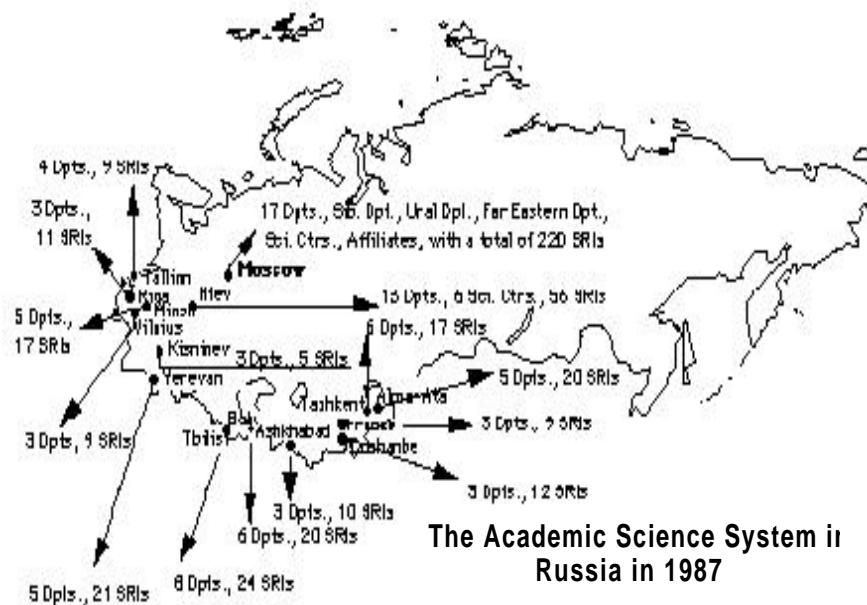


Former Republic Academies of the Russian Academy of Sciences

Compiled by

Jack L. Cross



Compiled from: Directory of Soviet Officials:
Science and Education. Washington: Directorate of
Intelligence, LDA 87-11012, May 1987, 416 pp.

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Austin, Texas
1996

Preface

The material in this guide was part of a larger study begun several years ago, which, when the Soviet Union broke up, I put on the shelf. What I had done was to work with all 15 republic academies as members of the one Soviet Academy of Sciences--a system of academic science.

In 1992, with the establishment of a revitalized Russian Academy of Sciences, uncertainty remained about the academies of the other 14 former republics. Estonia, Latvia and Lithuania went their own way, as did several other academies in some respects. Just how far remains to be sorted out over the next several years. Relations between the other republic academies and the Russian academy in Moscow vary from academy to academy, and the breakup of the political unity of the Soviet Union does not necessarily affect the ties between the engineers and scientists which are of long standing. But these relations vary, of course, from republic academy to republic academy, department to department, and subject to subject.

There are essentially two major models which the academies in the fourteen former republics may follow: that of the West as illustrated by that of the United States, in which graduate work is done primarily in the Universities, both public and private; or the Soviet and Russian model, in which graduate and postgraduate (postdoctoral) work is done primarily in the scientific research units which have been under the administrative control of the academy of sciences presidium and its various scientific departments--both subject-matter and geographic regional departments. The United States model epitomizes the "Western" structures, and elects scientists and engineers recognized by their peers to recognition and membership in the respective national academies, and they can represent both "town and gown." In the Western models, universities play a much greater role in the development of graduate research training than in the Russian model. The Baltic States, for the most part, have chosen to go the Western way, making their research units under the former arrangement State entities, and shifting graduate work to their universities. Most of the other former republic academies are maintaining their former structures intact, though, in many cases broadening membership, and softening the differences between Corresponding Members and Academicians.

These brief surveys of these particular academies are starting points for analysis as more information becomes available. While the subject of scientific and technological development is very important in these regions of the world, much remains to be learned about these matters, hence the tentative tone of this preface.

Austin, Texas, 1996

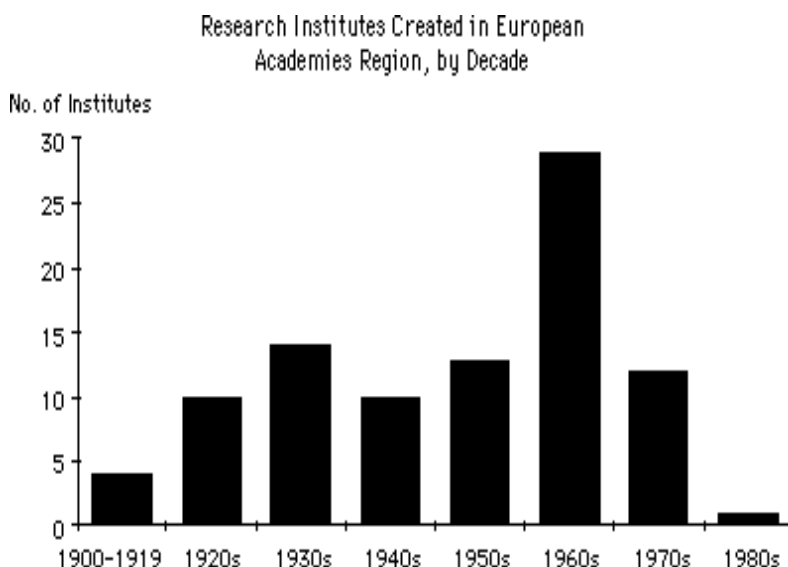
The European-Facing Republic Academies



The three republic academies which I have called "European-Facing", are the Ukrainian Academy, the Belarus Academy, and the Moldovo Academy. The three republics are contiguous and, in recent years, there has been a growing interchange between them. In 1992, the three academies had some 112 scientific research institutes under their jurisdiction. Since the breakup of the Soviet Union, there is evidence of a more rapid development of regional cooperation between these three former republics than before. Of the three academies, however, that of the Ukraine is the largest, and, in view of the coordinating role it played when it was an integral part of the Soviet Academy of Sciences, it is continuing to act as a catalyst in cooperative scientific ventures between these academies, and many others both in other former republics and in the academies of those Eastern European countries bordering the former Soviet Union.

The Ukraine is bordered by the Black Sea and basically lies between Poland and Russia. It is an area only slightly smaller in area than Texas, and by land is bordered by Belarus, Hungary, Moldova, and Poland, Romania on the southwest and the west, and Russia--the last having the longest border of some 1576 km. Its Black Sea coastline stretches some 2782 km. It is rich in arable land and in natural resources. Standing at the crossroad between Europe and Asia, it is the second largest country in Europe. It had a population of about 51.8 million in 1993. Its population is 100% literate. It formally separated from Russia on the 1st of December 1991. (Source: The Gutenberg Project Header to CIA World Factbook, 1996.)

When one plots the dates of the founding of these 112 research institutes in these three republics, it becomes clear that the greatest period for the establishment of research institutes was following World War II--from the 1950s through the 1970s. The falling off in the 1980s, and the present period of relative decline is foreshadowed dramatically in this chart.



The Ukrainian Academy of Sciences

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The Ukrainian Academy of Sciences is the largest and most complex of the other former republic academies. In 1972, it counted 45,000 scientific workers in its 36 research institutes and their laboratories, of whom 5,000 had either doctor's or candidate's degrees.¹ There were seven subject-matter departments at that time, one computer center and an Astronomical Observatory and Botanical Garden. By 1987, the Ukrainian Academy had expanded to 12 subject-matter departments with six regional "scientific centers," and with 59 scientific research institutes subordinate to the centers or departments. Scientific personnel had increased commensurately. In 1990, the Ukraine Academy had 76 research institutes, and a membership of 399 academicians and corresponding members.

Past Scientific Achievements: The Ukrainian Academy boasts of many scientific achievements in the past that include: the Dnepr-2, the Promin, and Mir computer systems, a two-billion electron volt linear accelerator, and a radio telescope which penetrates 10 billion light years into space and by which over 300 new radio stars had been discovered by 1972. Ukrainian

¹B. Paton, "A Nation of Advanced Science," *Technology and Armament (Tekhnika i voorunzheniye)*, December 1972, pp. 54-60. The most authoritative brief histories of the 15 Republic Academies of Science in the Soviet Union may be found in *The Great Soviet Encyclopedia*, New York, Macmillan, 1983, (translation of the Third Edition). Ukrainian SSR Academy, Vol. I, 54b, Vol. XXVI, 598a.

scientists researched cybernetics, semiconductors, radiophysics, electronics, chemistry of molecular compounds, low temperature physics, solid state physics, micro-electronics, bionics, new aspects of theoretical physics, quantum chemistry, geochemistry, physics of minerals, mathematical work on oscillation of synchro-phastrons and satellite orbits, controlled thermonuclear fusion, mechanized engineering and radio engineering and automatic control theory. They mounted investigations in applied gas dynamics, aerohydraulics, solid state mechanics, thermal engines, and hydraulic engines of high parameters, problems of the "boundary layer" in aerodynamics and aerodynamic wing theory.



Some Accomplishments of Ukrainian Scientists: Ukrainian scientists built the space welding machine "Vulkan," developed a continuous "teeming" of steel in blast furnaces using natural gas and pure oxygen, and made progress in the secondary reprocessing and refining of metals. One institute produced artificial diamonds successfully. Others developed new catalysts, polymers, fiber-glasses, dyes and insecticides. Geologists and geophysicists studied tectonic movements of the earth's crust, origins of the continental shelf troughs and looked for new mineral reserves. Academy laboratories studied or produced proteins, enzymes, antibiotics, hormones and vitamins in their efforts to control disease. Ukrainian scientists worked on economic reform, the improvement of production and the utilization and distribution of production, a trend that has assumed increased importance in the latest Five-Year Plan.

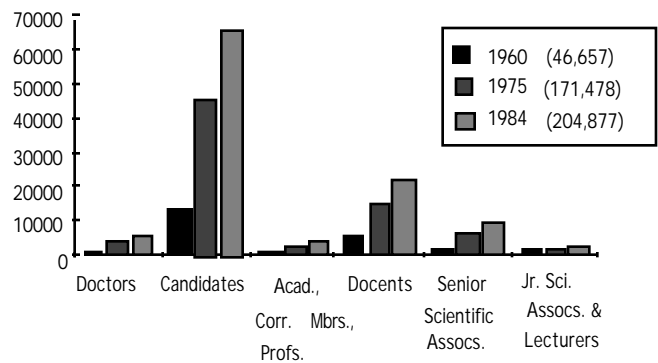
Research Ties: According to Academy President Boris E. Paton, the 1970s saw a greater effort to coordinate scientific research in the Ukrainian Academy with that of other academies, including the national academy, and with the "ministerial" Scientific Research Institutes, and with the scientific research in the higher educational institutions in the region and the country. He observed that joint scientific research investigations had increased greatly.

Organization of the Ukrainian Academy: The Ukrainian Academy of Sciences has nine major divisions: (1) mathematics, mechanics, and cybernetics; (2) physics; (3) physics and engineering problems; (4) earth sciences and space sciences; (5) chemistry and chemical engineering; (6) general biology; (7) biochemistry, biophysics, and physiology; (8) economics, history, archaeology, philosophy, and law; and (9) literature, language, and art criticism. The academy has a large computer center, observatories,

botanical gardens, national forest parks, and branches and divisions of the institutes. It is the headquarters for the Council for the Study of Ukrainian Productive Forces and for the editorial board of the Ukrainian Soviet Encyclopedia. It maintains a library of more than 7 million volumes and controls a large experimental plant for the scientific research institutes. It coordinates scientific and technological research and development throughout the Ukraine through some 55 scientific councils.² The academy publishes more than 24 scientific periodicals and more than 700 other major scientific works each year. Its past presidents have included such distinguished scientists as V. I. Vernadskii, V. I. Lipskii, D. K. Zabolotnii, A. A. Bogomolets, A. V. Palladin, and its current president since 1962, B. E. Paton.

Scientists in the Ukraine: Ukraine boasts of the second largest number of scientists among the former republic academies.³ It also has the largest number of scientists with advanced degrees

Figure 1
Scientists in the Ukrainian Academy of Sciences, 1960-1984



Numbers in parentheses in legend box = total scientists in the Ukrainian SSR.

among the other former republics. In 1984, there were 5595 doctoral degree holders and 66,422 candidate degree holders working in Ukraine. Of these, 4,234 were classified as academicians, corresponding members, and professors. Many of these were teachers in the VUZy system which also included 22,455 docents; senior scientific associates, researchers in the scientific research institutes in the academic and in the ministerial institutes, numbered 9868; and junior scientific associates and assistant lecturers in these same institutions totaled 3,644.⁴

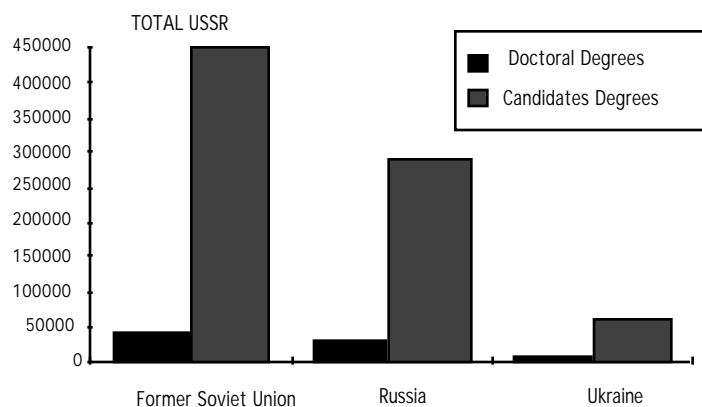
² The Great Soviet Encyclopedia. New York, 1983, Vol. I, p. 54; Vol. 26, p. 598.

³ "Breakdown of Scientists by Degrees, Titles," Vestnik statistiki, No. 12, Dec. 1985, p. 54.

⁴ Ibid.

Figure 2

Degree Distribution in the Two Largest Former Republic Academies, 1984

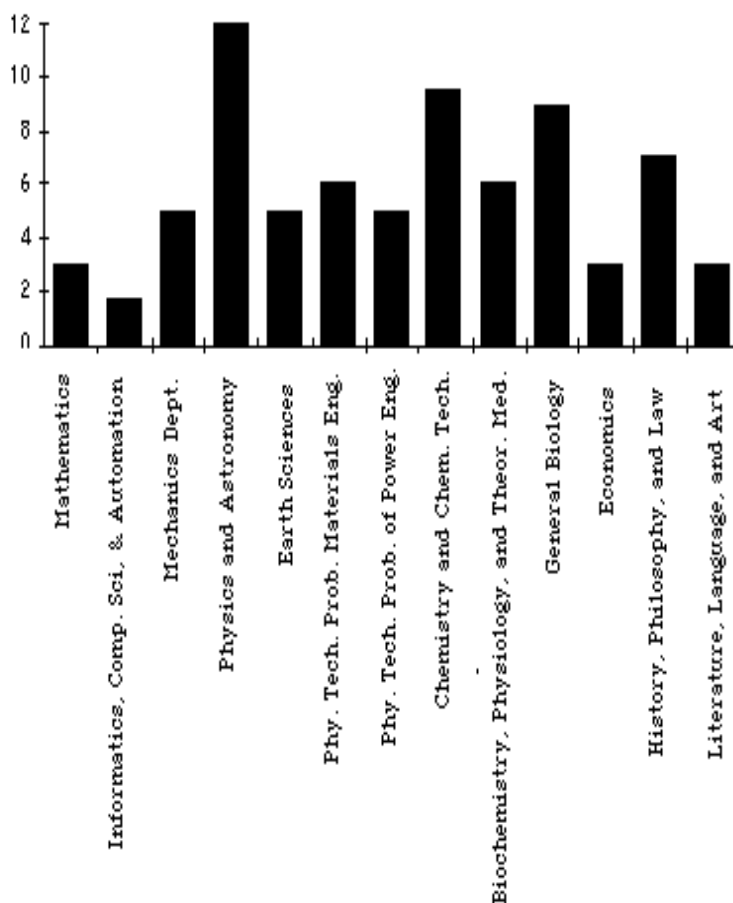


Ukrainian Scientific Research Institutes: The seventy-odd scientific research institutes under the subordination of the 13 academy subject-matter departments as shown in figures 52 and 53 reveal the relative importance given to the various research disciplines by the Ukrainian Academy of Sciences. In this regard Ukrainian scientists do not differ greatly from those belonging to the Russian Academy.⁵

⁵ Directory of Soviet Officials: Science and Education. Washington, 1987. LDA 87-11012, pp. 243-261.

Figure 3

Ukraine Scientific Research Institutes in 1990



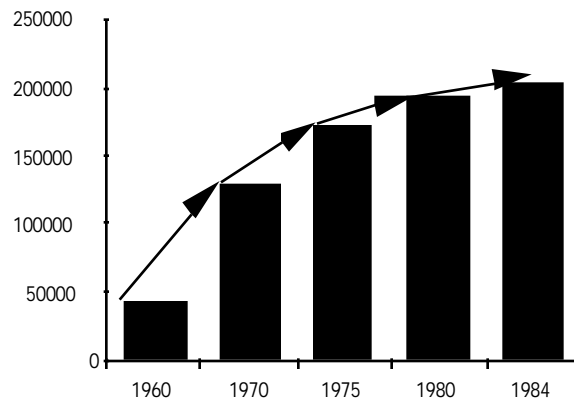
Growth of Scientific Activity in the Ukraine: The number of scientific workers in Ukraine from 1960 to 1984 increased five-fold (439 percent), an enormous increase for a twenty-five year period. During this same period, academicians, corresponding members and professors increased their numbers some 323 percent; holders of doctoral degrees, some 416 percent; and, candidate degree holders, almost 500 percent. As figure 4 illustrates, the rate of growth of all categories of scientists in the republic is beginning to level out. The critical mass of scientists and research institutes exists now to achieve scientific progress more rapidly than in the past.

The Coordinating Role: That the Ukrainian Academy of Sciences is older as well as more complex in structure than most of the former republic academies is shown in Figure 5 below. Its greatest growth was in the 1960s.⁶ Ukrainian scientists and administrators played an important role in coordinating scientific research between its own researchers, scientists of the other republic academies and the scientists of the Eastern European academies. The Ukrainian academy has acted as a focal point for the exchange of scientific research findings, scientific personnel, and materials. It has maintained and strengthened its ties with its European neighbors. It served as a port of entry for scientists from beyond the Soviet borders, who came to its laboratories to

⁶ Ibid.

Figure 4

Growth of Number of Scientists in the Ukrainian Academy, 1960-1984

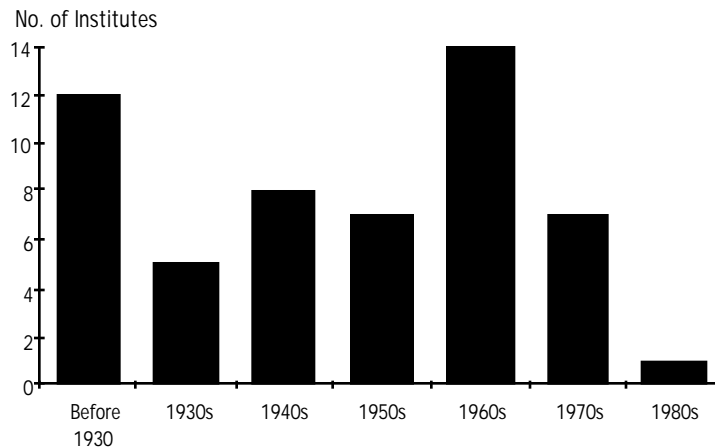


Compiled from: Vestnik statistiki, No. 12, December 1985, pp. 69-72.

work and to research. Over the years, 55 Ukrainian scientists have been academicians of both the Russian Academy of Sciences in Moscow and the Ukrainian Academy of Sciences in Kiev; 27 scientists have been corresponding members of both bodies.

Figure 5

Establishment of SRIs in the Ukrainian Academy of Sciences, by Decades



Scientific Research and Technological Development: The Ukrainian Academy of Sciences took the lead among the academies in the Soviet Union in coordinating and experimenting with the development of interdepartmental special-purpose Scientific Production Associations, intersectoral scientific production complexes, educational-scientific production associations--all in the name of scientific and technological progress. As Boris Paton observed in an article appearing in *Materialno-tehnicheskoye snabzheniye* in 1986, the Ukrainian Academy of Sciences experimental production base included 10 pilot plants, 27 pilot and experimental works, 32 design bureaus, and 5 computer centers. This base had begun in 1960s. Then it counted only 16 facilities. This union between science and production, Paton believed, would make restructuring of the Soviet society possible. The development, too, of

"engineering centers" of the academy represented a new step in resolving technological problems of improving production.⁷

Figure 6



Source: B. S. Stognii, *op. cit.* pp. 418-419.

Scientific Development in Higher Education in the Ukraine:

Scientists in the VUZy system play a major role in scientific development. As one author observed, "eighty-five percent of the scientists with scientific degrees and titles work at higher educational institutions, 10 percent work in the system of the Ukrainian Academy of Sciences and five percent work at ministerial scientific research institutes."⁸ Thus, at that time some 12,000 scientific and scientific teaching personnel worked at 25 higher educational institutions and at some 50 academy and ministerial scientific research institutes, in the western Ukraine alone. Another author noted that in the western Ukraine there were 18 academy SRIs, 24 ministerial SRIs, and 25 higher educational institutions in which some 16,000 scientists and scientific teaching personnel worked--550 of whom held doctors degrees and 6,000 of whom had candidates degrees. Their work was coordinated by the academy's Western Scientific Center established in 1971.⁹

The Ukrainian Academy as a Link: The pulling together of people and resources in the Ukraine for purposes of long-range planning and forecasting for republic and national economic development was the hallmark of activities of the Ukrainian Academy of Sciences in the 1980s. While exercising an ever larger role in the coordination of scientific and technical

⁷ B. Paton, "Scientific and technical Progress and the Decrease of the Materials-Output Ratio," *Materialno-tehnicheskoye snabzheniye*, No. 4., April 1986, pp. 19-25.

⁸ V. Dedekayev (of the Lvov Technical Institute), "Problems of the Development of Educational Scientific Production Associations," *Ekonomika Sovetskoy Ukrainy*, No. 10, October 1984, pp. 62-64.

⁹ M. Shvayka, "Interdepartmental Special Purpose Scientific Production Associations," *Ekonomika Sovetskoy Ukrainy*, No. 4, April 1984, pp. 48-52.

development among the former republic academies in the Soviet Union, the Ukrainian Academy of Sciences played an increasingly important role in the international coordination of Soviet scientific effort as shown in the chart 1 below.¹⁰ In 1992, Dr. Paton, President of the Ukrainian Academy suggested that this coordinating role of the Ukrainian Academy be used again to pull the former Republic Academies back together as a unit. Whether the role of coordinator with Eastern European and other academies of sciences will continue as Russia and the Ukraine continue their restructuring, remains to be seen. The links which have been forged by the coordinating activities of the past several years may prove to be more enduring than are the political or economic ties.

The Ukrainian Academy and the Other Republic Academies: As early as April 1982, President Paton of the Academy of Sciences observed at the academy's annual meeting that "productive relations between the USSR Academy of Sciences and the republic academies of sciences continue to broaden and deepen"--a development in which the Ukrainian academy would play an increasingly important role of coordination.¹¹

The Ukrainian Academy Thrusts in Research: While the scientists in the departments of the Ukrainian academy conduct research in all branches of modern science, the thrusts of their research efforts, according to the summary article about the academy in the Great Soviet Encyclopedia (26, p. 598), are in the theory of numbers, functional analysis, nonlinear differential equations, mathematical logic, probability theory (mathematics); theory of digital automata, teaching and self-teaching machines, problem-solving in the automated design of new computers and computing machinery (cybernetics); the theory of accelerators, theory of deformed nuclei, and others (nuclear physics); physics of the exciton state, electronic theory of metals, theory of polarons (solid state physics); fundamentals of the design of refractory and ultrahigh-strength materials and compounds, powder metallurgy (materials science problems); and radio astronomy, the earth sciences, the development of the bases of the welding processes, the chemistry of free radicals and stable isotopes, catalysis and its industrial applications, the chemistry of organophosphoric compounds, and colloidal chemistry; human, animal, and plant physiology, biochemistry, biophysics, economics; and, the history, language and literature of the Ukrainian people.

The Ukrainian Academy in Planning: In February 1985, in a conference held in Kiev, the scientific secretaries of the problem commissions of the Interdepartmental Scientific Council for the Problems of Scientific, Technical and Socioeconomic Forecasting--a council jointly attached to the presidium of the Ukrainian SSR Academy of Sciences and to the Ukrainian SSR State Planning Committee (GOSPLAN)--met to discuss the plans for scientific and

¹⁰ Primachenko, V., "Economy of the Countries in the Socialist Community: Inter Academy Cooperation among the CEMA Member Countries Under Conditions of Scientific-Technical Integration," *Ekonomika Sovetskoi Ukrainii*, No.9, September 1983, 76-81. A major work on scientific and technological integration of the CEMA countries by V. Ia. Mashtabei was published in Kiev in 1981 and reviewed in the *Ekonomika Sovetskoy Ukrainy* in October 1983. Another important article describing the establishment of the International Center of Scientific-Technical Information (MTsNTI) in 1969 by the signing of an international agreement between Bulgaria, Hungary, the GDR, Mongolia, Poland, Romania, Czechoslovakia and the USSR. In 1973, Cuba joined the consortium and in 1979 Vietnam became a member. See interview with Professor Leonid N. Sumarokov, director of MTsNTI in *Ekonomicheskoe sotrudnichestvo stran-chlenov*, No. 2, February 1984, 58-63.

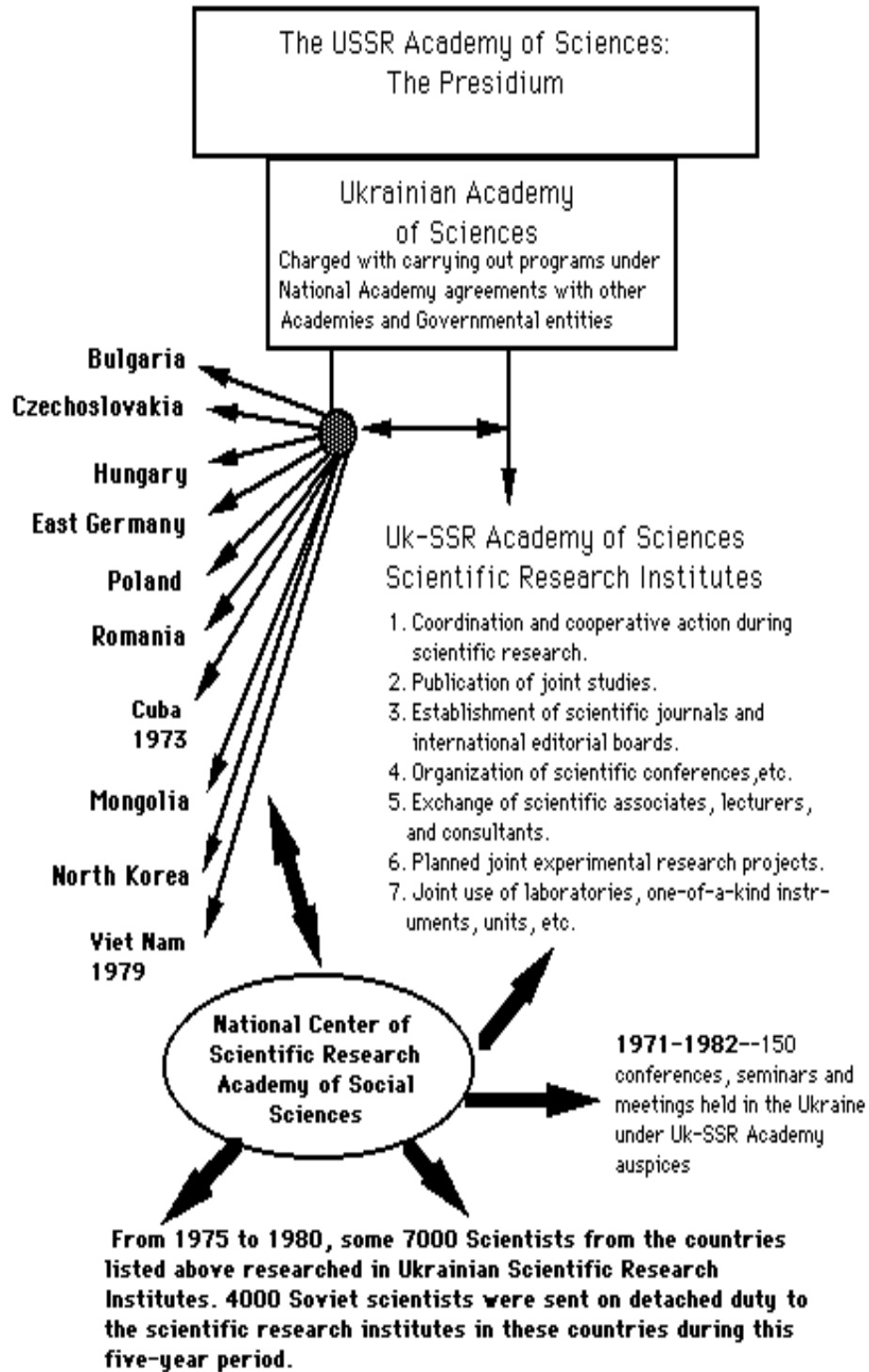
¹¹ B. Paton, "Scientific Quest--in the Service of the Five-Year Plan," *Pravda Ukrainy*, 3 April 1982, pp. 1-2.

technological progress for the years 1991-2010 for the Ukrainian Republic. Thus, scientists were involved in a very structured way in developing the plans for economic, technological, scientific, and social change for the future.
12

¹² V. Borisov and P. Popov, "The Organization of the Formulation of the Republic Program of Scientific and Technical Progress," *Ekonomika Sovetskoy Ukrainy*, No. 8, August 1985, pp. 93-94.

Chart 1

The Role of the Ukrainian Academy in Scientific Research Integration

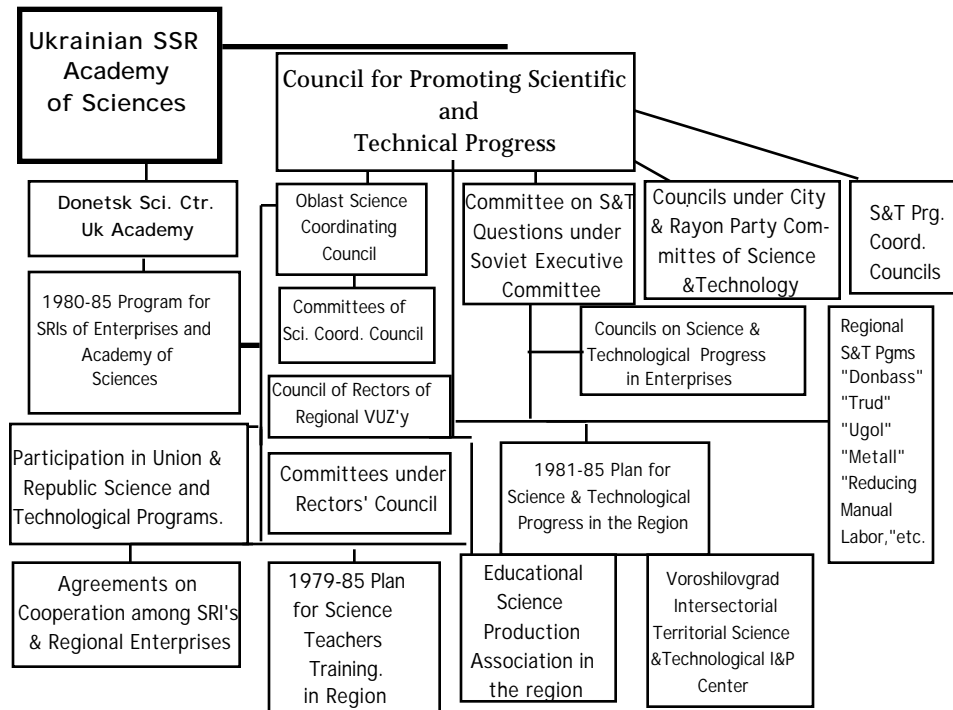


The Work of the Academy in Regional Scientific and Technological Progress: Chart 2 illustrates the manner in which the Ukrainian Academy of Sciences took the lead in developing regional scientific and technical progress. This was a new departure for the academy and its work became a

model to be imitated by other academies. This activity established relationships with ministerial scientific laboratories and their scientists, with city and oblast coordinating councils, with various science and technology councils in the enterprises themselves, and with regional and national coordinating councils. The Ukrainian Academy seems to be straddling the independent, confederative, and national impulses struggling for supremacy in Russia at the moment.

Chart 2

Organization of Regional Management of Scientific and Technical Progress



V. Bogachev, "Improving Regional Control Over Scientific and Technical Progress," *Ekonomika Sovetskoyo Ukrainy*, No. 11, 1983, pp. 49-52. JPRS-UIST-84-010, 24 April 1984, pp. 64-70. Chart on p. 66.

Membership of the Ukrainian Academy : Many of the scientists of the Ukrainian Academy of Sciences were directors or deputy directors of the scientific research institutes under academy jurisdiction and control. In 1989, some 70 members of the academy were or had been scientific research institute directors and 25 were deputy directors of institutes. In mid-1990, there were 399 members of the Ukrainian academy, of whom 179 were academicians and 220 were corresponding members.

Presidium

The presidium of the Ukrainian Academy of Sciences includes the officers listed below, the academicians secretaries of each of the subject-matter departments, and scientists elected by the general assembly of the academy.

President

Paton, Boris E. , D. Tech. S. Born November 1918 in Kiev. Soviet metallurgist and specialist in welding technology. Son of E. O. Paton. Since 1958, he has been an academician of the Physical and Technical Problems of Materials Science

department of the Ukrainian Academy of Sciences. Since 1962, he has been an academician of the Physical Chemistry and Technology of Inorganic Materials department of the national academy (elected originally to the Technical Sciences department). Since 1963, he has been a member of the presidium of the national academy of sciences. He graduated from Kiev Industrial Institute in 1941. He has been affiliated with the E. O. Paton Institute of Electrical Welding of the Ukrainian Academy of Sciences since 1942. He headed a laboratory there from 1942-50, was assistant director of the institute from 1950-53, and has been director since 1953. Recipient of the State Prize in 1950. From 1961 to 1966, he was a candidate member of the CC CPSU, and he has been a member of the Central Committee of the CPSU since 1966. Since 1962, he has served as president of the Ukrainian Academy of Sciences. Since 1964, he has been a member of the Presidium of the Committee for Lenin Prizes and State Prizes in Science and Technology. Since 1966, he has been one of five deputy chairmen of the Council of the Soviet Union. In 1973 and 1974, he was deputy chairman of the Soviet of the Union of the Supreme Soviet of the USSR. Since 1977, he has served as a board member of the GKNT General Assembly. His works have included: developing electroslag welding, producing unique high-pressure vessels for the power and chemical industries and the manufacture of large assemblies for ships and hydroelectric generators and for other purposes; developing programs for improving the welding industry in the USSR and accelerating technical progress; developing special purpose smelting plants and creation of a new branch of quality metallurgy known as special-purpose electrometallurgy. He is a member of the Bulgarian (1969) and the Czechoslovakian (1973) academies of sciences. Current member of the Editorial board of Science in the USSR. State Prize, 1950; the Lenin prize, 1957. In 1990 Paton headed the Interdepartmental Scientific Council on Scientific and Technological Development and the Scientific Council on Complex Problems of Technical Diagnosis and Remote Control. (GSE 19, p. 339.)

Vice Presidents

Bar'iakhtar, V. G. (March 1990). Born in 1930. Awarded the K. D. Sinel'nikova Prize for Physics in 1978. Awarded the N. M Krilov Prize in Mathematics, Mathematical Physics and Theoretical Cybernetics in 1985.

Kukhar', Valerii P., D. Chem. S. Born in 1942. Vice president since 1988. Secretary of the Chemistry and Chemical Technology Department from 1978 to 1990. Academician since 1985. Head of the Scientific Council on the Biosphere in 1990. B. S. Stognii, *History of the Contemporary Ukraine Academy of Sciences*. Scientific Publishing House: Kiev, 1990. 320 pp.

Lukinov, Ivan I., D. Econ. S. Born in 1927. Academician of the Economics Department since 1976; and academician of the Economics Department of the AN SSSR since 1984. He has been the director of the Economics Institute in Kiev since 1976. The institute conducts research on the economics of industry and agriculture and the history of the Ukrainian economy. He has served as vice president of the academy since 1979 and was reelected in 1988. Recipient of the State Prize for Science and Technology in 1979. Head of the Scientific Council on Economic Normality and Mature Socialism in 1990. The Council is located in the Economics Department.

Skok, Vladimir I., D. Bio. S. Born in 1932. Corresponding member of the Biochemistry, Physiology, and Experimental Medicine Department since 1973. Academician of the Physiology Department of the AN SSSR since December 1987. Secretary of the Ukrainian Department since 1974. Vice president of the Ukrainian academy since 1988. Recipient of the SSSR State Prize in 1989. In 1990, he was head of the Council on Problems of Biotechnology

Skopenko, Viktor V., D. Chem. S. Born in 1935. Corresponding member of the Chemistry and Chemistry Technology Department of the Ukrainian academy since 1978. Since 1985, he has served as rector of the T. G. Shevchenko Kiev

State University in Kiev which was established in 1834. He was named vice president of the Ukrainian academy in 1989.

Trefilov, Viktor I ., D. PM. S. Born in 1930. Academician since 1973. Recipient of the State Prize for Science and Technology in 1974. Awarded the E. O Paton Prize for the Creation of New Metals and Metal Processes in 1987. Academician of the Physical Chemistry and Technology of Inorganic Materials Department of the AN SSSR since 1987. Since 1973, director of the Problems of Material Science Institute in Kiev which was established in 1955 to develop high temperature materials to conduct studies on problems of the structure of solids, and to coordinate all Soviet powder metallurgy research in the USSR. Vice president of the Academy since 1974 and reelected in 1988. Member of CPSU.

Advisors to the Presidium:

Babichev, Fedor S., D. Chem. S. Born in 1917. Academician of the Chemistry and Chemical Technology Department since 1974. Vice president of the Ukrainian Academy since 1978. Awarded the L. V. Pisarzhevskii Prize for Chemistry and Chemical Technology in 1986.

Babii, Boris M., D. Jur. S. Born in 1914. Academician Secretary since 1970. Academician since 1972. Director of the State and Law Institute in Kiev since 1974. Established in 1949, the institute consults regularly with several Ukrainian government agencies and produces various handbooks and reference guides.

Pisarenko, Georgii S ., D. Tech. S. Born in 1910. Academician of the Mechanics Department since 1964. Awarded the N. M Krilov Prize in Mathematics, Mathematical Physics and Theoretical Cybernetics in 1968. Recipient of the State Prize for Science and Technology in 1969. Director of the Strength Problems Institute in Kiev since 1966. The institute was created in 1966 to concentrate on mechanical failure of all types of materials as influenced by temperature, strain rate, state of stress, and environment. Member of the Presidium since 1978. Chairman of the Northwestern Scientific Center since 1982. Recipient of the SSSR State Prize in 1982.

Pukhov, Georgii E. , D. Tech. S. Born in 1916. Secretary and Academician since 1978. Awarded the S. A. Lebedev Prize in Computer Technology and Automatic Control Systems in 1981. Recipient of the State Prize for Science and Technology in 1982.

Fedorchenko, Ivan M ., D. Tech. S. Born in 1909. Academician since 1961. Academic secretary of the Physical and Technical Problems of Materials Department since 1964. Awarded the E. O Paton Prize for the Creation of New Metals and Metal Processes in 1968. Recipient of the State Prize for Science and Technology in 1979.

Academy Chief Scientific Secretary:

Stognii, Boris S. Recipient of the State Prize for Science and Technology in 1985. Since April 1988, he has been the scientific secretary of the Ukrainian Academy of Sciences.

Academic Secretaries of the Academy Departments

Elected from the Mathematics Department:

Mitropol'skii, Iurii A ., D. Tech. S. Born in 1917. Academician of the Ukrainian academy since 1961. Recipient of the Lenin Prize in 1965. Since 1966, academician secretary of the Mathematics and Cybernetics Department of the Ukrainian Academy of Sciences. Recipient of the State Prize for Science and Technology in 1980. Academician of the Mathematics Department of the AN SSSR since 1984. Since 1958, he has been director of the Mathematics Institute in Kiev subordinate to the Mathematics Department of the Ukrainian

Academy of Sciences. Awarded the V. I Vernadskii Prize for Geology, Geochemistry and Hydrophysics in 1985. Ukraine Academy of Sciences Hero of Socialist Labor Prize recipient in 1986.

Elected from the Informatics, Computer Technology and Automation Department:

Mikhalevich, Vladimir S ., D. PM. S. Born in 1930. Recipient of the State Prize for Science and Technology in 1973. Since 1973, academician of the Mathematics, Mechanics, and Cybernetics Department of the Ukrainian Academy of Sciences. Awarded the V. M. Glushkov Prize for Cybernetics, Computer Machine and Systems Theory in 1984. Academician of the Information Science, Computer Technology, and Automation Department of the AN SSSR since 1984. In 1971, he was awarded the N. M. Krylov Ukrainian SSR Academy of Sciences Prize for his work on methods of optimization. In 1973, he received the Ukrainian SSR State Prize for undesignated research. In 1981, he was awarded--among a group of authors--the USSR State Prize for series of work on development and widespread introduction of modern mathematical methods of optimization published from 1962-79. Recipient of the SSSR State Prize in 1981. Since 1982, he has been director of the V. M. Glushkov Cybernetics Institute in Kiev which was established in 1957 and given its present name in 1961. The institute researches in theoretical and economic cybernetics, computer engineering and design, system engineering, automatic control design, biomedical cybernetics, and science policy.

16. Troshchenko, Valerii T. Born in 1929. Recipient of the State Prize for Science and Technology in 1969; elected in 1979. Recipient of the SSSR State Prize in 1982.

Bar'iakhtar, V. G. Born in 1930. Awarded the K. D. Sinel'nikova Prize for Physics in 1978. Awarded the N. M Krilov Prize in Mathematics, Mathematical Physics and Theoretical Cybernetics in 1989. Academic secretary of the Physics Department since 1989. Also a vice president.

Brodin, Mikhail S ., D. PM. S. Born in 1931. Recipient of the State Prize for Science and Technology in 1974. Academician since 1982. Academic secretary of the Physics and Astronomy Department since March 1990.

Elected from the Earth Sciences Department :

Starostenko, Vitalii I. Born in 1934. Recipient of the State Prize for Science and Technology in 1984. Corresponding member since 1985; elected academician in in 1990. Deputy director of the S. I. Subbotin Geophysics Institute in Kiev since 1983. The institute was established in 1960 and does research in theoretical and applied geophysics. Academic secretary of the Earth Sciences Department in 1990.

Zelenskii, Viktor F . Born in 1929, elected in 1988.

Shidlovskii, Anatolii K ., D. Tech. S. Born in 1933. Academician since 1985. Awarded the S. A. Lebedev Prize in Computer Technology and Automatic Control Systems in 1986. Director of the Electrodynamics Institute in Kiev since 1974. Founded in 1939, the institute is concerned with methods, devices, and systems used in the prevention of short circuits. Academic secretary to the Physical Technical Problems of Energetics Department in 1990.

Elected from the Chemistry and Chemical Technology Department:

Pokhodenko, Vitalii D ., D. Chem. S. Born in 1936. Academician since 1985. Deputy director of the L. V. Pisarzhevskii Physical Chemistry Institute in Kiev since 1971. Awarded the L. V. Pisarzhevskii Prize for Chemistry and Chemical Technology in 1979. Academic secretary to the Department of Chemistry and

Chemical Technology in 1990.

Elected from the Biochemistry, Physiology, and Theoretical Medicine Department:

Matsuka, Gennadii Kh ., D. Bio. S. Born in 1930. Awarded the A. V. Palladin Prize for Biology and Molecular Biology in 1979. Academician since 1985. He served as director of the Molecular Biology and Genetics Institute in Kiev from 1975 to 1977. Founded in 1973, the institute researches the laws of heredity variability of organisms, the structure and function of proteins and nucleic acids and studies genetic information transfer. Secretary to the Biochemistry, Physiology and Theoretical Medicine Department in 1990. Recipient of the State Prize for Science and Technology in 1986.

Elected from the General Biology Department:

Gleba, Iurii Iu. D. Bio. S. Born in 1949. Deputy director of the N. G. Kholodnii Botany Institute in Kiev since 1983. Awarded the V. Ia. Iur'eva Prize for Genetics--the creation of new methods of acclimitization, selection, and hybridization of plants and animals and the development of more productive animal species--in 1983. Recipient of the SSSR State Prize in 1984. Corresponding member since 1985; elected academic secretary to the General Biology Department in 1988. Recipient of the State Prize for Science and Technology in 1989.

Elected from the Economics Department:

Pakhomov, Iurii N. Born in 1928, elected in 1988. He became academic secretary to the department in 1990.

Elected from the History, Philosophy and Law Department:

Kuras, Ivan F. Born in 1939, elected in 1988. Academic secretary of the History, Philosophy and Law Department in 1990.

Elected from the Literature, Linguistics, and Fine Arts Department:

Rusanovskii, Vitalii M ., D. Phil. S. Born in 1931. Academic secretary since of the department since 1978. Academician since 1982. Recipient of the SSSR State Prize in 1983.

Elected from the General Assembly:

Andronati, Sergei A. Born in 1940, corresponding member since 1982; elected an academician in 1988. Member of the Presidium since 1990.

Chumachenko, Nikolai G. , D. Econ. S. Born in 1925. Awarded the A. G. Shlikhtera Prize for Economics in 1980. Academician of the Economics Department since 1982. Director of the Industrial Economics Institute in Donetsk since 1974. The institute is concerned with improved management and planning and with the economic stimulation of production, quality control, and technical progress in industry. Since 1986, he has served as chairman of the Donetsk Scientific Center. He was elected a member of the presidium in 1990.

Pilipenko, Anatolii T ., D. Chem. S. Born in 1914. Recipient of the State Prize for Science and Technology in 1973. Academician since 1976. Director of the A. V. Dumanskii Colloidal Chemistry and Hydrochemistry Institute in Kiev since

1975. The institute was established in 1968 and its research involves theoretical and technical aspects of colloid chemistry and hydrochemistry such as the regulation of water quality. Since 1979, prorector of the T. G. Shevchenko Kiev State University in Kiev, established in 1834. Awarded the L. V. Pisarzhenkii Prize for Chemistry and Chemical Technology in 1984. He was elected to the Presidium in 1990.

Smirnov, Valerii V . Born in 1937. Awarded the D. K. Zabolotii Prize in Microbiology, Virology, Epideomology, and Zoology in 1984. Academician since 1985. Recipient of the State Prize for Science and Technology in 1987. Director of the D.K. Zabolotnii Microbiology and Virology Institute in Kiev since 1977. The institute was founded in 1929 and conducts research on the physiology and biochemistry of microorganisms, molecular biology, and microbiological synthesis of protein and other products from hydrocarbons. He was elected to the Presidium in 1990.

Scientific Councils of the Presidium

The organization of the research effort in Ukraine has been through the use of Scientific Councils. Several members of the Presidium itself head up some of these councils--and those are indicated in the brief biographical notes on members of the Presidium above--others are managed through the Presidium by scientists selected by that body, and others are located for various reasons to the appropriate department of the Ukrainian Academy of Sciences.

The Scientific Councils under the Presidium include:

Interdepartmental Technical Scientific Council for Increasing the Life of Construction Machinery under **V. T. Troshchenko** --recipient of the State Prize for Science and Technology in 1969;

Council on Scientific Instruments under **V. T. Cherepin** --corresponding member of the Physical and Technical Problems of Materials Department and recipient of the State Prize for Science and Technology in 1980;

Council on Automation of Scientific Research under **V. S. Mikhalevich** -- recipient of the State Prize for Science and Technology in 1973; Interdepartmental

Council on Thermodynamic Processes of the Earth in Ukraine under Academician **E. F. Shniukov** --recipient of the State Prize for Science and Technology in 1989;

Council on Philosophical and Social Problems of Science and Technology under Academician **V. I. Shinkaruk** --awarded the Manuil'skii Prize for History, Philosophy, and Law in 1977 and recipient of the State Prize for Science and Technology in 1982;

Council on Problems of Socialistic Competition Among Workers of Manufacturing Enterprises under Academician **V. K. Mamutov** --awarded the A. G. Shlikhtera Prize for Economics in 1982;

Council on Automatic Systems for Data Processing in the Central Computer Center under **A. I. Nikitin**, D. Tech. S.--recipient of the State Prize for Science and Technology in 1972 and he was awarded the S. A. Lebedev Prize in Computer Technology and Automatic Control Systems in 1985;

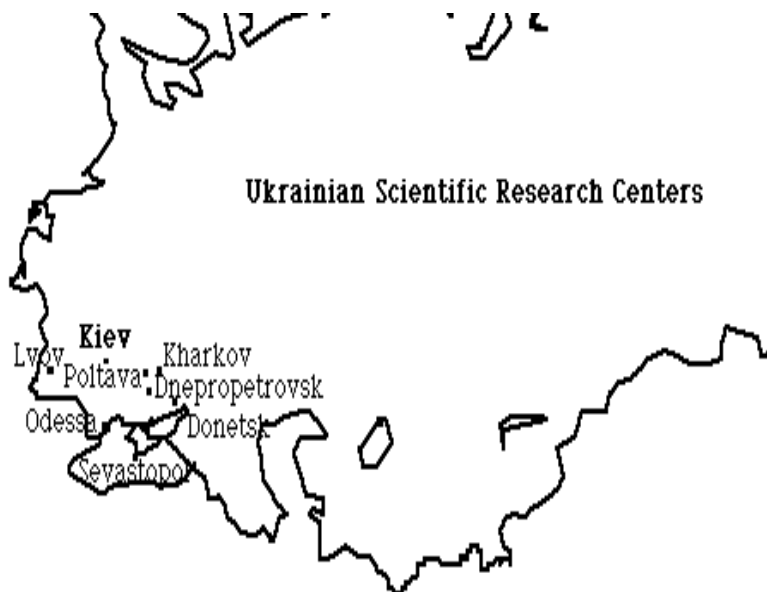
Interdepartmental Council on Problems of National Attitudes, Soviet Patriotism,

and the Socialist International Proletariat under Academician **Iu. Iu. Kondufor** --recipient of the State Prize for Science and Technology in 1980.

Scientific Institutions Subordinate to the Presidium: The Ukrainian academy has a large number of scientific research institutes subordinate to it, located in several different parts of the republic as the insert map shows. Research in many of the institutes located in these areas is coordinated by the Scientific Centers located within each major region.

Age of Directors at time of Appointment : The birthdates of the directors of 51 of these institutes is known. In 1989, four of these 51 directors were in their 80s; eight were in their 70s. The oldest was 89 and the youngest director was 51 years. The average age of the remaining 39 was 61 years. The average age of these directors upon the assumption of their directorships, however, was 46 years of age. Research in the scientific research institutes of the Ukrainian Academy of Sciences is not under the direction of the very elderly, though a large number of academicians and corresponding members of the various subject-matter departments are quite old. The Soviets have made way for their younger colleagues.

Scientific Centers Subordinate to the Presidium of the Ukrainian Academy



Donetsk Scientific Center

Chairman: **Chumachenko, Nikolai G.** , D. Econ. S. Born in 1925. Awarded the A. G. Shlikhtera Prize for Economics in 1980. Academician of the Economics

Department since 1982. Director of the Industrial Economics Institute in Donetsk since 1974. The institute is concerned with improved management and planning and with the economic stimulation of production, quality control, and technical progress in industry. Since 1986, he has served as chairman of the Donetsk Scientific Center. He was elected a member of the presidium in 1990.

Northeastern Scientific Center

Chairman: **Shestopalov, Victor P.**, D. PM. S. Born in 1923. Recipient of the State Prize for Science and Technology in 1972. Academician of the Physics and Astronomy Department since 1979. He has served as chairman of the Northeastern Scientific Center since 1983. Director of the Radio Physics and Electronics Institute in Kharkov since 1973. The institute was created in 1955 to study physical and quantum electronics, the dissemination of radio waves, the scattering of radar signals from the sea surface, high frequency characteristics of solids, electron optics, decametric radioastronomy, and long distance radio communications. Recipient of the SSSR State Prize in 1987.

Northwestern Scientific Center

Chairman: **Pisarenko, Georgii S.**, D. Tech. S. Born in 1910. Academician of the Mechanics Department since 1964. Recipient of the State Prize for Science and Technology in 1969. Director of the Strength Problems Institute in Kiev since 1966. The institute was created in 1966 to concentrate on mechanical failure of all types of materials as influenced by temperature, strain rate, state of stress, and environment. Member of the Presidium since 1978. Chairman of the Northwestern Scientific Center since 1982. Recipient of the SSSR State Prize in 1982.

Pridneprovskii Scientific Center

Chairman: **Poturaev, Valentin N.**, D. Tech. S. Born in 1922. Recipient of the State Prize for Science and Technology in 1975. Academician of the Mechanics Department since 1979. Member of the Presidium from 1979 to 1990. He has been the director of the Geotechnical Mechanics Institute in Dnepropetrovsk since 1975. This institute was established in 1962 and studies the physics and mechanics of rocks and the development of new geotechnical techniques and scientific instruments. He has served as chairman of the Pridneprovskii Scientific Center since 1983. He was awarded the A. N. Dinnik Prize for Mechanics and Machine Building in 1982.

Southern Scientific Center --Chairman: (Vacant).

Western Scientific Center-- Chairman (Vacant).

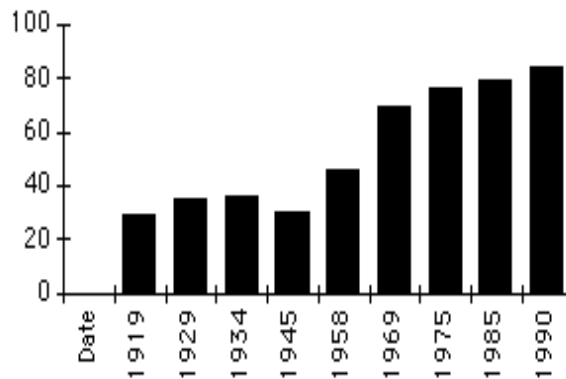
The Western Scientific Center of National Academy of Sciences unites scientific institutions of seven western regions of Ukraine. There are more than ten scientific institutions situated in LVIV : Institute of Physics and Mechanics (Karpenko Physico -Mechanical Institute); Institute for Condensed Matter Physics; Pidstrygach Institute on Applied Problems of Mathematics and Mechanics; Institute of Geology and Geochemistry of Fossil Fuels; Institute of Society (Social) Sciences; Institute of Ecology of the Carpathians; Institute of Ethnography; Branch of Palladin Biochemistry Institute; Branch of the Institute of Economics; Stefanyk Scientific Library

In addition to these scientific centers subordinate to the Presidium of the Ukraine Academy, there are five other scientific units under its direct jurisdiction: The **Central Natural History Museum** in Kiev, the **Central V. I. Vernadskii Scientific Library** in Kiev, the **L'vovsk V. Stefanika Scientific Library** in L'vov, the **Science Pavilion** in Kiev, and the **Science Center** --an exhibition hall

Research Institutes and Scientific Institutions : In January 1990, there were some 76 scientific research institutes under the 13 subject matter departments of the Ukraine Academy of Sciences. The 1990 Annual Report of the Academy lists a total of 84 scientific "institutions" under control of the presidium, which includes more than the research institutes subordinate to each of the subject-matter departments.

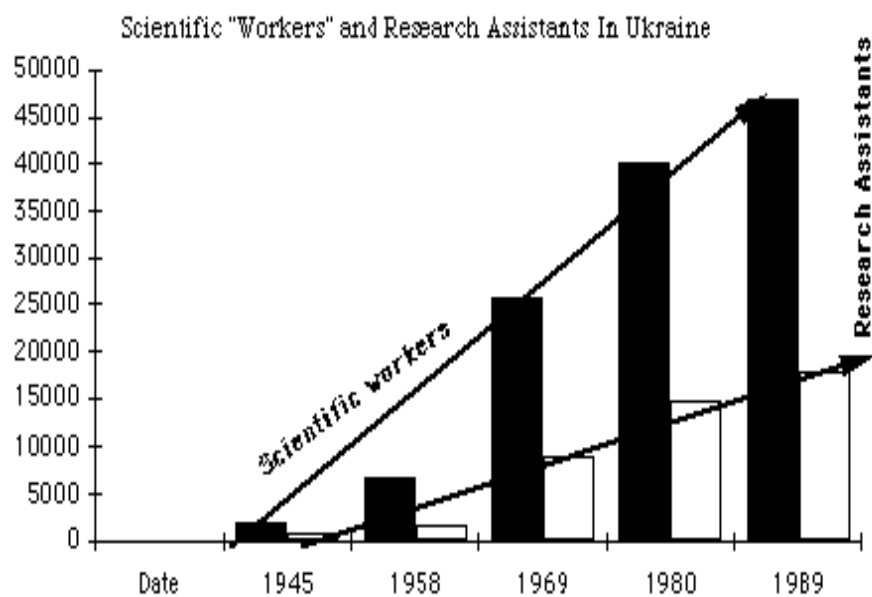
The 13 departments are described below in the order in which the Academy annual report lists them. Following a description of the scientific councils under the aegis of each department, the research institutes subordinate to it is described in the order in which they were founded, and following that, the academicians and corresponding members of each department are listed with a brief biographical background sketch.

Figure 7
Research Institutes in Ukraine, 1919-1990



Source: B. S. Stognii, editor, *Akademiya Nauk Ukrainskii SSR*. Kiev: Science House, 1990, 432 pp. See pages 418-419.

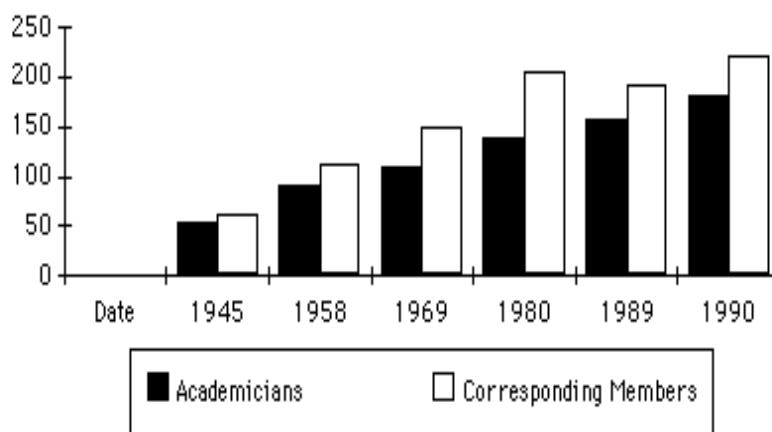
Figure 8



Source: B. S. Stognii, *op. cit.*, pp. 418-419.

Figure 9

Ukraine Academy Membership, 1945-1990



Source: B. S. Stognii, *op. cit.*

**SECTION OF PHYSICAL-ENGINEERING &
MATHEMATICAL SCIENCES**

252601 Kiev, Ukraine
Volodymyrska, 54
(044)225-3185

Department of Mathematics, Mechanics, and Cybernetics

252601 Kiev, Ukraine
Volodymyrska, 54
(044)225-2384

Members of the Department: The Mathematics Department counted 25 members in 1990--12 academicians and 13 corresponding members. There were two directors and two deputy directors of institutes among this membership. Five of the members of this department were also either academicians or corresponding members of the Mathematics or the Information Sciences, Computer Technology, and Automation department of the AN SSSR.

Academicians: All birthdates of the 12 academicians of this department are known. In 1991, one academician was in his 90s; one in his 80s; nine in their 70s; seven in their 60s; and two in their 50s.

Corresponding Members: The birthdates of all of the 13 corresponding members is known. The oldest of the corresponding members was 81; eight were in their 60s; and five were in their 50s.

Academician Secretary

Mitropol'skii, Iurii A ., D. Tech. S. Born in 1917. Academician of the Ukrainian academy since 1961. Since 1966, academician secretary of the Mathematics and Cybernetics Department of the Ukrainian Academy of Sciences. Academician of the Mathematics Department of the AN SSSR since 1984. Recipient of the State Prize for Science and Technology in 1980. Since 1958, he has been director of the Mathematics Institute in Kiev subordinate to the Mathematics Department of the Ukrainian Academy of Sciences. Awarded the V. I Vernadskii Prize for Geology, Geochemistry and Hydrophysics in 1985. Ukraine Academy of Sciences Hero of Socialist Labor Prize recipient in 1986.

Academicians

Berezanskii, Iurii M. (Differential Equations) Born in 1925. Awarded the N. M Krilov Prize in Mathematics, Mathematical Physics and Theoretical Cybernetics in 1980; elected in 1988.

Bogolubov, Nikolai N. (Mathematical Physics) Born in 1909, elected in 1948.

Gnedenko, Boris V ., D. PM. S. (Mathematics) Born in 1912. Academician since 1948. Recipient of the SSSR State Prize in 1976.

Ishlinskii, Aleksandr Iu. (Mechanics) Born in 1913, elected in 1948. Recipient of the Lenin Prize in 1960. Ukraine Academy of Sciences Hero of Socialist Labor Prize recipient in 1961. Awarded the A. N. Dinnik Prize for Mechanics and Machine Building in 1981.

Koroliuk, Vladimir S . D. PM. S. (Mathematics) Born in 1925. Awarded the N. M Krilov Prize in Mathematics, Mathematical Physics and Theoretical Cybernetics in 1976. Academician since 1976. Recipient of the State Prize for Science and Technology in 1978. Awarded the V. M. Glushkov Prize for Cybernetics, Computer Machine and Systems Theory in 1988.

Marchenko, Vladimir A., D. PM. S. (Mathematical Physics) Born in 1922. Recipient of the Lenin Prize in 1962. Academician of the Mathematics and Cybernetics Department of the Ukrainian Academy of Sciences since 1969. Awarded the N. M Krilov Prize in Mathematics, Mathematical Physics and Theoretical Cybernetics in 1983. Academician of the Mathematics Department

of the AN SSSR since December 1987. Recipient of the State Prize for Science and Technology in 1989.

Mitropolskii, Iu. A. . D. Tech. S. (See above.)

Pastiur, Leonid A. (Mathematics) Born in 1937, elected in 1990.

Pogorelov, Aleksei V. ., D. PM. S. (Geometry) Born in March 1919 in Korocho in what is now Belgorod Oblast. Soviet mathematician. Recipient of the SSSR State Prize in 1950. He has been a corresponding member of the Ukrainian academy since 1951 and an academician of the Mathematics and Cybernetics department of the Ukrainian academy since 1961. He has been a corresponding member of the Mathematics department of the AN SSSR since 1960, and an academician since 1976. He was originally elected to the Physical Mathematical Sciences department. From 1978 to 1990, he was been a member of the presidium of the Ukrainian Academy of Sciences. He graduated from the N. E. Zhukhovskii Air Force Engineering Academy in 1945, and taught at the University of Kharkov from 1947. He joined the Physics Technical Institute of Low Temperatures of the Ukrainian AN SSSR in 1960. He developed a complete theory of convex surfaces and has done research on bending of surfaces. He has published studies on the foundations of geometry and on the development and successful application of far-reaching geometric methods for the study of deformations of thin shells. He was a deputy to the 8th Convocation of the Supreme Soviet of the Ukrainian SSR. State Prize, 1950; the N. I. Lobachevskii Prize, 1959; and the Lenin Prize, 1962. Recipient of the State Prize for Science and Technology in 1973. He was awarded the N. M Krilov Prize in Mathematics, Mathematical Physics and Theoretical Cybernetics in 1988. (GSE 20, p. 260.)

Sergeev, Vladimir G. ., C. Tech. S. (Automatation Management) Born in 1914. Recipient of the Lenin Prize in 1957. Recipient of the SSSR State Prize in 1967. Awarded the M. K. Iangel Prize for Applied and Technical Mechanics in 1981. Academician since 1982.

Skorokhod, Anatolii V. ., D. Tech. S. (Mathematics) Born in 1930. Awarded the N. M Krilov Prize in Mathematics, Mathematical Physics and Theoretical Cybernetics in 1970. Recipient of the State Prize for Science and Technology in 1982. Academician since 1985.

Skripnik, Igor V. (Mathematics) Born in 1940. Academician since 1985. Director of the Applied Mathematics and Mechanics Institute in Donetsk since 1977. The institute was founded in 1971 and is responsible for scientific research into nonlinear problems of mathematical physics having free boundaries, applied hydraulics, metal welding, rock stress, and automated planning and control systems for industrial enterprises. Recipient of the State Prize for Science and Technology in 1989.

Corresponding Members

Bogoliubov, Aleksei I. (Mechanics) Born in 1911, elected in 1969.

Dziadik, Vladislav A. ., D. PM. S. (Mathematics--Computer Science) Born in 1919. Corresponding member since 1969.

Fushchich, Vil'gel'm I. (Mathematical Physics) Born in 1936, elected in 1988.

Iadrenko, Mikhail I. (Mathematics) Born in 1932, elected in 1990.

Kharlamov, Pavel V. (Mechanics) Born in 1924, elected in 1965.

Kit, Grigorii S. (Mathematical Problems of Mechanics) Born in 1930. Awarded the A. N. Dinnik Prize for Mechanics and Machine Building in 1987; elected in 1990.

Korneichuk, Nikolai P. ., D. PM. S. (Mathematics) Born in 1920. Corresponding member since 1972.

Koshliakov, Vladimir N. ., D. PM. S. (Mechanics) Born in 1922. Recipient of the SSSR State Prize in 1976; elected in 1978. Awarded the N. M Krilov Prize in Mathematics, Mathematical Physics and Theoretical Cybernetics in 1987.

Lukovskii, Ivan A ., D. PM. S. (Mathematics) Born in 1935. Corresponding member since 1985.

Ostrovskii, Iosif V ., D. PM. S. (Mathematics) Born in 1934. Corresponding member since 1978.

Petrina, Dmitrii Ia. (Mathematical Physics) Born in 1934. Awarded the N. M. Krilov Prize in Mathematics, Mathematical Physics and Theoretical Cybernetics in 1984; elected in 1988.

Samoilenko, Anatolii M. (Mathematics) Born in 1938; elected in 1978.

Sharkovskii, Aleksandr N ., D. PM. S. (Mathematics) Born in 1936. Corresponding member since 1978.

Research Institutes : The Mathematics Department manages two Scientific Councils: the scientific council on common mechanics under V. N. Koshliakov--recipient of the SSSR State Prize in 1976; and the council on program development of fundamental and practical research in the mathematical sciences in Ukraine under Iu. A. Mitropol'skii--recipient of the State Prize for Science and Technology in 1980. Although there are only three scientific research institutes subordinate to the Mathematics Department, these 360 mathematicians in these three institutes are among the leading scientists in Ukraine. The institutes are presented below in the order of their founding:

Mathematics Institute in Kiev.

252601 Kiev, Ukraine
Tereschenkovskaya, 3
(044)2255051
(044)2252010 (fax)
mathem@sovam.com (email)

Founded in 1934, from several existing commissions. Its first director was D. A. Grave. Others were: A. M. Samoilenko and Iurii A. Mitropolskii. In 1990, the institute had three academicians on the staff whose researchers numbered 165 of whom 45 held the doctorate and 120 the candidate degree. Research priorities in the institute include: theory of differential equations, mathematics of physics, statistical theory, theory of functions, topology, algebra, the dynamics of special mechanical systems, computer programming and the institute develops various fields of mathematics for the natural sciences and technology. Since its inception in 1934, the institute has graduated 82 doctorates and 748 candidates of mathematics. Director: Mitropolskii, Iurii A., D. Tech. S., 1958. The present director is Iurii A. Mitropolskii.

Applied Mathematics and Mechanics Institute in Donetsk.

340114 Donetsk, Ukraine
Luxemburg, 74
(0622)552394
(0622)552265 (fax)
postmaster@iamm.donetsk.ua (email)

Institute of Applied Problems of Mechanics & Mathematics UAS

290601 Lviv, Ukraine
Naukova, 3b
(0322)352597
(0322)632184 (fax)
postmaster@ippmm.lviv.ua (email)

Founded in 1965. Its first director was Academician I. I. Daniliuk. The staff of

the institute numbers 69 of whom 15 hold the doctorate and 54 the candidate degree. Research emphasis includes: nonlinear problems of mathematical physics having free boundaries, theory of the structure of differential equations, applied hydraulics, metal welding, rock stress, and automated planning and control systems for industrial enterprises. The present director is Igor V. Skripnik--recipient of the State Prize for Science and Technology in 1989.

Applied Problems of Mechanics and Mathematics Institute in L'vov. Founded in 1978 on the L'vov branch of the Mathematical Physics Institute of Mathematics of the Ukraine Academy of Sciences. Two corresponding members of the Ukraine Academy are on the staff which totals 126 researchers of whom 15 hold doctorates and 111 candidate degrees. The institute studies functional analysis, fundamental and applied problems of algebra, solid state mechanics and mathematical physics, including the theory of differential and integral equations and matrix polynomials. The present director of the institute is unknown.

Department of Informatics, Computers & Automation

252601 Kiev, Ukraine

Volodymyrska, 54

(044)224-1046

Membership in the department totalled 24 scientists in 1990, of whom nine are academicians and 15 are corresponding members. Three academicians were in their 50s, two in their 60s, and three in their 70s. The corresponding members, on the other hand, were younger: 11 were in their 50s, one in his 60s, and three in their 70s.

Academicians.

Ermol'ev, Iurii M ., D. PM. S. (Mathematical Cybernetics) Born in 1936. Corresponding member since 1976. Recipient of the SSSR State Prize in 1981. Awarded the V. M. Glushkov Prize for Cybernetics, Computer Machine and Systems Theory in 1987.

Kovalenko, Igor' N. (Theory of Mathematical Reliability) Born in 1935, elected in 1978. Awarded the V. M. Glushkov Prize for Cybernetics, Computer Machine and Systems Theory in 1984.

Kukhtenko, Aleksandr I. (Technical Cybernetics) Born in 1914, elected in 1972. Recipient of the State Prize for Science and Technology in 1978. Awarded the V. M. Glushkov Prize for Cybernetics, Computer Machine and Systems Theory in 1986.

Liashko, Ivan I. D. PM. S. (Economic Cybernetics) Born in 1922. Academician of the Mathematics and Cybernetics Department since 1973. Awarded the N. M Krilov Prize in Mathematics, Mathematical Physics and Theoretical Cybernetics in 1975. Recipient of the State Prize for Science and Technology in 1981. Member of the Presidium from 1978 to 1990.

Mikhalevich, Vladimir S ., D. PM. S. (Economic Cybernetics) Born in 1930. Recipient of the State Prize for Science and Technology in 1973. Since 1973, academician of the Mathematics, Mechanics, and Cybernetics Department of the Ukrainian Academy of Sciences. Awarded the V. M. Glushkov Prize for Cybernetics, Computer Machine and Systems Theory in 1984. Academician of the Information Science, Computer Technology, and Automation Department of the AN SSSR since 1984. In 1971, he was awarded the N. M. Krylov Ukrainian SSR Academy of Sciences Prize for his work on methods of optimization. In 1973, he received the Ukrainian SSR State Prize for undesignated research. In

1981, he was awarded--among a group of authors--the USSR State Prize for series of work on development and widespread introduction of modern mathematical methods of optimization published from 1962-79. Since 1982, he has been director of the V. M. Glushkov Cybernetics Institute in Kiev which was established in 1957 and given its present name in 1961. The institute researches in theoretical and economic cybernetics, computer engineering and design, system engineering, automatic control design, biomedical cybernetics, and science policy.

Skurikhin, Vladimir I., D. Tech. S. (Systems Theory and Technology) Born in 1926, elected in 1978. Deputy director of the V. M. Glushkov Cybernetics Institute in Kiev since 1971. Recipient of the SSSR State Prize in 1984. Awarded the S. A. Lebedev Prize in Computer Technology and Automatic Control Systems in 1987. Awarded the V. M. Glushkov Prize for Cybernetics, Computer Machine and Systems Theory in 1990.

Sergienko, Ivan V., D. PM. S. (Computer Mathematics) Born in 1936. Recipient of the State Prize for Science and Technology in 1972. Corresponding member since 1978. Recipient of the SSSR State Prize in 1981. Awarded the V. M. Glushkov Prize for Cybernetics, Computer Machine and Systems Theory in 1986. elected an academician in 1988.

Timofeev, Boris. B., D. Tech. S. (Systems Theory and Technology) Born in 1915. Recipient of the State Prize for Science and Technology in 1973. Academician of the Mathematics and Cybernetics Department of the Ukrainian academy since 1978. Since 1964, he has been the director of the Automation Scientific Research Center in Kiev which was founded in 1957 to assist in automating industry throughout the Soviet Union and which is subordinate to the Ministry of Instrument Making, Automation Equipment, and Control Systems. Recipient of the SSSR State Prize in 1980. Awarded the S. A. Lebedev Prize in Computer Technology and Automatic Control Systems in 1982.

Toma, Manfred. (Management Systems) Born in 1929, elected in 1990.

Corresponding Members:

Andron, Filipp I. (Informatics) Born in 1938. Awarded the V. M. Glushkov Prize for Cybernetics, Computer Machine and Systems Theory in 1989; elected in 1990.

Bublik, Boris N., D. PM. S. (Construction Mechanics) Born in 1936, elected in 1978.

Gasonov, Lev G. (Computer and Information Technology) Born in 1936, elected in 1990.

Iushchenko, Ekaterina L. (Automatic Data Processing Systems) Born in 1919, elected in 1976. Recipient of the State Prize for Science and Technology in 1978. Awarded the V. M. Glushkov Prize for Cybernetics, Computer Machine and Systems Theory in 1985.

Ivakhnenko, Aleksei G. Born in 1913, elected in 1961.

Kuchtsevich, Vsevolod M. (Cybernetics) Born in 1929, elected in 1988.

Letichevskii, Aleksandr A. (Informatics) Born in 1935. Recipient of the SSSR State Prize in 1968. Awarded the V. M. Glushkov Prize for Cybernetics, Computer Machine and Systems Theory in 1985. Elected a corresponding member in 1990.

Malinovskii, Boris N. (Computer Technology) Born in 1921, elected in 1969. Recipient of the State Prize for Science and Technology in 1977. Awarded the S. A. Lebedev Prize in Computer Technology and Automatic Control Systems in 1978. Awarded the V. M. Glushkov Prize for Cybernetics, Computer Machine and Systems Theory in 1990.

Morozov, Anatolii A. (Management of Complex Automatic Systems) Born in 1939. Recipient of the State Prize for Science and Technology in 1970. Recipient of the SSSR State Prize in 1977. Awarded the S. A. Lebedev Prize in Computer Technology and Automatic Control Systems in 1987; elected a

corresponding member in 1988.

10. 1939. Awarded the S. A. Lebedev Prize in Computer Technology and Automatic Control Systems in 1983. Recipient of the State Prize for Science and Technology in 1988; elected in 1990.

Petrov, Viacheslav V. (Optical Information Storage) Born in 1940, elected in 1988.

Pshenichnii, Boris N ., D. PM. S. (Mathematics) Born in 1937. Recipient of the State Prize for Science and Technology in 1978. Recipient of the SSSR State Prize in 1981. Corresponding member since 1985.

Samoilenko, Anatolii M ., D. PM. S. (Mathematical Modeling of Physical Processes) Born in 1938. Corresponding member since 1978. Awarded the N. M Krilov Prize in Mathematics, Mathematical Physics and Theoretical Cybernetics in 1981. Recipient of the State Prize for Science and Technology in 1985.

Stognii, Anatolii A ., D. PM. S. (Automatic Data Processing Systems) Born in 1932. Since 1976, he has been a corresponding member of the Mathematics, Mechanics, and Cybernetics Department of the Ukrainian Academy of Sciences; and since 1984, he has been a corresponding member of the Information Sciences, Computer Technology, and Automation Department of the AN SSSR. Since 1964, he has been deputy director of the V. M. Glushkov Cybernetics Institute at Kiev. In 1967, he was awarded the N. Ostrovskii Ukrainian Lenin Komsomol Central Committee prize for his work on digital computer software. In 1968, he received the SSSR State prize for software incorporated into the Mir computer.

Shor, Naum Z. (Mathematical Cybernetics) Born in 1937. Recipient of the State Prize for Science and Technology in 1973. Recipient of the SSSR State Prize in 1981. Awarded the V. M. Glushkov Prize for Cybernetics, Computer Machine and Systems Theory in 1987; elected corresponding member in 1990.

Research Institutes: This institute was previously part of the Mathematics and Cybernetics Department. In 1989, it became a separate department of the Ukraine Academy. It brought with it, in addition to personnel and institutes, the Scientific Council on Cybernetics which is headquartered in this department under the chairmanship of V. S. Mikhalevich--awarded the V. M. Glushkov Prize for Cybernetics, Computer Machine and Systems Theory in 1984. The department has two scientific research institutes directly subordinate to it.

**V.M. Glushkov Institute of Cybernetics
in Kiev Founded in 1962.**

252207 Kiev,

Ukraine

Glushkova, 40

(044)2662008

(044)2667418 (fax)

postmaster@icyb.kiev.ua (email)

The V.M. Glushkov Institute of Cybernetics is **one of three institutes** that form the Cybernetical Center. It is the largest of the three, employing approximately 2,000 scientists and support personnel. The Institute of Mathematical Machines and Systems has 1,800 personnel while the Institute of Programming Systems has 400 personnel. The research at the **Institute of Cybernetics** has four major directions:

1. Mathematics and economic theory, which emphasize optimization theory and include some research on computer- aided design.
2. Computer techniques and microelectronics design, which are oriented

- toward computer hardware design. This section of the institute has been responsible for design of CPU chips, and produced the Electron S-5.
3. Control systems and management, which emphasize theoretical studies.
 4. Information technology and systems.

This is the largest of the Ukrainian Academy Institutes with a staff which numbered 828 in 1990, of whom 73 held the doctorate and 555 the candidate degree. Six academicians and 12 corresponding members of the Ukraine Academy were on the staff. The researchers held some 52 science medals and prizes among themselves. Research is conducted in theoretical and economic cybernetics, computer engineering and design, system engineering, automatic control design, biomedical cybernetics, and science policy. The present director is Vladimir S. Mikhalevich, D. PM. S.--awarded the V. M. Glushkov Prize for Cybernetics, Computer Machine and Systems Theory in 1984.

Institute of Cybernetics, Poltava Branch UAS

314601 Poltava, Ukraine
Koval, 3
(0532)20818
(0532)79160 (fax)

Problems of Information Registration Institute in Kiev.

Institute of Information Recording Problems UAS

252113 Kiev, Ukraine
Shpak, 2
(044)4463318
(044)4461491 (fax)
postmaster@pri.kiev.ua (email)

The institute was founded in 1987. The staff of the institute numbers 36 of whom five hold the doctorate and 31 the candidate degree. Institute scientists are developing the principles of optical scanning, the development of optical storage systems, and work on computer programming. Its first and present director is V. V. Petrov, corresponding member of the Ukraine Academy.

Institute of Problems of Artificial Intellect UAS

340048 Donetsk, Ukraine
Artema, 118 b
(0622)553172
(0622)553172 (fax)

Department of Mechanics

252601 Kiev, Ukraine
Volodymyrska, 54
(044)224-8877

Members of the department: With only one research institute under its jurisdiction, the Mechanics Department is one of the older departments in the Ukrainian academy with the result that it has a rather high membership of some 37 persons. In 1989, five of the 13 academicians were directors of SRIs; two corresponding members were directors of institutes; and, two corresponding members were deputy directors of scientific research institutes. Obviously these scientists directed institutes under the jurisdiction

of other departments of the academy or of governmental ministries. One rector and one prorector of Ukrainian institutions of higher learning belonged to this department.

Academicians: The birthdates of all 15 academicians belonging to the Mechanics Department are known. Three academicians were in their 80s; six in their 70s; three in their 60s; and one in his 50s.

Corresponding Members: The birthdates of 22 corresponding members is known. In 1991, one was in his 90s; three in their 80s; seven in their 70s; five in their 60s; and six in their 50s.

Academician Secretary: Vacant

Academicians

Bondar', Nikolai G. , D. Tech. S.(Construction Mechanics) Born in 1920. Academician since 1979. Awarded the A. N. Dinnik Prize for Mechanics and Machine Building in 1986.

Budnik, Vasilii S. , D. Tech. S. (Mechanics, Machinery Construction) Born in 1913. Academician since 1967. Ukraine Academy of Sciences Hero of Socialist Labor Prize recipient in 1959. Recipient of the Lenin Prize in 1960. Awarded the M. K. Iangel Prize for Applied and Technical Mechanics in 1982.

Guz', Aleksandr N. , D. Tech. S. (Mechanics) Born in 1939. Academician since 1978. Awarded the A. N. Dinnik Prize for Mechanics and Machine Building in 1979. Director of the Mechanics Institute in Kiev since 1976. Established in 1919, the institute works on problems of thermoelasticity, vibrations, static stability, modeling of polymer designs, and the plasticity of materials. Recipient of the State Prize for Science and Technology in 1979 and 1988. Awarded the M. K. Iangel Prize for Applied and Technical Mechanics in 1983. Recipient of the SSSR State Prize in 1985.

Kosmodamianskii, Aleksandr S. D. Tech. S. (Mining Engineering) Born in 1923. Corresponding member since 1965; elected academician in 1990. Awarded the A. N. Dinnik Prize for Mechanics and Machine Building in 1983. Since 1979, he has been prorector of the Donetsk State University in Donetsk which was established in 1965.

Lebedev, Anatolii A. D. Tech S.(Mechanics) Born in 1931. Corresponding member since 1978; elected academician in 1988.

Logvinovich, Georgii V. , D. Tech. S.(Hydromechanics) Born in 1913. Academician since 1967. Recipient of the Lenin Prize in 1978.

Lotarev, Vladimir A. , D. Tech S.(Machine Construction) Born in 1914. Recipient of the Lenin Prize in 1960. Ukraine Academy of Sciences Hero of Socialist Labor Prize recipient in 1974. Recipient of the SSSR State Prize in 1948 and 1976. Academician since 1985. Awarded the M. K. Iangel Prize for Applied and Technical Mechanics in 1987.

Mossakovskii, Vladimir I. , D. PM. S.(Mechanics and Machine Construction) Born in 1919. Recipient of the SSSR State Prize in 1970. Academician since 1972. Since 1967, rector of the 300th Anniversary of the Union of the Ukraine and Russia Dnepropetrovsk State University in Dnepropetrovsk, established in 1918. Ukraine Academy of Sciences Hero of Socialist Labor Prize recipient in 1982.

Pilipenko, Viktor V. (Engine Dynamics) Born in 1935, elected in 1982.

Pisarenko, Georgii S. , D. Tech. S.(Mechanics, Machinery Stability) Born in 1910. Academician since 1964. Recipient of the State Prize for Science and Technology in 1969. He was elected to the presidium of the academy in 1978. He has been the director of the Strength Problems Institute in Kiev since 1977. The institute was created in 1966 and does research in mechanical failure of all types of materials as influenced by temperature, strain rate, state of stress, and environment. Since 1982, he has served as chairman of the Northwestern Science center of the Ukrainian academy.

Poliakov, Nikolai S. (Mining) Born in 1903, elected in 1967.
Poturaev, Valentin N . (Mining Mechanics) Born in 1922. Recipient of the State Prize for Science and Technology in 1975; acadecian since 1979. Director of the Geotechnical Mechanics Institute in Dnepropetrovsk since 1975.
Prisniakov, Vladimir F. (Mechanics) Born in 1937, elected in 1990.
Troshchenko, Valerii T. (Structural Mechanics) Born in 1929. Recipient of the State Prize for Science and Technology in 1969; elected in 1979.
Utkin, Vladimir F., D. Tech. S.(Mechanics) Born in 1923. Academician of the Mechanics Department of the Ukrainian Academy of Sciences since 1976. Awarded the M. K. Iangel Prize for Applied and Technical Mechanics in 1980. Academician since 1984--of the Problems of Machine Building, Mechanics and Control Processes Department of the An SSSR. Member of the presidium since October 1988. Recipient of the Lenin Prize in 1964. Ukraine Academy of Sciences Hero of Socialist Labor Prize recipient in 1969 and 1976.

Corresponding Members

Bublik, Boris N. (Structural Mechanics) Born in 1936, elected in 1979.
Burak, Ia. I. (Mechanics) Born in 1936. Recipient of the State Prize for Science and Technology in 1975. Corresponding member since 1985.
Dadenkov, Iurii N. (Hydraulics) Born in 1911, elected in 1961.
Efremov, Ernest I ., D. Tech S. (Mechanics, Geodynamic Explosions) Recipient of the State Prize for Science and Technology in 1983. Corresponding member since 1985. Awarded the A. N. Dinnik Prize for Mechanics and Machine Building in 1989.
Fedorovskii, Aleksandr D. (Geodynamics) Born in 1931, elected in 1982.
Golego, Nikolai L ., D. Tech. S.(Mechanics, Machine Construction) Born in 1914. Corresponding member since 1967.
Grigorenko, Ia. M. , D. Tech. S.(Mechanics) Born in 1927. Corresponding member since 1978. Deputy director of the Mechanics Institute in Kiev since 1977. Established in 1919, the institute works on problems of thermoelasticity, vibrations, static stability, modeling of polymer designs, and the plasticity of materials. Recipient of the State Prize for Science and Technology in 1979. Awarded the M. K. Iangel Prize for Applied and Technical Mechanics in 1985.
Ivanchenko, Fedor K . (Mechanics) Born in 1918. Corresponding member since 1982.
Kovtunencko, Viacheslav M., D. Tech. S. (Mechanics) Born in 1921. Corresponding member since 1972. Corresponding member of the General Physics and Astronomy Department of the AN SSSR since 1984. Scientific director of the Babakin Testing Center. Ukraine Academy of Sciences Hero of Socialist Labor Prize recipient in 1961.
Martiniuk, Anatolii A . (Dynamic Transportation Facilities) Born in 1941. Awarded the N. M Krilov Prize in Mathematics, Mathematical Physics and Theoretical Cybernetics in 1981; elected in 1988.
Matveev, Valentin V. (Dynamics, Machine Stability) Born in 1929. Recipient of the SSSR State Prize in 1982. Awarded the A. N. Dinnik Prize for Mechanics and Machine Building in 1985; elected corresponding member in 1990.
Nikitin, Pavel I ., D. Tech. S. (Mechanics) Born in 1916. Awarded the M. K. Iangel Prize for Applied and Technical Mechanics in 1978. Corresponding member since 1982.
Oleinik, Aleksandr Ia. (Hydromechanics) Born in 1929. Corresponding member since 1973. Director of the Hydromechanics Scientific Research Center in Kiev since 1972. The institute studies high velocity hydrodynamics. Recipient of the State Prize for Science and Technology in 1981. Awarded the A. N. Dinnik Prize for Mechanics and Machine Building in 1990.
Povkh, Ivan L ., D. Tech. S. (Aerogasdynamics) Born in 1909. Corresponding

member since 1961.

Shevchenko, Iu. N. , D. Tech. S.(Mechanics) Born in 1926. Recipient of the State Prize for Science and Technology in 1986. Corresponding member since 1982. Awarded the M. K. Iangel Prize for Applied and Technical Mechanics in 1985.

Shimanovskii, Vitalii N. (Structural Mechanics) Born in 1928. Corresponding member since 1982.

Shul'ga, Nikolai A. (Mechanics) Born in 1938. Awarded the A. N. Dinnik Prize for Mechanics and Machine Building in 1986; elected in 1990.

Smitanin, Iurii A. (Hydraulic Mechanics) Born in 1925, elected in 1988.

Ulitko, Andrei F. , D. PM. S. (Mechanics) Born in 1934. Corresponding member since 1982. Awarded the A. N. Dinnik Prize for Mechanics and Machine Building in 1984. Recipient of the State Prize for Science and Technology in 1988.

Ushkalov, Viktor F. (Mechanics) Born in 1936, elected in 1990.

Vaslenko, Petr M. , D. Tech. S. (Machine Control, Agricultural Mechanics) Born in 1900. Corresponding member since 1939.

Research Institutes: The Scientific Council on Solid State Mechanical Deformations is headed by personnel from this department. In 1990, there were five scientific research institutes subordinate to the department: Membership in the department totalled 37, of whom 15 were academicians and 22 were corresponding members.

Mechanics Institute in Kiev.

Institute of Mechanics UAS

252057 Kiev, Ukraine

Nesterova, 9

(044)4460319

(044)4460319 (fax)

postmaster@min.kiev.ua (email)

Although founded in 1919, the institute has functioned under several different names over the years. Its directors have included: Academician S. P. Timoshenko, D. A. Grave, K. K. Siminskii, S. V. Serensen, N. V. Kornoukhov, F. P. Beliankin, G. N. Savin, A. D. Kovalenko, and V. O. Kononenko. The staff numbered 206 in 1990, of whom 16 held the doctorate and 132 the candidate degree. Five corresponding members of the Ukrainian Academy are on the staff. The institute's researchers work on problems of thermoelasticity, vibrations, static stability, modeling of polymer designs, and the plasticity of materials. The present director is Aleksandr N. Guz', D. Tech. S.--Recipient of the State Prize for Science and Technology in 1979 and 1988. Awarded the M. K. Iangel Prize for Applied and Technical Mechanics in 1983.

Institute of Hydromechanics Ukrainian Academy of Sciences in Kiev.

Institute of Hydromechanics UAS

252057 Kiev, Ukraine

Zhelabova, 8/4

(044)4467194

(044)4462229 (fax)

postmaster@inm.kiev.ua (email)

It was founded in 1926, joining the Ukrainian Academy in 1934. In 1938, it was called the Hydrology Institute; in 1944, the Hydrology and Hydrotechnical Institute, and, finally, in 1963, it received its present name. Its first director was Academician E. V. Oppokov. The staff of the institute numbered 84 in 1990,

of whom 14 held the doctorate and 70 the candidate degree. The institute's scientists research hydroacoustics, the hydrodynamics of various objects, turbulence and stratification of water, water hydrodynamics and hydrotechniques. The present director is V. T. Grinchenko, corresponding member of the Ukraine Academy. The Hydromechanics Institute is one of three institutes in Kiev that belong to the Department of Mechanics of the Ukrainian Academy of Sciences. The center is concerned with a wide range of hydrodynamics and hydroacoustics. The other mechanics institutes study solid body mechanics and the strength of various materials in harsh environments. In 1995, the Hydromechanics Institute employed 150 researchers and had a total staff of over 300 persons.

The twelve departments at the Hydromechanics Institute are listed below:

- * **Hydrodynamic Acoustics**
- * **Vortex Motions**
- * **Hydrobionics and Boundary Layer Control**
- * **Free Boundary Flows**
- * **Hydrothermal Processes Modelling**
- * **Hydrodynamic Processes Control**
- * **Technical Hydromechanics**
- * **Applied Hydrodynamics**
- * **Hydrodynamics of Wave Processes**
- * **Hydrodynamics of Hydraulic-Engineering Structures**
- * **Dynamics of Elastic Systems**
- * **Stratified Flows**

Strength Problems Institute in Kiev.

Institute of Problems of Strength UAS
252014 Kiev, Ukraine
Timiryazevskaya, 2
(044)2951687
(044)2961684 (fax)

Founded in 1966 from a sector on stability of the Materials Problems Institute. It was renamed in 1988. Its first director was Georgii S. Pisarenko. In 1990, Three academicians and one corresponding member of the Ukraine Academy were on its staff which numbered 182 of whom 28 held doctorates and 154 candidate degrees. Research efforts concentrate on mechanical failure of all types of materials as influenced by temperature, strain rate, state of stress, and environment. The present director is Academician V. T. Troshchenko.

Geotechnical Mechanics Institute in Dnepropetrovsk.

Institute of Geological Engineering UAS
320095 Dnipropetrovsk, Ukraine
Simpheropolskaya, 2a
(0562)460151
(0562)462426 (fax)

Founded in 1967. Its first director was Academician N. S. Poliakov. The staff numbered 164 in 1990. Twenty of the staff held doctorates and 144 held candidate degrees. Institute staff studies the physics and mechanics of rocks and the development of new geotechnical techniques and develops new geotechnical scientific instruments, and specializes on research on mineral resources and characteristics and metallurgical problems. The present director is Valentin N. Poturaev, D. Tech. S.--recipient of the State Prize for Science and Technology

in 1975.

Technical Mechanics Institute in Dnepropetrovsk was founded in 1980.

Institute of Engineering Mechanics UAS
320600 Dnipropetrovsk, Ukraine
Leshko-Popel 15
(0562)472533
(0562)473413 (fax)

The staff of the institute numbered 148 researchers in 1990, of whom 16 held the doctorate and 132 the candidate degree. Two academicians and one corresponding member of the Ukraine Academy were on its staff. The institute does research; on; regional dynamics, complex mechanical and hydromechanical systems, stability, carrying capacity and reliability of complex mechanical systems. Academician V. V.Pilinenko is the present director.

**Physics-Engineering Institute of Low
Temperatures UAS**

310164 Kharkiv, Ukraine
Lenina, 47
(0572)321223
(0572)322370 (fax)
postmaster@ilt.kharkov.ua (email)

Physics and Astronomy Department

Department of Physics & Astronomy
252601 Kiev, Ukraine
Volodymyrska, 54
(044)224-0651

Members of the Physics and Astronomy Department: In 1987, the Physics and Astronomy Department counted the largest membership of the 12 subject-matter departments in the Ukrainian Academy of Sciences--62--of whom, 28 were academicians and 34 were corresponding members. The department also controlled the largest number of SRIs (nine). In January of 1990, membership in the Physics and Astronomy department totalled 58, of whom 30 were academicians and 28 were corresponding members. In 1987, 18 of the members of this department were or had been directors or deputy directors of SRIs--11 of the academicians and seven of the corresponding members. Only one member of this department was also a member of a department of the AN SSSR, despite the sophisticated development of physics research in the Ukraine.

Academicians: All of the 30 academicians' birthdates are known. In 1990, one academician was in his 90s, 9 academicians of this department were in their 80s; six were in their 70s; 10 were in their 60s; and four were in their 50s.

Corresponding Members: In 1990, among the corresponding members, the age distribution was as follows: two were in their 80s; four were in their 70s; 11 were in their 60s; and 11 were in their 50s.

Academician Secretary:

Brodin, Mikhail S. , D. PM. S.(Solid State Physics) Born in 1931. Academician since 1982. Academic secretary of the Physics and Astronomy Department since March 1990.

Academicians

Akhiezer, Aleksandr I. , D. PM. S.(Theoretical Physics) Born in 1911. Academician since 1964. Recipient of the State Prize for Science and Technology in 1986.

Bar'iakhtar, Viktor G. (Solid State Physics) Born in 1930, elected in 1978. Awarded the N. M Krilov Prize in Mathematics, Mathematical Physics and Theoretical Cybernetics in 1985. (Academic secretary of the Mechanics Department since 1989.??)

Bogoliubov, Nikolai N., D. PM. S. (Mathematical Physics) Born in 1909 in Nizhny Novgorod. Soviet mathematician and theoretical physicist. He has been a corresponding member of the AN SSSR since 1946 and since 1948, an academician of the Physics and Astronomy Department of the Ukrainian Academy of Sciences. Since 1953, he has been an academician of the Nuclear Physics Department of the AN SSSR. He has served as academician secretary of the Mathematics Department of the AN SSSR since 1963. He went directly into graduate work at the Ukrainian Academy of Sciences in 1925. Following that, he worked at both the Ukrainian academy and Academy of Sciences of the USSR. Since 1965, he has been director of the Joint Institute for Nuclear Research at Dubna which was established in 1956 by an agreement between the USSR and 10 bloc country members for collaboration in nuclear physics development. His works have included approximation methods of mathematical analysis, mathematical physics, asymptotic methods of nonlinear mechanics, the theory of dynamic systems, statistical physics, and quantum field theory. He developed a method for distributing function chains for non-equilibrium processes in 1946, provided mathematical grounds for microscopic theory of super fluidity in 1947, provided the first proof of dispersion ratios in quantum field theory in 1956, and constructed a mathematical theory of superconductivity in 1958. He has founded schools of non-linear mechanics, statistical physics, and quantum field theory. He was awarded the State Prizes in 1947, 1953 and 1984 and the Lenin Prize in 1958. Ukraine Academy of Sciences Hero of Socialist Labor Prize recipient in 1969 and 1979. Recipient of the State Prize for Science and Technology in 1987. From 1937 to 1958 he produced eight major monographs. He was a participant in the Pugwash movement. In 1984, he was recipient of the USSR State Prize in Science and Technology for works published from 1955 to 1956 and co-authored by Shirkov and Logunov. The papers were entitled "The Renormalization Group Method in Field Theory." In 1988, he was appointed advisor to the national academy's presidium. (GSE 3, p. 396. See also: GSE, 18, pp. 135-136 for article on the Joint Institute for Nuclear Research in Dubna.)

Braude, Semen Ia. , D. Tech. S.(Radioastronomy) Born in 1911. Recipient of the SSSR State Prize in 1952. Academician since 1969. Deputy director of the Radio Physics and Electronics Institute in Kharkov since 1957. The institute was created in 1955 to research physical and quantum electronics, the dissemination of radio waves, the scattering of radar signals from the sea surface, high frequency characteristics of solids, electron optics, decametric radio astronomy, and long distance radio communication.

Brodin, Mikhail S. , D. PM. S.(Solid State Physics) Born in 1931. Recipient of the Lenin Prize in 1966. Recipient of the SSSR State Prize in 1982. Academician since 1982. Academic secretary of the Physics and Astronomy Department since March 1990.

Davidov, Aleksandr S. , D. PM. S. Born in 1912. Academician since 1964. Recipient of the Lenin Prize in 1966. Recipient of the State Prize for Science and Technology in 1969. Director of the Theoretical Physics Institute in Kiev

since 1973. Ukraine Academy of Sciences Hero of Socialist Labor Prize recipient in 1982.

Dmitrenko, Igor M., D. PM. S.(Physics of Low Temperature) Born in 1928. Corresponding member since 1976. Academician since 1988. Deputy director of the Low Temperature Physical Technical Institute in Kharkov since 1970.

Eremenko, Viktor V., D. PM. S.(Solid State Physics) Born in 1932. Recipient of the State Prize for Science and Technology in 1971. Awarded the E. O. Paton Prize for the Creation of New Metals and Metal Processes in 1973. Academician since 1978. Awarded the K. D. Sinel'nikova Prize for Physics in 1985.

Fainberg, Ia. B., D. PM. S.(Theoretical Radio Physics) Born in 1918. Academician since 1979.

Gaiyko, Vladimir (Solid State Physics) Born in 1920, elected in 1990.

Iatskiv, Ia. S., C. PM. S.(Astronomy) Born in 1940. Recipient of the State Prize for Science and Technology in 1983. Academician since 1985. Director of the Main Astronomical Observatory at Kiev since 1976. It was founded in 1944 and its research centers on terrestrial rotation measurement, construction of coordinate systems in outer space, planetary atmosphere physics, and stellar physics. Since 1985, vice president of the International Astronomical Union. Recipient of the SSSR State Prize in 1986.

Iukhnovskii, Igor R., D. PM. S.(Theoretical Physics) Born in 1925. Academician since 1982. Awarded the N. M Krilov Prize in Mathematics, Mathematical Physics and Theoretical Cybernetics in 1986.

Kasha, Mikhail. (Molecular Electroscopy) Born in 1920, elected in 1990.

Kurdiumov, Georgii V. (Metal Physics) Born in 1902, elected in 1939. Recipient of the SSSR State Prize in 1949. Ukraine Academy of Sciences Hero of Socialist Labor Prize recipient in 1969. Recipient of the State Prize for Science and Technology in 1984.

Lazarev, Boris G., D. PM. S.(Physics) Born in 1906. Recipient of the SSSR State Prize in 1951. Academician since 1951. Recipient of the State Prize for Science and Technology in 1982.

Lisitsa, Mikhail P., D. PM. S.(Solid State Physics, Spectroscopy, Optical Electronics) Born in 1921. Recipient of the State Prize for Science and Technology in 1981. Academician since 1982.

Manshelii, Vadim G. (Experimental Physics) Born in 1933, elected in 1990.

Nakhodkin, Nikolai G. (Radiophysics, Radioastronomy) Born in 1925. Recipient of the State Prize for Science and Technology in 1970; elected in 1990.

Nasechnik, Mitrofan V. Born in 1912, elected in 1961.

Nemoshkalenko, Vladimir V., D. PM. S.(Solid State Physics, Spectroscopy, Optic Electronics) Born in 1933. Recipient of the State Prize for Science and Technology in 1980. Awarded the K. D. Sinel'nikova Prize for Physics in 1977. Academician since 1982. Deputy director of the Metal Physics Institute in Kiev since 1974. The institute was established in 1945 and studies phase transformations in a solid state, crystallization and structures of melts, and diffusion in metals and alloys. Recipient of the SSSR State Prize in 1985.

Nemets, Oleg F., D. PM. S. (Experimental Nuclear Physics) Born in 1922. Academician since 1978. Director of the Nuclear Research Institute in Kiev since 1974. Awarded the K. D. Sinel'nikova Prize for Physics in 1983.

Parasiuk, Ostap S. (Mathematical Physics) Born in 1921, elected in 1964.

Peletminskii, Sergei V. (Theoretical Physics) Born in 1931. Awarded the K. D. Sinel'nikova Prize for Physics in 1978. Recipient of the State Prize for Science and Technology in 1986. Awarded the N. M Krilov Prize in Mathematics, Mathematical Physics and Theoretical Cybernetics in 1986; elected in 1990.

Prikhot'ko, Antonina F., D. PM. S.(Solid State Physics) Born in 1906. Academician since 1964. Recipient of the Lenin Prize in 1966. Ukraine Academy of Sciences Hero of Socialist Labor Prize recipient in 1976. Recipient

of the State Prize for Science and Technology in 1977.

Shestopalov, Viktor P. (Theoretical Radiophysics) Born in 1923. Recipient of the State Prize for Science and Technology in 1972; elected in 1979. Recipient of the SSSR State Prize in 1987.

Shpak, Marat T., D. PM. S. (Experimental Physics) Born in 1926. Corresponding member since 1969. Director of the Physics Institute in Kiev since 1970. Founded in 1929, the institute studies solid state and plasma physics, physical and quantum electronics, and holography. Recipient of the State Prize for Science and Technology in 1974. Academician since 1990.

Sitenko, Aleksei G ., D. PM. S. (Theoretical Physics) Born in 1927. Awarded the K. D. Sinel'nikova Prize for Physics in 1976. Academician since 1982.

Smirnov, Adrian A ., D. PM. S. (Metallurgy and Mineral Law) Born in 1908. Academician since 1967. Recipient of the State Prizes for Science and Technology in 1978 and 1988. Awarded the K. D. Sinel'nikova Prize for Physics in 1981.

Svechnikov, Sergei V. D. Tech. S. (Optoelectronic Material) Born in 1926. Corresponding member since 1973. Recipient of the State Prizes for Science and Technology in 1973 and 1983; elected an academician in 1988. Recipient of the SSSR State Prize in 1986.

Usikov, Aleksandr Ia. D. PM. S. (Radiophysics and Electronics) Born in 1904. Recipient of the Lenin Prize in 1960. Academician since 1964.

Volkov, Dmitrii V ., D. PM. S. (Theoretical Physics) Born in 1925. Corresponding member since 1976. Academician since 1988.

Corresponding Members

Belii, Mikhail U. , D. PM. S. (Optiks and Spectroscopy) Born in 1922. Corresponding member since 1969.

Borziak, Petr G ., D. PM. S. (Physical Electronics) Born in 1903. Corresponding member since 1961. Recipient of the State Prize for Science and Technology in 1986.

Fomin, Petr I. (Astrophysics and Astronomy) Born in 1930, elected in 1990. Ukraine Academy of Sciences N. P. Barabashov Prize for Theoretical Physics recipient in 1989.

Gorban', Ivan S ., D. PM. S. (Solid State Physics and Low Temperature Physics) Born in 1928. Corresponding member since 1982.

Iakovenko, Vladimir M. (Physics of Semiconductors) Born in 1938. Awarded the K. D. Sinel'nikova Prize for Physics in 1987; elected in 1990.

Ianson, Igor K ., D. PM. S. (Physics of Instrument Making) Born in 1838. Corresponding member since 1979. Recipient of the State Prize for Science and Technology in 1980.

Kliucharev, Aleksei P. , D. PM. S. (Atomic Core Physics) Born in 1910. Corresponding member since 1969.

Kondilenko, Ivan I. , D. PM. S. (Solid State Physics and Physical Optics) Born in 1919. Corresponding member since 1967.

Koroliuk, Aleksei P ., D. PM. S. (Experimental Solid State Physics) Born in 1926. Recipient of the State Prize for Science and Technology in 1980. Corresponding member since 1985.

Kosevich, Arnol'd M. (Solid State Physics) Born in 1928, elected in 1990.

Kulik, Igor O., D. PM. S. (Physics) Born in 1935. Corresponding member since 1978. Recipient of the State Prize for Science and Technology in 1980.

Lesnik, Andrei G ., D. PM. S. (Metal Physics) Born in 1916. Corresponding member since 1976. Awarded the K. D. Sinel'nikova Prize for Physics in 1979.

13. 1931. Recipient of the State Prize for Science and Technology in 1970. Corresponding member since 1985. Awarded the K. D. Sinel'nikova Prize for Physics in 1989.

Litvinenko, Leonid N ., D. PM. S. (Electronics) Born in 1938. Awarded the L.

V. Pisarzhenskii Prize for Chemistry and Chemical Technology in 1969. Corresponding member since 1982. Recipient of the State Prize for Science and Technology in 1987.

Men', Anatolii V. (Astronomy) Born in 1927, elected in 1988.

Naumobets, Aanton G. (Surface Physics and Electronics) Born in 1936, elected in 1990.

Ptushinskii, Iu. G., D. PM. S.(Physical Electronics) Born in 1927. Corresponding member since 1978. Deputy director of the Physics Institute in Kiev since 1970. Founded in 1929, the institute studies solid state and plasma physics, physical and quantum electronics, and holography. Recipient of the SSSR State Prize in 1988.

Sheinkman, Moiseii K. (Electronics) Born in 1929. Recipient of the State Prize for Science and Technology in 1981; elected in 1988.

Shelest, Vitalii P. D. PM. S.(Elementary Particle Theory) Born in 1940. Corresponding member since 1969.

Soskin, Marat S. (Solid State Physics) Born in 1929. Recipient of the State Prize for Science and Technology in 1974. Recipient of the SSSR State Prize in 1982; elected a corresponding member in 1988.

Strutinskii, Vilen M ., D. PM. S.(Physics and Core Theory) Born in 1929. Corresponding member since 19782.

Tolok, Vladimir T ., D. PM. S. (Plasma Physics) Born in 1926. Corresponding member since 1972. Deputy director of the Physical Technical Institute in Kharkov since 1970. Established in 1928, the institute specializes in plasma, nuclear, solid state, particle, and materials science physics.

Tolpigo, Kirill B ., D. PM. S.(Theoretical Physics) Born in 1916. Corresponding member since 1965.

Tsimbal, Liudmila T. (Physical Electronics) Born in 1937. Recipient of the State Prize for Science and Technology in 1980; elected in 1988.

Vishnevskii, Ivan N. (Experimental Physics) Born in 1938. Awarded the K. D. Sinel'nikova Prize for Physics in 1990; elected in 1990.

Zaliubovskii, Il'ia I. (Experimental Nuclear Physics) Born in 1938. Awarded the K. D. Sinel'nikova Prize for Physics in 1983; elected in 1990.

Zavadskii, Edvald A., D. PM. S.(Solid State Physics) Born in 1927. Corresponding member since 1978.

Zviagin, Anatolii I. (Experimental Solid State Physics) Born in 1937. Corresponding member since 1985. Deputy director of the Low Temperature Physical Technical Institute in Kharkov since 1977.

Research Institutes : This department is the largest of the academy departments, having 12 scientific research institutes under its jurisdiction. The responsibility for directing the research of several important scientific councils is lodged with personnel of this department: the council on solid-state physics; the council on semiconductor physics; the council on astronomy; the council on low temperature physics and cryogenetic engineering; the council on a quantum electronics; and the council on the physics of low and high frequency waves. Subordinate institutes are listed below in the order of their establishment:

Physical Technical Institute in Kharkov.

Institute of Single Crystals UAS

310001 Kharkiv, Ukraine

Lenina, 60

(0572)322331

(0572)320273 (fax)

postmaster@isc.kharkov.ua (email)

Founded in 1928, the institute joined the Ukraine Academy System in 1938. Its first director was Academician I. V. Obreimov. This large and important institute had a staff in 1990 of 505 researchers of whom 80 held the doctorate and 425 held the candidate degree. Six academicians and one corresponding member of the Ukraine Academy were on the staff. The institute specializes in plasma, nuclear, solid state, particle, and materials science physics, physical quantum electronics and holography. The present director is Acad. V.P. Seminozhenlo. In 1995, personnel working in all units of this institute totalled some 2,000 persons.

Scientific research and development in the following basic trends: scintillation inorganic and organic materials; devices for the registration and spectrometry of the ionizing radiation; single crystals for optics, quantum electronics and constructional applications; High-Tc superconductors; light-converting, photo-and thermochromic organic materials; physics and chemistry of solids. The Scientific and Technical Complex "Institute for Single Crystals" comprises Research Laboratory of New Materials and Technologies (Uzhgorod), 2 Pilot Plants for Single Crystals, and a Research Laboratory with experimental production (Sumy)

Physics Institute in Kiev.

Institute of Physics UAS

252028 Kiev, Ukraine

Nauki, 46

(044)2651220

(044)2651589 (fax)

postmaster@lls.kiev.ua (email)

The Institute of Physics (IP) of the Academy of Sciences of Ukraine, founded in 1929, is one of the oldest physics research institutions in Ukraine. In 1995, it was comprised of twenty-six scientific departments and laboratories. The staff consisted of more than 600 persons. Its first director was A. G. Gol'dman. The institute has a large special design bureau and pilot plant. The research staff numbered 237 in 1990, of whom 40 held the doctorate and 197 held the candidate degree. Three academicians and four corresponding members of the academy were on the staff. The institute studies solid state and plasma physics, physical and quantum electronic physics, and holography. The present director is Academician Mikhail S. Brodin, D. PM. S. The main directions of its research includes:

- * basic electronic properties of condensed media
- * linear and nonlinear optics and spectroscopy
- * lasers
- * adsorption of particles on atomic surfaces
- * physics of ion beams and sources
- * liquid crystals

Astronomical Observatory (Main) in Kiev.

Main Astronomical Observatory UAS

252127 Kiev, Ukraine

Goloseyevo

(044)2663110

(044)2246387 (fax)

postmaster@gao.kiev.ua (email)

Founded in 1944. Its first director was Academician A. Ya. Orlov. The staff of the observatory numbered 67 in 1990, of whom 12 held the doctorate and 55 the candidate degree. The observatory's research centers on terrestrial rotation

measurement, construction of coordinate systems in outer space, planetary atmosphere physics, and stellar physics. The present director is Academician Iaroslav S. Iatskiv, C. PM. S.--recipient of the SSSR State Prize in 1986.

Metal Physics Institute in Kiev.

Institute of Metal Physics UAS
252680 Kiev, Ukraine
Vernadsky, 36
(044)4441005
(044)4442561 (fax)
postmaster@imp.kiev.ua (email)

Founded in 1945 from the crystallization laboratory of the the Dnepropetrovsk Physical Technical Institute, the department of metal physics of the Ferrous Metallurgy Institute, and the Diffusion Processes department of the Physics Institute which were consolidated into a metallurgy laboratory in Kiev. In 1955, this laboratory became the Metal Physics Institute of the Ukrainian Academy and its head was Academician V. N. Gridnev. In 1990, researchers in the institute numbered 293, of whom 54 held the doctorate and 239 held the candidate degree. Two academicians and two corresponding members were on the staff. Institute scientists study phase transformations in a solid state, crystallization and structures of melts, and diffusion in metals and alloys. The institute maintains a large technical design bureau and production plant which develops scientific instruments, develops new technological and metallurgical processes, and introduces scientific and technological discoveries into production. The present director is V. G. Sumakh.

Radio Physics and Electronics Institute in Kharkov.

Institute of Electron Physics UAS
294016 Uzhgorod, Ukraine
Universitetskaya, 21
(03122)43650
(03122)43650 (fax)
postmaster@iep.uzhgorod.ua (email)

Founded in 1955 from the radio engineering sector of the Khar'kovskogo Physical Technical Institute. Its first director was Academician A. Ya. Usikov. In 1990, the staff numbered 174, of whom 30 held the doctorate and 144 the candidate degree. Two academicians and two corresponding members were on the staff. The institute does research in physical and quantum electronics, dissemination of radio waves, scattering of radar signals from the sea surface, high frequency characteristics of solids, electron optics, decametric radioastronomy, and long distance radio communications. The institute maintains a large design bureau and pilot plant for experimental production. The present director is Viktor P. Shestopalov, D. PM. S.--recipient of the SSSR State Prize in 1987.

Low Temperature Physical Technical Institute in Kharkov.

Physico-Engineering Institute UAS
310108 Kharkiv, Ukraine
Academicheskaya, 1
(0572)356579
(0572)351738 (fax)
postmaster@kfti.kharkov.ua (email)

The B. Verkin Institute for Low Temperature Physics and Engineering was

organized in May of 1960. The initiative team consisted of professors B.Verkin, A. Galkin, B. Eselson, I. Dmitrenko. All of them were from the Institute for Physics and Technology - well known Ukrainian Physics and Technology Institute, so called UPhTI, where at the beginning of the 1930s L. Landau, I. Pomeranchuk, L. Schubnikov, I. Obreimov and other outstanding physicists worked.

The Low Temperature Physics Lab. of the UPhTI was organized by Prof. Lev Schubnikov, who during his joint work with Prof. de Haas van Alfen in Leiden, the Netherlands, had got very good experience in experimental Low Temperature (LT) Physics. He was very active in physics of superconductivity, magnetoresistivity of metals (Schubnikov-de-Haas effect), heat capacity and magnetic susceptibility near phase transitions, antiferromagnetism. He and his colleagues were very active in all these problems up to the tragic 1937 year. After Schubnikov, most of these problems, were developed under guidance of Prof. B. Lasarev.

Before 1960 the initiative group worked in the lab. All of them were interested in different aspects of pure LT-physics, connected with Schubnikov-Lasarev traditions: Verkin and Dmitrenko studied electronic properties of metals (de Haas-van Alfen effect in Zn and in other metals), Galkin studied superconductivity and cyclotron-resonance, Eselson - worked in the physics of helium.

Due to their efforts a lot of the important trends of LT-Physics were created and now they are being developed successfully in the ILTPE. From the very beginning the attention of Kharkov mathematicians was attracted to the problems, studied at the Institute. Best-known mathematicians (Prof. A. Pogorelov, Prof. V. Marchenko etc.) were invited to the Institute and now there is a Division of Mathematics in the Institute. In addition to the Institute itself there are Applied Division and two pilot plants - the experimental one, situated in Kharkov on the territory of the Institute, and the other nearly industrial, situated in the town of Valki--40 miles from Kharkov.

The institute was founded from a section of the Kharkov Physical Technical Institute. Academician B. E. Verkin was its director until 1988. In 1990, the staff numbered 373 researchers of whom 73 held the doctorate and 300 the candidate degree. Four academicians and five corresponding members of the academy were on the staff. The institute researches basic and applied superconductivity, electronic properties of solid bodies, molecular physics, processes of heat exchange, physical properties of biological macromolecules, new problems of mathematics, and cryogenic technology. The present director is A. I. Zviagin, corresponding member of the Ukraine Academy.

Division of Physics

* Department of Magnetism: Head of the Department is Doctor of Sciences Sergey L. Gnatchenko. tel: +(380)-572-30-03-02 fax: +(380)-572-32-23-70
E-mail: gnatchenko@ilt.kharkov.ua.

The department was organized in 1966. Prof. V.V.Eremenko, Academician of the Academy of Sciences of Ukraine, and Prof. A.I.Zvyagin, corresponding member of the Academy of Sciences of Ukraine, contributed mainly to the formation and development of scientific trend of the department. Prof. A.I.Zvyagin was the first Head of Department beginning from 1966 till 1991. 19 co-workers are engaged in the Department. Among them 3 Doctors of Sciences: Gnatchenko, S. L., Khats'ko E.N. and Stepanov A. A. and 9 Candidate of Sciences

(Ph.D.): Bedarev, V.A., Chernyi, A. S. , Chizhik, A. B., Dudko, K. L. El'chaninova S. D., Gapon N. V., Gurskas, A. A., Kobets, M. I. and Pashchenko, V. A.

- * Department of Acoustic Properties of Solids
- * Department of Optic and Magnetic Properties of Solids
- * Laboratory of Resonance and Thermophysical Properties of Magnetics
- * Department of Magnetic Properties and Spectroscopy of Metals
- * Department of Kinetic Properties of Metals
- * Department of Physics of Real Crystals:

Headed by Professor Dr Vasilii D. Natsik;
tel.: + (380)-572-30-03-31 fax: + (380)-572-32-23-70
E-mail: natsik@ilt.kharkov.ua.

The Department was founded by Prof. Valerian I. Startsev in 1961. Leading co-workers of the Department (heads of research teams): Prof. Vitalii V. Pustovalov, Prof. Vasilii P. Soldatov, Prof. Flor F. Lavrent'ev, Dr Vladimir Z. Bengus, Dr. Serj V. Lubenets, Dr. Pavel P. Pal-Val, Dr. Vladislav A. Moskalenko. The Laboratory of Superconductor Material Science is included into the Department. Head of the Laboratory is Dr. Vjacheslav V. Demirsky

- * Laboratory of Superconductor Materials Science
- * Department of Thermal Properties of Molecular Crystals
- * Physicochemical Laboratory of Pure Gases
- * Department of Structural Investigations of Solids at Low Temperatures
- * Department of Physics of Quantum Fluids
- * Department of Spectroscopy of Molecular Cryogenic Systems
- * Department of Physical Investigations at Ultralow Temperatures
- * Department of Nonlinear and Quantum Phenomena in Superconductors
- * Laboratory of SQUIDS: Physics and Applications
- * Department of Spectroscopy of Magnetic and Molecular Crystals
- * Laboratory of Spectroscopy of Molecular Crystals
- * Department of Molecular Biophysics
- * Department of Microcontact Spectroscopy
- * Laboratory of Applied Aspects of Microcontacts Physics
- * Department of Superconductivity

- * Department of Theory of Electronic Properties of Solids
- * Department of Quantum and Nonlinear Dynamics of Macroscopic Systems

Division of Mathematics

- * Department of Geometry
- * Department of Mathematical Physics:
 - Headed by academician Marchenko, Vladimir A.
 - tel: +(380)-572-30-05-85
 - fax: +(380)-572-32-23-70
 - E-mail: marchenko@ilt.kharkov.ua

It was founded in 1960. It has been headed by Professor V.A. Marchenko from its inception. The staff of the Department consists of 4 Doctors of Sciences and 4 Candidates of Sciences.

- * Department of Mathematical Modelling of Physical Processes:
 - Headed by KHRUSLOV Eugeni Ya.
 - tel: +(380)-572-30-03-34
 - fax: +(380)-572-32-23-70
 - E-mail: khruslov@ilt.kharkov.ua

The Department of Mathematical Modeling of Physical Processes was founded in 1985 as a result of union of the Laboratory of Mathematical Modeling and the Department of Applied Mathematics that was organized and headed for a long time by professor A.D. Myshkis.

*Department of Statistical Methods Applied to Mathematical Physics: Department of Mathematical Physics was founded in 1960. It is headed by Professor V.A. Marchenko. The staff of the Department consists of 4 Doctors of Sciences and 4 Candidates of Sciences.

- * Department of Theory of Functions:
 - Head of the Department Corresponding Member, Iosif V. Ostrovskii.
 - tel: +(380)-572-30-85-66 fax: +(380)-572-32-23-70
 - E-mail: ostrovskii@ilt.kharkov.ua

Kharkov's function-theoretic school has existed for more than 100 years and is related with the names of A. M. Lyapunov (1857-1918), S. N. Bernshtein (1880-1968), N. I. Akhiezer (1901-1980), and B.Ya. Levin (1906-1993). The Department of Function Theory, was organized in 1969. B.Ya. Levin was at the Department until 1986. **I.V. Ostrovskii** has headed the Department since 1986.

APPLIED DIVISION of the Kharkov Institute

Director: Stanislav I. Bondarenko, D. Tech. S.
 Phone +(380)-572-32-22-93
 Fax: +(380)-572-32-22-93, E-mail: sktb@ilt.kharkov.ua

Institute of Physics of Semiconductors.

Institute of Semiconductors UAS
 252650 Kiev, Ukraine
 Nauki, 41
 (044)2659786
 (044)2658342 (fax)

postmaster@semicond.kiev.ua (email)

Founded in 1960 from a laboratory of the Physics Institute. Its first director was V. E. Lashkarev. The institute staff numbered 269 in 1990, of whom 61 held the doctorate and 208 the candidate degree. The institute conducts research on electromagnetic wave interaction with semiconductors and develops photoelectric and optical instruments. Since 1970 the institute has been headed by Academician O. V. Snitko. The Institute of Semiconductors was originally based on some divisions and laboratories inherited from the Institute of Physics. The institute is composed of seven departments performing research and development in photoelectronics, semiconductors, physics of liquid crystals, and microelectronics. The departments comprise twenty-five divisions and twenty-four laboratories. On January 1, 1993, the institute became the Institute of Physics of Semiconductors.

Physical Technical Institute in Donetsk.

Physical-Engineering Institute UAS

340114 Donetsk, Ukraine

Luxemburg, 72

(0622)550301

(0622)550127 (fax)

postmaster@dipt.donetsk.ua (email)

Founded in 1965 from the department of resonance phenomenon of the Low Temperature Physical-Technical Institute of the Ukraine Academy. Its first director was Academician A. A. Galkin. In 1990, the staff of the institute numbered 197, of whom 30 held the doctorate and 167 the candidate degree. The institute researches the optical and magnetic characteristics of solids, superconductivity, the electronic power spectra of metals and semiconductors, and the physical foundations of the strength and plasticity of solids. The institute has a special design bureau and a pilot plant. The present director is E. A. Zavadskii, corresponding member of the Ukraine Academy.

Theoretical Physics Institute in Kiev.

Institute of Theoretical Physics UAS

252143 Kiev, Ukraine

Metrologicheskaya, 14b

(044)2665998

(044)2665998 (fax)

postmaster@itphys.kiev.ua (email)

Founded in 1966 from the theoretical department of the Physics Institute. Its first director was Academician N. N. Bogoliubov. The staff of the institute numbered 125 in 1990, of whom 33 held the doctorate and 92 the candidate degree. Three academicians and two corresponding members of the academy are on the staff. The institute develops basic research in atomic nucleus theory, statistical mechanics, and elementary particles. The present director of the institute is Academician V. V. Nemoshkalenko.

Nuclear Research Institute in Kiev.

Institute of Nuclear Research UAS

252028 Kiev, Ukraine

Nauki, 47

(044)2652349
(044)2654463 (fax)
postmaster@oubaes.freenet.kiev.ua (email)

Founded in 1970. The first director of the institute was Academician M. V. Pacechnik. The staff of this important institute numbered 269 in 1990, of whom 61 held the doctorate and 208 the candidate degree. Two academicians and two corresponding members of the academy were on the staff. The institute conducts research on nuclear, solid state, and plasma physics, atomic power engineering, and the use of isotopes and nuclear radiation in the national economy. The institute has a special technical design bureau for experimental production. It maintains a scientific research center to monitor the effects on the environment of nuclear energy use. The experimental base is equipped with a U-240 Cyclotron, a U-120 Cyclotron, an ESG-5 Electrostatic Generator, and a microtron. The present director is I. N. Vishnevskii.

Institute of Radiophysics & Electronics UAS

310085 Kharkiv, Ukraine
Acad. Proscura, 12
(0572)441129
(0572)441105 (fax)
postmaster@ire.kharkov.ua (email)

Radio Astronomy Institute in Kiev.

The institute was founded in 1985 on the foundation of the radioastronomy department of the Radio Physics and Electronics Institute. Several scientists from the Kiev department of Radio Interference research were transferred to the new institute. In 1990, the staff numbered 77, of whom 17 held the doctorate and 60 the candidate degree. The institute researches radioastronomy of sonic and ultrasonic waves, develops scientific detection and measurement apparatus, studies the ionosphere, and develops methods of radioastronomical research. Its scientists have catalogued more than 2000 spectra, of which 100 represent new discoveries. The present director is L. N. Litvinenko, corresponding member of the Ukraine Academy.

The Physics of Condensation Systems Institute in L'vov.

Institute of Condensed Matter Physics UAS
290001 Lviv, Ukraine
Sventsitskij, 1
(0322)761978
postmaster@icmp.lviv.ua (email)

It was founded in 1990 from the L'vov department of physics statistics of the Theoretical Physics Institute of the Ukraine Academy. The director of the institute is Academician I. R. Iukhnovskii.

Institute of Applied Physics UAS

244030 Sumy, Ukraine
Petrovskaya, 58
(05400)222794
(05400)333436 (fax)

Earth Sciences Department

252601 Kiev, Ukraine
Volodymyrska, 54
(044)225-2380

Members of the department: Membership in the Earth Sciences Department totalled 27 in 1990, of whom 13 were academicians and 14 were corresponding members. In 1987, five of the members were directors of SRIs and two were deputy directors of research institutes. There are no joint memberships with the AN SSSR departments in the Earth Sciences section of the national academy in this Ukrainian Academy department.

Academicians: The birthdates of all of the academicians of the Earth Sciences Department are known. In 1990, four of them were in their 80s; one in his 70s; six in their 60s; and two in their 50s. .

Corresponding Members: One of the corresponding members was in his 80s; three in their 70s; seven in their 60s; and three in their 50s.

Academician Secretary

Starostenko, Vitalii I. Born in 1934. Recipient of the State Prize for Science and Technology in 1984. Corresponding member since 1985; elected academician in 1990. Deputy director of the S. I. Subbotin Geophysics Institute in Kiev since 1983. The institute was established in 1960 and does research in theoretical and applied geophysics. Academic secretary of the Earth Sciences Department in 1990.

Academicians

Belevtsev, Iakov N. , D. GM. S. (Geology of Mine Pits) Born in 1912. Academician since 1967. Deputy director of the Geochemistry and Mineral Physics Institute in Kiev since 1983. The institute was established in 1969 and studies the laws of chemical composition of the earth's core, processes of migration and concentration of chemical elements, and the nature and properties of mineral matter. Recipient of the SSSR State Prizes in 1951 and 1974. Recipient of the State Prize for Science and Technology in 1973. Awarded the V. I Vernadskii Prize for Geology, Geochemistry and Hydrophysics in 1983.

Beliaev, Valerii I. D. PM. S. (Geophysics) Born in 1931. Corresponding member since 1969; elected academician in 1988.

Bondarchuk, Vladimir G., D. GM. S. (General Geology) Born in 1905. Academician since 1951. Recipient of the State Prize for Science and Technology in 1976.

Chebanenko, Ivan I. (Geology) Born in 1925, elected in 1982.

Chekunov, Anatolii V. (Geophysics and Geology) Born in 1932. Awarded the V. I Vernadskii Prize for Geology, Geochemistry and Hydrophysics in 1976; elected in 1982. Recipient of the State Prize for Science and Technology in 1984.

Dolenko, Grigorii N., D. GM. S. (Geology and Geophysics) Born in 1917. Academician since 1979. Director of the Geology and Geochemistry of Combustible Materials Institute in L'vov since 1963. Established in 1946, the institute conducts research on the problems of geology and the geochemistry of combustible materials. Recipient of the State Prize for Science and Technology in 1971. Awarded the V. I Vernadskii Prize for Geology, Geochemistry and Hydrophysics in 1977j.

Malakhov, Georgii M ., D. Tech. S. (Mining) Born in 1907. Recipient of the SSSR State Prize in 1948. Academician since 1967. Recipient of the State Prize for Science and Technology in 1970. Awarded the V. I Vernadskii Prize for Geology, Geochemistry and Hydrophysics in 1988.

Nelepo, Boris A. (Physics of the Sea) Born in 1932, elected in 1978. Recipient of the State Prize for Science and Technology in 1980.

Semenenko, Nikolai P ., D. GM. S. (Petrography and Ore Deposits) Born in 1905. Academician since 1948. Recipient of the State Prize for Science and

Technology in 1973. Awarded the V. I Vernadskii Prize for Geology, Geochemistry and Hydrophysics in 1981.

Shcherbak, Nikolai P., D. GM. S.(Geochemistry) Born in 1924. Since 1977, director of the Geochemistry and Mineral Physics Institute in Kiev. Secretary of the Department from 1978 to 1990. Academician since 1979. Recipient of the State Prize for Science and Technology in 1981.

Shniukov, Evgenii F., D. GM. S.(Geology) Born in 1930. Academician since 1982. Director of the Geological Sciences Institute in Kiev since 1977. Recipient of the State Prize for Science and Technology in 1989.

Starostenko, Vitalii I. (Geophysics) Born in 1934. Recipient of the State Prize for Science and Technology in 1984. Corresponding member since 1985; elected academician in 1990. Deputy director of the S. I. Subbotin Geophysics Institute in Kiev since 1983. The institute was established in 1960 and does research in theoretical and applied geophysics. Academic secretary of the Earth Sciences Department in 1990.

Zabigailo, Vladimir E. (Geology) Born in 1934; elected in 1990.

Corresponding Members

Belevtsev, Rudol'f Iu. (Petrography and Ore Deposits) Born in 1937, elected in 1990.

Bulgakov, Nikolai P. (Hydrophysics and Hydrodynamics) Born in 1929, elected in 1982.

Cherkesov, Leonid V. (Geology and Geophysics) Born in 1933. Corresponding member since 1979.

Didkovskii, Valentin Ia., D. GM. S. (Geology) Born in 1914. Corresponding member since 1973. Recipient of the State Prize for Science and Technology in 1976.

Gavrish, Vladimir K., D. GM. S.(Oil and Gas Geology) Born in 1925. Corresponding member since 1982.

Glushko, Vasilii V., D. GM. S.(Geology) Born in 1920. Corresponding member since 1967. Recipient of the State Prize for Science and Technology in 1986.

Marinich, Aleksandr M. (Physical Geology) Born in 1920, elected in 1969.

Matiash, Ivan V. (Mineral Physics) Born in 1930, elected in 1988.

Mel'nik, Iurii P., D. GM. S. (Geology and Geophysics) Born in 1931. Awarded the V. I Vernadskii Prize for Geology, Geochemistry and Hydrophysics in 1974. Corresponding member since 1979.

Shestopalov, Viacheslav M. (Regional Hydrogeology) Born in 1936, elected in 1988.

Shirokov, Aleksandr Z., D. GM. S. (Geology of Coal Deposits) Born in 1905. Corresponding member since 1957. Awarded the V. I Vernadskii Prize for Geology, Geochemistry and Hydrophysics in 1986.

Shpak, Petr F. (Lithography and Mining Geology) Born in 1931. Awarded the V. I Vernadskii Prize for Geology, Geochemistry and Hydrophysics in 1989; elected in 1990.

Sobotovich, Emlen V. (Regional Hydrogeology) Born in 1927; elected in 1988.

Tiapkin, Konstantin F. (Geophysics) Born in 1927; elected in 1990.

Research Institutes : Five important Scientific Councils are located in this department. They include: council on geology and geotechnology of combustion research under Academician V. E. Zabigailo--awarded the V. I Vernadskii Prize for Geology, Geochemistry and Hydrophysics in 1986; council on Ukrainian Tectonics under Academician A. V. Chekunov--recipient of the State Prize for Science and Technology in 1984; council on hydrogeology and geological engineering under corresponding member V. M. Shestopalov; council on the geology of useful minerals of the oceans and seas under

academician E. F. Shnukov; council on studying resources by remote control under V. I. Lial'ko, D. Geol/Mineralogical S.--Recipient of the State Prize for Science and Technology in 1989; and the council on geodynamics and earthquake forecasting. The department had five scientific research institutes directly subordinate to it in 1990.

Subordinate Research Institutes : They are listed below in the order of their founding:

Institute of Geological Sciences

Institute of Geology UAS
252601 Kiev, Ukraine
Chkalova, 55b
(044)2169446
(044)2169334 (fax)

Founded in 1926 from the geological branch academy of the People's Commisariat of the Ukrainian SSR. It joined the Ukrainian Academy System in 1934. Its first director was Academician P. A. Tutkovskii. The staff of the institute numbered 161 researchers in 1990, of whom 31 held the doctorate and 130 the candidate degree. Four academicians and three corresponding members were on the staff. The institute studies paleontological stratification, lithology and tectonic structures of the earth's core in Ukraine, geological resources of oil and gas, mining methods, geological engineering and geocological matters, and the geological mineral resources of the world's oceans, and the flora and fauna, of Ukraine. The Institute of Geological Sciences is responsible for exploration and assessment of all mineral resources in the Ukraine, whether terrestrial or undersea. These include both oil and gas as well as metals and rare elements. The present director is Academician Peter F. Shpak, D. GM. S.

Institute of Geology, Chernigov Branch UAS

250000 Chernigov, Ukraine
Shchors, 8
(04622)41024

Marine Hydrophysical Institute in Sevastopol.

Marine Hydrophysical Institute UAS
335000 Sevastopol, Ukraine
Kapitanskaya, 2
(0690)520452
(0690)444253 (fax)
postmaster@mhi.sevastopol.ua (email)

The institute was established in Moscow in 1948, and joined the Ukrainian Academy System in 1961. The institute was shifted to Sevastopol in 1963. Its first director was Academician V. V. Shuleikin. The staff of the institute numbered 117 scientists in 1990, of whom 19 held the doctorate and 98 the candidated degree. One academician and three corresponding members of the academy are on the staff. The research of the institute centers on physical oceanography, optics, temperature, hydrochemistry, and radiochemistry as well as special hydrophysical studies of the ocean plantform. It develops methods of automating oceanographic informations. The institute

maintains a scientific technical base from which eight flying laboratories are operated. The present director is V. N. Eremeev, D. PM. S.

[From a report of a visit in 1993 written by R. Seymour]

The Marine Hydrophysical Institute (MHI) is one of the largest research institutions in the world devoted principally to the study of physical oceanography. In addition to the headquarters facility in Sevastopol, the institute has an Experimental Division in Katsiveli (Crimea) and an Acoustics Division in Odessa.

The institute operates five ships, two of which are major ocean-going vessels that have been active in the world oceans on programs such as WOCE, TOGA, and JGOFS. Because of present budget constraints, work outside of the Black Sea is restricted to contract investigations. The institute was founded in 1929 and the base in Sevastopol was established in 1963. In addition to deep water physical oceanography, MHI has had a continuing interest in coastal and shelf processes, and operates a shelf mounted observational platform at a depth of 35 m in the Black Sea.

The research interests of MHI include: turbulence, hydrophysics, optics and biophysics, ocean-atmosphere interactions, wave theory, and dynamic and stochastic modelling. The institute has a substantial design, development, and manufacturing capability for the specialized instruments employed in its investigations. The deputy director is Mikail E. Rabinovich.

Geology and Geochemistry of Combustible Materials Institute in Lvov.

Institute of Geology & Geochemistry of
Combustible Minerals UAS
290053 Lviv, Ukraine
Naukova, 3a
(0322)632441
(0322)632209 (fax)

Founded in 1951 from the L'vov department of the Geological Sciences Institute. In 1962, it was called the Geology of Combustible Materials Institute; in 1963, it received its present name. Its first director was Academician V. B. Porfir'ev. The staff numbered 82 in 1990, of whom 10 held the doctorate and 72 the candidate degree. Two academicians were on the staff. The institute studies the complex problems of fossil fuels, the formation of oil and gas, the development of criteria for interconnecting regions of Ukraine, the problems of the production and conservation of fuel resources and production and gasification methods, and it conducts research on combustible materials. The present director is Academician V. E. Zabigailo.

S. I. Subbotin Geophysics Institute in Kiev.

Institute of Geophysics UAS
252680 Kiev, Ukraine
Palladina, 32
(044)4440112
(044)4502520 (fax)

Founded in 1961 from a geophysical group of the Institute of Geological Sciences. Its first director was Academician S. I. Subbotin. The institute staff numbered 196 in 1990, of whom 26 held the doctorate and 170 the candidate degree. The institute maintains field stations in Yalta, Simferopol, Alushte,

Fedosii, L'vov and Uzhgorod. Three academicians and one corresponding member of the academy are on the staff. The institute does research in theoretical and applied geophysics, the theory and complexity of the geophysical poles, the geodynamics of mining and the theory and methods of predicting earthquakes, the irregular movement of the earth, latitudinous polar variations, and the deformations of the earth's core, cosmic rays, methods of geophysical explorations using explosive techniques, and the lithology of Central and Eastern Europe. The present director is Anatolii V. Chekunov, D. GM. S.--recipient of the State Prize for Science and Technology in 1984.

Carpathian Division of Geophysical Institute UAS

290601 Lviv, Ukraine
Naukova, 3b
(0322)648563
(0322)649955 (fax)

**Institute of Geophysics, Division of Geodynamics
of Explosion UAS**

252054 Kiev, Ukraine
Khmelnitsky, 63
(044)2520152
(044)2287272 (fax)

Geochemistry and Mineral Physics Institute in Kiev.

Institute of Geochemistry, Mineralogy &
Ore-Formation UAS
252680 Kiev, Ukraine
Palladina, 34
(044)4440060
(044)4441270 (fax)
postmaster@igpm.kiev.ua (email)

Founded in 1969 from a sector of geochemistry and mineralogy and a sector of metallogeny of the Geological Sciences Institute of the Ukraine Academy. The first director of the institute was Academician N. P. Semenenko. The staff of the institute numbered 188 in 1990, of whom 31 held the doctorate and 157 the candidate degree. One corresponding member of the Russian Academy of Sciences, three academicians and four corresponding members of the Ukraine Academy were on the staff. The institute studies the laws of the chemical composition of the earth's core, processes of migration and concentration of chemical elements, and the nature and properties of mineral matter. The present director is Nikolai P. Shcherbak, D. GM. S.--recipient of the State Prize for Science and Technology in 1981.

Institute of Geography UAS

252003 Kiev, Ukraine
Volodymyrska, 44
(044)2246193
(044)2243230 (fax)

**Poltava Gravimetric Observatory of Institute of
Geophysics, UAS**

314029 Poltava, Ukraine

Miasoedova street 27/29
(0532)05322 -7
(0532)05322 - (fax)
postmaster@ippmm.lviv.ua (email)

Physical and Technical Problems of Materials Department

252601 Kiev, Ukraine

Volodymyrska, 54

(044)224-1914

Membership of the Physical and Technical Problems of Materials

Department: With 44 members, this is one of the larger departments of the academy. Twenty-one of these are academicians and 23 are corresponding members. In 1987, 11 of these members were either directors or deputy directors of the several Scientific Research Institutes under the department's jurisdiction.

Academicians: Four of the academicians of this department were in their 80s in 1991; five in their 70s; 11 in their 60s; and one in his 50s.

Corresponding Members: One corresponding member was in his 80s; seven in their 70s; five in their 60s; nine in their 50s; and, one in his 40s.

Academician Secretary

Fedorchenko, Ivan M., D. Tech. S. Born in 1909. Academician since 1961. Academic secretary of the Physical and Technical Problems of Materials Department since 1964. Awarded the E. O. Paton Prize for the Creation of New Metals and Metal Processes in 1968. Recipient of the State Prize for Science and Technology in 1979.

Academicians

Arkharov, Vladimir I. (Solid State Physics) Born in 1907, elected in 1965.

Gasik, Mikhail I. (Steel and Ferrous Metals) Born in 1929, elected in 1990.

Dudko, Daniil A., C. Tech. S. (Material Process Control) Born in 1921. Recipient of the SSSR State Prize in 1950. Deputy director of the Electric Welding Institute in Kiev since 1962. Recipient of the Lenin Prize in 1963. Recipient of the State Prize for Science and Technology in 1972.

Efimov, Viktor A., D. Tech. S. (Metallurgy and Metals Technology) Born in 1921. Awarded the E. O. Paton Prize for the Creation of New Metals and Metal Processes in 1969. Academician since 1973. Director of the Casting Problems Institute in Kiev since 1965. The institute was founded in 1958 and is involved in the development of theoretical and technological bases of casting steel and forming steel ingots. It is subordinate to the Physical and Technical Problems of Materials Science Department of the Ukrainian academy. Recipient of the SSSR State Prize in 1981.

Eremenko, Valentin N. (Cover Materials and Powder Metallurgy) Born in 1911, elected in 1969. Recipient of the State Prizes for Science and Technology in 1975 and 1985. Awarded the I. N. Frantsevich Prize in Physical Materials in 1988.

Fedorchenko, Ivan M. (Powder Metallurgy) Born in 1909, elected in 1961. Recipient of the State Prize for Science and Technology in 1979.

Kuchuk-Iatsenko, Sergei I. (Metallurgy and Metal Technology) Born in 1930, elected in 1988.

S. Lebedev, Vladimir K. (Electrometry) Born in 1922. Recipient of the Lenin Prize in 1966.

Elected an academician in 1972. Recipient of the State Prize for Science and Technology in 1976.

Makhnenko, Vladimir I. (Materials and Material Sciences) Born in 1931, elected in 1990.

Medovar, Boris I., D. Tech. S. (Metallurgy and Metal Technology) Born in 1916. Recipient of the Lenin Prize in 1963. Academician since 1973. Recipient of the State Prize for Science and Technology in 1978. Deputy director of the Paton Electric Welding Institute in Kiev since 1980. Recipient of the SSSR State

Prize in 1950 and 1987. Awarded the E. O. Paton Prize for the Creation of New Metals and Metal Processes in 1990.

Movchan, Boris A., D. Tech. S. (Materials and Materials Sciences) Born in 1928. Recipient of the State Prize for Science and Technology in 1974. Academician since 1978. Awarded the E. O. Paton Prize for the Creation of New Metals and Metal Processes in 1989.

Naidich, Iurii V. (Materials Sciences and Materials Soldering) Born in 1928. Awarded the E. O. Paton Prize for the Creation of New Metals and Metal Processes in 1973; elected in 1988.

Nekrasov, Zot I., D. Tech. S. (Cast Iron Metallurgy) Born in 1908. Recipient of the SSSR State Prize in 1941. Recipient of the Lenin Prize in 1960. Academician since 1961. Ukraine Academy of Sciences Hero of Socialist Labor Prize recipient in 1969.

Novikov, Nikolai V., D. Tech. S. (Materials Sciences and Metals Technology) Born in 1932. Recipient of the State Prize for Science and Technology in 1973 and of the SSSR State Prize in 1981. Awarded the E. O. Paton Prize for the Creation of New Metals and Metal Processes in 1983. Academician since 1985. Director of the Superhard Materials Institute in Kiev since 1977. The institute was created in 1961 for the development of superhard materials, tools made from them, and equipment fabricated for their production.

Panasiuk, Vladimir V. (Materials Sciences and Durability of Metals) Born in 1926. Awarded the A. N. Dinnik Prize for Mechanics and Machine Building in 1974. Recipient of the State Prize for Science and Technology in 1977; academician since 1978.

Paton, Boris E., D. Tech. S. (See above.)

Pokhodnia, Igor K., D. Tech. S. (Metallurgy and Metals Technology) Born in 1927. Academician of the Physical and Technical Problems of Materials Science Department since 1976. Vice president of the academy from 1983 to 1990. In 1990, he headed the Technical Scientific Council on Corrosion of Protection of Corrosion in Metals. This Council was subordinate to both the Presidium of the Ukrainian Academy and GOSPLAN. Recipient of the SSSR State Prizes in 1971 and 1978.

Skorokhod, Valerii V. (Materials Sciences and Metals Technology) D. Tech. S. Born in 1934. Corresponding member since 1985; elected an academician in 1990.

Taran-Zhovnir, Iurii N., (Metals Sciences and Metals Technology) D. Tech. S. Born in 1927. Academician since 1985.

Trefilov, Viktor I., D. PM. S. (Physics of Durability) Born in 1930. Recipient of the State Prize for Science and Technology in 1974. Academician of the Ukrainian department since 1973; and academician of the Physical Chemistry and Technology of Inorganic Materials department of the AN SSSR since 1987. Since 1973, he has been the director of the Problems of Material Science Institute in Kiev which was established in 1955 to develop high temperature materials to conduct studies on problems of the structure of solids, and to coordinate all Soviet powder metallurgy research in the USSR. Awarded the E. O. Paton Prize for the Creation of New Metals and Metal Processes in 1987.

Zelenskii, Viktor F. (Radiation Materials Sciences) Born in 1929, elected in 1988.

Corresponding Members

Cherepin, Valentin T. (Materials Sciences) Born in 1930. Recipient of the State Prize for Science and Technology in 1980; elected in 1982.

Efimenko, Georgii G. (Metallurgy) Born in 1917. Corresponding member since 1973. Recipient of the State Prize for Science and Technology in 1983.

Firstov, Sergei A. (Materials Sciences and Materials Durability) Born in 1940. Awarded the E. O. Paton Prize for the Creation of New Metals and Metal Processes in 1967; elected in 1988.

Gnesin, Georgii C. (Materials Sciences and Metals Durability) Born in 1932, elected in 1990.

Gritsik, Vladimir V. (Scientific Instrument Making) Born in 1941, elected in 1990.

Iushchenko, Konstantin A. (Materials Sciences and Metal Welding) Born in 1935, elected in 1990.

Kasatkin, Boris S. , D. Tech. S. (Materials Sciences) Born in 1919. Awarded the E. O. Paton Prize for the Creation of New Metals and Metal Processes in 1975. Corresponding member since 1976. Recipient of the State Prize for Science and Technology in 1979.

Kislii, Pavel S. , D. Tech. S. (Materials Sciences) Born in 1933. Corresponding member since 1982. Deputy director of the Superhard Materials Institute in Kiev since 1978. The institute was created in 1961 to develop superhard materials, tools to be made from them, and equipment fabricated for their production.

Kudinov, Vladimir M., D. Tech. S. (Materials Sciences) Born in 1934. Corresponding member of the Physical and Technical Problems of the Ukrainian academy since 1982. Since 1980, he has been a deputy chairman of the GKNT (State Committee for Science and Technology.) This important committee develops and monitors the implementation of a unified state policy for science and technology. Recipient of the SSSR State Prize in 1985.

Lobanov, Leonid M. (Materials Sciences and Material Durability) Born in 1940, elected in 1990.

Maksimovich, Georgii G. (Materials Sciences and Material Durability) Born in 1922, elected in 1978. Awarded the E. O. Paton Prize for the Creation of New Metals and Metal Processes in 1979.

Mil'man, Iulii V. (Materials Sciences and the Physics of Durability) Born in 1930, elected in 1990.

Naidek, Vladimir L. , D. Tech. S. (Casting Manufacture) Born in 1937. Corresponding member since 1988.

Ostrenko, Viktor Ia. , D. Tech. S. (Metallurgy and Metals Technology) Born in 1917. Recipient of the SSSR State Prize in 1968. Corresponding member since 1978.

Pereloma, Vitalii A. (Steel and Ferrous Metallurgy) Born in 1934, elected in 1990.

Pokhmurskii, Vasili I. (Materials Sciences and Metals Durability) Born in 1933. Awarded the G. V. Karpenko Prize in Physical Chemistry in 1989; elected in 1990.

Pozniak, Leonid A. (Materials Sciences) Born in 1929. Awarded the E. O. Paton Prize for the Creation of New Metals and Metal Processes in 1984; elected in 1990.

Rodin, Petr R. , D. Tech. S. (Metal Processing) Born in 1922. Corresponding member since 1976.

Romaniv, Oleg N. (Materials Sciences) Born in 1928. Recipient of the State Prize for Science and Technology in 1976; elected in 1985. Awarded the G. V. Karpenko Prize in Physical Chemistry in 1988.

Seminozhenko, Vladimir P. (Ceramic Materials) Born in 1950, elected in 1988.

Shul'te, Iu. A. , D. Tech. S. (Electrometallurgy) Born in 1910. Corresponding member since 1969.

Tovstiuk, Kornii D. (Conductive Materials) Born in 1922. Recipient of the State Prize for Science and Technology in 1973; elected in 1978.

Trufiakov, Vladimir I. , D. Tech. S. (Construction Materials Durability) Born in 1918. Recipient of the State Prize for Science and Technology in 1972. Corresponding member since 1976. Awarded the E. O. Paton Prize for the Creation of New Metals and Metal Processes in 1978. Recipient of the SSSR State Prize in 1985.

Research Institutes : Three scientific councils are managed through this department: the scientific council on the physical chemistry of mechanical materials under Academician V. V. Panachiuk; scientific council on surface phenomena of contact fusion in the solid phase under Academician Iu. V. Naidich--awarded the E. O Paton Prize for the Creation of New Metals and Metal Processes in 1973; and the scientific council on high pressure materials under Academician N. V. Novikov--Recipient of the State Prize for Science and Technology in 1973, the SSSR State Prize in 1981, and the E. O Paton Prize for the Creation of New Metals and Metal Processes in 1983. There are seven scientific research institutes directly subordinate to the department and they are given below in the order of their founding:

E. O. Paton Electric Welding Institute in Kiev.

Institute of Electrical Welding UAS
252005 Kiev, Ukraine
Bozhenko, 11
(044)2273183
(044)2680486 (fax)
postmaster@paton.kiev.ua (email)

Established in 1934. Its first director was Academician E. O. Paton who directed its work until his death in 1953. The institute coordinates research and design applications in welding techniques in Ukraine. The present director is Academician Boris E. Paton D. Tech. S., who also president of the Ukrainian Academy of Sciences.

G. V. Karpenko Physical Mechanical Institute in Lvov.

Physico-Mechanical Institute UAS
290601 Lviv, Ukraine
Naukova, 5
(0322)654233
(0322)649427 (fax)
postmaster@fmi.lviv.ua (email)

Physico-Mechanical Institute UAS, Sea Corrosion
Dept.
270003 Odessa, Ukraine
Petrenko, 2
(0482)222275
(0482)260754 (fax)

Established in 1951 from a L'vov department of elasticity theory of the Mathematics Institute of the Ukraine Academy. Its first director was N. N. Shiemilovskii, D. Tech. S. One academician and five corresponding members of the Ukraine Academy are on the staff which numbered 192 in 1990, of whom 22 held the doctorate and 170 held the candidate degree. The institute is responsible for theoretical studies of deformation, and fracture mechanics of materials under stress. The present director is Vladimir V. Panasiuk, D. Tech. S.--recipient of the State Prize for Science and Technology in 1977 and awarded the A. N. Dinnik Prize for Mechanics and Machine Building in 1974.

I. N. Frantsevich Materials Problems Institute in Kiev.

Institute of Problems in Material Science UAS

252142 Kiev, Ukraine
Krzhizhanovsky, 3
(044)4442271
(044)4442078 (fax)
postmaster@ipms.kiev.ua (email)

It was established in 1955 from a special fusion laboratory of the Ferrous Metallurgy Institute of the Ukraine Academy. Its first director was Academician I. N. Frantsevich. This large institute has a scientific-technical complex, a design bureau, a special information system bureau, and a scientific base for filament research. Four academicians and six corresponding members are on the staff which numbered 660 in 1990, of whom 60 held the doctorate and 600 the candidate degree. The institute develops high temperature materials, studies problems of the structure of solids, and coordinates all Soviet powder metallurgy research. The present director is Academician Viktor I. Trefilov, D. PM. S.--recipient of the State Prize for Science and Technology in 1974. Awarded the E. O Paton Prize for the Creation of New Metals and Metal Processes in 1987.

Institute of Problems in Material Science,

Chernivtsy Division UAS
274001 Chernivtsi, Ukraine
Vil'de, 5
(03700)25155
(03700)25155 (fax)
atc@chern.customers (email)

Casting Problems Institute in Kiev.

Institute for Foundry Problems UAS
252680 Kiev, Ukraine
Vernadskogo 34/1
(044)4446901
(044)4448173 (fax)

Established in 1958 from the Machine and Agricultural Mechanical Institute of the Ukraine Academy. Its first director was A. A. Gorshkov, corresponding member of the Ukraine Academy. The staff of the institute numbered 135 in 1990, of whom 15 held the doctorate and 120 held the candidate degree. One academician and three corresponding members were on the staff. The institute is involved in the development of theoretical and technological bases of casting steel and forming steel ingots. The present director is V. L. Naidek.

Superhard Materials Institute in Kiev.

Institute of Superresistant Materials UAS
254153 Kiev, Ukraine
Avtozavodskaya, 2
(044)4351321
(044)4353291 (fax)

Established in 1961 from the Central Design Bureau of the Alloy Hardening and Diamond Institute of the Ukraine Academy. Its first director was V. N. Bakul', D. Tech. S. One academician is on the staff which in 1990 numbered 242 of whom 21 held the doctorate and 221 the candidate degree. The institute is involved in the development of superhard materials, tools made from them, and equipment fabricated for their production. The present director is Nikolai V. Novikov, D. Tech. S.--Awarded the E. O Paton Prize for the Creation of New Metals and Metal Processes in 1983 and recipient of the SSSR State Prize in

1981.

Electrohydraulic Design Bureau in Mikolaev.
Institute of Pulse Research &
Eng/Electro-hydraulics Design Bureau UAS
327018 Mykolayev, Ukraine
Oktyabrsky, 43a
(0510)224113
(0510)226140 (fax)

The bureau was established in 1962, becoming a part of the Ukrainian Academy System in 1972 with independent institute status. Its first director was A. P. Sorochinskii, C. Tech. S. The staff of the institute numbered 65 in 1990, of whom three held the doctorate and 62 the candidate degree. The present director is G. A. Gulin, D. Tech. S.

Monocrystal Institute in Kharkov was established in 1989. Its director is V. P. Seminozhenko, whose field is ceramic materials.

Physical and Technical Problems of Power Engineering

Department

252601 Kiev, Ukraine

Volodymyrska, 54

(044)225-2374

Members of the department: This department counted only 11 members in 1987--four academicians and seven corresponding members, it has control over four large Scientific Research Institutes.. There were four directors and deputy directors from the department's membership. In 1990, however membership in ;this department had grown to 24, of whom 10 were academicians and 14 were corresponding members.

Academicians: Two of the academicians were in their 80s; three in their 70s; three were in their 60s; and two were in their 50s.

Corresponding Members: In 1990, one was in his 80s; two in their 70s; and, three in their 60s; and eight in their 50s.

Academician Secretary

Shidlovskii, Anatolii K., D. Tech. S. (Power Machine Construction and Machine Durability) Born in 1933. Academician since 1985. Director of the Electrodynamics Institute in Kiev since 1974. Founded in 1939, the institute is concerned with methods, devices, and systems used in the prevention of short circuits. Academic secretary to the Physical Technical Problems of Energetics (Power Engineering) Department in 1990.

Academicians

Chizhenko, Ivan M. D. Tech. S. (Power Transistor Transformers) Born in 1916. Recipient of the Lenin Prize in 1962. Corresponding member since 1972; elected an academician in 1988.

Grinevich, Feodosii B. , D. Tech S. (Electrical Measurement) Born in 1922. Recipient of the SSSR State Prize in 1976. Academician since 1979.

Dolinskii, Anatolii A. D. Tech. S. (Heat Engineering) Born in 1931. Corresponding member since 1978; elected an academician in 1988. Director of the Technical Thermal Physics Institute in Kiev since 1982. The institute was established in 1964 to do research on heat and mass exchange in technological processes, heat processes in MHD systems, and in the earths core, and thermometric instruments. Recipient of the State Prize for Science and Technology in 1984.

Pukhov, Georgii E. (Mathematics and Computer Technology) Born in 1916, elected in 1967. Recipient of the State Prize for Science and Technology in 1982. Until 1990 he was academic secretary to the department.

Rvachev, Vladimir L. (Mechanics) Born in 1926. Awarded the A. N. Dinnik Prize for Mechanics and Machine Building in 1976; elected in 1978. Recipient of the State Prize for Science and Technology in 1980.

Schastlivii, Gennadii G. D. Tech. S. (Durability of Electrical Machines) Born in 1930. Awarded the G. F. Proskuri Prize for Power Engineering in 1979. Corresponding member since 1985; elected an academician in 1988. Deputy director of the Electrodynamics Institute in Kiev since 1974.

Shchervan', Aleksandr N. (Mining Pit Ventilation) Born in 1906, elected in 1957.

Shidlovskii, Anatolii K. , D. Tech. S. (Electric Machine Construction and Durability) Born in 1933. Academician since 1985. Director of the Electrodynamics Institute in Kiev since 1974. Founded in 1939, the institute is concerned with methods, devices, and systems used in the prevention of short circuits. Academic secretary to the Physical Technical Problems of Power

Engineering Department in 1990.

Shubenko-Shubin, Leonid A. (Energetics) Born in 1906. Recipient of the SSSR State Prize in 1947; elected in 1957. Ukraine Academy of Sciences Hero of Socialist Labor Prize recipient in 1962. Awarded the G. F. Proskuri Prize for Power Engineering in 1982.

Stognii, Boris S. (Energetics) Born in 1936. Recipient of the State Prize for Science and Technology in 1985; elected in 1990.

Corresponding Members

Denisenko, Grigori I., D. Tech. S. (Electrical Circuits and Systems) Born in 1919. Corresponding member since 1969.

Diban, E. P., D. Tech. S. (Electrical Currents) Born in 1925. Corresponding member since 1985. Awarded the G. F. Proskuri Prize for Power Engineering in 1977.

Evdokimov, Viktor F. (Heat Exchange) Born in 1941. Awarded the S. A. Lebedev Prize in Computer Technology and Automatic Control Systems in 1984; elected in 1990.

Gerashchenko, Oleg A. (Current Stabilization of Power Systems) Born in 1925, elected in 1976.

Khalatov, Artem A. (Heat Engineering) Born in 1942, elected in 1990.

Kuznetsov, Vladimir G. (Electrical Engineering) Born in 1935, elected in 1990.

Matsevitii, Iurii M. (Heat Accumulation in Technological Processes) Born in 1934, elected in 1982. Awarded the G. F. Proskuri Prize for Power Engineering in 1984.

Podgornii, Anatolii N. (Dynamics and Machine Durability) Born in 1932, elected in 1973. Recipient of the State Prize for Science and Technology in 1984.

Povkh, Ivan L. (Gas Aerodynamics) Born in 1909, elected in 1961.

Samofalov, Konstantin G. (Electrical Engineering and Modeling of Power Systems) Born in 1921, elected in 1982.

Stoian, Iu. G., D. Tech. S. (Electrical Engineering and Power Plant Modeling) Born in; 1935. Recipient of the State Prize for Science and Technology in 1980. Corresponding member since 1985.

Tonkal', Vladimir E. (Power Transistors and Transformers) Born in 1936, elected in 1982.

Vasil'ev, Vsevolod V. (Electronics and Modeling of Energy Systems) Born in 1935, elected in 1982. Awarded the S. A. Lebedev Prize in Computer Technology and Automatic Control Systems in 1988.

Volkov, Igor' V. (Current Stabilization Systems) Born in 1936. Recipient of the State Prize for Science and Technology in 1975; elected in 1988.

Research Institutes : Four scientific councils are coordinated through personnel of this department: the scientific council on the scientific principles of electricity under Academician A. K. Shidlovskii; the scientific council on the principles of energy conservation under Corresponding Member V. E. Tonkal'; the scientific council on the theoretical principles of power engineering and electrometry modeling under Academician G. E. Pukhov--recipient of the State Prize for Science and Technology in 1982; and the scientific council on heat technology under Academician A. A. Dolinskii--Recipient of the State Prize for Science and Technology in 1984. There are five scientific research institutes directly subordinate to this department and they are given below in the order of their founding:

Electrodynamics Institute in Kiev.
Institute of Electrodynamics UAS

252680 Kiev, Ukraine
Pobedy, 56
(044)4460151
(044)4469494 (fax)
postmaster@edi.kiev.ua (email)

Founded in 1947 from the electrotechnical department of the Power Engineering Institute of the Ukrainian Academy. It received its present name in 1963. Its first director was Academician S. A. Lebedev. In 1990, the staff numbered 197 of whom 28 held the doctorate and 169 the candidate degree. Four academicians and four corresponding members are on the staff. The institute is primarily concerned with methods, devices, and systems used in the prevention of short circuits. The institute maintains a special design bureau. The present director is Anatolii K. Shidlovskii, D. Tech. S.

Technical Thermal Physics Institute in Kiev.

Institute of Engineering Thermophysics UAS
252057 Kiev, Ukraine
Zhelabova, 2a
(044)4466282
(044)4466091 (fax)

Founded in 1947 from a department of the Power Engineering Institute of the Ukrainian Academy. From 1963 to 1987, it was called the Thermal Power Engineering Institute. In 1987, it received its present name. Its first director was Academician I. T. Shvets. The institute is a part of a scientific-technical complex which includes a design bureau, an experimental thermal physics design bureau, and an experimental mechanics plant. In 1990., the institute had a staff which numbered 170 of whom 21 held the doctorate and 149 the candidate degree. Two academicians and two corresponding members of the Ukraine Academy are on the staff. The institute does research in heat and mass exchange in technological processes, heat processes in MHD systems, and in the earth's core, and thermometric instruments. The present director is Anatolii A. Dolinskii, D. Tech S.--Recipient of the State Prize for Science and Technology in 1984.

Problems of Machine Building Institute in Kharkov.

Institute of Problems of Engineering UAS
310046 Kharkiv, Ukraine
Pozharsky. 2/10
(0572)945514
(0572)942914 (fax)
root@ipmach.kharkov.ua (email)

Founded in 1972. The staff of the institute numbered 121 in 1990, of whom 18 held the doctorate and 103 held the candidate degree. The institute conducts research on improving methods of designing machines using mathematics, mechanics, and computer assisted design technology. The present director is Anatolii N. Podgornii, D. Tech. S.--Recipient of the State Prize for Science and Technology in 1984.

Problems of Modeling in Power Engineering Institute in Kiev.

Institute of Energy Simulation Problems UAS
252164 Kiev, Ukraine
Generala Naumova, 15
(044)4441063

postmaster@ipme.kiev.ua (email)

Founded in 1981 from an electricity modeling sector of the Electrodynamics Institute of the Ukrainian Academy. Its first director was Academician G. E. Pukhov. Its staff numbered 93 in 1990, of whom 17 held the doctorate and 76 the candidate degree. This institute formulates computer models to investigate the reliability of regional power systems and coordinates research in the Ukraine on theoretical power engineering, electronics, and power system modeling. The institute maintains a special design bureau. The present director is V. F. Evdokimov, corresponding member of the Ukraine Academy.

Problems of Power Conservation Institute in Kiev.

Institute of Energy Saving Problems UAS

252070 Kiev, Ukraine

Andreevskaya, 19

(044)4165068

(044)4162510 (fax)

The institute was established in 1988 from the department of problems of conservation and research in electric energy of the Electrodynamics Institute of the Problems of Modeling in Power Engineering and from the Heat and Power Complex of the Technical Thermal Bureau. The staff of the institute numbers 81 in 1990, of whom nine held the doctorate and 72 the candidate degree. The present director is V. E. Tonkal'.

SECTION OF CHEMICAL-ENGINEERING & BIOLOGICAL SCIENCES

252601 Kiev, Ukraine
Volodymyrska, 54
(044)224-3238

Department of Chemistry & Chemical Engineering

252601 Kiev, Ukraine
Volodymyrska, 54
(044)224-1944

Membership of the department: The Chemistry and Chemical Technology Department of the Ukrainian academy counted a total of 39 members in 1990, 17 of whom were academicians and 22 were corresponding members. In 1987, 12 members of this department were or had been directors or deputy directors of eight of the scientific research institutes under departmental control. None of the academicians or corresponding members of this department share a membership in any of the subject-matter departments of the AN SSSR. The academy membership included a rector and a prorector of the Kiev State University.

Academicians: In 1990, two academicians were in their 90s; two academicians were in their 80s; five were in their 70s; four in their 60s; and, five were in their 50s.

Corresponding Members: Two corresponding members were in their 80s; three were in their 70s; six were in their 60s; 10 were in their 50s; and, one was in his 40s. This old and traditional department was consciously attempting to bring in younger scientists.

Academician Secretary

Pokhodenko, Vitalii D ., D. Chem. S. (Physical Chemistry) Born in 1936. Academician since 1985. Deputy director of the L. V. Pisarzhevskii Physical Chemistry Institute in Kiev since 1971. Academic secretary to the Department of Chemistry and Chemical Technology in 1990.

Academicians

Andronati, Sergei A. (Bioorganic Chemistry) Born in 1940, corresponding member since 1982; elected an academician in 1988. Member of the Presidium since 1990.

Atroshchenko, Vasili I ., D. Tech. S. (Chemical Technology) Born in 1906. Recipient of the SSSR State Prize in 1969. Academician since 1972. Ukraine Academy of Sciences Hero of Socialist Labor Prize recipient in 1971.

Babichev, Fedor S ., D. Chem. S. (Organic Chemistry and Heterocyclical Compounds) Born in 1917. Academician of the Chemistry and Chemical Technology Department since 1974. Vice president of the Ukrainian Academy since 1978. Awarded the L. V. Pisarzhevskii Prize for Chemistry and Chemical Technology in 1986.

Berezhnoi, Anatolii S ., D. Tech. S. (Chemistry and the Technology of Inorganic Structural Materials) Born in 1910. Academician since 1979.

Chuiko, Aleksei A ., D. Chem S. (Surface Chemistry) Born in 1930. Recipient of the State Prize for Science and Technology in 1972. Corresponding member since 1979; elected an academician in 1988. Deputy director of the L. V. Pisarzhkevskii Physical Chemistry Institute in Kiev since 1972.

Gorodiskii, Aleksandr V ., D. Chem. S. (Electrochemistry) Born in 1930. Awarded the L. V. Pisarzhenskii Prize for Chemistry and Chemical Technology in 1972. Academician since 1978. From 1972 to 1973, he was deputy director of the N. S. Kurnakov General and Inorganic Chemistry Institute in Moscow which was founded in 1934 to study metal alloys, rare earth elements, and the chemistry of complex compounds and polymers. He has been director of the General and Inorganic Chemistry Institute in Kiev since 1973. This institute was founded in 1919 and its research includes chemistry, electrochemistry of melted, aqueous and nonaqueous electrolytes, and coordination chemistry.

Iatsimirskii, Konstantin B., D. Chem. S. (Inorganic Chemistry) Born in 1916. Academician since 1964. Director of the L. V. Pisarzhenskii Physical Chemistry Institute in Kiev since 1968. Awarded the L. V. Pisarzhenskii Prize for Chemistry and Chemical Technology in 1970.

Kirsanov, Aleksandr V. , D. Chem. S. (Organic Chemistry) Born in 1902. Academician since 1961. Director of the Organic Chemistry Institute in Kiev since 1960. The institute conducts research on elementally based organic compounds, photosynthesis, polymerization reactions, and heterocyclical compounds. Recipient of the Lenin Prize in 1974.

Kucher, Roman V ., D. Chem. S. (Physical Chemistry) Born in 1925. Academician since 1972. Awarded the L. V. Pisarzhenskii Prize for Chemistry and Chemical Technology in 1975.

Kukhar', Valerii P ., D. Chem. S. (Organic Chemistry) Born in 1942. Secretary of the Chemistry and Chemical Technology Department from 1978 to 1990. Academician since 1985. Awarded the G. V. Karpenko Prize in Physical Chemistry in 1989.

Kul'skii, Leonid A ., D. Tech. S. (Chemistry and the Technology of Water Purification) Born in 1903. Academician since 1969. Awarded the L. V. Pisarzhenskii Prize for Chemistry and Chemical Technology in 1985.

Lipatov, Iurii S. , D. Chem S. (Chemistry of High Molecular Compounds) Born in 1927. Academician since 1973. Director of the High Molecular Compounds Institute in Kiev since 1965. The institute was established in 1959 and studies the chemistry of high molecular compounds for both basic purposes and for the production of new types of monomers, polymers, and synthetic fiber. Awarded the L. V. Pisarzhenskii Prize for Chemistry and Chemical Technology in 1980 and recipient of the State Prize for Science and Technology in 1981.

Markovskii, Leonid N ., D. Chem. S. (Organic Chemistry) Born in 1939. Corresponding member since 1939; elected an academician in 1988. Deputy director of the Organic Chemistry Institute in Kiev since 1981. Director of the institute since 1991. The institute conducts research on elementally based organic compounds, photosynthesis, polymerization reactions, and heterocyclical compounds.

Ovcharenko, Fedor D ., D. Chem. S. (Colloidal Chemistry) Born in 1913. Academician since 1961. Recipient of the State Prize for Science and Technology in 1969. Awarded the L. V. Pisarzhenskii Prize for Chemistry and Chemical Technology in 1981.

Pilipenko, Anatolii T., D. Chem. S. (Analytical Chemistry) Born in 1914. Academician since 1976. Director of the A. V. Dumanskii Colloidal Chemistry and Hydrochemistry Institute in Kiev since 1975. The institute was established in 1968 and its research involves theoretical and technical aspects of colloid chemistry and hydrochemistry such as the regulation of water quality. Since 1979, prorector of the T. G. Shevchenko Kiev State University in Kiev, established in 1834. Awarded the L. V. Pisarzhenskii Prize for Chemistry and Chemical Technology in 1984. He was elected to the Presidium in 1990.

Pokhodenko, Vitalii D ., D. Chem. S. (Physical Chemistry) (See above.)

Skopenko, Viktor V ., D. Chem. S. (Inorganic Chemistry) Born in 1935. Corresponding member of the Chemistry and Chemistry Technology Department of the Ukrainian academy since 1978; elected an academician in

1988. Since 1985, he has served as rector of the T. G. Shevchenko Kiev State University in Kiev which was established in 1834. He was named vice president of the Ukrainian academy in 1988.

Corresponding Members

Antropov, Lev I. (Chemical Technology) Born in 1913. Corresponding member since 1982.

Baranov, Sergei N., D. Chem. S. (Organic Chemistry) Born in 1918. Corresponding member since 1965.

Golodets, Grigorii I. (Physical Chemistry) Born in 1936. Awarded the L. V. Pisarzhenskii Prize for Chemistry and Chemical Technology in 1973; elected in 1990.

Gololobov, Iu. G., D. Chem. S. (Organic Chemistry) Born in 1930. Corresponding member since 1976. Deputy director of the Organic Chemistry Institute in Kiev since 1972. The institute conducts research on elementally based organic compounds, photosynthesis, polymerization reactions, and heterocyclical compounds.

Goncharuk, Vladislav V. (Chemistry and the Technology of Water Purification) Born in 1941, elected in 1990.

Iasnikov, Aleksandr A., D. Chem. S. (Chemistry of Natural Compounds) Born in 1923. Corresponding member since 1969. Awarded the L. V. Pisarzhenskii Prize for Chemistry and Chemical Technology in 1971.

Karp, Igor' N. (Chemical Technology and Gas Technology) Born in 1932, elected in 1988.

Kercha, Iurii Iu. (Chemistry of High Molecular Compounds) Born in 1936. Awarded the L. V. Pisarzhenskii Prize for Chemistry and Chemical Technology in 1987; elected in 1990.

Klimov, Vsevolod V., D. Chem. S. (Physical Chemistry and the Technology of Inorganic Materials) Born in 1930. Recipient of the SSSR State Prize in 1975. Corresponding member since 1978.

Koshenko, Viachslav G. (Physical Chemistry) Born in 1946, elected in 1990.

Lebedev, Evgenii V. (Chemistry of High Molecular Compounds) Born in 1941, elected in 1988.

Lozinskii, Miron O. (Organic Chemistry) Born in 1938, elected in 1990.

Makhorin, Konstantin E. (Oil Chemistry and the Technology of Oil and Gas) Born in 1928. Recipient of the SSSR State Prize in 1986; elected corresponding member in 1972.

Nazarenko, Vasilii A., D. Chem. S. (Technical Chemistry) Born in 1908. Recipient of the SSSR State Prize in 1952. Corresponding member since 1972.

Popov, Anatolii F. (Physico-organic Chemistry) Born in 1937, elected in 1988.

Prisiazhnii, Vitalii D. (Inorganic Chemistry) Born in 1935, elected in 1990.

Rudakov, Elisey S., D. Chem. S. (Physical Chemistry and Catalysis and Kinetics) Born in 1929. Corresponding member since 1972. Awarded the L. V. Pisarzhenskii Prize for Chemistry and Chemical Technology in 1982.

Sheka, Ivan A., D. Chem. S. (Inorganic Chemistry and Chemistry Technology) Born in 1907. Corresponding member since 1967.

Strelko, Vladimir V. (Processing of Compounds) Born in 1937. Recipient of the SSSR State Prize in 1979; elected in 1988.

Vlasenko, Vasilii M., D. Chem. S. (Chemical Technology) Born in 1921. Recipient of the State Prize for Science and Technology in 1970. Corresponding member since 1976. Awarded the L. V. Pisarzhenskii Prize for Chemistry and Chemical Technology in 1984.

Volkov, Sergei V., D. Chem. S. (Inorganic Chemistry) Born in 1935. Corresponding member since 1978. Deputy director of the General and Inorganic Chemistry Institute in Kiev since 1974. Awarded the L. V.

Pisarzhenskii Prize for Chemistry and Chemical Technology in 1983.
Zarubitskii, Oleg G. (Chemical Technology, Inorganic Materials) Born 1936;
elected in 1985.

Research Institutes: This department's personnel head up seven important scientific councils for the Ukrainian Academy of Sciences: the scientific council on the synthesis and deep cleaning of inorganic compounds under Corresponding Member I. A. Sheka; the scientific council on the chemistry and technology of surface modification under Academician A. A. Chuiko--recipient of the State Prize for Science and Technology in 1972; the scientific council on the chemistry of the modification of polymers under Corresponding Member E. V. Lebedev; the scientific council on chemical kinetics and structure under Academician V. D. Pokhodenko; the scientific council on electrochemical kinetics and electrodynamic control processes under Academician A. V. Gorodiskii--awarded the L. V. Pisarzhenskii Prize for Chemistry and Chemical Technology in 1972; the scientific council on the chemistry of biopolymer regulation under Academician V. P. Kukhar'--awarded the G. V. Karpenko Prize in Physical Chemistry in 1989; and the scientific council on the problems of oil chemistry and oil refining under Academician V. P. Kukhar'. There were 10 scientific research institutes directly subordinate to the Chemistry and Chemical Technology Department in 1990. They are given below in the order of founding:

L. V. Pisarzhenskii Physical Chemistry Institute in Kiev.
252039 Kiev, Ukraine
Nauki, 31
(044)2654228
(044)2656216 (fax)
ipcukr@sovamsu.sovusa.com. (email)

Founded in 1927 from the Dnepropetrovsk scientific research base rostrum of the electron chemistry commissariat of the Ukraine Academy, joining the Akademyi Science System in 1934. Its first director was Academician L. V. Pisarzhenskii. Two academicians and three corresponding members were on the staff in 1990 when it numbered 120 researchers of whom 26 held doctorates and 94 held candidate degrees. Research is done on the theory of chemical structures, kinetics, catalysis, high energy chemistry, synthesis, inorganic and bioinorganic chemistry. It is the lead organization in implementing the basic research program on macrocyclic complexions and their analogs. The present director is V. D. Pokhodenko.

General and Inorganic Chemistry Institute in Kiev.
"Technoelektrokhim"
252680 Kiev, Ukraine
Palladina, 32/34
(044)4443111
(044)4447440 (fax)
sprintmail:atc.kiev (email)

Founded in 1931 from a rostrum of scientists of the People's Commissariat of the Ukraine SSR and a chemistry laboratory of the the academy headed by V. I. Vernadskii. The first director of the institute was Academician V. A. Plotnikov. One academician and five corresponding members of the Ukraine Academy were on the staff in 1990 which numbered 155 researchers of whom 26 held the doctorate and 129 the candidate degree. The staff studies electrochemistry, the physical chemistry of ionic transfer and electrolysis, synthesis, adsorption, inorganic synthesis, and aqueous and nonaqueous electrolytes.

The present director is Academician Aleksandr V. Gorodetskii, D. Chem. S.

Organic Chemistry Institute in Kiev.

253660 Kiev, Ukraine

Murmanskaya, 5

(044)5527150

(044)5528308 (fax)

Founded in 1939 from the Chemistry Technology Institute and a sector of organic chemistry of the Chemistry Institute of the Ukraine Academy. Its first director was Academician V. P. Iavorskii. Scientists at the institute conduct basic research in organophosphorus compounds, organofluorine compounds, cyanine dyes, heterocyclic compounds, polymers based on isocyanates. Its scientists and the personnel in the experimental plant produce drugs for human and veterinary medicine, plant growth regulators and pesticides, sensitizers for photosensitive materials, cyanine dyes for laser technics, stabilizers and lubricants for polyvinylchloride, antimicrobial additives for lubricant-coolants protection, complexation (trialkylphosphinoxides) for hydrometallurgy, and medical glues and biodestructive materials of polyurethane composition. In 1992, there were 350 research workers at the institute and 320 at the experimental plant which manufactures a number of different products each year. A second building of the production plant is currently under construction. Institute scientists maintain relations with scientific and commercial foreign partners in Bulgaria, Czechoslovakia, Poland, West Germany, Hungary, France, and Japan. The institute is interested in the establishment of joint ventures for the commercial production and sale of pharmaceuticals, stabilizers for PVC or other fine organic chemicals. Institute structure: the institute is organized in 11 Research Departments among which some 10 laboratories are distributed with an analytical laboratory available to all Departments. The Departments are: 1) the Chemistry of Organophosphorus Compounds Department with the Heterocumulenes Aimed Synthesis laboratory since 1978 under Professor A. M. Pinchuk, D. Chem. S., who was born in 1938 and graduated from the Dnepropetrovsk Metallurgical Institute in 1960--the department has two laboratories: the Laboratory of Heterocumulenes Aimed Synthesis since 1981 under Professor L. I. Samarai, D. Chem. S. who was born in 1935 and graduated from Lvov State University in 1958; and the Laboratory of Complexing Organophosphorus Compounds since 1966 under Professor N. G. Fashchenko, D. Chem. S. who was born in 1929 and graduated from Kiev State University in 1954; 2) the Organic Compounds Color and Structure Department, since 1976 under Professor A. I. Tolmachev who was born in 1929 and graduated from the Kiev State University in 1954; 3) the Organoelement Compounds Department since 1981 under A. D. Sinitsa, D. Chem. S., who was born in 1941 and graduated from Kiev Polytechnical Institute in 1965--with the fluorine-containing heterocyclic compounds laboratory, since 1984 under V. P. Nazaretian who was born in 1943 and graduated from Kiev State University in 1969; 4) the Complexing Organophosphorus Compounds Department since 1973 under Professor V. I. Staninets, D. Chem. S., who was born in 1934 and graduated from Uzhgorod University in 1957--with the laboratory of Mechanisms of Organic Compounds Halogenation which, since 1973 has been under Professor Yu. A. Serguchev, D. Chem. S., who was born in 1934 and graduated from Dnepropetrovsk Pharmaceutical Institute in 1958; 5) the Phosphoranes Chemistry Department since 1975 under the direction of Professor L. N. Markoviski who was born in 1939 and graduated from the Lvov Polytechnical Institute in 1981--with the laboratory of the chemistry of sulphur organic compounds which since 1986 has been under Yu. G. Shermolovich, D. Chem. S., who was born in 1948 and graduated from the Lvov Polytechnical Institute in 1971 and the laboratory of

low-coordinate phosphorus which since 1988 has been under V. D. Romanenko, D. Chem. S., who was born in 1946 and graduated from the Dnepropetrovsk Chemical and Technological Institute in 1969; 6) the Bioactive Substances Department which since 1980 has been under Professor M. O. Lozinski, D. Chem. S., who was born in 1933 and graduated from the Lvov Polytechnical Institute in 1956; 7) the Acetylene Compounds Department which; since 1984 has been under Professor A. Ya. Ilchenko, D. Chem. S., who was born in 1934 and graduated from the Kiev Polytechnical Institute in 1956--with the radiospectroscopy laboratory which since 1988 has been under V. M. Bzhezovski, C. Chem. S. who was born in 1946 and graduated from the Kiev Polytechnical Institute in 1971, and the Laboratory of X-Ray Structure Analysis which since 1990 has been under A. N. Chernega, C. Chem. S. who was born in 1955 and graduated from Kiev State University in 1971; 8) the Organofluorine Compounds Department which since 1988 has been under Yu. L. Yagupolski, D. Chem. S., who was born in 1949 and graduated from the Kiev State University in 1971; 9) the Medico-Biological Research Department which since 1983 has been under B. M. Kebanov, D. NMed. S., who was born in 1935 and graduated from the Kiev Medical Institute in 1958--with the chemical compounds biological trials laboratory which, since 1981 has been under V. S. Petrenko, C. Bio. S. who was born in 1937 and graduated from Kiev State University in 1965. The institute has two deputy directors--M. O. Lozinskii, D. Chem. S., Associate Member of the Ukrainian Academy, and A. D. Sinitsa, D. Chem. S., a learned secretary, a director of the Experimental or Pilot Plant, and a Chief Engineer. There are several in-house support departments which include: the Scientific Information and International Relations Department, the Metrology Department, the Operation and Technical Services Department, the Administrative Services Department, the Planning Department, the Material and Technical Supply Department, and the Personnel Department. There is an institute-wide bookkeeping section, a patent group, a new developments introduction group, and a standardization group. In 1990, the director was V. V. Goncharuk. Professor L. N. Markovskii academician of the Ukrainian Academy is the present director of the institute. (This material included in letters dated 29 January 1992 and February 24, 1992 from Professor Director L. N. Markovskii.)

Gas Institute in Kiev.

Founded in 1949. The first director was Academician N. N. Dobrokhotov. The staff numbered 81 in 1990, of whom 12 held the doctorate and 69 the candidate degree. The institute studies the efficiency of the uses of gas in industry and techniques to prevent air pollution from chemical processing of hydrocarbons. In 1990, the director was I. N. Karp, corresponding member of the Ukraine Academy.

High Molecular Compounds Chemistry Institute in Kiev.

Institute of Macromolecular Chemistry UAS
253160 Kiev, Ukraine
Kharkovsky, 48
(044)5591394
(044)5524064 (fax)

Founded in 1958 from a high molecular compounds laboratory of the Organic Chemistry Institute of the Ukraine Academy. Its first director was K. A. Kornev, corresponding member of the academy. In 1990, two corresponding members were on the staff which numbered 98 scientists of whom 17 held the doctorate and 81 the candidate degree. It studies the chemistry of high molecular compounds for both basic purposes and for the production of new

types of monomers, polymers, and synthetic fiber. In 1990, the director was E. V. Lebedev.

A. V. Dumanskii Colloidal Chemistry and Hydrochemistry Institute
in Kiev.

Institute of Colloid & Water Chemistry UAS
252680 Kiev, Ukraine
Vernadskogo, 42
(044)4440196
(044)4520276 (fax)

Founded in 1968 from a sector of chemistry and water technology and a physical chemistry dispersion system of the General and Inorganic Chemistry Institute of the Ukrainian Academy. Its first director was Academician F. D. Ovcharenko. Two academicians and two corresponding members were on the staff in 1990 which numbered 209 researchers of whom 25 held the doctorate and 184 the candidate degree. The institute researches the theoretical and technical aspects of colloid chemistry and hydrochemistry and develops guidelines for the regulation of water quality. In 1990, the director was V. V. Goncharuk, corresponding member of the academy.

Physical Organic Chemistry and Coal Chemistry Institute in Donetsk.

340114 Donetsk, Ukraine
Luxemburg, 70
(0622)558524
(0622)553542 (fax)
postmaster@dipt.donetsk.ua (email)

Founded in 1975 from the Donetsk department of organic physical chemistry of the L. V. Pisarzhevskii Institute of Physical Chemistry. The first director of the institute was Academician L. M. Litavinenko. The staff of the institute numbered 126 in 1990, of whom 13 held the doctorate and 113 the candidate degree. Three corresponding members of the academy were on the staff. The institute studies physical organic chemistry and the use of coke and chemical raw material and chemical refining of solid mineral fuels. The present director is A. F. Popov, corresponding member of the Ukraine Academy.

A. V. Bogatskii Physical Chemistry Institute in Odessa.

Physico-Chemical Institute UAS
270080 Odessa, Ukraine
Chernomorskaya, 86
(0482)665155
(0482)652012 (fax)
postmaster@iite.odessa.ua (email)

Founded in 1977 from a laboratory of the General and Inorganic Chemistry Institute of the Ukraine Academy. The first director was Academician A. V. Bogatskii. The staff of the institute numbered 131 in 1990 of whom 18 held the doctorate and 113 the candidate degree. Two academicians and one corresponding member were on the staff. The institute performs research on methods for directed production of small-tonnage chemical products and research in the field of catalysts. The present director is Academician S. A. Andronati.

Institute of Physical Chemistry, Lviv Branch
290053 Lviv, Ukraine

Naukova, 3a
(0322)635174
(0322)635174 (fax)

Surface Chemistry Institute in Kiev.
252022 Kiev, Ukraine
Nauki, 31
(044)2654160
(044)2640446 (fax)

It was founded in 1986 from the department of surface chemistry of the L. V. Pisarzhevskii Physical Chemistry Institute. The staff numbered 119 in 1990 of whom four held the doctorate and 115 the candidate degree. One academician was on the staff. The director of the institute in 1990 was Academician A. A. Chuiko.

Bioorganic Chemistry and Oil Technology Institute in Kiev.
253160 Kiev, Ukraine
Kharkovsky, 50
(044)559-7121
(044)543-5152 (fax)
postmaster@bioorganic.kiev.ua (email)

It was organized in 1987 from a bioorganic chemistry department of the Organic Chemistry Institute of the Ukraine Academy. In 1990, the staff numbered 154, of whom 27 held the doctorate and 127 the candidate degree. One academician and one corresponding member were on the staff. The institute staff models biological processes, researches and develops synthetics from oil and other organic materials, and develops practical products such as medicine from petroleum derivatives. The director of the institute in 1990 was Academician V. P. Kukhar'.

Institute of Adsorptions & Problems of Endoecology
252142 Kiev, Ukraine
Palladina, 32/34
(044)2933413
(044)2930639 (fax)

Biochemistry, Physiology, and Theoretical Medicine Department

252601 Kiev, Ukraine
Volodymyrska, 54
(044)225-1539

Members of the Biochemistry, Physiology, and Experimental Medicine Department: There were 18 academicians and 19 corresponding members of the Biochemistry, Physiology, and Experimental Medicine Department of the Ukrainian Academy of Sciences in 1990. In 1987, five of the academicians were directors of scientific research institutes under the department and one academician was a deputy director of an institute. Four of the corresponding members of the department were or had been institute directors. Two members of the department were also corresponding members of the Physiology Department of the AN SSSR in Moscow; and two others were also members of the Lenin Academy of Medical Sciences.

Academicians: Academicians and corresponding members of this department include a sizeable number of scientists of advanced age. Among the academicians, five were in their 80s; two were in their 70s; nine were in their 60s; and two were in their 50s.

Corresponding Members: Among the 19 corresponding members: four were in the 80s; three were in their 70s; six were in their 60s; three were in their 50s; and, three were in their 40s.

Academician Secretary

Skok, Vladimir I ., D. Bio. S. (Physiology and Medicine) Born in 1932. Corresponding member of the Biochemistry, Physiology, and Experimental Medicine Department since 1973; elected an academician in 1979. Academician of the Physiology Department of the AN SSSR since December 1987. Secretary of the Ukrainian Department since 1974. Vice president of the Ukrainian academy since 1988. Recipient of the SSSR State Prize in 1989.

Academicians

Amosov, Nikolai M ., D. Med. S. (Surgery) Born in 1913. Corresponding member of the Clinical Medicine Department of the Lenin Academy of Medical Sciences since 1961. Academician since 1969. Recipient of the Lenin Prize in 1961. Ukraine Academy of Sciences Hero of Socialist Labor Prize recipient in 1973. Recipient of the State Prize for Science and Technology in 1978 and 1988.

Butenko, Zoia A., D. Med. S. (Experimental Oncology) Born in 1928. Corresponding member since 1978. Recipient of the State Prize for Science and Technology in 1981; elected an academician in 1990.

Frol'kis, Vladimir V. D. Med. S. (Physiology) Born in 1924. Awarded the A. A. Bogomol'ts Prize in Physiology and Theoretical Medicine in 1970. Corresponding member since 1978; elected an academician in 1988.

Gershenson, Sergei M. (Genetics). Born in 1906. Academician since 1976.

Grishchenko, Valentin I. (Cryobiology and Cryomedicine) Born in 1928, elected in 1988.

Gulii, Maksim F. , D. Bio. S. (Biochemistry) Born in 1905. Recipient of the SSSR State Prize in 1952. Academician since 1957. Awarded the A. V. Palladin Prize for Biology and Molecular Biology in 1974. Recipient of the State Prize for Science and Technology in 1978.

Komissarenko, Vasili P ., D. Med. S. (Pathophysiology and Endocrinology) Born in 1907. Academician since 1951. Awarded the A. A. Bogomol'ts Prize in Physiology and Theoretical Medicine in 1961. Recipient of the State Prize for Science and Technology in 1976.

Kostiuk, Platon G ., D. Bio. S. (Human and Animal Physiology) Born in 1924 in Kiev. Soviet physiologist and a specialist in neurophysiology and electrophysiology. Member of the presidium of the academy since August of 1988. He has been a corresponding member of the Physiology Department of the AN SSSR since 1966; and, academician since 1974. He has served as academician secretary of the Physiology department since 1975. He was a recipient of the State Prize for Science and Technology in 1976. He has also been an academician of the Biochemistry, Physics, and Theoretical Medicine department of the Ukrainian academy of sciences since 1969 and a member of the GDR Republic Academy of Naturalists since 1966. He graduated from the University of Kiev in 1946 and from the Kiev Medical Institute in 1949. He became head of the Institute of Animal Physiology of the University of Kiev in 1956. In 1958, he became head of the division of general physiology of the nervous system which he had organized at the A. A. Bogomolets Institute of Physiology of the Ukrainian AN SSR. Since 1966, he has been director of that Institute in Kiev. Established in 1953, the institute does research on basic and applied problems of physiology. His works have included work on cellular mechanism of nervous activity. He was the first in the USSR to use

microelectrodes in the study of nerve cells. He was awarded the I. P. Pavlov Prize in 1962. Recipient of the SSSR State Prize in 1983. Ukraine Academy of Sciences Hero of Socialist Labor Prize recipient in 1984. Awarded the A. A. Bogomol'ts Prize in Physiology and Theoretical Medicine in 1987. Since 1970, he has been director of the Experimental Medical Institute in St. Petersburg. (GSE 13, p. 439.)

Kundiev, Iurii I. (Hygiene) Born in 1927. Academician since 1979.

Lishko, Valerii K., D. Bio. S. (Molecular Biology and Genetics) Born in 1937. Awarded the A. V. Palladin Prize for Biology and Molecular Biology in 1980. Academician since 1982. He has been director of the A. V. Palladin Biochemistry Institute in Kiev since 1977. The institute was founded in 1925 and conducts extensive research in the field of biochemistry and trains scientific workers and higher school instructors. Recipient of the SSSR State Prize in 1985.

Matsuka, Gennadii Kh ., D. Bio. S. (Molecular Biology and Genetics) Born in 1930. Awarded the A. V. Palladin Prize for Biology and Molecular Biology in 1979. Academician since 1985. He served as director of the Molecular Biology and Genetics Institute in Kiev from 1975 to 1977. Founded in 1973, the institute researches the laws of heredity variability of organisms, the structure and function of proteins and nucleic acids and studies genetic information transfer. Secretary to the Biochemistry, Physiology and Theoretical Medicine Department in 1990. Recipient of the State Prize for Science and Technology in 1986.

Nikitin, Vladimir N ., D. Bio. S. (Physiology) Born in 1907. Academician since 1969. Awarded the A. A. Bogomol'ts Prize in Physiology and Theoretical Medicine in 1974. Recipient of the State Prize for Science and Technology in 1984.

Serkov, Filipp N ., D. Bio. S. (Physiology and Medicine) Born in 1908. Recipient of the State Prize for Science and Technology in 1978. Academician since 1978. Awarded the A. A. Bogomol'ts Prize in Physiology and Theoretical Medicine in 1982.

Shalimov, Aleksandr A. (Physiology and Medicine) Born in 1918. Recipient of the State Prize for Science and Technology in 1977; elected in 1978. Ukraine Academy of Sciences Hero of Socialist Labor Prize recipient in 1982. Recipient of the SSSR State Prize in 1985.

Shuba, Mikhail F., C. Bio. S. (Biophysics) Born in 1928. Corresponding member since 1982; elected an academician in 1990.

Skok, Vladimir I. (See above.)

Smirnov, Valerii V . (Virology and Microbiology) Born in 1937. Awarded the D. K. Zabolotii Prize in Microbiology, Virology, Epideomology, and Zoology in 1984. Academician since 1985. Recipient of the State Prize for Science and Technology in 1987. Director of the D.K. Zabolotnii Microbiology and Virology Institute in Kiev since 1977. The institute was founded in 1929 and conducts research on the physiology and biochemistry of microorganisms, molecular biology, and microbiological synthesis of protein and other products from hydrocarbons. He was elected to the Presidium in 1990.

Ternovoi, Konstantin S. (Pathophysiology) Born; in 1924. Academician since 1982. Recipient of the SSSR State Prize in 1985.

Corresponding Members

Andreiuk, Evgenii I. , D. Bio. S. (Microbiology) Born in 1927. Awarded the D. K. Zabolotii Prize in Microbiology, Virology, Epideomology, and Zoology in 1974. Corresponding member since 1982.

Belous, Apollon M. (Cryobiology) Born in 1929, elected in 1988. Awarded the A. A. Bogomol'ts Prize for Physiology and Theoretical Medicine in 1980. Awarded the A. V. Palladin Prize for Biology and Molecular Biology in 1990.

Bilai, Vera I ., D. Bio. S.(Antibiotics) Born in 1908. Recipient of the SSSR State Prize in 1952. Corresponding member since 1961. Awarded the D. K. Zabolotii Prize in Microbiology, Virology, Epideomology, and Zoology in 1970. Recipient of the State Prize for Science and Technology in 1978.

Bogomolets, Oleg A ., D. Med. S. (Pathophysiology) Born in 1911. Corresponding member since 1964.

Bratus', Vasilii D. , D. Med. S. (Physiology and Medicine) Born in 1916. Corresponding member since 1972. Recipient of the State Prize for Science and Technology in 1982.

El'skaia, Anna V. (Molecular Biology) Born in 1940. Awarded the A. V. Palladin Prize for Biology and Molecular Biology in 1979; elected in 1988.

Komissarenko, Sergei V. (Pathophysiology and Endocrinology) Born in 1943, Recipient of the State Prize for Science and Technology in 1979; elected in 1990.

Krishtal', Oleg A ., D. Bio. S.(Physical Chemical Membrane Biology) Born in 1945. Recipient of the SSSR State Prize in 1983. Corresponding member since 1985.

Kvasnikov, Evgenii I. (Microbiology) Born in 1906; academician since 1967.

Lavrik, Semen S. (Pathophysiology and Pharmacology) Born in 1915. Awarded the A. A. Bogomol'ts Prize in Physiology and Theoretical Medicine in 1977; elected in 1979.

Matseliukh, Bogdan P. (Molecular Genetics) Born in 1932. Awarded the D. K. Zabolotii Prize in Microbiology, Virology, Epideomology, and Zoology in 1990; elected in 1990.

Mel'nichuk, Dmitrii A. (Biology) Born in 1943, elected in 1990.

Moibenko, Aleksei A. (Pathophysiology) Born in 1931, elected in 1988.

Pinchuk, Vadim G ., D. Med. S. (Experimental Oncology) Born in 1930. Corresponding member since 1973. Director of the R. E. Kavitskii Problems of Oncology Institute in Kiev since 1978. Awarded the A. A. Bogomol'ts Prize in Physiology and Theoretical Medicine in 1979. Recipient of the State Prize for Science and Technology in 1981.

Podgorskii, Valentin S. (Microbiology) Born in 1937, elected in 1990.

Pushkar', Nikolai S ., D. Med. S. (Cryobiology) Born in 1930. Corresponding member since 1978. Director of the Cryobiology and Cryomedical Problems Institute in Kharkov since 1974. The institute was established in 1972 to study the action of cold on biological structures and the solution of problems in the use of low temperatures in biology and medicine, including the preservation of living tissues. Recipient of the SSSR State Prize in 1978. Awarded the A. A. Bogomol'ts Prize in Physiology and Theoretical Medicine in 1980.

Troitskii, German V. (Medical Biology) Born in 1913, elected in 1979. Awarded the A. V. Palladin Prize for Biology and Molecular Biology in 1984.

Tul'chinskaia, Vera P. (Microbiology) Born in 1907, elected in 1948.

Vozianov, Aleksandr F. (Physiology and Medicine) Born in 1938; elected in 1990.

Research Institutes: Six scientific councils are controlled by this department's scientists: the scientific council on molecular biology under Academician G. Kh. Matsuka; the scientific council on microbiology under Corresponding Member V. S. Podroskii; the scientific council on human and animal physiology under Academician P. G. Kostiuk--recipient of the SSSR State Prize in 1983; the scientific council on cryobiology and cryomedicine under Academician V. I. Grishchenko; the scientific council on animal and human biochemistry under S. A. Kudinov, D. Bio. S.--awarded the A. V. Palladin Prize for Biology and Molecular Biology in 1985--; and the scientific council on the problems of the sorption of toxins under the control of internal organisms under Academician K. S. Ternovoi--recipient of the SSSR State Prize in 1985.

There are six Scientific Research Institutes subordinate to the Biochemistry, Physiology, and theoretical Medicine Department of the Ukrainian Academy of Sciences (AN UkSSR). Research Institutes Subordinate to the department by order of founding are given below:

A. V. Palladin Biochemistry Institute in Kiev.

Institute of Biochemistry UAS
252030 Kiev, Ukraine
Leontovich, 9
(044)2245974
(044)2296365 (fax)
ibsuas@gluk.apc.org (email)

Founded by A. V. Palladin in 1925 from a rostrum of scientific researchers from the Kharkov Institute of Medicine. In 1931, the institute moved to Kiev and joined the academy as the biochemical institute. It was under Palladin's direction until 1969. The staff of the institute numbered 150 in 1990, of whom 25 held the doctorate and 125 the candidate degree. It conducts research into the field of biochemistry and trains scientific workers and higher school instructors. The director in 1990 was S. V. Komissarenko, coresponding member of the Ukraine Academy.

Institute of Biochemistry, Lviv Branch UAS

290005 Lviv, Ukraine
Dragomanova, 14/16
(0322)728508

D. K. Zabolotnii Microbiology and Virology Institute in Kiev.

252143 Kiev, Ukraine
Zabolotnogo, 154
(044)2661179
(044)2662379 (fax)

The institute was founded in 1928 as the Microbiology and Epiemiology Institute. In 1944, it received its present name. The first director of the institute was Academiocian D. K. Zabolotnii. In 1990, the research staff numbered 160 of whom 23 held the doctorate and 137 the candidate degree. One academician and five corresponding members of the academy were on the staff. The institute conducts research on the physiology and biochemistry of microorganisms, molecular biology, and microbiological synthesis of protein and other products from hydrocarbons. The present director of the institute is Academician Valerii V. Smirnov--recipient of the State Prize for Science and Technology in 1987;

A. A. Bogomolets Physiology Institute in Kiev.

Institute of Physiology UAS
252024 Kiev, Ukraine
Bogomolets, 4
(044)2932909
(044)2936458 (fax)
postmaster@binph.Kiev.ua (email)

Institute of Physiology UAS, Scientific Center "Sonar"

252024 Kiev, Ukraine
Bogomolets, 4

(044)2932909
(044)2933431 (fax)
pkostyuk@gluk.apc.org (email)

The institute was founded in 1953 from the Experimental Biology and Pathology Institute of the Ministry of Health and from the Clinical Physiology Institute of the Ukraine Academy. Its first director was A. M. Vorob'ev, corresponding member of the academy. The staff of the institute numbered 155 in 1990, of whom 30 held the doctorate and 125 the candidate degree. Two academicians and two corresponding members were on the staff. It does research on basic and applied problems of physiology. The present director of the institute is Platon G. Kostiuk, D. Bio. S.--recipient of the SSSR State Prize in 1983.

R. E. Kavetskii Problems of Oncology Institute in Kiev.

Radiobiology, "LEKON"
252022 Kiev, Ukraine
Vasilkivska, 45
(044)2669824

Founded in 1960 from the Kiev Experimental and Clinical Oncology Scientific Research Institute of the Ukraine Ministry of Health. Its first director was Academician R. E. Kavetskii. The staff numbered 150 in 1990, of whom 26 held the doctorate and 124 the candidate degree. One academician and one corresponding member were on the staff. The institute studies the causes of cancer and was the first institute in the USSR to use lasers for the treatment of malignant tumors. The present director is Vadim G. Pinchuk, D. Med. S.--recipient of the State Prize for Science and Technology in 1981.

Cryobiology and Cryomedical Problems Institute in Kharkov.

Institute of Problems of Cryobiology & Cryomedicine
310015 Kharkiv, Ukraine
Pereyaslovskaya, 23
(0572)724143
(0572)720084 (fax)

Established in 1972 from the department of Biophysics and the Production of Cryology Instruments of the Physical Technical Low Temperature Institute of the Ukraine Academy and from the problems scientific research laboratory of the Low Temperature Conservation of the Brain and Blood Marrow Department of the Ukraine Ministry of Health. Its first director was N. S. Pushkar', corresponding member of the academy. Its staff numbered 100 in 1990, of whom 12 held the doctorate and 88 the candidate degree. It studies the action of cold on biological structures and the solution of problems in the use of low temperatures in biology and medicine, including the preservation of living tissues. The present director is Academician V. I. Grishchenko.

Molecular Biology and Genetics Institute in Kiev.

252143 Kiev, Ukraine
Zabolotnogo, 150
(044)2661169
(044)2660759 (fax)
postmaster@imbg.Kiev.ua (email)

Founded in 1973 from a sector of molecular biology and genetics of the K. K. Zabolotnii. Microbiology and Virology Institute. The staff of the institute

numbered 91 in 1990, of whom 11 held the doctorate and 80 held the candidate degree. Institute research is concerned with investigating the laws of heredity variability of organisms, the structure and function of proteins and nucleic acids, and the study of genetic information transfer. The director of the institute is Academician G. Kh. Matsuka.

General Biology Department

252601 Kiev, Ukraine

Volodymyrska, 54

(044)225-2360

Members of the department: In 1987, there were 26 members of the General Biology Department--7 academicians and 19 corresponding members. Of this total, six were or had been directors or deputy directors of the five SRLs listed above. In 1990, there were 23 members, of whom 11 were academicians and 12 were corresponding members.

Academicians: In 1990, two were in their 80s; six in their 60s; two in their 50s; and one in his 40s.

Corresponding Members: Two were in their 80s; one in his 70s; three in their 60s; four in their 50s; and two in their 40s.

Academician Secretary: Vacant

Academicians

Gleba, Iurii Iu. D. Bio. S. (Plant Cell Engineering) Born in 1949. Awarded the V. Ia. Iur'eva Prize for Genetics--the creation of new methods of acclimitization, selection, and hybridization of plants and animals and the development of more productive animal species--in 1983. Deputy director of the N. G. Kholodnii Botany Institute in Kiev since 1983. Corresponding member since 1985; elected academic secretary to the General Biology Department in 1988. Recipient of the State Prize for Science and Technology in 1989.

Golubets, Mikhail A. D. Bio. S. (Geobotany) Born in 1930. Corresponding member since 1978; elected academician in 1990.

Grodzinskii, Dmitrii M. (Plant Physiology) Born in 1929. Awarded the N. G. Kholodnii Prize for Botany and Plant Physiology in 1980; elected in 1990.

Markevich, Aleksandr P ., D. Bio. S. (Animal Zoology) Born in 1905. Academician since 1957. Recipient of the State Prize for Science and Technology in 1988.

Morgun, Vladimir V. (Genetics and Selection) Born in 1938. Recipient of the State Prize for Science and Technology in 1982. Corresponding member since 1985; elected academician in 1990. Recipient of the SSSR State Prize in 1986.

Polikarpov, Gennadii G. (Radiobiology) Born in 1929, elected in 1990.

Romanenko, Viktor D. , D. Bio. S. (Freshwater Hydrobiology) Born in 1930. Corresponding member since 1978. Awarded the V. Ia. Iur'eva Prize for Genetics--the creation of new methods of acclimitization, selection, and hybridization of plants and animals and the development of more productive animal species--in 1984; elected an academician in 1988. Director of the Hydrobiology Institute in Kiev since 1979. This institute was organized in 1939 to research aquatic toxicology, mathematical modeling of biological processes in water bodies, and cytology of aquatic organisms.

Sozinov, Aleksei A ., D. Agr. S. (Genetics) Born in 1930. Academician since 1978. Since 1981, director of the General Genetics Institute in Moscow which was founded in 1966 to study the selection, radiation, space, and evolutionary genetics of plants, animals and microorganisms. Awarded the V. Ia. Iur'eva

Prize for Genetics--the creation of new methods of acclimitization, selection, and hybridization of plants and animals and the development of more productive animal species--in 1989.

Sitnik, Konstantin M. D. Bio. S. (Botany) Born in 1922. Academician of the

the General Biology Department since 1973. Vice president of the academy since 1974. Awarded the N. G. Kholodnii Prize for Botany and Plant Physiology in 1975. Director of the N. G. Kholodnii Botany Institute in Kiev since 1970. The institute was founded in 1921 and studies the flora and vegetation of the Ukrainian Republic in order to find new and useful plant varieties. Recipient of the State Prize for Science and Technology in 1979. Recipient of the SSSR State Prize in 1984. In 1990, he headed the Ukrainian sector of the Scientific Council on the Vegetable World, and was leading a study on the Protection and Utilization of Vegetables under that Council.

Sheliag-Sosonko, Iurii R., D. Bio. S. (Geobotany) Born in 1933. Corresponding member since 1978. Awarded the N. G. Kholodnii Prize for Botany and Plant Physiology in 1988; elected an academician in 1990.

Vasil'ev, Vadim P. D. Bio. S. (Entomology). Born in 1912. Academician since 1964. Recipient of the State Prize for Science and Technology in 1976.

Corresponding Members

Akimov, Igor A. (Animal Zoology) Born in 1937, elected in 1990.

Dmitrenko, Petr A. (Agrochemistry) Born in 1909, elected in 1964.

Dolin, Vladimir G. D. Bio. S. (Entomology) Born in 1933. Recipient of the State Prize for Science and Technology in 1976. Awarded the D. K. Zabolotii Prize in Microbiology, Virology, Epideomology, and Zoology in 1985. Corresponding member since 1985.

Frantsevich, Leonid I. (Animal Zoology) Born in 1935. Recipient of the SSSR State Prize in 1987; elected in 1990.

Kondratiuk, Evgenii N. D. Bio. S. (Botany) Born in 1914. Corresponding member since 1972. Awarded the N. G. Kholodnii Prize for Botany and Plant Physiology in 1978.

Petipa, Tamara S. D. Bio. S. (Hydrobiology) Born in 1927. Corresponding member since 1972.

Pidoplichko, Vladimir. (Cell Biology) Born in 1947, elected in 1990.

Shchepot'ev, Fedor L. D. Bio. S. (Animal Zoology) Born in 1906. Corresponding member since 1965.

Topachevskii, Vadim A. D. Bio. S. (Zoology) Born in 1930. Corresponding member since 1978. Director of the Zoology Institute in Kiev since 1973. The institute was established in 1930 to conduct research on the biological bases of development, rebuilding, and conservation of the fauna of the republic and neighboring regions.

Vasser, Solomon P. (Botany) Born in 1946. Awarded the N. G. Kholodnii Prize for Botany and Plant Physiology in 1982; elected in 1988.

Zaika, Viktor E. D. Bio. S. (Hydrobiology) Born in 1936. Corresponding member since 1978. Director of the A. O. Kovalevskii Biology of Southern Seas Institute in Sevastapol since 1977. The institute was founded in 1963 and does physical, chemical, and biological research of the seas and its marine life.

Zaitsev, Iu. P. D. Bio. S. (Hydrobiology) Born in 1924. Corresponding member since 1969. Director of the Odessa Branch of the A. O. Kovalevskii Biology of Southern Seas Institute since 1972.

Research Institutes: Six Scientific Councils are directed by personnel of this department: the scientific council on ecological forecasting and the preservation of the natural world under N. Iu. Evtushenko, D. Bio. S.; the scientific council on the rational use of animal resources and their

preservation under Corresponding Member I. A. Akimov; the scientific council on the problems of genetic selection under Academician V. V. Morgun; the Ukrainian section of the Scientific Council on the Vegetable World, under Academician K. M. Sitnik who is heading a study on Plant Protection and Utilization--awarded the N. G. Kholodnii Prize for Botany and Plant Physiology in 1975; the Ukrainian sector on the problems of the physiology and biochemistry of plants under E. P. Starchenko, D. Bio. S.; and, the Ukrainian departmental scientific council on problems of the introduction and acclimatization of plants under T. N. Chevchenko, D. Bio. S. There were nine scientific research institutes subordinate to the department in 1990, and they are listed below by the order of their founding:

N. G. Kholodnii Botany Institute in Kiev.

252601 Kiev, Ukraine
Tereschenkovskaya, 2
(044)2244041
(044)2241064 (fax)
postmaster@botan.kiev.ua (email)

Established in 1921 as the Botany Museum and Garden. Its first director was Academician A. V. Fomin. The staff included three academicians and one corresponding member of the academy in 1990, and its staff numbered 170 scientists of whom 25 held the doctorate and 135 the candidate degree. It studies the flora and vegetation of the republic in order to find new and useful varieties of plants. It also performs research into factors affecting plant growth, such as climate. The institute has a branch in L'vov. The present director is Academician Konstantin M. Sitnik, D. Bio. S.--awarded the N. G. Kholodnii Prize for Botany and Plant Physiology in 1975 and recipient of the SSSR State Prize in 1984.

I. I. Shmal'gauzena Zoology Institute in Kiev.

Institute of Zoology UAS
252601 Kiev, Ukraine
Khmelnitsky, 15
(044)2241070
(044)2241569 (fax)
postmaster@izoology.kiev.ua (email)

The Zoology Institute was established in 1930 from the zoological museum and a rostrum of scientists from first rank laboratories in Ukraine. The institute bears the name of its first director. In 1990, the staff numbered 149 of whom 11 held the doctorate and 138 the candidate degree. One academician and four corresponding members were on the staff of the institute. It does research on the biological bases of development, rebuilding, and conservation of the fauna of the republic and neighboring regions. The present director is I. A. Akimov, corresponding member of the Ukraine Academy.

Institute of Animal Physiology & Biochemistry UAS

290034 Lviv, Ukraine
V. Stusa, 38
(0322)427029
(0322)427029 (fax)

Central Republic Botanical Garden in Kiev.

Central Botanical Garden UAS

252014 Kiev, Ukraine
Timiryazevskaya, 1
(044)2954105
(044)2961063 (fax)

It was established in 1935 from the Botanical Institute, and since 1944 has functions as an independent research institute. Its first director was Academician N. N. Grishko. In 1990, the staff numbered 94 scientists of whom five held the doctorate and 89 the candidate degree. The present director is T. M. Cherevhenko, D. Biol. S.

Hydrobiology Institute in Kiev.

Institute of Hydrobiology UAS
254655 Kiev, Ukraine
Geroev Stalingrada, 12
(044)4193981
(044)4182232 (fax)

Founded in 1909 as the Dnieper Biological Station which, in 1940 was reorganized as the Hydrobiological Institute of the Ukraine Academy. Its first director was Ya. V. Roll, corresponding member of the Ukraine Academy. In 1989, the institute incorporated hydrobiological stations in Kherson and Lyutezh, a pond station in Belaia Tserkov of the Kiev region, an expedition fleet and auxiliary divisions. The institute was organized into 12 scientific departments and five research laboratories. The staff of the institute numbered 101 scientists in 1990, of whom 15 held the doctorate and 90 the candidate degree. Two academicians of the Ukrainian Academy are on the staff: V. D. Romanenko, director of the institute since 1980, and A. P. Markevich. Scientists of the institute research water quality formation and bioproductivity of various types of fresh water ecological systems--reservoirs, small rivers, canals, cooling ponds of nuclear and thermal power stations--make ecological forecasts for large-scale hydrotechnical construction projects, and study the biological principles of acclimatization, reproductivity and rearing of commercial fish species. They work in aquatic toxicology, mathematical modeling of biological processes in water bodies, and the cytology of aquatic organisms. The present director is Viktor D. Romanenko, D. Bio. S.--awarded in 1984 the V. Ia. Iur'eva Prize in Genetics for the creation of new methods of acclimatization, selection, and hybridization of plants and animals and the development of more productive animal species. (See: *Institute of Hydrobiology*. Kiev: The Academy of Sciences of Ukraine, 1989. 12 pp.)

Government Natural History Museum in L'vov.

It was organized in 1940 from the T. G. Shevchenko Science Association and from a part of the natural history museum. Its first director was P. P. Balabai, D. Bio. S. The staff consists of seven research scientists, all of whom hold the candidate degree. The present director is Iu. N. Cheenobai, C. Bio. S.

Plant Physiology and Genetics Institute in Kiev.

Institute of Plant Physiology & Genetics UAS
252022 Kiev, Ukraine
Vasilkivska, 31/17
(044)2635160

(044)2635150 (fax)

The institute was founded in 1946 from the department of Plant Physiology and Agrochemistry of the Botany Institute of the Ukraine Academy. Its first director was Academician A. I. Dushechkin. Two academicians of the academy are on the staff which numbered 164 in 1990, of whom 17 held the doctorate and 147 the candidate degree. Institute research includes studies on photosynthesis in plants and the resistance of plants to environmental extremes. The present director is V. V. Morgun.

A. O. Kovalevskii Biology of Southern Seas Institute in Sevastopol.

Institute of Biology of the Southern Seas UAS

335011 Sevastopol, Ukraine

Nahimov, 2

(0690)524110

(0690)592813 (fax)

ibss.sevastopol (omnet) (email)

Institute of Biology of the Southern Seas,

Karadag Branch UAS

334876 Feodosiya, Ukraine

Kurortnoye

(06562)38331

Institute of Biology of the Southern Seas,

Odessa Branch UAS

270011 Odessa, Ukraine

Pushinskaya St. 37

(0482)250-917

(0482)269-479 (fax)

postmaster@pci.odessa.ua (email)

Founded in 1963 from the Sevastopol, Odessa, and Karadarskoi Biological Station of the Ukraine Academy. The institute has two Branches: Karadag Branch and the Odessa Branch. The first director was V. A. Vodianitskii, corresponding member of the Ukraine Academy. The staff of the institute numbered 186 scientists in 1990, of whom 26 held the doctorate and 160 the candidate degree. The institute does physical, chemical, and biological investigations of the marine life of the seas. The present director is S. M. Konovalov, D. Biol. S. (Karadag Branch: director: Morozova, A. L., since 1975; Odessa Branch: director: Zaitsev, Iuvenalii P., D. Bio. S., since 1972.)

Donetsk Botanical Gardens in Donetsk were established in 1965.

Botanical Garden UAS

340059 Donetsk, Ukraine

Illicha, 110

(0622)941280

(0622)946157 (fax)

postmaster@botgar.dipt.donetsk (email)

The first director of the gardens was E. N. Kondratiuk, corresponding member of the Ukraine Academy. The staff of the institute numbered 34 scientists in 1990, of whom two held the doctorate and 32 the candidate degree. The institute is organized into seven departments. The present director is A. Z. Glukhov.

Cellular Biology and Genetic Engineering Institute in Kiev.

Institute of Cell Biology & Genetic Engineering UAS

252022 Kiev, Ukraine

Zabolotnogo, 148

(044)2669266

(044)2669266 (fax)

postmaster@irabiol.kiev.ua (email)

It was established in 1990 from the department of cellular biology and genetic engineering of the N. G. Kholodnii Botany Institute. Three academicians and one corresponding member of the academy are on the staff, which, in 1990, numbered 50 scientists of whom six held the doctorate and 44 the candidate degree. The institute is organized into four departments and 11 laboratories. Institute research includes molecular biology and molecular genetics, cell cultures and analysis, biotechnology, cell and genetic engineering, biochemical analytical methods, biophysics and immunology. The director of the institute is Academician Iu. Iu. Gleba.

Institute of Animal Physiology & Biochemistry UAS

290034 Lviv, Ukraine

V.Stusa, 38

(0322)427029

(0322)427029 (fax)

Institute of Ecology of the Carpathians UAS

290000 Lviv, Ukraine

Chaikovskiyi, 17

(0322)725809

SECTION OF SOCIAL SCIENCES

252601 Kiev, Ukraine
Volodymyrska, 54
(044)224-4051

Economics Department

252601 Kiev, Ukraine
Volodymyrska, 54
(044)224-7716

Members of the department: The Economics Department in 1990 was a small department with only 20 members of whom 11 were academicians and nine were corresponding members. In 1987, four members were or had been directors or deputy directors of the two research institutes listed above. One member was chairman of the Donetsk Scientific Center and another was vice president of the Ukrainian academy, an academician of the Economics Department of the AN SSSR and head of the Economics Scientific Research Institute in Kiev.

Academicians: One academician was in his 80s; one in his 70s; and nine in their 60s.

Corresponding Members: One was in his 80s; four in their 60s; and four in their 50s. .

Academician Secretary

Pakhomov, Iurii N. (Political Economics and Problems of Socialist Economics) Born in 1928, elected in 1988. He became academic secretary to the department in 1990.

Academicians

Alimov, Aleksandr N ., C. Econ. S. (Industrial Economics) Born in 1923. Awarded the A. G. Shlikhtera Prize for Economics in 1973. Academician since 1973.

Bakaev, Aleksandr A. D. Econ. S. (Agroindustrial Complex Economics) Born in 1927. Recipient of the State Prize for Science and Technology in 1973. Corresponding member since 1978. Awarded the A. G. Shlikhtera Prize for

Economics in 1986; elected academician in 1990. Recipient of the SSSR State Prize in 1981.

Chumachenko, Nikolai G., D. Econ. S. (Economics) Born in 1925. Awarded the A. G. Shlikhtera Prize for Economics in 1980. Academician since 1982. Director of the Industrial Economics Institute in Donets since 1974. The institute is concerned with improved management and planning and with the economic stimulation of production, quality control, and technical progress in industry. Since 1986, he has served as chairman of the Donetsk Scientific Center.

Chukhno, Anatolii A. D. Econ. S. (Political Economics and Problems of Socialist Economics) Born in 1926. Corresponding member since 1967; elected academician in 1988. Awarded the A. G. Shlikhtera Prize for Economics in 1989.

Gavrilishin, Bogan. (Scientific Management) Born in 1926, elected in 1990.

Lukinov, Ivan I ., D. Econ. S. (Agricultural Economics) Born in 1927.

Academician of the Economics Department of the Ukrainian Academy since 1976; and, academician of the Economics Department of the AN SSSR since 1984. Recipient of the State Prize for Science and Technology in 1979. Since 1979, he has served as a vice president of the Ukrainian Academy. Since 1976, he has been the director of the Economics Institute in Kiev which is subordinate to the Economics Department of the Ukrainian Academy and which studies the economics of industry and agriculture and the history of the Ukrainian economy.

Onishchenko, Aleksei M. (Agroindustrial Complex Economics) Born in 1928. Awarded the A. G. Shlikhtera Prize for Economics in 1984; corresponding member since 1985; elected academician in 1990.

Palamarchuk, Maksim M ., D. Econ. S. (Industrial Economics) Born in 1916. Academician since 1973. Awarded the A. G. Shlikhtera Prize for Economics in 1977.

Pakhomov, Iurii N. (Political Economics and Problems of Socialist Economics) (See above.)

Iampol'skii, Stefan M., D. Econ. S. (Industrial Economics) Born in 1906. Academician since 1967. Awarded the A. G. Shlikhtera Prize for Economics in 1981.

Corresponding Members

Belorus, Oleg G. (Middle Management) Born in 1939. Awarded the A. G. Shlikhtera Prize for Economics in 1990; elected in 1990.

Beschastnii, Leonid K. (Political Economics) Born in 1937, elected in 1988.

Dolishnii, Mar'ian I. (Regional Economics) Born in 1936, elected in 1990.

Emel'ianov, Aleksandr S. (Economics and Structural Organization) Born in 1932, elected in 1979.

Gerasimchuk, Nikolai S. (Economics) Born in 1931, elected in 1990.

Golikov, Vladimir I., D. Econ. S. (Economics) Born in 1929. Corresponding member since 1982.

Ivanov, Nikolai I. (Economics and Structural Organization) Born in 1923, elected in 1979. Awarded the A. G. Shlikhtera Prize for Economics in 1982.

Nesterenko, Aleksei A ., D. Econ. S. (Economics) Born in 1904. Corresponding member since 1958.

Savchenko, Anatolii P. (Industrial Economics) Born in 1937. Awarded the A. G. Shlikhtera Prize for Economics in 1973; elected in 1990.

Council for the Study of the Productive Forces of Ukraine UAS

60 Shevchenko blvd.

City/State: Kiev 252032

Phone: +7 (044) 2169070, 2169054

The Council for Studies of Productive Forces of Ukraine of the National Academy of Sciences was established in 1934 in order to study the urgent problems of the development of the human development and labor in Ukraine. Experts of the Council were involved in the preparation of analytical survey of labour forces assessment and development in Ukraine. Findings were published in the *Human Development Report (Ukraine), 1995*. The director of the Council is S. I. Doroguntsov.

Research Institutes : This department acts as coordinator for three major Scientific Councils: the council on economic normality of mature socialism under Academician I. I. Lukinov--Recipient of the State Prize for Science and Technology in 1979; the scientific council on conversion planning and the administration of national production under Academician N. G. Chumachenko--awarded the A. G. Shlikhtera Prize for Economics in 1980; and the scientific council on population and the availability of manpower under S. I. Doroguntsov, D. Econ. S. There are three scientific research institutes and three branches directly subordinate to the Economics department and they are listed below in the order of their founding:

Economics Institute in Kiev.

252011 Kiev, Ukraine
Ul. Panasa Mirnogo 26
(044)290-8663

Organized in 1930. Its first director was A. A. Asatkin. The institute has branches in L'vov, Odessa, and Kharkov. Structure of the Institute: the institute is organized into 20 departments: the methodology of plitical economy; economic mechanism and reporduction; forms and methods of socialist economic management; socioeconomic problems of the nonproduction sphere and consumption; history of the economy and history of economic thought; the efficiency of capital investment and the reproduction of basic funds; economic problems of scientific-technical progress; agroindustrial integration; socioeconomic problems of rural development; economics of utilization of natural resources; problems of the productivity of labor; demography and the reproduction of labor resources; problems of labor potential and professional retraining; theoretical and applied problems of economic management; economic development modeling; systems methods of studying the dynamics of the national economy; statistics and balance methods; socioeconomic bases for integration of science and production; and problems of economic analysis. The staff numbers 162 researchers of whom 21 hold the doctorate and 117 hold the candidate degree. There is one academician of the Russian Academy of Sciences; and there are two academican and two corresponding members of the Ukrainian Academy of Sciences on the staff. Research supervisors include: A. Revenko, L. K. Beschastnyi, V. V. Ivanov, A. N. Alymov, V. I. Kononenko, V. M. Geets. A. N. Alymov, D. P. Boginia, S. I. Pirozhjkov, V. V. Ilarionov, V. S. Steshenko, V. M. Tregobchuk, V. E. Kozak, V. K. Cherniak, T. I. Dereviankin, A. M. Onishchenko--awarded the A. G. Shlikhtera Prize for Economics in 1984--B. I. Paskhaver, L. A. Shepot'ko--awarded the A. G. Shlikhtera Prize for Economics in 1984--and N. S. Gerasimchuk. Dr. Ivan I. Lukinov, D. Econ. S., has been director of the institute since 1976. The institute has branch institutes in L'vov, Khar'kov, and Odessea which are listed separately. The institute maintains close relations with institutes of the academies of sciences of Poland, Hungary and Czechoslovakia.

Industrial Economics Institute in Donetsk.

Institute of Industrial Economics UAS

Founded in 1969 upon the base of the Donetsk Department of the Economic

Industrial Research institute of Economics of the Ukrainian Academy. The Lugansk Branch of the Institute was organized in 1970, using the Lugansk Branch of the Scientific Research Institute of Planning and Standards of GOSPLAN. The first director of the institute was A. N. Alymov. Since 1973, the institute has been headed by N. G. Chumachenko. Structure of the institute: the institute is organized into 15 departments--nine in Donetsk, five in Lugansk, and one in Zaporozh'e: 1.) problems of production management with sectors on regional problems of management in the national economy and problems of efficient utilization of material resources and waste; 2.) economic problems of scientific-technical progress in industry with sectors on problems of scientific-technical progress in various branches of industry and regional problems of scientific-technical progress; 3.) the methodology of planning and incentives in industry; 4.) problems of socioeconomic development; 5.) problems of regional economics with a sector on the efficiency in industrial production and a laboratory on the economic problems of special electrometallurgy; 6.) problems of efficient exploitation of production resources with sectors on problems of raising the productivity of labor in industry, problems of intensive renewal and exploitation of basic funds, and problems of raising the efficiency of the investment process; 7.) economic and social problems of automation with sectors on economic and social problems of integrated automated control systems, robot technology and automatization of production; analysis of exploitation of production resources with computers; and organization of automation processes; 8.) economic problems of labor protection with sectors on managing conditions of labor and recreational provision in industry; 9.) economic and legal problems with sectors on organization of economic-legal work in industry, economic-legal problems in the organization of socialist competition, and encouraging economic initiative in labor collectives; 10.) socioeconomic problems of eliminating heavy manual labor in industry; 11.) problems of accelerating the development of an industrial region (Lugansk), with a sector on management of scientific-technical progress; 12.) economic-legal problems of environmental protection and rational utilization of natural resources in Lugansk; 13.) economic-legal problems in raising the productivity of labor in Laguansk; 14.) problems of organization and utilization of reserves in industrial production in Lugansk; and 15.) sociological studies in Laguansk. The institute maintains a computer center. The institute is concerned with improved management and planning and with the economic stimulation of production, quality control, and technical progress in industry. The staff of this large institute numbers 189 (148 in Donetsk, 38 in Lugansk, and three in Zaporozh'e). Eleven of the staff hold the doctorate and 87 hold the candidate degree. There are two academicians and one corresponding member of the Ukrainian Academy of Sciences on the staff. Research supervisors include: A. I. Amosha--awarded the A. G. Shlikhtera Prize for Economics in 1987--L. N. Salomatina, N. D. Prokopenko--awarded the A. G. Shlikhtera Prize for Economics in 1987--F. E. Poklonskii, V. V. Finagin--awarded the A. G. Shlikhtera Prize for Economics in 1980--N. G. Chumachenko--awarded the A. G. Shlikhtera Prize for Economics in 1980--S. N. Katsura, M. D. Aizenstein, V. M. Degtiareva, G. A. Il'ina, V. K. Mamutov, G. A. Znamenskii, N. I. Konishcheva, N. I. Ivanov--awarded the A. G. Shlikhtera Prize for Economics in 1982--V. I. Bogachev, B. G. Rozovskii, B. M. Birenberg--awarded the A. G. Shlikhtera Prize for Economics in 1987--A. V. Bretslavtsev, V. S. Rubin, and I. E.

Zarnoiskii. Academician Dr. Nikolai G.Chumachenko, D. Econ. S., has been the director of the institute since 1974. (See: A Scholars' Guide. . . .)

L'vov Branch of the Economics Institute in L'vov.

This branch was founded in 1964 and is comprised of 11 departments: problems of regional development; territorial and branch problems of management; sociological research; sociopsychological problems of labor and management; regional problems of management of scientific-technical progress; problems of organizational and technical development of production; ecological and economic problems of the western region of the Ukraine; integrated scientific-technical programs; problems of comprehensive socioeconomic development of the Carpathian region; and regional resources for raising the efficiency of production. The institute has a computer center. The staff of the institute numbers 86 researchers of whom six hold the doctorate and 63 hold the candidate degree. Dr. Mar'ian I. Dolishnii, D. Econ. S., is director of the institute and was Awarded the A. G. Shlikhtera Prize for Economics in 1983. (See: A Scholars's Guide. . . .)

Khar'kov Branch of the Economics Institute in Khar'kov.

Established in 1965. The institute is organized into five departments: socioeconomic problems of labor and employment of labor resources; problems of improving production planning; problems of industrial management; socioeconomic problems of accelerating scientific-technical progress; and economic problems of production organization. The staff of the institute numbers 39 researchers of whom two have the doctorate and 17 the candidate degree. Research supervisors include: G. S. Odintsova, A. N. Zolotarev--awarded the A. G. Shlikhtera Prize for Economics in 1988--I. N. Volik, V. F. Khalina, L. P. Miroshnikov, I. P. Ianova, and G. V. Chemyshev. The director of the institute is Anatolii N. Zoloturev, D. Econ. S.--awarded the A. G. Shlikhtera Prize for Economics in 1988.(See: A Scholars' Guide.. . .)

Odessa Branch of the Economics Institute in Odessa.

The branch was founded in 1970 and is made up of eight departments: problems of the economics of the sea; problems of the establishment and development of the marine economic complex; problems of the economics of organization of management and planning of industrial production; socioeconomic problems of the perspective development in the southern region of the Ukraine; problems of the economics and organization of marine transport; mathematical modeling of production and economic-ecological systems; the theory of management and systems analysis; and situational management of socioeconomic and organizational and technical systems. The institute staff numbers 107 researchers of whom six hold the doctorate and 43 the candidate degree. Supervisors of research include D. V. Burkinskii, V. A. Dergachev, V. N. Stapanov, S. K. Kharichkov, R. A. Dryzhanovskii, and M. I. Kotlubia. Boris V. Burkinskii, C. Econ. S., is the director of the institute. (See: A Scholars' Guide. . . .)

Social and Economic Problems of Foreign Countries Institute in Kiev.

Institute of Social & Economic Problems of Foreign Countries UAS
252030 Kiev, Ukraine
Ul. Leontovicha 5
(044)225-5127
(044)225-2231 (fax)

The institute was founded in October 1978 by combining several units of the Institute of History and the Institute of Economics of the Ukrainian Academy. Structure of the institute: the institute is organized into 10 departments: world economy and international economic relations; regional problems of foreign economic relations; international scientific-technical ties and environmental protection; sociopolitical development of the Eastern European countries; sociopolitical movements and ethnic relations in Western countries; the countries of the Near and Middle East; foreign Ukrainian studies; concepts of foreign policy and international activity in the Ukraine. The institute also has departments (small branches) in Uzhgorod and Chernotsy. The staff of the institute numbers 71 researchers of whom 16 hold doctorates and 52 hold candidate degrees. One academician of the Ukrainian Academy is on the staff. Academician Arnold N. Shlepakov is director of the institute--Awarded the Manuil'skii Prize for History, Philosophy, and Law in 1982. (See: A Scholars' Guide. . .)

History, Philosophy, and Law Department

252601 Kiev, Ukraine

Volodymyrska, 54

(044)225-7776

Members of the department: In 1987, there were 19 members of the History Department--six academicians and 13 corresponding members. Two of the members were directors of SRIs subordinate to the department. In 1990, membership in the department totalled 24, of whom nine were academicians and 15 were corresponding members.

Academicians: In 1990, three were in their 70s; five were in their 60s; and two were in their 50s.

Corresponding Members: In 1990, five were in their 70s; six in their 60s; and, three were in their 50s. .

Academician Secretary

Kuras, Ivan F. (History of the Communist Party) Born in 1939, elected in 1988. Academic secretary of the History, Philosophy and Law Department in 1990. Possibly academician since 1989.

Academicians

Babii, Boris. M. (History of the Ukraine State and Law) Born in 1914. Academician since 1972.

German, Iokhim. (Ancient History and Slavic Archeology) Born in 1932, elected in 1990.

Kondufor, Iurii Iu. (USSR History) Born in 1922. Academician since 1985. Director of the History Institute in Kiev since 1984. The institute dates back to 1919. Major historical research began there in the 1950s. Recipient of the State Prize for Science and Technology in 1980.

Kutsenko, Vladimir I ., D. Phil. S. (Philosophy) Born in 1921. Awarded the Manuil'skii Prize for History, Philosophy, and Law in 1983. Academician since 1985.

Mamutov, Valentin K. D. Jur. S.(Law) Born in 1928. Corresponding member since 1972. Awarded the A. G. Shlikhtera Prize for Economics in 1982; elected academician in 1988.

Shinkaruk, Vladimir I. (Philosophy) Born in 1928, elected in 1978. Awarded the Manuil'skii Prize for History, Philosophy, and Law in 1977. Recipient of the State Prize for Science and Technology in 1982.

Shlepakov, Arnold N. (World History) Born in 1930. Awarded the

Manuil'skii Prize for History, Philosophy, and Law in 1982. Academician since 1982.

Tolochko, Petr P. (Archeology) Born in 1938. Recipient of the State Prize for Science and Technology in 1983; elected in 1990.

Tronko, Petr T. , D. Hist. S. (USSR History) Born in 1915. Academician since 1978.

Corresponding Members

Goncharenko, Nikolai V. (Philosophy and Esthetics) Born in 1924, elected in 1979. Awarded the I. Ia. Franko Prize for Philology, Ethnography and Linguistics in 1988.

Isaevich, Iaroslav D. (History of Culture) Born in 1936, elected in 1990.

Iurchuk, Vasilii I. (History of the Communist Party) Born in 1921, elected in 1973.

Klokov, Vsevolod I. , D. Hist. S. (History) Born in 1917. Recipient of the Hero of the Soviet Union Medal in 1945. Recipient of the State Prize for Science and Technology in 1970. Corresponding member since 1978.

Krizhitskii, Sergei D. (Archeology) Born in 1932, elected in 1990.

Mel'nikova, Irina N. , D. Hist. S. (History of the Socialist State) Born in 1918. Corresponding member since 1973. Awarded the Manuil'skii Prize for History, Philosophy, and Law in 1976.

Onishchenko, Aleksei S. (Philosophy and Atheism) Born in 1933. Corresponding member since 1985.

Shemshuchenko, Iurii S. Born in 1935, elected in 1988.

Shevchenko, Fedor P. , D. Hist. S. (Historiography and Historical Method). Born in 1914. Corresponding member since 1969. Recipient of the State Prize for Science and Technology in 1984.

Shevelev, Arnold G., D. Hist. S. (History of the USSR) Born in 1928. Corresponding member since 1972.

Sokhan', Pavel S., D. Hist. S. (Ancient History) Born in 1926. Awarded the Manuil'skii Prize for History, Philosophy, and Law in 1976. Recipient of the State Prize for Science and Technology in 1980. Corresponding member since 1985.

Sokhan, Lidia V. (Socialist Truth) Born in 1924, elected in 1990.

Tsvetkov, Viktor V. , D. Jur. S. (Law and Management Problems) Born in 1923. Corresponding member since 1972. Awarded the Manuil'skii Prize for History, Philosophy, and Law in 1985.

Yurchuk, Vasilii I. , D. Hist. S. (History of Law) Born in 1921. Corresponding member since 1973.

Research Institutes : Five major Scientific Councils are administered from this department: the scientific council on problems of history under Academician Iu. Iu. Kondufor'; the scientific council on the problems of philosophy under A. T. Gordnenko, D. Phil. S.; the scientific council on governmental development, management, and law under Academician B. M. Babii; the scientific council on the problems of sociology under Academician Iu. N. Pakhomov; and the scientific council on archeology and ancient history under Academician P. P. Tolochko--recipient of the State Prize for Science and Technology in 1983. There are six scientific research institutes and one archeology museum subordinate to the department and they are given below in the order of their founding:

Odessa Archeology Museum

This museum dates back to 1825, has a staff of six--all of whom hold candidate degrees--and is presently headed by V. P. Vanchugov, C. Hist. S.

Archeology Institute in Kiev was established in 1934.

252014 Kiev, Ukraine

Ul. Vydubetskaya 40

(044)295-3581

(044)295-4317 (fax)

Initially it was called the History of Material Culture Institute. Directors of the institute have been F. A. Kozubovskii (1934-38), M. I. Iachmenev (1938-39), L. M. Slavin --recipient of the State Prize for Science and Technology in 1977-- (1940-41, 1`944-45), P. P. Efimenko (1945-54), S. N. Bibikov--recipient of the State Prize for Science and Technology in 1977 (1955-68), F. P. Shevchenko--recipient of the State Prize for Science and Technology in 1984 (1969-72), I. I. Artemenko--recipient of the State Prize for Science and Technology in 1980 (1973-88) and, since 1988, P. P. Tolochko. Structure of the institute: the institute is made up of nine departments: archeology of primitive society; ancient Scythian archeology; the archeology of the Lower Bug region: the Olvia Preserve; Slavic archeology; old Russian and medieval archeology; theory and methods of archeology; safety methods in archeological research and source studies; archeology of the Crimea; and archeology of the northwestern coastal regions of the Black Sea. The staff of the institute numbers 137 researchers of whom 18 hold the doctorate and 84 the candidate degree. There is one correspondling member of the Ukrainian Academy on the staff. Research emphasis in the 1890s will be on the study of economic issues and the historical-topographic structure of ancient and medieval Kiev, and the problems of the hisotory and culture of the cities of classical antiquity in the northern coastal region of the Black Sea--5th century B. C. to the 4th century A. D. The holdings of the collections and archives of this institute are ancient, broad, and deep. The library has more than 130,000 items including 90,000 scientific books forty percent of which are rare. The archives house more than 1,000 archeological collections acquired on digs from the mid-1950s to the present. Relics from the Paleolithic, the Neolithic, the Aeneolithic, the Bronze Age and the EarlyIron Age, and cultural materials of the ancient, early Slav and old Russian periods may be found among its collections. Petr P. Tolochko, corresponding member of the Ukrainian Academy is director of the institute. (See: A Scholars' Guide. . . .)

History Institute in Kiev.

252601 Kiev, Ukraine

Hrushevskoho 4

(044)229-6362

(044)228-5251 (fax)

Established in 1936. The first director of the various units which eventually made up the institute was A. Kh. Saradzhev and after him the institute was headed by S. N. Belousov (1936-41), N. N. Petrovskii (1942-47), A. K. Kasimenko--recipient of the SSSR State Prize in 1976--(1947-64), K. K. Dubina (1964-67), A. D. Dkaba (1968-73), A. G. Shevelev (1973-78), and since 1978, the institute has been headed by Academician Iruui Iu. Kondufor. Structure of the institute: the institute is organized into 10 departments: the history of feudalism; the history of capitalism; the history of the Great October Socialist Revolution and Civil War; the history of World War II; the history of the construction of socialism; the history of relations among ethnic groups in the USSR; source lstudies and supplementary historical discipli8nes;; the history of Ukrainian international relations; foreign historiography; and, historical and country studies. The staff of the institute numbers 157 researchers, of whom 29 hold the doctorate

and 97 the candidate degree. Two academicians and four corresponding members of the Ukrainian Academy of Sciences are on the staff. Supervisors of major research projects in the institute include Iurii Iu. Kondufor, R. G. Simonenko--recipient of the State Prize for Science and Technology in 1984, P. T. Tron'ko--recipient of the SSSR State Prize in 1976--and V. A. Gorbik. Joint research is being conducted with institutes of the Bulgarian, Polish, and Czechoslovak Academies of Sciences.

Philosophy Institute in Kiev.

Institute of Philosophy UAS
252001 Kiev, Ukraine
Ul. Geroev Revolyutsii 4
(044)228-0605

Although the institute itself was established in 1946, it may be traced back to the first center for training specialists in Marxist-Leninist Philosophy in the Ukraine--the Philosophical-Sociological Unit of the Chair of Marxism and Marxist Studies organized in Khar'kov in 1921. After World War II a Philosophy Commission was organized and was converted to the Philosophy Institute in 1946. Directors of the institute have been M. E. Omel'ianovskii (1946-52), D. F. Ostrianin (1952-62), P. V. Kopnin (1962-68), and since 1968, Vladimir I. Shinkaruk, corresponding member of the Ukrainian Academy has been the director. Structure of the institute: the institute is organized into six departments: dialectical materialism; philosophy, logic, and the methodology of science; philosophical problems of sociohistorical processes; philosophical problems of culture; the history of philosophy in the Ukraine; and contemporary foreign philosophy. There is also a division of sociology whose head is Iu. N. Pakhomov, academician of the Ukrainian Academy. The Sociology Division has seven departments: researching social structures; sociology of mass information and public opinion; social problems of management; social problems of the upbringing of young people; sociology of labor; social psychology; and, methodological principles and methods of sociological studies. The staff of the institute numbers 128 researchers of whom 25 hold the doctorate and 101 hold candidate degrees. There are three academicians of the Ukrainian Academy on the staff. Supervisors of research in the institute include: V. G. Tabachkovskii--recipient of the State Prize for Science and Technology in 1982--, M. A. Bulatov, M. V. Popovich, P. F. Iolon--awarded the Manuil'skii Prize for History, Philosophy, and Law in 1990--E. K. Bystritslii; N. N. Kiselev, V. I. Mazepa--awarded the Manuil'skii Prize for History, Philosophy, and Law in 1977--V. M. Nichik, and A. T. Gordienko. Dr. Vladimir I. Shinkariuk, D. Phil. S., corresponding member of the Russian Academy of Sciences and academician of the Ukrainian Academy has been director of the institute since 1968. (See: A Scholars' Guide. . .)

State and Law Institute in Kiev.

Institute of State & Law UAS
252601 Kiev, Ukraine
Ul. Geroev Revolyutsii 4
(044)228-5155

Founded in 1949. Heads of the institute have been V. M. Koretskii (1969-74), B. M. Babii (1974-88), and, since 1988, Iurii S. Shemshuchenko, corresponding member of the Ukrainian Academy has been the director of the institute. Structure of the institute: the institute is organized into eight departments: theory of state and law; historical and political studies of state and law in the Ukraine; constitutional law, formation of the Soviet state and problems of national-governmental relations; governmental-legal problems of

management and problems of improving the economic mechanism; civil and labor law; legal problems of ecology and the agroindustrial complex; criminal-legal and criminological problems; international law and foreign policy of the Ukrainian Republic. The staff of the institute numbers 93 researchers of whom 21 hold the doctorate and 47 the candidate degree. Two corresponding members of the Ukrainian Academy are on the staff. The institute consults regularly with several Ukrainian government agencies and produces various handbooks and reference guides. Supervisors of major research in the institute include: N. I. Koziubra, B. M. Babii, A. N. Mironenko, B. M. Baru, A. N. Mironenko, A. P. Tkach, G. A. Murashin, L. T. Krivenko, V. F. Butko, V. F. Sirenko--Awarded the Manuil'skii Prize for History, Philosophy, and Law in 1985--V. B. Aver'ianov--awarded the Manuil'skii Prize for History, Philosophy, and Law in 1985--Ia. N. Shevchenko, Z. K. Simorot, Iurii S. Shemshuchenko, N. R. Malysheva, V. I. Semchik, A. Ia. Svetlov, G. I. Changuli, and V. N. Denisov. Iurii S. Shemshuchenko, corresponding member of the Ukrainian Academy of Sciences has been the director of the institute since 1988. (See: A Scholars' Guide. . .).

Social Sciences Institute in L'vov.

Institute of Social Sciences UAS
290006 Lviv, Ukraine
Ul. Sovetskaya 24
(0322)724832

The institute was organized in June of 1951 on the basis of departments which had existed from 1940 in five institutes: economics; history; archeology; literature; and linguistics of the Ukrainian Academy of Sciences. From September 1963 to 1969, the Social Sciences Institute was incorporated into the Franko L'vov University under the Ministry of Higher and Secondary Special Education of the Ukrainian SSR. Heads of the institute have been: A. A. Nesterenko (1951-53), I. P. Kripiakevich (1953-63), M. M. Oleksiuk (1964-73), V. P. Chugaev--awarded the Manuil'skii Prize for History, Philosophy, and Law in 1986--(1973-82), M. V. Bryk (1982-88), and since 1989, the director has been Iaroslav D. Isaevich, corresponding member of the Ukrainian Academy. Structure of the institute: the institute is comprised of eight departments: philosophy with a group on religious studies; history with a sector on historical memoirs; the history of social movements; the history of culture; archeology with a group in Uzhgorod; Ukrainian literature; Linguistics; and a department of Archeographic Commission of the Ukrainian Academy of Sciences which is assigned to the institute. The staff of the institute numbers 80 researchers of whom nine hold the doctorate and 40 the candidate degree. There is one corresponding member of the Ukrainian Academy on the staff. Supervisors of major research projects include: M. V. Kashuba, Iu. Iu. Slivka--Awarded the Manuil'skii Prize for History, Philosophy, and Law in 1986--F. I. Stiblii, Ia. D. Isaevich, N. N. Il'nitskii, and D. G. Grinchisin. The institute maintains ties with the Harvard University Ukrainian Research Institute, the Canadian Institute of Ukrainian Studies at the University of Alberta, and the Slavonic Institute of the Polish Academy of Sciences. (See: A Scholars' Guide.)

Sociology Institute in Kiev.

Institute of Sociology UAS
252053 Kiev, Ukraine
Observatorna, 11/1
(044)212-1135
postmaster@scg.kiev.ua (email)

The institute was organized in 1990 from a department of sociology of the

Philosophy Institute. The staff of the institute numbered 41 in 1990, of whom seven held the doctorate and 34 the candidate degree. One academician was on the staff. The institute researches social structure and socialization problems of people, social psychology and methods of sociological research. The present director is Academician Iu. N. Pakhomov.

Literature, Linguistics, and Art Department

252601 Kiev, Ukraine

Volodymyrska, 54

(044)225-0981

Members of the Literature and Linguistics, and Art Department:

There was a total of 15 members of this department in 1987, seven academicians and eight corresponding members, making it one of the smaller departments in the academy. The directors of two research institutes under departmental jurisdiction were members of the academy. Two of the members of this department were also corresponding members of AN SSSR departments. Membership totalled 14 in January of 1990--seven academicians and seven corresponding members..

Academicians: In 1990, four of the academicians were in their 70s; two were in their 60s; and one was in his 50s.

Corresponding Members: Among the seven corresponding members, two were in their 70s; two in their 60s; and three in their 50s.

Academician Secretary

Rusanovskii, Vitalii M ., D. Phil. S. (Linguistics) Born in 1931. Academic secretary since of the department since 1978. Academician since 1982. Recipient of the SSSR State Prize in 1983.

Academicians

Gonchar, Aleksandr T. (Literary Method) Born in 1918. Recipient of the Lenin Prize in 1964. Academician since 1978. Ukraine Academy of Sciences Hero of Socialist Labor Prize recipient in 1978. Recipient of the SSSR State Prize in 1948, 1949, and 1982.

Dzeverin, Igor' A. D. Phlg S. (Theory of Literature) Born in 1929. Corresponding member since 1972; elected academician in 1988. Director of the T.G. Shevchenko Literature Institute in Kiev since 1978. The institute studies the theory, development, and achievements of literature.

Mel'nychuk, Aleksandr S ., D. Phil. S. (Linguistics) Born in 1921. Academician of the Ukrainian Literature, Language, and Art Department since 1985. Corresponding member of the Literature and Language Department of the AN SSSR since 1981.

Novichenko, Leonid N. , D. Phlg. S. (Literary Method) Born in 1914. Awarded the I. Ia. Franko Prize for Philology, Ethnography and Linguistics in 1982. Academician since 1985.

Oleinik, Boris I. (Literary Method) Born in 1935, elected in 1990.

Rusanovskii, Vitalii M ., D. Phil S. (See above.)

Zatonskii, Dmitrii. (Literary Method) Born in 1922. Corresponding member since 1969; elected academician in 1990.

Corresponding Members

Akulenko, Valerii V. (Linguistics and German Language) Born in 1925, elected in 1988.

Kostiuk, Aleksandr G. (Fine Arts) Born in 1933, elected in 1990.
Krutikova, Nina E., D. Phlg. S. (Russian Literary Method) Born in 1913.
Corresponding member since 1957.
Nepokupnii, Anatolii P. (Linguistics and German Language) Born in 1932,
elected in 1988.
Nimchuk, Vasilii V. (Linguistics) Born in 1933. Awarded the I. Ia. Franko
Prize for Philology, Ethnography and Linguistics in 1985; elected in 1990.
Verves, Grigorii D., D. Phlg. S. (Literary Method) Born in 1920.
Corresponding member since 1978.
Zhulinskii, Nikolai G. (Literary Method) Born in 1940, elected in 1990.

Research Institutes : Three Scientific Councils are controlled by personnel in this department: the scientific council on the development of language and practical language activities under Academician V. M. Pusanovskii; the scientific council on classical studies and contemporary Belle Lettres under Academician I. A. Dzeverin; and the scientific council on the development of Belle Lettres and the traditional culture of the Soviet people under Corresponding Members A. G. Kostiuk. In 1990, there were three scientific research institutes subordinate to the Literature, Linguistics, and Art Department:

O. O. Potebni Linguistics Institute in Kiev.
Institute of Linguistics UAS
252601 Kiev, Ukraine
Ul. Kirova 4
(044)229-0292

Founded in 1921. The institute was named in honor of the famous linguist O. O. Potebni in 1945. From 1941 to 1945, the institute was relocated to Ufa. Directors of the institute have been: A. E. Krymskii (1921-39), M. Ia. Kalinovich (1939-41), L. A. Bulakhovskii (1944-61), I. K. Beloded--recipient of the SSSR State Prize in 1983 and recipient of the State Prize for Science and Technology in 1971--(1961-81), and since 1981 Academician V. M. Rusanovskii--Recipient of the SSSR State Prize in 1983. Structure of the institute: the institute is comprised of six departments: theory and history of Ukrainian; lexicology and lexicography; culture of the Ukrainian language; general and Slavic linguistics; structural-mathematical linguistics; and comparative linguistics and linguistics of Romance and Germanic languages. The staff of the institute numbers 104 researchers of whom 22 hold the doctorate and 58 the candidate degree. Two academicians and one corresponding member of the Ukrainian Academy are on the staff. The institute studies the problems of applied and theoretical linguistics, works on scientific terminology, and creates sectorial dictionaries. Supervisors of major research included V. M. Rusanovskii and M. M. Peshchak. The institute maintains ties with the linguistic institutes of the Czechoslovak and Polish Academies of Sciences. Academician Vitalii M. Rusanovskii, has been the director of the institute since 1981. (See: A Scholars' Guide. . . .)

T. G. Shevchenko Literature Institute in Kiev.
Institute of Literature UAS
252601 Kiev, Ukraine
4l. Kirova 4
(044)229-1084
(044)228-5281 (fax)

From the Taras Shevchenko Scientific Research Institute (1926) within the system of the Ukrainian Commissariat of Education, the Shevchenko Institute of Ukrainian Literature was established in 1936. Since 1952, it has been called the Shevchenko Institute of Literature. Structure of the institute: the institute is organized into nine departments: the theory of literature, with a sector on sociology; Soviet Ukrainian literature; Ukrainian literature before 1917; Old Ukrainian literature; Shevchenko studies; Russian literature and literatures of the peoples of the USSR; Eastern European literatures; Western literature; and manuscript holdings. The staff of the institute numbers 101 of whom 26 hold the doctorate and 69 the candidate degree. Two academicians and four corresponding members of the Ukrainian Academy are on the staff. Major research supervisors are V. G. Konchik, M. T. Iatsenko, and G. M. Sivokon' The

institute studies the theory, development, and achievements of literature. The collections and archives of this institute hold some 146 personal holding and 8 holdings of institutions, and 12 collections--approximately 81,000 items. Other holdings include manuscripts and documents such as ancient manuscripts of the late 16th to 18th centuries. Academician Dr. Igor A. Dzeverin, D. Phlg. S., has been the director of the institute since 1978. (See: . . .Guide).

Ryl'skii Art Studies, Floklöre, and Ethnography Institute in Kiev
(1944).

Institute of Art, Folklore & Ethnography UAS
252601 Kiev, Ukraine
Ul. Kirova 4
(044)228-345

The institute was founded in 1936 on the basis of the Ethnographic Commission of the Ukrainian Academy of Sciences and its Office of Music Ethnography. The first director was A. A. Khvyliia. In 1942, the institute was reorganized and renamed the Institute of Folk Creativity and Art of the Ukrainian Academy of Sciences. Professor N. A. Grinchenko became its director, followed in 1942 by Academician M. F. Ryl'skii, a writer and literary figure who served as the institute's permanent directors until 1964. In 1944, the institute was again reorganized and received its present name. Structure of the institute: the institute is comprised of 11 departments: fine arts; fine and folk arts abroad; music; theater studies; cinema studies; theory of art; folklore studies; theoretical problems in the artistic development of the masses; Soviet traditions and ceremonies; ethnography; and problems of ethnosociology. There is an independent sector on the art of the peoples of the USSR. The staff numbers 99 researchers of whom 84 hold advanced degrees. One corresponding member of the Ukrainian Academy is on the staff. Supervisors of major research include: N. M. Gordiichuk, M. M. Paziak, I. P. Berezovskii, Iu. A. Stanishevskii, A. V. Orlov, N. V. Goncharenko, A. K. Fedonuk, A. A. Kulik, S. D. Bezklubenko, V. N. Fomenko, I. F. Liashenko, and A. G. Kostiuk. The manuscript holdings of the Collections and Archives of the Institute include a rich collection of materials on verbal and musical folklore, ethnography, folk and professional art, theatrical culture, cinematography, and other subjects. More than one million archive sheets are in this collection. The institute has its own film and photographic laboratory. (See: *A Scholars' Guide*. . .)



The Byelorussian Academy of Sciences

Retrospect: In 1972, according to an article describing the establishment and development of the Byelorussian Academy of Sciences, Nikolaii Borisevich--then President of the academy--wrote that at the time of the 1917 Russian revolution there were only 10 or twelve scientists in all of Byelorussia. "Eighty-six percent of the population was [of the peasant class], whose basic implements of production were the wooden plough and the wooden barrow." ¹ There were only two primitive experimental stations, no higher educational institutions, nor any scientific research establishments in the territory. By way of contrast, in 1972, as he pointed out, there were 28 higher educational institutions, 129 middle "special" educational institutions, and 33 scientific research establishments, twenty of which the Academy controlled.

At that time, the Academy consisted of five "branches" or "departments": the physico-mathematical, the physico-technical, the biological-chemical, and the social science sectors. Priorities for funding in the Byelorussian Academy were in the fields of mathematics, cybernetics, computing technology, solid state physics, machine and instrument building, power engineering, chemistry, and land reclamation and agriculture.

Byelorussian scientists were helping to develop the Minsk series of computers, working primarily on software innovations; they were very active in designing, building, and testing machines of all kinds with the use of computer technology. They had, for instance, developed automated design systems in gear processing for the Minsk Transfer plant, helped in producing complex automated cutting tools for the Moscow "Red October" plant, and assisted in automating production schedules for the Omsk Motor-building plant.

Additionally, in physics, they worked on physical optics, quantum electronics, atomic and molecular spectroscopy, luminescence and photochemistry, optics of scattering media, the spectroscopy of low temperature plasma, and the optics and acoustics of crystals. The Academy published a three-volume monograph on *Methods of Designing Lasers*. Important solid state and gas laser research was being conducted in the Institute of Physics in both the visible and the ultraviolet regions of the radiation spectrum.

Byelorussian scientists were studying the nature of chemical bonds in solids, the physical and physico-chemical constants of solids under conditions of low temperature and high pressure and in strong electric and magnetic fields; phase transitions and growth processes of crystals were also being researched. A search for new semiconductor and magnetic materials having special properties was continuing and early investigation had developed a boron nitride--a material which was particularly adaptable to high precision cutting of hard steels. The study of the physics of the strength of materials in the ultrasonic field and the general behavior patterns in the structure of metals and alloys occupied the time and interests of a number of researchers in the Physico-Technical Institute. Progress was also reported by the President in the development of new self-lubricating materials and in the mechanics of polymers, metallic polymer structures, and machine part development.

¹ N. Borisevich, "A Nation of Advanced Science," *Technology and Armament*, December 1972, pp. 61-67.

In the Institute of Heat and Mass Exchange, scientists were building new heat exchangers, and developing processes for drying materials and products of light and pharmaceutical industries while studies of the thermal and physical characteristics of solids, liquids and gases were being conducted.

Work in the designing and building of nuclear power plants for export and for use in Belarus was centered in the Power Engineering Institute, where, at that time, the use of diasassociated nitrogen tetroxide as the heat carrier of reactors was being tested.

Catalytics for oil refining and methods for the exploitation of the sylvirite ore deposits as a basis for the production of potassium fertilizers were being developed in the Institute of General and Organic Chemistry.

President Borisevich stressed the ties which had been and were being developed with 65 other research institutes in the former Soviet Union as well as with various industrial establishments in the country. He cited the relationship between the Ukrainian Institute of Theoretical and Applied Mathematics and the Byelorussian Mathematics Department; The Institute of General and Inorganic Chemistry was working closely with the Ministry of the Chemical and Oil Machinery on the development of heat-resistant and chemically stable enamels and coatings; the Institute of Mechanics of Metallic Polymer Systems had developed close relationships with the Karpov Physical Chemical Institute, the G. I. Menedleev Chemico-Technological Institute, the the Institute of the Problems of Mechanical Engineering of the National Academy of Sciences, and the Institute of Polymer Mechanics of the Latvian Academy.

Belarus is located in Eastern Europe between Poland and Russia. It's land area is some 207,600 km², only slightly smaller than Kansas. It shares borders with Latvia, Lithuania, Poland, Russia, and Ukraine. The southern part of Belarus is highly contaminated from the fallout of the nuclear disaster at Chernobyl. The country is landlocked, with a population estimated in 1993 to be about 10.37 million people. Belarus has a 100% literacy rate for persons between 9 and 49. It has a labor force of 5.5 million.

During the period when Belarus was a part of the Soviet Union, strong ties had grown between the Institute of Economic Sciences of Byelorussia (Belarus) and the economics sister institutes in the Ukraine, Georgia, Azaerbaijan, Moldavia, Latvia and Estonia.

By 1987, the Byelorussian Academy of Sciences had expanded considerably, counting some 17 research instutes under its administrative direction, and having some 59 academicians and 91 corresponding members on its roster. The number of research institutes had grown from 14 (1972) to 23 in 1989.

Membership of the Academy: 2

President

Platonov, Vladimir Petrovich, D. P.M.S Born in 1920. He has been the

² This listing is taken from: *Directory of Soviet Officials: Science and Education*. Washington, D.C.: Directorate of Intelligence. LDA-87-11012, May 1987, pp.171-173.

director of the Mathematics Institute in Minsk since 1977. Founded in 1959, the institute is primarily a school of studies in advanced mathematics for those who have received their candidate degree.

Vice Presidents:

Belyy, Vladimir A., D. Tech. S. Born in 1922.

Dmitriev, Andrei S., D. Bio. S., Born in 1935. In 1985, he was deputy director of the Physiology Institute in Minsk which was established in 1953. The institute studies the physiology of men and animals. (See: Ruble, Vol. I, p. 310.)

Machnach, Aleksandr S., D. GM. S Born in 1918.

Naumenko, Ivan I., D. Phlg. S. Born in 1925.

Chief Scientific Secretary: **Kudrin, Petr A.** Born in 1931.

Presidium: [The Presidium is comprised of the officers above, the scientific secretaries, and the following scientists elected by the general assembly of the Byelorussian Academy of Sciences.]

Akhrem, Afanasii A., D. Chem. S. Born in 1913.

Skoropanov, Stepan G., D. Agr. S. Born in 1910.

Yerugin, Petr A. Born in 1907.

Sushchenia, Leonid M., D. Bio. S. Born in 1929.

Komarov, Vladimir S., D. Chem. S. Born in 1923. Since 1979, he has been director of the General and Inorganic Chemistry Institute in Minsk which was established in 1959 from the 1931 Chemistry Institute. The institute researches the synthesis and reactivity of inorganic compounds and studies adsorbents, catalysts, and surface phenomena in dispersed systems. (GSE 28, p. 116.)

Fedorov, Fedor I., D. PM. S. Born in 1911.

Iashcheritsyn, (Yashcheritsyn), Petr I., D. Tech. S. Born in 1915.

Birillo, Nikolai V., D. Phlg. S. Born in 1923.

Foreign Relations Department : **Kudrin, Petr A.** (see above)

The Biological Sciences Department

Academician Secretary: **Sushchenia, Leonid M.**, D. Bio. S. Born in 1929.

Academicians:

Antonov, Ignatii P. Born in 1922

Chebotaren, Roman S., D. Vet. S. Born in 1905.

Dmitriev, Andreii S., D. Bio. S. Born in 1925.

Golub, David M. D. Med. S. Born in 1901.

Goregliad, Khariton S., D. Vet. S. Born in 1898.

Khotileva, Liubov V., D. Bio. S. Born in 1928. She has been director of the Genetics and Cytology Institute in Minsk since 1979--an institute which was founded in 1965, and which does theoretical and applied research on the genetics and cytology of plants and microorganisms producing hybrids for agricultural development.

Savchenko, Nikolaii Ye., D. Med. S. Born in 1922.

Sushchenia, Leonid M., D. Bio. S. Born in 1929.

Turbin, Nikolaii V., D. Bio. S. Born in 1912.

Corresponding Members:

Ambrosov, Anton L., D. Bio. S. Born in 1912.

Arinchin, Nikolaii I., D. Bio. S. Born in 1914.

Birich, Tatiana V., D. Med. S. Born in 1905.

Bormotov, Vsevolod Ye., D. Bio. S. Born in 1928.

Goncharik, Mikhail N., D. Bio. S. Born in 1899.

Lobanok, Anatgoli G., D. Bio. S. Born (n.d.)

Ostrovskii, Iurii M., D. Med. S. Born in 1925.

Parfenov, V. I., D. Bio. S. Since 1979, he has been director of the Experimental Botany Institute in Minsk which was founded in 1966 on the basis of an institute originally founded in 1931. In 1947, that institute became the Institute of Biology and Microbiology. It took its present form in 1966. The institute is engaged in the detailed study of flora and vegetation of the Byelorussian area. The institute staff numbers over 300 with some 200 specialists among them.

Samtsevich, Semen A., Born in 1902.

Sidorenko, Goergii I., C. Med. S. Born in 1925.

Biological Sciences department: Scientific research institutes subordinate to the department in the order of their founding:

Experimental Botany Institute in Minsk. Founded in 1966 based on an institute originally founded in 1931. In 1947 that institute became the Institute of Biology and Microbiology. It took its present form in 1966. The institute is engaged in the detailed study of flora and vegetation of the Byelorussian area. The institute staff numbers over 300 with some 200 specialists among them. Scientific Personnel: Director Parfenov, V. I., D. Bio. S., '79; Deputy Director Smoliak, L. P., '65. (See: Ruble, Vol. I., p. 309.) (GSE 3, p. 308.)

Botanical Gardens (Central) in Minsk. Founded in 1932. The Botanical Garden coordinates republic research into the growth and acclimatization of plants, as well as their potential for cross breeding with a view toward greater productivity. Scientific Personnel: Director Sidorovich, E. A., C. Bio. S., '79. (See: Ruble, Vol. I., p. 308.)

Physiology Institute in Minsk. Established in 1953. The institute studies the physiology of men and animals. Scientific Personnel: Director vacant; Deputy Director Dmitriev, Andrei S., D. Bio. S., CPSU, '67. (See: Ruble, Vol. I., p. 310.)

Genetics and Cytology Institute in Minsk. Founded in 1965. The institute does theoretical and applied research on the genetics and cytology of plants and microorganisms producing hybrids for agricultural development. Director: Scientific Personnel: Director Khotileva, Liubov V., D. Bio. S., '79.

Photobiology Institute in Minsk. Established in 1973. The institute studies the biochemistry and biophysics of the plastic pigments, in particular the chlorophylls. Scientific Personnel: (Vacant).

Bioorganic Chemistry Institute in Minsk. Founded in 1974. The institute offers graduate degrees in bioorganic chemistry and the chemistry of natural and physiologically active substances. (See: Ruble, Vol. I., p. 309.) (GSE 28, p. 116.)

Chemical and Geological Sciences Department

Academician Secretary: **Komarov, Vladimir S**., D. Chem. S. Born in 1923. He has been head of the **General and Inorganic Chemistry Institute** in Minsk since 1979. That institute was established in 1959 from the 1931 Chemistry Institute. The institute researches the synthesis and reactivity of inorganic compounds and studies adsorbents, catalysts, and surface phenomena in dispersed systems. (GSE 28, p. 116.)

Academicians:

Akhrem, Afanassii A., D. Chem S. Born in 1923.
Alsmik (Al'smik) , Petr I., D. Agr. S. Born in 1907.
Dorozbkin, Nikolai A. , D Agr. S., Born in 1905.
Garetskii, Radim G. , D. GM. S. Born in 1928.
Komarov, Vladimir S. , D. Chem. S. Born in 1923. (See Above)
Kozlov, Nikolai S., D. Chem. S. Born in 1907.
Lappo, Arkadii I. Born in 1904.
Lishtvan, Ivan I., Born in 1932. He has been director of the Peat Institute in Minsk since 1978. The Peat Institute was founded in 1933, and studies the genesis, composition, and processing of peat and its uses as a fuel.
Lukashev, Konstantin I., D. GM. S. Born in 1907.
Makhnach, Aleksandr S., D. GM. S. Born in 1918.
Mitskevich, Natalia I., D. Chem. S.
Paushkin, Yaroslav M., D. Tech. S. Born in 1913.
Rogogoy, Pavel P., D. Agr. S. Born in 1895.
Skoropanov, Stepan G., D. Agr. S. Born in 1910.
Soldatov, Vladimir S., D. Chem. S. Born in 1937.
Yerofeev, Boris V., D. Chem. S. Born in 1909.
Yurkevich, Ivan D., D. Agr. S. Born in 1902.

Corresponding Members:

Bardyshev, Ivan I., D. Chem. S. Born in 1912.
Bel'kevich (Belkevich), Petr I., D. Chem. S. Born in 1907.
Ivanov, Sergei N., D. Agr. S. Born in 1909.
Ivitskii, Andrei I., D. Tech. S. Born in 1904.
Kulalovskaia, Tamara, D. Agr. S. Born in 1919.
Lashkevich, Grigorii I., D. Agr. S. Born in 1904.
Medvedev, Andrei G. Born in 1897.
Mitskevich, Nikolai I. , D. Chem. S. Born in 1914.
Ol'dekop (Oldekop), Iurii A. , D. Chem. S. Born in 1918.
Prokopov, Petr Ye., D. Agr. S. Born in 1909.
Rakovskii, Vladimir Ye., D. Tech. S. Born in 1900.
Salamatov, Ilia I., D. Tech. S. Born in 1907.
Starobinets, Grigorii L., D. Chem. S. Born in 1910.
Sviridov, V. V.
Tishchenko, Ivan G., D. Chem. S. Born in 1912.
Yermolenko, Igor N., D. Chem. S. Born in 1932.

Chemical and Geological Sciences department: Research Institutes subordinate to the department in the order of founding:

General and Inorganic Chemistry Institute in Minsk. Established in 1959 from the 1931 Chemistry Institute. The institute researches the synthesis and reactivity of inorganic compounds and studies adsorbents, catalysts, and surface phenomena in dispersed systems. Scientific Personnel: Director Komarov, Vladimir S., D. Chem. S., '79. (GSE 28, p. 116.)

Peat Institute in Minsk. Founded in 1933. The institute studies the genesis, composition, and processing of peat and its uses as a fuel. Scientific Personnel: Director Lishtvan, Ivan I., '78' Deputy Director Kostiuik, N. S., '78.

Physical Organic Chemistry Institute in Minsk. Established in 1959 from the 1931 Chemistry Institute. The institute studies the catalysis and catalytic synthesis of organic compounds based on raw petroleum, and the chemistry of organic, heterogenic and macromolecular compounds. Director Trokhimets, A. I., C. Chem. S., '79. (GSE 28, p. 116.)

Geochemistry and Geophysics Institute in Minsk. Founded in 1971. The institute assesses the natural wealth of the republic. It offers graduate work in geophysics, geochemistry, geotectonics, hydrogeology, paleontology, geomorphology, and the rational use of natural resources. Institut geokhimi i geofiziki AN BelSSR, Leninskii prospekt, 68, Minsk 220072. (See: Ruble, Vol. I, p. 309.) (GSE 28, p. 116.)

The Physical and Mathematical Sciences Department

Academician Secretary: Fedorov, Fedor I., D. PM. S. Born in 1911.

Academicians

Akulov, Nikolai S., D. PM. S. Born in 1900.

Apanasevich, Pavel A., D. PM. S. Born in 1929. In 1985, he was listed as one of the deputy directors of the Physics Institute in Minsk, which was founded in 1959 and which conducts research in physical optics, spectroscopy, luminescence, photochemistry, the optics of dispersive media, and theoretical physics. He was made a deputy director in 1982.

Bokut' (Bokut), Boris V., D. PM. S. Born in 1926.

Borisevich, Nikolai A., D. PM. S. Born in 1923. In 1985, he was listed as one of the deputy directors of the Physics Institute in Minsk. Founded in 1959, the institute conducts research in physical optics, spectroscopy, luminescence, photochemistry, the optics of dispersive media, and theoretical physics. He is a former president of the Byelorussian Academy of Sciences.

Boyko (Boiko), Boris B., D. PM. S. Born in 1923. In 1985, he was listed as director of the important Solid State and Semiconductor Physics Institute in Minsk. Founded in 1963, the institute conducts research on fundamental problems of solid state and semiconductor physics and chemistry.

Fedorov, Fedor I., D. PM. S., Born in 1911.

Gakhov, Fedor D., D. PM. S. Born in 1906.

Goucharenko, Andrei M., D. PM. S. Born in 1929.

Kiselevskii, Leonid I., D. PM. S. Born in 1927.

Krilov, Vladimir. Born in 1902.

Pilipovich, Vladimir A., C. PM. S. Born in 1931.

Platonov, Vladimir P., D. PM. S. Born in 1939. In 1985, he was director of the **Mathematics Institute** in Minsk, which was founded in 1959. The institute is primarily a school of studies in advanced mathematics for those who have received their candidate degree.

Shashkov, Anatolii G., D. Tech. S. Born in 1927.

Sirota, Nikolai N., D. PM. S. Born in 1913.

Stepanov, Boris I., C. PM. S. Born in 1913. Since 1979, he has been director of the Physics Institute in Minsk, which was founded in 1959. The institute conducts research in physical optics, spectroscopy, luminescence, photochemistry, the optics of dispersive media, and theoretical physics.

Suprunenko, Dmitrii A., D. PM. S. Born in 1915.

Yel'yashevich (Yelyashevich), Mikhail A., D. PM. S. Born in 1908.

Yerugin, Nikolai P., D. PM. S. Born in 1908.

Corresponding Members

Burakov, Viktor S., D. PM. S. In 1979, he was named one of the deputy directors of the Physics Institute in Minsk. Founded in 1959. The institute conducts research in physical optics, spectroscopy, luminescence, photochemistry, the optics of dispersive media, and theoretical physics.

Gribkovskii, Viktor P., C. PM. S. Born in 1932.

Grudo, Eduard I., D. PM. S.

Gurinovich, Georgii P., D. PM. S. Born in 1933.
Ivanov, Arkadii P. Born in 1912.
Ivanov, Yevgenii A., D. PM. S. Born in 1924.
Izobov, N. A.
Klubovich, Vladimir V. Born in 1933.
Korshunov, Fedor P., D. Tech. S.
Nesterenko, Vasilii B., D. Tech. S. Born in 1934. In 1985, he was listed as director of the Nuclear Power Engineering Institute in Minsk, a position at that time which he had held for seven years. Founded in 1965, the institute researches the use of dissociable gasses in atomic and thermal power engineering and the utilization of gamma radiation in the national economy.
Rubinov, Anatolii N., D. PM. S. Born in 1939.
Shemetkov, L. A.
Shirokov, Aleksandr M., Col. Engr. Born in 1924.
Sprindzhuk, Vladimir G. Born in 1936.
Stepanenko, A. V.
Tkachev, Valentin D., D. PM. S. Born in 1939.
Tolkachev, Vitalii A. D. PM. S. Born in 1934.
Vafiadi, Vladimir G., D. Tech. S. Born in 1911.
Veynik, Albert I. Born in 1919.
Zakrevskii, Arkadii D., D. Tech. S. Born in 1928.

Physical and Mathematical Sciences department: Research institutes subordinate to the department in order of founding:

Mathematics Institute in Minsk. Founded in 1959. The institute is primarily a school of studies in advanced mathematics for those who have received their candidate degree. Director Platonov, Vladimir P., D. PM. S., CPSU, '77.

Physics Institute in Minsk. Founded in 1959. The institute conducts research in physical optics, spectroscopy, luminescence, photochemistry, the optics of dispersive media, and theoretical physics. Director Stepanov, Boris I., C. PM. S., CPSU, '57; Deputy Directors: Apanasevich, Pavel A., D. PM. S., '82; Borisevich, Nikolai A., D. PM. S., CPSU, '55; Burakov, Viktor S., D. PM. S., '79.

Solid State and Semiconductor Physics Institute in Minsk. Founded in 1963. The institute conducts research on fundamental problems of solid state and semiconductor physics and chemistry. Director Boiko (Boyko), Boris B., D. PM. S., '79; Deputy Director Iliushenko, Larisa F., C. PM. S., '69.

The Physical and Technical Sciences Department

Academician Secretary: Yashcheritsyn (Iashcheritsin), Petr I., D. Tech. S. Born in 1915.

Academicians

Anisovich, Gennadii A., D. Tech. S. Born in 1932.
Belyy (Belii), Vladimir A., D. Tech S. Born in 1922.
Chachin, Viktor N. Born in 1930. In 1985, he was listed as director of the Physical Technical Institute in Minsk, which was established in 1931. The institute conducts research on the pressure forming of metals, plasticity and strength, phase and structural transformations in metals and alloys, thermal physics, electrophysics, and magnetic-pulse machining.
Gorev, Konstantin V. Born in 1904.
Soloukhin, L. V.
Soloukhin, Rem. I., D. PM. S. Born in 1930. In 1985, he was listed as director

of the A. V. Likov Heat and Mass Transfer Institute in Minsk. Founded in 1952. The institute includes the thermophysical properties of gaseous, liquid and solid substances, heat and mass transfer in rheological systems, plasma chemistry, and the development of low temperature plasma generators.

Vinokurov, Fedor P. Born in 1900.

Corresponding Members

Akhverdov, Iosif N., D. Tech. S. Born in 1916.

Astapchik, S. A., D. Tech. S.

Bodyako, Mikhail N., D. Tech S. Born in 1914.

Budyka, Sergei Kh., D. Tech. S. Born in 1909.

Goranskii, Georgii K., D. Tech. S. Born in 1912.

Kolykhan, Leonid I., D. Tech. S. Born in 1931.

Kovalev, Ivan S., D. Tech. S. Born in 1913.

Labunov, Vladimir A., D. Tech. S. Born in 1939.

Sviridenok, Anatolii I., D. Tech. S. Born in 1936. In 1985, he was director of the Metal Polymers Systems of Mechanics Institute in Gomel. Founded in 1969, this institute produces conducting metal polymer materials, equipment for producing and testing conducting metal polymer materials, contact brushes, scientific-technical documentation, and design and development documentation.

Treyer Valfrid B, Born in 1901.

Tsitovich, Igor S. Born in 1917.

Vysotskii, Mikhail S., D. Tech. S. Born in 1928.

Zabrodskii, Sergei S., D. Tech. S. Born in 1911.

Zatsepin, Nikolai N., D. Tech. S. Born in 1920.

Physical and Technical Sciences department : Research institutes subordinate to the department in order of founding:

Physical Technical Institute in Minsk. Established in 1931. The institute conducts research on the pressure forming of metals, plasticity and strength, phase and structural transformations in metals and alloys, thermal physics, electrophysics, and magnetic-pulse machining. Scientific Personnel: Director Chachin, Viktor N., CPSU, '74.

A. V. Likov Heat and Mass Transfer Institute in Minsk. Founded in 1952. The institute includes the thermophysical properties of gaseous, liquid and solid substances, heat and mass transfer in rheological systems, plasma chemistry, and the development of low temperature plasma generators. Director Soloukhin, Rem I., D. PM. S., CPSU, '76; Deputy Directors: Borodulia, Valentin A., C. Tech. S., '77; Kravchenko, S. I., '82; Martinenko, Oleg G., C. Tech. S., '66.

Nuclear Power Engineering Institute in Minsk. Founded in 1965. The institute researches the use of dissociable gasses in atomic and thermal power engineering and the utilization of gamma radiation in the national economy. Director Nesterenko, Vasili B., D. Tech. S., '78.

Technical Cybernetics Institute in Minsk. Founded in 1965. The institute develops theoretical and practical methods for automating the engineering design processes using computer technology. Director Semenov, Oleg I., C. Tech. S., '72; Deputy Director Yarmosh, N. A., C. Tech., '72.

Metal Polymers Systems of Mechanics Institute in Gomel. Founded in 1969. This institute produces conducting metal polymer materials, equipment for producing and testing conducting metal polymer materials, contact

brushes, scientific-technical documentation, and design and development documentation. Scientific Personnel: Director Sviridenok, Anatoli I., D. Tech. S., '79.

The Social Sciences Department

Academician Secretary: Birillo, Nikolai V., D. Phlg. S. Born in 1923.

Academicians

Atrakhovich, Kondrat K ., D. Phlg. S. Born in 1896.

Borisenko, Vasilii V., D. Phlg S. Born in 1904.

Buslov, Kazimir P., D. Phil. S. Born in 1914.

Ignatenko, Illarion M., D. Hist. S. Born in 1919.

Martinkevich, Feliks S., D. Econ. S. Born in 1920. In 1985, he was one of the two directors of the Economics Institute in Minsk. Founded in 1932. The institute undertakes research on capital investment, technological innovation, economic history, and labor reserve estimates for urban areas. The institute employs over 180 workers of whom 135 are academic specialists. Members of the institute have done important demographic research as well as economic forecasting and planning. (See Ruble, Vol. I, p. 150.)

Naumenko, Ivan Ya., D. Phlg. S., Born in 1925.

Corresponding Members

Adamovich, Aleksandr M., D. Phlg. S. Born in 1927.

Babosov, Yevgenii M., C. Phil. S. Born in 1931.

Birillo, Nikolai V. D. Phlg. S. Born in 1923.

Bondarchik, Vasilii K., D . Hist. S. Born in 1920.

Il'yushin (Ilyushin), Ivan M., Born in 1903.

Kachuro, Ivan M. Born in 1902.

Kovalenko, Viktor A., D. Phlg. S.

Kozlov, Iurii K. Born in 1928.

Marchenko, Ivan Ye., D. Hist. S.

Martselev, Stanislav V., C. Hist. S.

Matskevich, Yuzefa F., D. Phlg. S. Born in 1911.

Medvedev, Vitalii F., D. Econ. S.

Nefed, Vladimir I., D. Arts. Born in 1916.

Petrikov, Petr F. Born in 1927.

Semenkov, Viktor I.

Shabunya, Konstantin I., D. Hist. S. Born in 1912.

Shamyakin (Shamiakin), Ivan P. Born in 1921.

Shirokanov, Dmitrii I., C. Phil. S. Born in 1929.

Stepanov, Vasiliii I., D. Phil. S. Born in 1903.

Sudnik, Mikhail R., C. Phlg. S. Born in 1910.

Veduta, Nikolai I., D. Econ. S. Born in 1913.

Voinov, Aleksandr P. Born in 1902.

Zhuravskii, A. I.

Social Sciences department: Research institutes subordinate to the department in the order of their founding:

History Institute in Minsk.

Belorussian historians organized centers in the Belorussian State University and the Institute of Belorussian Culture in 1921 and 1922 in that order, and they became the basis for the establishment of the Belorussian Academy of

Sciences itself in January 1929. The Department of the Humanities of the Academy established a history subdivision which at that time consisted of six chairs and nine commissions. It was on this base that the Institute of History of the Belorussian Academy was founded in 1929. Its directors have included: V. M. Ignatovskii (1929-30), P. O. Gorin (1931-35), V. K. Shcherbakov (1935-36), N. M. Nikol'skii (1937-53), I. S. Kravchenko (1953-64), N. V. Kamenskaia (1965-69), I. M. Ignatenko (1969-75), and P. T. Petrikov (1975-88), and since 1988, M. P. Kostiuk has headed the History Institute of the Belorussian Academy. In the early 1990s the staff of the institute numbered 131 researchers of whom 16 held the doctorate and 62 the candidate degree. Included in the group were one full and two corresponding members of the Belorussian Academy. The institute maintains an archeology section among its traditional historical sections. (See: Ruble, Vol. III, p. 129. For a description of the historical work being conducted in the institute, and research being conducted jointly with historians in Poland, Russia, and Lithuania, see: *A Scholars' Guide*. .pp. 124-125.)

Economics Institute in Minsk.

Founded in March 1931. From 1940 to 1946, it was headed by V. N. Lubiako; from 1946 to 48, by S. N. Malinin; from 1948-51, by I. M. Kochuro; from 1952-64, by G. T. Kovalevskii; from 1964-80, by F. S. Martinkevich; from 1981-88, by S. G. Galuza; and, since 1988, it has been headed by G.M. Lych. There are 12 departments in the Institute. The institute undertakes research on capital investment, technological innovation, economic history, and labor reserve estimates for urban areas. The institute employs over 180 workers of whom 135 are academic specialists. The staff of the institute numbered 96 in the early 1990s, including one full and two corresponding members of the Belorussian Academy. There were 11 persons with doctorates and 53 with condidate degrees on the staff. Members of the institute have done important demographic research as well as economic forecasting and planning. Gennadi M. Lych, Corresponding Member of the Belorussian Academy has been the director of the institute since 1988. (Directors Galuza, S. G., D. Econ. S., 1981-1988); and, (Martinkevich, Feliks S., D. Econ. S., 1964 to 1980); Deputy Director Drita, Valentin I., since 1983. (See Ruble, Vol. I, p. 150. See also: *A Scholars' Guide*. .p., 124)

Philosophy and Law Institute in Minsk.

This institute emerged from a merger a Chair of Marxism-Leninism comprised of three "commissions": dialectical materialism, historical materialism, and Leninism which, in 1931 were combined into a research Institute of Philosophy, which, in 1935 was further merged with the Institute of Soviet State Structure and Law to become the Institute of Philosophy and Law. From 1938 to 1947, the Institute stopped functioning, and in 1958, the Sector of the State and Law was detached from the Institute, and was reorganized as the Division of Legal Sciences of the Belorussian Academy. At that time the Institute was renamed the Institute of Philosophy and Law. In 1965, the Division was returned and once again became part of the Institute. In February 1990, the Institute of Sociology was separated from it. Directors of the Institute have included: S. Ia. Wolfson (1931-38), I. M. Il'iushin (Iliushin) (1947-51), V. P. Skochelias (1951-56), K. P. Buslov (1956-73), P. D. Puzikov (1973-77), E. :M. Babosov (1977-88), and, since 1989, D. I. Shirokanov. In 1975, the department received institute status and employed at that time 27 professionals distributed among some 17 sections, ten of which offer graduate programs and do research in the legal sciences. In the early 1990s, the institute had nine departments: human philosophical problems; philosophical

problems of relations among nationalities and international relations; the history of philosophy; the theory and history of state and law; state law and administration; labor and economic law; and agricultural and ecological law. There were some 123 researchers in the institute which included one full and four corresponding members of the Belorussian Academy of Sciences, and there were 11 doctorate holders and 60 candidate holders among the 123 researchers. D. I. Shirokanov, V. I. Semenov, I. Ia. Zhibul', and V. A. Krutalevich are heading major research areas within the institute. Close collaboration between The Institute of Philosophy and Sociology of the Polish Academy of Sciences and the Belorussian Academy on the interrelationship of philosophical and sociopolitical thought in Belorussia and Poland in the Renaissance Period are ongoing. (See: Ruble, Vol. I., pp. 464-465. See Also: A Scholars' Guide. . .pp.,127-128.)

Yanka Kupala Literature Institute in Minsk.

Originally founded in 1931 on a section of Belorussian Language and Literature and a Literary Commission which had been a part of the Institute of Belorussian Culture, and from 1929 to 1931 it was a part of the Belorussian Academy of Sciences system, until 1951 it was called the Institute of Language, Literature, and Art. In 1957, it received its present name. Its directors have included: I. I. Zamotin (1931), V. V. Borisenko (1937-41; 1946-73), M. T. Lyu'kov (Lyukov) (1943-46), I. Ia. Naumenko (1973-82) and since 1982, V. A. Kovalenko. The institute is made up of six departments: contemporary Belorussian literature and criticism; the history of Belorussian Soviet literature; Belorussian literature of the pre-October period; literary theory; interaction between literatures; and publications and textology. It offers advanced degrees in literary studies. The staff of the institute in the early 1990s numbered some 61 researchers among whom were one full and one corresponding members of the Belorussian Academy and counted seven doctorate and 32 candidate degree holders in its ranks. Its scientists maintain relationships with research institutes in Czechoslovakia, the former Yugoslavia, Great Britain, and Germany. (See: Ruble, Vol. III, p. 498. Also see: A Scholars' Guide. . .pp. 126-127.)

Yakub Kolas Linguistics Institute in Minsk.

As early as 1929, an Institute of Linguistics of the Belorussian Academy of Sciences was founded. In 1935, it was incorporated into the Institute of Literature, Art and Language, which in turn was subdivided into two institutes, (Literature and Art) and (Linguistics). It was this Linguistics branch which became the present Yakub Kolas Linguistics Institute, receiving its name in 1956. The institute has been headed over the years by S. M. Nekrashevich (1929-30), P. A. Buzuk (1931-33), K. K. Atrakhovich (1951-56), P. F. Glebka (1956-57), M. R. Sudnik (1957-83), A. I. Zhuravskii (1983-89), and since 1989, the institute has been directed by A. I. Podluzhnii (Podluhnyi). In the early 1990s the staff of the institute consisted of 84 researchers among whom were 10 doctorate and 32 candidate degree holders and among these, one full and three corresponding members of the Belorussian Academy. The institute is organized into seven departments: contemporary Belorussian language and speech culture; lexicology and lexicography; experimental phonetics; general linguistics and Slavic linguistics; Russian language; history of the Belorussian language; and dialectology. The institute specializes in the study of dialects. In the 1950s and 1960s, its scholars produced Russian-Byelorussian and Byelorussian-Russian dictionaries. Studies in general linguistics and the development of automated systems languages are conducted in the graduate programs offered at the institute. The institute is involved in the development of a General Slavic Linguistic Atlas and the Linguistic Atlas of Europe. The

institute maintains close relations with counterparts in Poland and the former Yugoslavia. (See: Ruble, Vol. III, p. 497. See also: *A Scholars' Guide*. . .p., 126.)

Art Studies, Ethnography and Folklore Institute in Minsk.

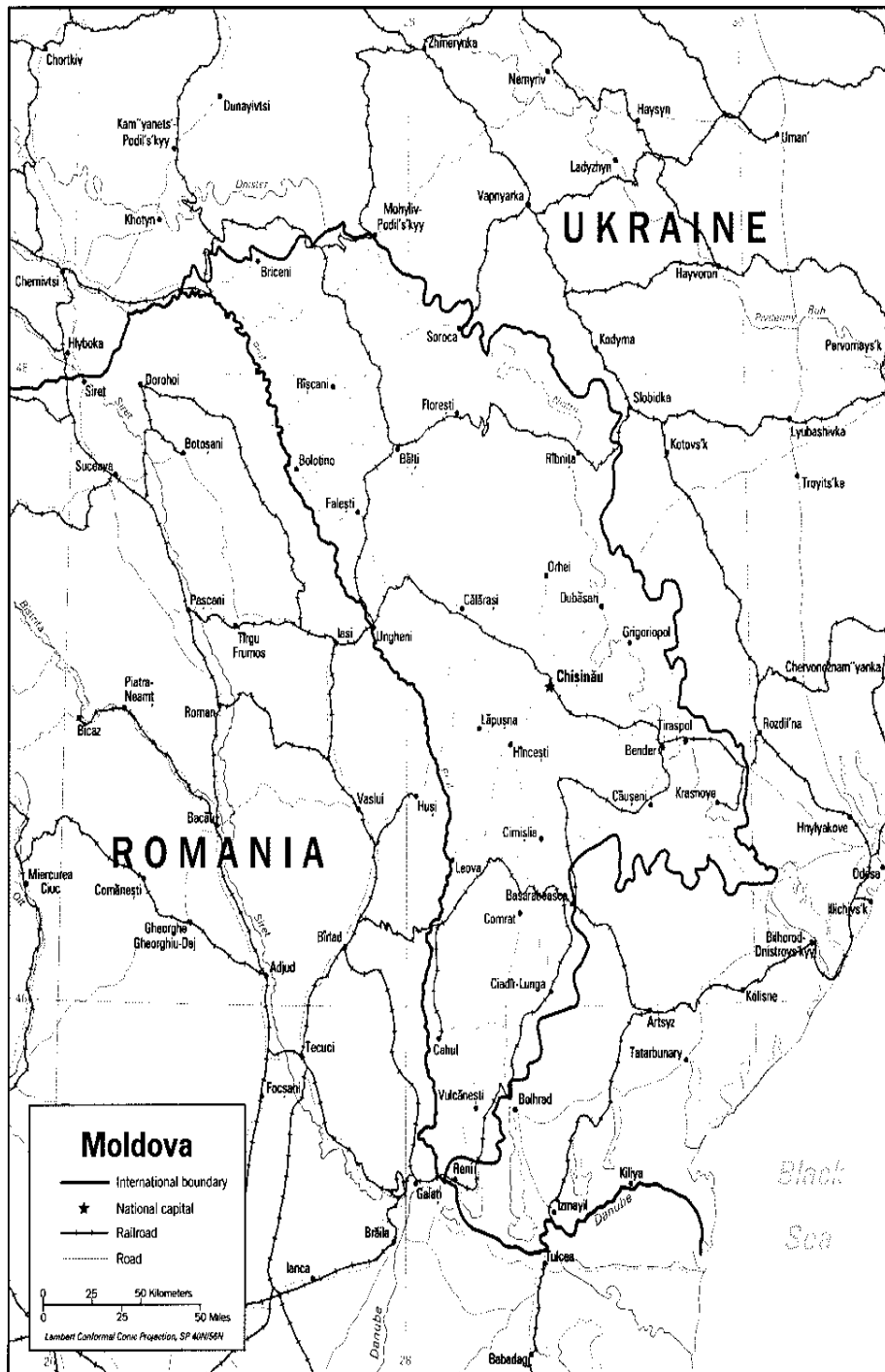
Established in 1957 from the sectors of Ethnography and Folklore of the History Institute, the institute has eight departments: the history of Belorussian culture; ethnography; Slavic studies, folklore, theater, music, fine arts, and cinema and television. Originally headed by P. F. Glebka (1957-69), it was headed by V. K. Bondarchik from 1969 to 1976. Since 1976, S. V. Martselev, a corresponding member of the Belorussian Academy, has been its director. By 1979, the institute employed over 140 workers, 95 of whom were designated as "Scientific Workers." The institute is a major graduate school offering degrees in 10 fields, including physical anthropology, ethnography, theory and history of architecture, folklore studies, and various performing arts, including film and television. In the early 1990s, the institute staff numbered 93 researchers, of whom three were corresponding members of the Belorussian Academy, and of whom ten held the doctorate and 53 the candidate degree. Studies underway in the institute include: cities and villages in Belorussia: the Grodno and Minsk regions under S. V. Martselev; artistic and cultural relics of Belorussia under O. V. Tereshchatova; historical-ethnographic research on the ethnic culture of Belorussians under V. K. Bondarchik; the contemporary; Belorussian theater under R. B. Smol'skii (Smolskii); the problems of modern cinema and television under A. V. Krasinskii; the interconnections of Belorussian fine arts and decorative-arts of the Union Republics under L. N. Drobov; musical art in Belorussia under G. G. Kuleshova; Belorussian folklore under A. S. Fedosik; a dictionary of the folklore terms of the Eastern Slavs under K. P. Kabashnikov; the role of interethnic ties among the physical types of the Belorussian population and its genetic stock under L. I. Tegako; and the present-day ethnic processes in Belorussia under V. J. Bondarchik. The Belorussian Academy and the Polish Academy are collaborating on several studies of mutual interest. (See: Ruble, Vol. III, pp. 127-128 and p. 496. Also see: *A Scholars' Guide to Humanities and Social Science in the Soviet Union: The Academy of Sciences of the USSR and the Academies of the Republics*. Armonk, New York: M. E. Sharpe, Inc, p.123)

Institute of Sociology of the Belorussian Academy of Sciences in Minsk.

Founded in 1990 on the basis of the sociology departments of the Institute of Philosophy and Law³, as well as the Department on the Study of Sciences and the Department on Demography and Population of the Institute of Economics of the Belorussian Academy of Sciences. The institute is structured in eight departments: theory, methodology and methods in sociological research; social dynamics of rural population; sociological studies of ideological processes; social problems of the younger generation; sociology of public opinion; social psychology of an individual and the collective; study of sciences; and the demography of labor resources. In the early 1990s its staff consisted of some 73 researchers: one corresponding member of the academy and the staff included five persons with doctorates and 35 with candidate degrees. The institute is under the direction of corresponding member of the academy Evgenii M. Babosov. (See: *A Scholars' Guide*. . .pp127-128.)



The Moldavian Academy of Sciences



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Moldavia had 5 research institutes under the administration of its two subject-matter sectors, and some 45 holders of the doctorate and 400 holders of the candidate degree on its staff in Kishinev (Chisinau), according to its President,

Ya. Grosul.¹ In the Republic, as a whole, he reported that there were 70 "scientific establishments" with a total of 6,000 scientific workers of whom some 2,000 held advanced degrees. In 1985, the number of research institutes remained the same although the number of scientific workers in the Republic

By 1989, Moldavia had the one academy of sciences, five scientific departments, or sectors, 34 research units in the country--not all of which were under the direct administration of the academy--three branches of the academy located in other towns in the country, four experiment stations, one botanical garden, and ten archival, library and other centers. The total number of "scientific workers" in these institutions was 8944, of whom 334 held the doctorate and 3725 held the candidate degree. On the staff of the Academy there were 35 persons of whom 10 held the doctorate and 22 the candidate degree. In the five sectors or subject-matter departments of the academy 213 scientific workers were listed of whom 11 held the doctorate and 108 held the candidate degree. In the 34 research institutes in Moldavia, including governmental units and university laboratories, etc., there was a total of 3418 scientific workers, of whom 120 held the doctorate and 1317 held the candidate degree. In the three branches and departments of the academy some 394 persons were employed of whom 1 held the doctorate and 17 the candidate degree. In the other 10 institutes (libraries, archives, experimental construction centers, etc.) 4691 persons were employed of whom 187 held the doctorate and 2,186 held the candidate degree.²

Some Facts about Moldvia : Moldavia is a small land-locked Republic slightly larger than Hawaii of the Hawaiian Islands with a population in 1993 of about 4.46 million persons. It is a nation with an extremely high literacy rate. It is next to the smallest of the former Republics of the Soviet Union. It lies between Ukraine and Rumania in Eastern Europe. Like many other former republics of the Soviet Union, Moldova is moving to develop computer and communications networks which will involve a number of institutions, among which thie Moldavian Academy of Sciences is prominently mentioned.

As one report puts it,

. . .Research and development activities are mainly concentrated in the institutes of the Academy of Sciences and the Moldovian universities. The importance of a good telecommunication and information infrastructure has been recognised and is supported by the government within the so called Programme of Informatisation of the Moldovian Society. . .The institutes of the Academy of Sciences and the universities are highly interested in getting connections to international networks and scientific and patent databases. They are also interested in taking part in further Copernicus Programme activities and other international teamwork but because not being involved in former international programmes they do not have the necessary contacts to abroad. National geographical, radiological, seismological and other databases are also of interest to the scientific community in Europe. . . ."

¹ Ya, Grosul, "A Nation of Advanced Science," *Technology and Armament*, December 1972, pp. 103-110.

² These statistics were taken from a publication of the State Committee on Science and Technology (GKNT) in Moscow. *Svodnaia skema razvitiya i razmetscheniya otrasli narodnogo Khozyaistva "Nauka i nauchnoe obsluzhivanie"* for the period to 2005, kratkii istogovii dokyment, Tom I, pp. 192-193.

Members of the Academy ³

President: **Zhuchenko, Aleksandr A.**, D. Bio. S. Born in 1935.

Vice Presidents:

Andrunakiyevich, Vladimir A., D. PM. S. Born in 1917.

Chibotaru., Simion S., D. Phlg. S. From 1969 to 1984, he was director of the Language and Literature Institute in Kishinev. The roots of this institute stretch back to 1926 when a Moldavian Scientific Committee was formed which later became the Scientific-Research Institute of History, Language and Literature under the Council of People's Commissars of the Moldavian Autonomous Republic. In 1946, this institute became part of the Moldavian Research Base of the USSR Academy of Sciences (which from 1949 to 1961 was the Moldavian Subdivision of that Academy and in 1961 became the Moldavian Academy of Sciences.

Lupashku, Mikhail F.

Ursul, Dmitrii T., D. PM. S. From 1973 to 1979, he headed the **Philosophy and Law Department (Institute)** in Kishinev, which was founded in 1969,

Chief Scientific Secretaries: Andriyesh, Andrei M., D. PM. S. Born in 1933.

Gitsu, Dmitrii V., D. PM. S.

The Presidium

Andriyesh, Andrei M., D. PM. S. Born in 1933.

Mel'nik (Melnik), Boris Ye.

Rud' (Rud), Gerasim Ya., C. Agr. S. Born in 1907.

Sibirskii, Konstantin S., D. PM. S. Born in 1928.

The Biological and Chemical Sciences Department

Academician Secretary: Toma, S. I., D. Agr. S.

Academicians

Anestiadi, Vasilii Kh., D. Med S.

Lazur'yevskii (Lazurievskii), Georgii V., D. Chem S. Born in 1906. Head of the **Chemistry Institute** in Kishinev. Founded in 1959. The institute conducts research in such areas as electronic paramagnetic resonance, antitranspirants to raise the drought and frost resistance of cultivated plants, production of cosmetics and medicine, and agricultural chemicals for soil enrichment.

Lupashku, Mikhail F.

Popushoy, Ivan S.

Radautsan, Sergei I., D. Tech S. Born in 1926.

Spasskii, Aleksei A., D. Bio. S.

Yaroshenko, Mikhail F., D. Bio. S.

Zhuchenko, Aleksandr A., D. Bio. S. Born in 1935.

³ These membership listings may be found in the *Directory of Soviet Officials: Science and Education*. Washington, D.C.: Directorate of Intelligence, LDA 87-11012, May 1987, pp. 171-173.

Corresponding Members

Arasimovich, Valentina V., D. Bio. S. Born in 1906.

Bersuker, Isaak B., D. PM. S. Born in 1928.

Chalyk, Tikhon S. Born in 1921.

Chebotar' (Chebotar), Aleksandr A., D. Bio. S. Born in 1932.

Dorokhov, Lazar' M., D. Bio. S.

Drumya (Drumia), Anatolii V., D. GM. S.

Geydeman, Tatiana S., D. Bio. S. Born in 1903.

Klimenko, Vasilii G., D. Bio. S.

Matiyenko, Boris T., D. Bio. S. Born in 1929.

Mel'nik (Melnik), Boris Ye.

Rud' (Rud), Gerasim Ya., C. Agr. S. Born in 1907.

Siminel, V. D.

Toma, S. I. D. Agr. S.

Unguryan (Ungurian), B. G.

Verdervskii, Dmitrii D., D. Agr. S. Born in 1905.

Biological and Chemical Sciences Department research institutes by order of their founding:

Chemistry Institute in Kishinev. Founded in 1959. The institute conducts research in such areas as electronic paramagnetic resonance, antitranspirants to raise the drought and frost resistance of cultivated plants, production of cosmetics and medicine, and agricultural chemicals for soil enrichment. Director Lazurievskii, Georgii V., D. Chem. S., '61. (See: Ruble, Vol. I., p. 328.) (GSE 28, p. 116.)

Zoology Institute in Kishinev. Founded in 1961. The institute studies the animals and plants of the region in an effort to understand the interaction between them. Director Furduy, F. I., '76. (See: Ruble, Vol. I., p. 329.) (GSE 3, p. 308.)

Plant Physiology and Biochemistry Institute in Kishinev. Established in 1961. The institute has developed high yield forms of wheat, tobacco, and other crops. Director Moraru, Konstantin V., C. Agr. S., '80. (See: Ruble, Vol. I., p. 329.) (GSE 3, p. 308.)

4. Geography department of the Moldavian Academy in Kishinev. The department studies the natural resources, habitats, environmental protection, water quality and treatment and soil quality and availability in the republic. (See: Ruble, Vol. I., p. 328.)

The Physical, Technical, and Mathematical Sciences Department

Academician Secretary: Andrunakiyevich, Vladimir A., D. PM. S. Born 1917.

Academicians

Andrunakiyevich, Vladimir A., D. PM. S. Born 1917.

Malinovskii, Tadeush I., D. PM. S. Born in 1921.

Moskalenko, Vsevolod A.

Petrov, Iurii N., D. Tech. S. Born in 1930.

Sibirskii, Konstantin S., D. PM. S. Born in 1928.

Corresponding Members

Andriyesh, Andrei M., D. PM. S. Born in 1933.
Bologa, Mircha K., D. Tech. S.
Chalyy, Georgii V, C. Tech. S. Born in 1916.
Gitsu, Dmitrii V., D. PM. S.
Gokhberg, Izrail T., C. PM. S. Born in 1928.
Kovarskii, Viktor A., D. PM. S.
Perlin, Iurii Ye., D. PM. S.
Soltan, Petr S.

Physical, Technical, and Mathematical Sciences department:

Research institutes subordinate to the department by order of founding:

Mathematics Institute and Computer Center in Kishinev. Founded in 1964. Subordinate to the Physical, Technical and Mathematical Sciences department of the Moldavian Academy. The institute researches in mathematical cybernetics, human-machine methods of control and develops interface systems. Director Andrunakeevich, Vladimir A., D. PM. S., '65. (GSE 15, p. 585.)

Applied Physics Institute in Kishinev. Founded in 1964.

The Social Sciences Department

Academician Secretary: Ursul, Dmitrii T., C. Hist. S.

Academicians

Chervinskii, Vasilii F., D. Econ. S. Born in 1908.
Chibotaru, Simion S., D. Phlg S.
Frolov, Nikolai P., D. Econ. S. Born in 1908.
Lupan, Andrei P., Born in 1912.
Ursul, Arkadii D., D. Phil. S.
Ursul, Dmitrii T., C. Hist. S.
Vartichan, Iosif K., C. Phlg. S.

Corresponding Members

Aftenyuk, Semen Ya.,
Il'yashenko (Ilyashenko), T. P., D. Phlg. S.
Lazarev, Artem M. Born in 1914.
Mokhov, Nikolai A., D. Hist. S.
Russev, Evgenii M., C. Hist. S.
Tsaranov, Vladimir I., C. Hist. S.
Zavtur, Aleksandr A., D. Phil. S. Born in 1929.

Social Sciences department: Research institutes subordinate to the department by order of founding:

Language and Literature Institute in Kishinev.

The roots of this institute stretch back to 1926 when a Moldavian Scientific Committee was formed which later became the Scientific-Research Institute of History, Language and Literature under the Council of People's Commissars of the Moldavian Autonomous Republic. In 1946, this institute became part of the Moldavian Research Base of the USSR Academy of Sciences (which from 1949 to 1961 was the Moldavian Subdivision of that Academy and in 1961 became the Moldavian Academy of Sciences. With the splitting of the earlier institute into

two in 1958, the Language and Literature Institute was established. Directors of the Institute have been: I.K. Vartichian (1958-61), N. G. Korletianu (1961-69), S. S. Chibotaru (1969-84), Kh. G. Korbu (1984-87), and, since 1988, Silvii G. Berezhan. Institute scholars have completed work on a two-volume Dictionary of the Moldavian Literary Language and have produced some 20 Russian-Moldavian terminological dictionaries in various subjects, an etymological dictionary, and a dictionary of Moldavian folk speech. The institute has published since 1958 the quarterly journal *Limba shi literatura moldoveniaske*. (See: Ruble, Vol. III, pp. 528-529. See also: *A Scholars' Guide*. . pp. 163-4.)

Economics Institute in Kishinev.

The institute was one of the original clusters of research institutes which comprised the Moldavian Academy of Sciences at its opening in 1961; the actual founding date of this institute was in May of 1960. It has been headed by M. M. Radul (1960-61), V. F. Chervinskii (1961-68), N. P. Frolov (1968-80), and since 1980, it has been directed by G. N. Singur. There are eight laboratories in the institute: the comprehensive development of the regional economy; energy and economic problems; economic mechanisms of the agroindustrial complex; ecological and economic problems; socioeconomic problems of the intensification of the economy; economic mechanisms and labor productivity in industrial production; the economic problems of management; and scientific-technical and socioeconomic forecasting. The institute specializes in agricultural economics. In early 1990s, the staff was comprised of 66 researchers, of whom three held the doctorate and 39 the candidate degree. There was one member of the staff who was a corresponding member of the academy. Supervisors of research projects in the institute included: V. G. Kramarenko, G. N. Singur, II. Roizman, and I. S. Darakhovskii. Scientific Personnel: Directors: Singur, Georgii N., D. Econ. S., corresponding member of the academy and director since 1980.; and, Frolov, Nikolai P., D. Econ. S., director of the institute from 1968 to 1980; Deputy Director Gudima, Anatoli A., since 1981. (See Ruble, Vol. I, p. 174. Also see: *A Scholars' Guide*. . pp. 161-162.)

History Institute in Kishinev.

The institute was founded in 1958, and its directors included: Ia. S. Grosul (1958-61), E. M. Russev (1961-69), I. G. Budak (1970-74), B. K. Vizer (1974-77; and V. I. Tsaranov (1977-91. Since 1991, A. M. Tsaran has directed the institute. The institute is a center of anthropological and archeological investigation as well as research into the most important problems of the history of southeastern Europe in the feudal epoch and in modern times. Relations between the Moldavian state and its Slavic neighbors, particularly Russia and Ukraine, in the feudal epoch; the social, economic and political consequences of the absorption of Bessarabia into Russia in 1812, and the development of capitalism in the region after 1861, are major research thrusts. In the early 1990s the staff of the institute numbered 80 researchers. Under the Division of the Social Sciences of the Moldavian Academy, the institute is working on the problem of the ethnogeny of the Moldova people. (See: Ruble, Vol. III, p. 154. Also see: *A Scholars' Guide*. . p. 162.)

Department of Ethnography and Art in Kishinev.

Established in 1969 on the basis of the Ethnography Sector of the academy's Institute of History which itself had been founded in 1958. At that time the Department consisted of three sectors: ethnography, art studies and folklore. In 1975, the sector of art studies was subdivided into a sector on fine arts and a

sector on theater and cinema. In 1976, a sector on the study of historical and cultural monuments was added, and in 1978 the sector of folklore returned to the Institute of Language and Literature. In 1977, the Department added a sector of archeology transferred to it from the Institute of History, which spawned a number of new sectors in subsequent years, some of which have become departments on their own. From 1969 until 1986, V. S. Zelenchuk was head of the department. Since 1986, Nikolai A. Demchenko, C.Hist. S. has headed the department. There are 10 subdivisions in the department: ethnography; archeology; folk arts; fine arts; theater and cinema; musical studies; Gagauz studies; historical and cultural monuments; national processes; and folk arts, crafts and trades. Research in the institute includes Moldavian folk dress, ceramic art, and the Slavic populations of Moldavia from the sixth to the ninth centuries. Department Chairman: Nikolai A. Demchenko. The department maintains close ties with its opposite numbers in Poland and Romania.(See: Ruble, Vol. III, p. 154. Also see: *A Scholars' Guide*. . .p. 160)

Philosophy and Law Department (Institute) in Kishinev.

Founded in 1969, it has been headed by V. N. Ermuratskii (1969-73), D. T. Ursul (1973-79), A. I. Babii (Babyi) (1979-86) and since 1987 by Aleksandr N. Roshka. The Department has 10 subdivisions: dialectical and historical materialism; sociopolitical problems of socialism; the history of philosophy and esthetics; scientific atheism; philosophical problems of ecology and acceleration of progress; the study of public opinion; social problems of science; problems of democracy; legality and legal culture; and ecological and agrarian law. The institute is the keeper of the archives of the Moldavian Academy of Sciences. In the early 1990s the institute had some 67 researchers which included one full and one corresponding member of the academy, and of whom seven held the doctorate and 27 the candidate degree. (See: Ruble, Vol. I., p. 473. Also see: *A Scholars' Guide*. . .p.161.)



The Transcaucasus Republic Academies



The Transcaucasus Academies

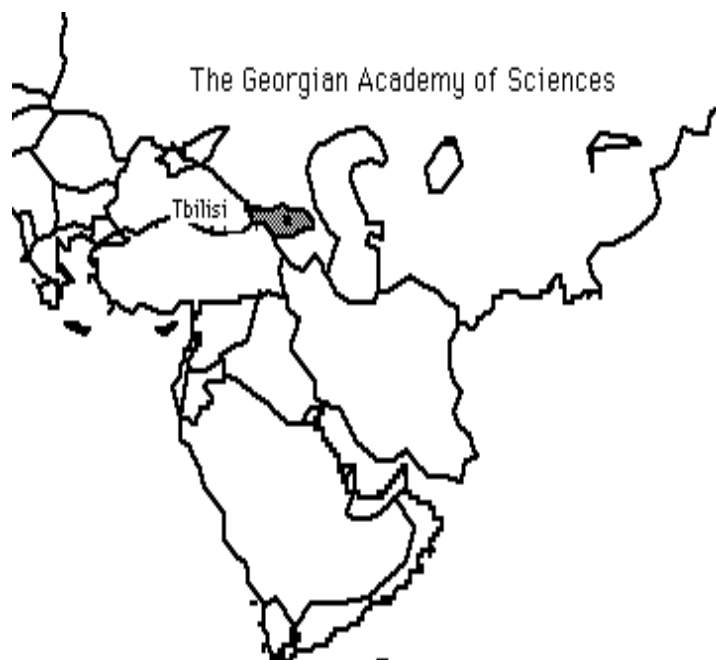
The Research Institutes: The three science academies in what is called here the Transcaucasus Academies--Georgia, Azerbaijan, and Armenia--directed the research of 84 scientific research institutes. The oldest institute is found in Georgia, dating back to 1625; the latest in Azerbaijan in 1978. The oldest concentrates on plants; the latest on space.

Membership in the Academies: The three Transcaucasus academies count a total of eight corresponding members and five academicians of eight of the subject matter departments of the AN SSSR. The president of the Azerbaijan academy did not have a joint membership with the national academy in 1989. The presidents of the Georgian and the Armenian academies held corresponding memberships. There were no academician members of the AN SSSR in the Azerbaijan academy. The Georgian academy had one and the Armenian academy had four. Again, as was the case for the Baltic academies and the European academies, the Transcaucasus academies, though neighbors, show no evidence of cross fertilization by way of joint memberships between personnel of their respective scientific departments. The numbers of academicians and corresponding members for these three academies totalled only 383 in 1989, of which some 150-odd were academicians of their departments. Again, the presidium of each academy controlled the research institutes which were subordinate to the academy department. Most of the directors and many of the deputy directors of these institutes were corresponding members or academicians of department to which the institute was subordinate.

The Georgian Academy of Sciences

Georgia is located between Turkey and Russia and is bordered by the Black Sea. It has a total land area of 69,700 km²--slightly larger than South Carolina, and a population of about 5.6 million. By land it is bordered by Armenia, Azerbaijan, Russia, and Turkey.

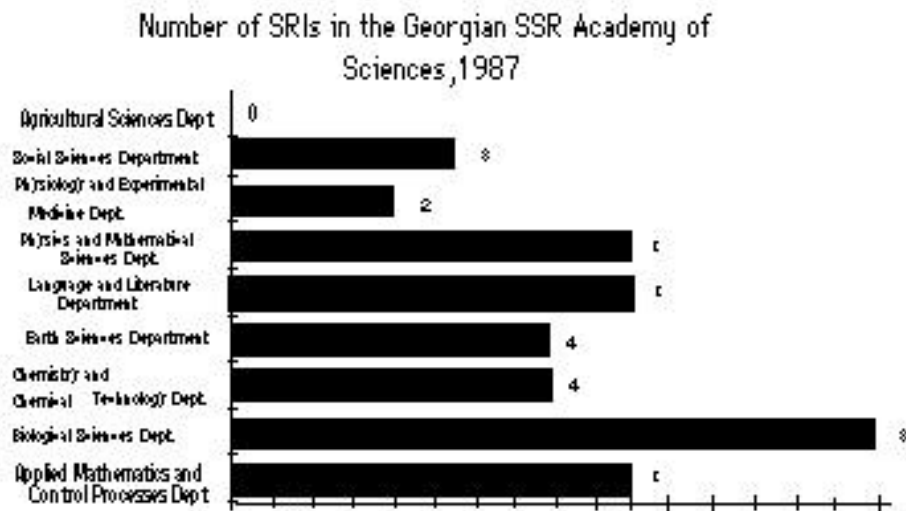
Retrospect: The Academy of Sciences of the Georgian SSR was founded in 1941 upon the previously existing branch of the national academy. In its organization, it combined several research institutes in existence at the Tbilisi State University, which may account for the much closer connection between the academy in Georgia and the VUZy institutions in that republic than is the case in some of the other republics.



Academy Organization: The academy in 1980 was organized in six departments: mathematics and physics; earth sciences; applied mechanics and control processes; chemistry and chemical engineering; biological sciences; and, social sciences. By 1987, through reorganization, there were eight departments in the academy: 1. Agricultural Sciences, 2. Applied Mechanics and Control Processes, 3. Biological Sciences, 4. Chemistry and Chemical Technology, 5. Earth Sciences, 6. Language and Literature, 7. Physical and Mathematical Sciences, and 8. Social Sciences.

Scientific Research Institutes and the Research Thrust: As Figure 66 shows, these eight departments had 36 scientific research institutes subordinate to them. Major research activities of academy scientists included: mathematics and mechanics; physics and astrophysics; geology, geophysics and geography; cybernetics, electronics, automation, and remote control; structural mechanics and seismic resistance; mining mechanics, machine mechanics, and the mechanics of polymeric materials; physical and organic chemistry; inorganic chemistry and electrochemistry, and pharmaceutical chemistry; physiology, botany, and genetics; paleobiology, biochemistry, and

biophysics; experimental morphology and zoology; history, archaeology, and ethnography; linguistics and the history of literature; Oriental studies, archaeography, philosophy and psychology; economics and law; and the history of Georgian art. The central library of the Georgian academy housed 1,725,000 volumes in 1968. The academy maintains a vigorous publication program including monographs, collections of articles, various scientific works, three major scientific periodicals and has produced the Georgian Soviet Encyclopedia.¹



Source LD087-11012, pp. 190-193

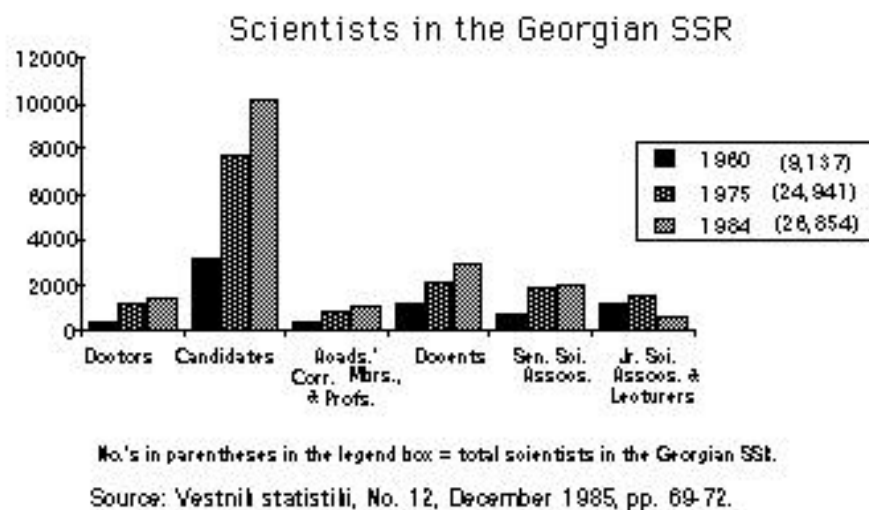
Georgian Scientific Workers: According to I. Vekua, president of the academy in 1972, the academy institutes had over 4,000 "scientific workers" on their rosters, of whom 287 held doctoral degrees and 1362 held candidates degrees. In the Georgian republic as a whole, Vekua pointed out, there were a total of 200 scientific establishments of which 135 were scientific research establishments--divided between the academic science system (the academy), the sectorial science system, and the VUZy system.²

Advanced Degree Holders: By 1984, the Georgian republic ranked sixth among the 15 republics in the total number of scientists working in the republic, yet in terms of the number of doctoral degree holders ranked third

¹ The Great Soviet Encyclopedia. New York, Macmillan, 1983, (translation of the Third Edition). "Georgian SSR Academy", Vol. I, 52a

² I. Vekua, "A Nation of Advanced Science," Technology and Armament, December 1972, pp. 82-88.

among the republics. The number of scientists in Georgia over a number of years is shown in the figure below:³



Historical Background: As figure 68 suggests, the Georgian academy has relatively long historical antecedents when compared with some of the other republic academies, thus the 1930s found a number of the scientific research institutes already in existence, many at Tbilisi University. The other major period of growth in the number of research institutes subordinate to the academy departments was in the decade of the fifties.

Science and Political, Social, Industrial, and Economic Development: The early 1980s witnessed a growth in the formal collaboration between scientific research institutes of the academy and other productive institutions in the republic--under the leadership of E. A. Shevardnadze who, at that time was head of the Georgian SSR's Coordinating Council for Science and Scientific-Technological Progress as well as first secretary of the Georgian Communist Party Control Committee and candidate for membership in the Politburo of the CPSU Central Committee. Until 1991, he was Minister of Foreign Affairs of the USSR.⁴

Coordination of Scientific Activity: In a meeting in early March of 1984, members of the regional coordinating councils for science and scientific-

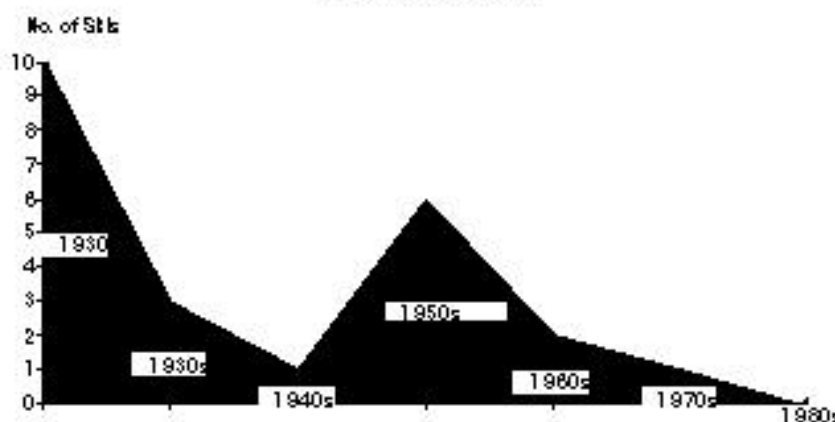
³ Vestnik statistiki, No. 12., December 1985, pp. 69-72. The RSFSR Republic had 29,150 doctoral holders; the Ukrainian Republic 5,595; and the Georgian Republic, 1,362. When Candidate degree holders are considered, however, the Georgian Republic falls back to its sixth place ranking.

⁴ "To Reinforce Achievements and Make Plans for the Future," Zaria vostoka, 28 March 1984, pp. 1-2.

technological progress of the Georgian industrial centers, chiefs of technological progress of ministries and agencies, chief engineers and chief technologists of major enterprises and associations, administrators of scientific research and of planning-design and technological organizations were in attendance. Other representatives from the Academy of Sciences of the Georgian SSR, the Georgian GKNT, the Georgian GOSPLAN, were reporting on the growth of cooperation in the "restructuring" required for scientific and technical progress. Some interesting innovations within the academy of sciences were reported: the establishment of sectors within the academy for mathematical analysis of sciences and the sociology of science, for partnership and introduction of results of scientific research. A new form of collaboration between the academy and the Ministry Finance had been developed.⁵

Science and Technological Progress: At the annual meeting of the Georgian academy in 1984, the role of the academy in improving the lot of the working people was stressed by the president of the academy, E. Kharadze. He praised the work of members and researchers of the academy in accelerating the pace of scientific-industrial progress, particularly in the development of new patterns of cooperation--nine academic institutes having inaugurated 17 partnership agreements with 12 industrial enterprises and associations.⁶

Georgian SRIs, by Decade of Establishment



Source: LDA 87-11012, pp. 190-194.

Membership of the academy: In 1987, the academy counted a total of 133 members, of whom 57 were academicians and 76 were corresponding members. Twenty-five of the members were directors of research institutes subordinate to the academy and four were deputy directors of these institutions. A total of only 28 were listed as members of the Communist party--21 percent of the membership. The birthdates of 15 of the 24 directors of the scientific research institutes in the Georgian Republic are known as is also the date of their appointment as institute directors. The average age of these Georgian scientists at the time of their assumption of directorial responsibility was 49.

The Presidium President

⁵ Ibid.

⁶ "Scales of Research--At Annual General Meeting of Georgian SSR Academy of Sciences," Zaria vostoka, 5 April 1984, p. 3.

Tavkheldze, Albert N., D. PM S. Born in 1930. Academician of the Physical and Mathematical Sciences Department of the Georgian Academy of Sciences since 1974. Corresponding member of the Nuclear Physics Department of the AN SSSR since 1984. President of the Georgian Academy since October 1986. From 1977 to 1987, he was the director of the Nuclear Research Institute in Moscow which was created in 1971 to conduct theoretical physics research into particle physics, astrophysics, and quantum mechanics. It has a meson factory and is subordinate to the Nuclear Physics Department of the academy. . (LDA 89-11378.)

Vice Presidents

Durmishidze, Sergei V., D. Bio. S. Born in 1910. Academician of the Biological Sciences Department of the Georgian Academy since 1955. Vice president of the Georgian Academy since 1972. Since 1980, director of the Plant Biochemistry Institute in Tbilisi which was established in the 1970s to do research in applied bacteriology, satellite DNA and plant enzyme systems. Member of the Presidium since 1981. . (LDA 89-11378.)

Dzhibladze, Georgii N. Born in 1914. Academician of the Language and Literature Department of the Georgian Academy since 1964. Vice president of the Georgian Academy since 1980. Member of the Presidium of the academy since 1981. . (LDA 89-11378.)

Prangishvili, Aleksandr S., D. Ped. S. Born in 1909. Academician of the Social Sciences Department of the Georgian Academy of Sciences since 1974. Vice president of the academy since 1976. Member of the Presidium of the academy since 1981. Since 1954, director of the D. N. Uznadze Psychology Institute in Tbilisi which is the republic's central institute for psychological research. It performs work in general theory, industrial, social, physiological, and experimental psychology. (LDA 89-11378.)

Prangishvili, Iverii V., D. Tech. S. Born in 1930. Academician of the Applied Mechanics and Control Processes Department of the Georgian Academy since 1979. Vice president of the Georgian Academy since 1985. He was made director of the Control Problems Institute in Moscow in 1987. This institute was created in 1939 to research in automation, systems analysis, and computer modeling. It is jointly subordinate to the; Problems of Machine Building, Control Processes and Automation Department of the AN SSSR and to the Ministry of Instrument Making, Automation Equipment, and Control Systems of the government. (LDA 89-11378.)

Chief Scientific Secretary of the Academy

Sekhniashvili, Emil A., D. Tech S. Born in 1924. Member of the Presidium of the academy since 1981. Since 1983, he has been an academician of the Applied Mechanics and Control Processes Department and the Chief Scientific Secretary of the Georgian Academy of Sciences. . (LDA 89-11378.)

Presidium: (In addition of officers listed above and the academician secretaries of the departments, the following leading scientists were elected by the academy's general assembly.)

Abashidze, Iraklii V. Born in 1909. Academician of the Language and Literature Department since 1979. Member of the Presidium since 1981. .

Andronikashvili, Elevter L., D. PM. S. Born in 1910. Since 1951, director of the Physics Institute in Tbilisi which was established in 1951 and which studies plasma physics, semiconductors, nuclear reactors and low-temperature radiation materiology. Research is also conducted in low temperature, solid-state, high-energy, and cosmic ray physics. Academician of the Physical and Mathematical Sciences Department since 1955. Member of the academy's Presidium since 1981.

Apakidze, Andrei M . Academician secretary for the Social Sciences Department of the academy since 1980. Member of the Presidium since 1981. Academician since 1983.

Daraseliya, Mikhail K ., D. GM. S. Born in 1902. Corresponding member of the Agricultural Sciences Department of the Georgian Academy since 1955. Member of the Presidium since 1981.

Durmishidze, Sergei V ., D. Bio. S. Born in 1910. Academician of the Biological Sciences Department since 1955. Vice President of the academy since 1972. Since 1980, director of the Plant Biochemistry Institute in Tbilisi which was established in the 1970s and which does research in applied bacteriology, satellite DNA, and plant enzyme systems. Member of the Presidium since 1981. .

Dzhibladze, Georgii N . Born in 1914. Academician since 1964. Academician secretary of the Language and Literature Department since 1974. Vice president of the academy since 1980. Member of the Presidium since 1981. .

Dzidziguri, Archil A ., D. Tech. S. Since 1958, director of the G. A. Tsulukidze Mining Institute in Tbilisi which does research on iron ores and magnetic sands. Since 1969, academician of the Applied Mechanics and Control Processes Department of the academy. Since 1981, member of the Presidium of the academy. In 1983, he was chairman of the Commission for the Study of Productive Forces and Natural Resources under the presidium of the Georgian Academy of Sciences. .

Dzidziguri, Shota V ., D. Phlg. S. Academician of the Language and Literature Department of the academy since 1974. Member of the Presidium of the academy since 1981.

Gabuniya, Leonid K ., D. GM. S. Academician of the Biological Sciences Department since 1969. Member of the Presidium since 1981.

Gomelauri, Vakhtang I ., C. Tech S. Born in 1913. Academician of the department since 1969. Academician secretary of the Applied Mechanics and Control Processes Department since 1983.

Kharadze, E. K ., D. PM. S. Born in 1907. Since 1932, director of the Astrophysical Observatory at Abastumani. The highest astrophysical observatory in the USSR, it studies the upper atmosphere, stars, planets, the sun and the moon. It also researches in areas of modern astrophysics and stellar astronomy. Academician of the Physical and Mathematical Sciences Department since 1955. Member of the Presidium since 1981. In 1984 and until 1986, he was president of the Georgian Academy of Sciences. Since 1984, academician of the USSR Academy's General Physics and Astronomy Department. .

Lominadze, Dzhumber G . Born in 1930. Corresponding member of the department since 1979. Academician secretary of the Physical and Mathematical Sciences Department since 1982.

Okudzhava, Vazha M ., D. Med. S. Born in 1930. Since 1941, academician of the Physiology and Experimental Medicine Department of the academy. Member of the Presidium since 1980. .

Oniani, T. N ., C. Bio. S. Since 1979, academician of the Physiology and Experimental Medicine Department of the academy. Since 1980, academician secretary to that department. Member of the Presidium of the academy since 1981.

Prangishvili, Aleksandr S ., D. Ped. S. Born in 1909. Since 1954, director of the D. N. Uznadze Psychology Institute in Tbilisi which performs work in general theory, industrial, social, psychological, and experimental psychology. Since 1974, academician of the Social Sciences Department of academy. Since 1976, vice president of the academy. Since 1981, member of the Presidium.

Sekhniashvili, Emil A ., D. Tech. S. Born in 1924. Since 1981, member of the Presidium of the academy. Since 1983, academician of the Applied Mechanics and Control Processes Department and Chief Scientific Secretary of the

Georgian Academy of Sciences. .

Tsagareli, Archil L ., D. GM. S. Born in 1913. Academician of the department since 1969. Academician secretary of the Earth Sciences Department since 1980. Member of the Presidium of the academy since 1981.

Tsitsishvili, Georgii V ., D. Chem. S. Born in 1915. Since 1960, academician of the Chemistry and Chemical Technology Department of the academy. Since 1981, member of the Presidium. Since 1956, he has been the director of the P. G. Melikishvili Physical Organic Chemistry Institute in Tbilisi which was established in the 1930s. The institute is involved in research on various types of physical and organic chemistry, including the absorption, catalytic, and colloidal properties of solids and the nature and luminescent substances in petroleum. (LDA 89-11378.)

Foreign Relations Department:

Chief: **Kaskhniashvili, Nugzar V.** Since 1975, he has acted as chief of the Foreign Relations Department of the academy.

Agricultural Sciences Department:

Academician Secretary:

Daraseliya, Mikhail K ., D. GM. S. Born in 1902. Since 1955, Corresponding member of the Agricultural Sciences Department of the academy. Since 1976, academician secretary to the department. Since 1981, member of the Presidium of the academy.

Academicians

Kanchaveli, Levan A ., D. Agr. S. Born in 1900. Academician since 1951.

Corresponding members

Chanishvili, Sh. F ., D. Agr. S. Corresponding member since 1955.

Daraseliya, Mikhail K . D. GM. S. (See academician secretary above.)

Rcheulioshvili, M. D . Corresponding member since 1967.

Shkhvatsavbaia, G. Ia . Corresponding member since 1955.

Applied Mechanics and Control Processes Department

Members of the Department

Academician Secretary

Gomelaury, Vakhtang I ., C. Tech S. Born in 1913. Academician of the department since 1969. Academician secretary since 1983.

Academicians

Chavchanidze, Vladimir V ., D. PM. S. Born in 1920. From 1961 to 1987, he was director of the Cybernetics Institute in Tbilisi which was founded in 1960 and is engaged in development of the physical principles for the creation of cybernetic systems, and the theory of modeling of natural and artificial cybernetic processes and structures. Academician since 1974. (LDA 89-11378.)

Chichinadze, Vakhtang K ., D. Tech. S. Born in 1918. Academician of the department since 1983. Since 1966, he has been the deputy director of the A. N. Natishvili Experimental Morphology Institute in Tbilisi which was created in 1955 to do research in cytology, histochemistry, anatomy, carcinogenesis, and cardiac surgical techniques. (LDA 87-11012.)

Dzhordzhadze, I. I . Academician since 1979.

Dzidziguri, Archil A ., D. Tech. S. Academician of the department since 1969. Member of the Presidium since 1981. Since 1958, he has been the director of the G. A. Tsulukidze Mining Institute in Tbilisi which conducts research on iron ores and magnetic sands. . (LDA 89-11378.)

Gomelaury, Vakhtang I ., C. Tech. S. Born in 1913. Academician since 1979.

Loladze, Teimuraz N ., D. Tech. S. Born in 1920. Academician since 1979.

Prangishvili, Iverii V ., D. Tech. S. (See vice president above.)

Sekhniashvili, Emil A ., D. Tech. S. Born in 1924. Since 1981, member of the Presidium. Since 1983, academician of the department. Since 1983, chief scientific secretary of the Georgian Academy of Sciences. . (LDA 89-11378.)

Tavkheldze, David S ., D. Tech S. Since 1979, he has been an academician of the Applied Mechanics and Control Processes Department of the Georgian Academy of Sciences.

Corresponding Members

Khvingiya, Mikhail V . Corresponding member since 1979.

Kruashvili, Z. E. , D. Tech. S. Corresponding member since 1983.

Napetvaridze, Sh. G ., D. Tech. S. Corresponding member since 1974.

Salukvadze, Mindiia E. , D. Tech. S. Born in 1933. Corresponding member since 1983.

Zurabishvili, I. I ., D. Tech. S. Corresponding member since 1983.

Applied Mechanics and Control Processes Department: Research institutes subordinate to the department by order of founding:

Construction Mechanics and Seismic Stability Institute in Tbilisi.

No date given in source. The institute studies the seismic stability of construction projects, and the properties of both new construction materials and advanced structures. Director: (vacant)

Control Systems Institute in Tbilisi.

Founded in 1956. The institute specializes in designing and producing instruments and equipment for control systems. Director: Kharatishvili, Guram L. C. PM. S., '73; Deputy Director Kipiani, N., '79.

Machine Mechanics Institute in Tbilisi.

No date given in source. This institute develops devices for improving the efficiency of various kinds of motor vehicles, including photo-optical equipment for use in farm tractors and altitude compensators for engine carburetors. Director: (Unknown); Deputy Director Margvelashvili, Otar V., D. Tech. S., '69.

G. A. Tsulukidze Mining Institute in Tbilisi.

The institute researches iron ores and magnetic sands. It is subordinate to the Applied Mechanics and Control Processes Department of the Georgian Academy. Director: Dzidziguri, Archil A., D. Tech. S., CPSU, '58.

Cybernetics Institute in Tbilisi.

Founded in 1960. The institute is engaged in development of the physical principles for creation of cybernetic systems, and the theory of modeling of natural and artificial cybernetic processes and structures. Director: Kharatishvili, Guram L., C. PM. S., October 1987.

The Biological Sciences Department

Members:

Academician Secretary

Gabuiniya, Leonid K ., D. GM. S. Academician of the Biological Sciences Department since 1969. Academician secretary since 1976.

Academicians

Bokuchava, Mikhail A ., D. Bio S. Born in 1910. Academician since 1979.

Durmishidze Sergei V ., D. Bio. S. (See vice president above.)

Gabuniya, Leonid K ., D. GM. S. (See academician secretary above.)

Sanadze, Givi A . Born in 1929. Academician since 1983.

Corresponding Members

Bakhtashvili, V. I ., D. Med. S. Corresponding member since 1983.

Chanishvili, T. G . Corresponding member since 1979.

Dzhokhadze, David I . Corresponding member since 1979.

Kolakovskii, A. A . Corresponding member since 1955.

Kvesitadze, Georgii I ., D. Bio. S. Born in 1942. Corresponding member since 1983.

Lagidze, Ramaz M ., D. Chem. S. Corresponding member since 1983.

Nakhutsrishvili, Georgii S ., D. Bio. S. Born in 1932. Corresponding member since 1979.

Nutsubidze, Nodar N ., D. Bio. S. Corresponding member since 1979. Since 1983, he has served as a deputy director of the Plant Biochemistry Institute in Tbilisi which was established in the 1970s and does research in applied bacteriology, satellite DNA, and plant enzyme systems. (LDA 87-11012.)

Tumanishvili, Georgii D ., D. Bio. S. Corresponding member since 1983.

Biological Sciences Department: Research institutes subordinate to the department by order of founding:

Central Botanical Gardens in Tbilisi.

Founded in 1625, as the palace gardens, the Gardens became the Tbilisi Botanical Garden in 1845. It assumed its present status in the Academy in 1943. It contained over 4500 types of plants in its 160-odd hectares of garden in the mid-1970s. There are seven scientific sections in the Gardens. It has published Trudy since 1894. (See: Ruble, Vol. I., p. 313.)

Institute of Botany in Tbilisi.

Founded in 1934. The institute conducts research in plant physiology, anatomy and acclimation of agricultural crops in particular, and studies indigenous republic flora. (See: Ruble, Vol. I., p. 315.) (GSE 3, p. 308.)

Paleobiology Institute in Tbilisi.

No date given in source. The institute studies the theoretical bases of paleontology, its history, and evolutionary study. It also studies fossils, the ecology of fauna and other general biological problems. Director: Davitashvili, Leo S., D. GM. S., 1970.

I. S. Beritashvili Physiology Institute in Tbilisi.

Founded in 1941. The institute is engaged in the study of the general physiology and biochemistry of the central nervous system, as well as pathologic physiology. Director: Bakuradze, Aleksandr N., '69; Deputy Director Mitagvaria, Nodar P., '83. (GSE 3, p. 308.)

Zoology Institute in Tbilisi.

Founded in 1941. The institute does research in the protection and reproduction of the natural resources of animals in the republic. It is also involved in efforts to confine the spread of dangerous infections by animals and the eradication of parasitic and infectious diseases. Director: Kurashvili, Boris, D. Bio. S., '66. (See: Ruble, Vol. I., p. 316.) (GSE 3, p. 308.)

A. N. Natishvili Experimental Morphology Institute in Tbilisi.

Established in 1946. The institute researches in cytology, histochemistry, anatomy, carcinogenesis, and cardiac surgical techniques. Director: Dzhavakhishvili, Nina A., D. Med. S., CPSU, '60; Deputy Director Chichinadze, N. K., '66. (GSE 3, p. 308.)

Paleobiology Institute in Tbilisi.

Founded in 1957. The institute studies the theoretical bases of paleontology, its history, and evolutionary study. It also studies fossils, the ecology of fauna and other general biological problems. Director: Davitashvili, Leo S., D. GM. S., '70. (GSE 3, p. 308.)

Plant Biochemistry Institute in Tbilisi.

Founded in 1971. The institute does research in applied bacteriology, satellite DNA and plant enzyme systems. Director: Durmishidze, Sergei V., D. Bio. S., CPSU, '80; Deputy Director Nutsbidze, Nodar N., D. Bio. S., '83. (See: Ruble, Vol. I, p. 315.) (GSE 28, p. 116.)

Chemistry and Chemical Technology Department

Members of Department

Academician Secretary

Tsitsishvili, Georgii V ., D. Chem S. Born in 1915. Academician of the department since 1960. Academician secretary since 1963. Member of the Presidium since 1981. Since 1956, he has directed the work of the P. G. Melikishvili Physical Organic Chemistry Institute in Tbilisi which was established in the 1930s and is involved in research on various types of physical and organic chemistry, including the absorption, catalytic, and colloidal properties of solids and the nature and luminescent substances in petroleum. (LDA 87-11012.)

Academicians

Agladze, Rafail I. Born in 1911. Academician since 1946. .

Melikadze, Leonid D ., D. Chem S. Academician since 1974.

Tavadze, Ferdinand N ., D. Tech. S. Born in 1912. Academician since 1960.

Since 1955, he has been the director of the Metallurgy Institute in Tbilisi which focuses its research on the utilization of manganese ore and other metals for alloy development, composite cutting tools, surface castings, welding overlaying, casting, ferroalloys, furnace designs, electroslag, refining, and beneficiation of low grade ores.

Tsitsishvili, Georgii V ., D. Chem. S. (See academician secretary above.)

Corresponding Members,

Andronikashvili, Teimuraz G. Born in 1928. Corresponding member since 1979. Since 1980, he has been the deputy director of the P. G. Melikishvili Physical Organic Chemistry Institute in Tbilisi which was established in the 1930s to research various types of physical and organic chemistry, including the absorption, catalytic, and colloidal properties of solids and the nature and luminescent substances in petroleum. (LDA 87-11012.)

Dzhaparidze, L. N ., D. Tech. S. Corresponding member since 1983.

Gvelesiani, G. G ., D. Tech. S. Corresponding member since 1979. Director of the Institute of Metallurgy.

Kemertelidze, E. P . Born in 1926. Corresponding member since 1979.

Since 1984, he has been the director of the I. G. Kutateladze Pharmaceutical Scientific Research Institute in Tbilisi which was founded in 1932 to perform research on new pharmaceuticals for industrial application. (LDA 87-11012.)

Khananashvili, L. M . Born in 1930. In 1984, recipient of an Academy of Sciences prize for his work in chemistry and physics. Corresponding member since 1979.

Mchedlov-Petrosyan, Otar P . Born in 1918. Corresponding member since 1974.

Okley, Leonid N ., D. Tech. S. Corresponding member since 1979.

Tsintsadze, G. V ., D. Chem S. Corresponding member since 1983.

Chemistry and Chemical Technology Department: Research institutes subordinate to the department by order of founding:

P. G. Melikishvili Physical Organic Chemistry Institute in Tbilisi.

Founded in the 1929. The institute does research on various types of physical and organic chemistry, including the absorption, catalytic, and colloidal properties of solids and the nature and luminescent substances in petroleum. Director: Tsitsishvili, Georgii V., D. Chem. S., '56; Deputy Director

Andronikashvili, Teimuraz G., '80. (GSE 28, p. 116.)

I. G. Kutateladze Pharmaceutical Chemistry Scientific Research Institute in Tbilisi.

Founded in 1932. The institute looks for new pharmaceuticals for industrial application. Director: Kemertelidze, Eteri P., '84; Scientific Secretary Patsuria, Mikhail, '86. (GSE 3, p. 308.) (GSE 28, p. 116.)

Inorganic Chemistry and Electrochemistry Institute in Tbilisi.

Founded in 1957. The institute conducts research on the electrochemical and the chemical methods of processing mineral ores. (GSE 28, p. 116.) Director: Avaliani, A., 1975.

Metallurgy Institute in Tbilisi.

Founded in 1965. The institute focuses its research on the utilization of manganese ore and other metals for alloy development, composite cutting tools, surface coatings, welding overlaying, casting, ferroalloys, furnace designs, electroslag, refining, and beneficiation of low grade ores. Director: Tavadze, Ferdinand N., D. Tech. S., 1955.

Earth Sciences Department

Members of Department

Academician Secretary

Tsagareli, Archil L., D. GM. S. Born in 1913. Academician of the department since 1969. Academician secretary since 1980. Member of the Presidium of the academy since 1981.

Academicians

Balavadze, Benedikt K., D. PM. S. Born in 1909. Academician since 1974. Since 1973, he has been the director of the Geophysics Institute in Tbilisi which was established in 1933 to study the earth's crust and mantle, atmospheric physics, and seismology. (LDA 89-11378.)

Tsagareli, Archil L., D. GM. S. (See academician secretary above.)

Tvalchrelidze, Georgii A., D. GM. S. Born in 1927. Academician since 1979. Since 1981, he has been the director of the A. I. Dzhanelidze Geology Institute in Tbilisi which was established in 1926 and which studies the mineral deposits of the region. (LDA 89-11378.)

Corresponding Members

Aleksidze, M. A., D. PM. S. Corresponding member since 1983. Since 1982, he has been the deputy director of the Geophysics Institute in Tbilisi which was established in 1933 and whose research involves the study of the earth's crust and mantle, atmospheric physics, and seismology. (LDA 87-11012.)

Buachidze, Iosif M., D. GM. S. Born in 1907. Corresponding member since 1961.

Dzhaoshvili, Vakhtang S., D. Geog. S. Corresponding member since 1983.

Gamkrelidze, Iraklii P., D. GM. S. Born in 1933. Corresponding member since 1983.

Skhirtladze, N. I., D. GM. S. Corresponding member since 1974.

Svanidze, Givi G . Born in 1921. Corresponding member of the Earth Sciences Department of the Georgian academy since 1979. Since 1979, he has been the director of the Hydrometeorology Scientific Research Institute in Tbilisi which was created in 1953 to develop methods for modification of harmful hydrometeorological phenomena, regulate precipitation, and to study the proper use of natural resources. The institute is directly subordinate to the State Committee for Hydrometeorology in Moscow. (LDA 89-11378.)

Zaridze, Georgii M ., D. GM. S. Born in 1908. Corresponding member since 1967.

Earth Sciences Department: Research Institutes Subordinate to the department by order of founding:

Vakhushti Geography Institute in Tbilisi.

No date given in source. The institute conducts research on the physical and economic geography of the republic. (See: Ruble, Vol. I., p. 315.) (vacant)

Geophysics Institute in Tbilisi.

Founded in 1933. The institute studies the earth's crust and mantle, atmospheric physics and seismology. Director: Balavadze, Benedikt K., D. PM. S., '73; Deputy Director Aleksidze, M. A., D. PM. S., '82. (See: Ruble, Vol. I., p. 316.)

Metallurgy Institute in Tbilisi.

Founded in 1965. The institute focuses its research on the utilization of manganese ore and other metals for alloy development, composite cutting tools, surface coatings, welding overlaying, casting, ferroalloys, furnace designs, electroslag, refining, and beneficiation of low grade ores. Director: Tavadze, Ferdinand N., D. Tech. S., 1955.

Inorganic Chemistry and Electrochemistry Institute in Tbilisi.

Founded in 1957. The institute conducts research on the electrochemical and the chemical methods of processing mineral ores. Director: Avaliani, A., '75; Deputy Director Lezhava, T., '81.

The Language and Literature Department

Members:

Academician Secretary

Dzidziguri, Shota V. C. Phlg. S. Academician of the department since 1964. Academician secretary since 1974. Member of the Presidium of the academy since 1981.

Academicians

Abashidze, Gregorii G. Born in 1913. Academician since 1979. .

Abashidze, Iraklii V. Born in 1909. Academician since 1960. .

Baramidze, Aleksandr G. Born in 1902. Academician since 1960.

Dzhibladze, Georgii N. (See vice president above.)

Dzhikiya, Sergei S. , D. Phlg. S. Academician since 1969.

Dzidziguri, Shota V. , D. Phlg. S. Academician since 1974. Member of the Presidium since 1981.

Gamkrelidze, Tamaz V. , D. Phlg. S. Born in 1929. Academician since 1974.

Lomtadze, Ketevana V. , D. Phil. S. Born in 1911. Academician since 1979. .

Metreveli, Elena. P. , D. Phlg. S. Born in 1917. Academician since 1983.

Shanidze, Akakii G. Born in 1987. Academician since 1941.

Corresponding Members

Andronikashvili, M. K. . Corresponding member since 1979.

Gigineyshvili, I. M. . Corresponding member since 1979.

Kaukhchishvili, T. S. . Corresponding member since 1979.

Kobidze, D. I. . Corresponding member since 1979.

Tsaishvili, S. S. , D. Phlg. S. Corresponding member since 1983.

Tsereteli, Konstantin G. , D. Phlg. S. Born in 1921. Corresponding member since 1974.

Tsitsishvili, Georgii S. , D. Phlg. S. Born in 1921. Corresponding member since 1979.

Language and Literature Department: Research institutes subordinate to the department by order of founding:

Oriental Studies Institute in Tbilisi.

Dating from 1960, the Oriental Studies Institute has grown to include more than 160 specialists in the late 1970s. The institute is primarily concerned with language study. It is organized into eight departments: Ancient and Oriental Languages; Modern History of the Near East; Medieval History of the Near East; Byzantine Studies; Indo-Persian Languages; Persian Studies; and a Phonetics Laboratory. Director: Gamkrelidze, T. G. (See: Ruble, Vol. I, p. 412 and Vol. III, p.134.)

D. I. Gulia Abkhazian Institute of Languages, Literature and History in Sukhumi.

Subordinate to the Georgian Academy of Sciences, this institute's scholars study Abkhazian languages, literature and history and investigate demographic trends in the area. Director: Dzidzariia, G. A. (See: Ruble, Vol. II, p. 44 and Vol. III, p. 138.)

Shota Rustaveli History of Georgian Literature Institute in Tbilisi.

The original Shota Rustaveli Institute was established in 1935 at Tbilisi University. In 1942, the Rustaveli Institute joined the Georgian Academy of Sciences and since that time has become the center of study of Georgian literature from the fifth century to the present. Director: Baramidze, A. G. (See: Ruble, Vol. III, p. 505.)

Linguistics Institute in Tbilisi.

Established originally as the N. Ia. Marr Institute of Language, History and Material Culture in 1936 with the founding of the Georgian Academy of Sciences. It became an independent Institute in 1941. It is a leading center for the study of Caucasian language. Its departments do research in : Georgian languages, lexicology, terminology, culture of languages, and general linguistics. The institute publishes *Iberiisko-kavkazskoe iazykoznanie*. Director: Chikobava, A. S. (See: Ruble, Vol. III, p. 506.)

K. S. Kekelidze Manuscripts Institute in Tbilisi.

No date of founding for this institute is given in source. Its collections include some 10,000 manuscripts dating back to the fifth century and some 3,000 ancient manuscripts in other languages--Greek, Arabic, Persian, Turkish, Armenian, Russian, and others. There are also some 37,000 historical documents of the tenth to the nineteenth centuries among its collections. Scholars at the institute have been preparing a catalogue of all ancient manuscripts in Georgia as part of the USSR Academy of Sciences national catalogue. By 1974, manuscripts of the ninth to the fifteenth centuries had been included in their compilation. Director: Metreveli, E. P. (See: Ruble, Vol. III, p. 507.)

The Physical and Mathematical Sciences Department

Members:

Academician Secretary

Lominadze, Dzhumber G . Born in 1930. Corresponding member of the department since 1979. Academician secretary since 1982.

Academicians

Andronikashvili, Elevter L ., D. PM. S. Born in 1910. Academician since 1955. Member of the Presidium of the academy since 1981. Since 1951, he has been the director of the Physics Institute in Tbilisi which was established in 1951 to study plasma physics, semiconductors, nuclear reactors and low-temperature radiation materiology. Research is also conducted in low-temperature, solid state, high energy, and cosmic ray physics. (LDA 89-11378.)

Bitsadze, Aandrei V ., D. PM. S. Born in 1916. Academician since 1969. Also member of the Siberian Department of the USSR Academy. .

Chogoshvili, Georgii S ., D. PM. S. Born in 1914. Academician since 1960.

Gamkrelidze, Revaz V ., D. PM. S. Born in 1927. Academician since 1969. .

Gverdtsiteli, Iraklii G ., D. PM. S. Born in 1918. Academician since 1979. .

Kharadze, Georgii A ., C. PM. S. Born in 1931. Academician since 1983.

Kharadze, Evgenii K ., D. PM. S. Born in 1907. Academician since 1955. Member of the academy's Presidium since 1981. Academician of the General Physics and Astronomy Department of the AN SSSR in Moscow since 1984. Since 1932, he has been the director of the Astrophysical Observatory in Abastummani which is at the highest altitude of any astrophysical observatory in the USSR. It studies the upper atmosphere, stars, planets, the sun and the moon. It also does research in the areas of modern astrophysics, and stellar astronomy. . (LDA 89-11378.)

Tavkhelidze, Albert N ., D. PM. S. Born in 1930. Academician since 1974.

Vekua, Nikolai P ., D. PM. S. Born in 1913. Academician since 1960.

Corresponding Members

Amaglobeli, Nodar S . Corresponding member of the Physical and Mathematical Sciences Department of the Georgian academy since 1979. In 1986, he was named rector of the Tbilisi State University in Tbilisi which was established in 1918. In 1986, he became the director of the High Energy Physics Institute of Tbilisi University. In 1986, he was awarded the Georgian SSR State Prize for series of works "The Detection and Study of a Baryon State with Hidden Strangeness." (LDA 89-11378.)

Berikashvili, Nodari A . Born in 1929. Corresponding member since 1979.

Buishvili, L. L ., D. PM. S. Corresponding member since 1983.

Burchuladze, T. V . Corresponding member since 1979.

Gegeliya, T. G ., D. PM. S. Corresponding member since 1974.

Inasaridze, Kh. N ., D. PM. S. Corresponding member since 1983.

Kharatishvili, Guram L ., C. PM. S. Born in 1934. Corresponding member since 1979. In 1973 at the age of 39, he became the director of the Control Systems Institute in Tbilisi which was established in 1956 and which specializes in designing and producing instruments and equipment for control systems. In 1987, at the age of 53, he also became director of the Cybernetics Institute in Tbilisi which was founded in 1960 for the purpose of developing the physical principles for creating cybernetic systems. (LDA 89-11378.)

Khvedelidze, Boris V ., D. PM. S. Born in 1915. Corresponding member since 1983.

Kiguradze, Ivan T. Corresponding member since 1979.

Kopaleyshvili, Teimuraz I ., D. PM. S. Born in 1930. Corresponding member since 1979.

Lominadze, Dzhumber G. (See academician secretary above.)

Salukvadze, Rezo G. Corresponding member since 1979. Since 1976, he has been the director of the Physical Technical Institute in Sukhumi which was created in 1946 and which consists of two facilities that concentrate on controlled thermonuclear fusion, plasma, nuclear and particle physics, plasma acceleration, nuclear magnetic resonance, and isotope separation at low temperatures. It is the primary institute for Soviet ion source work. (LDA 89-11378.)

Sanadze, Tengis I., D. PM. S. Corresponding member since 1974.

Zhizhiashvili, L. V. D. PM. S. Corresponding member since 1974.

Physical and Mathematical Sciences Department: Research institutes subordinate to the department by order of founding:

A. M. Razmadze Mathematics Institute in Tbilisi.

Founded in 1935. The institute is engaged in the study of the mathematical theories of surfaces, elasticity, and functions. The institute has a department of theoretical physics which studies mathematical problems of quantum field theory, gauge theories, symmetries, condensed matter, gravity and cosmology, and phenomenology. It is located at Ukhadze street 1, GE-380 093 Tbilisi. Director: (vacant); Deputy Director Mandzhavidze, Georgii F., D. PM. S., '63. (GSE 15, p. 585.)

Astrophysical Observatory in Abastumani.

No date given in source (probably in existence in 1941). The observatory which is almost 5,000 feet high, studies the upper atmosphere, stars, planets, the sun and the moon. It also researches other areas of modern astrophysics and stellar astronomy. Director: Kharadze, Evgenii K., D. PM. S., CPSU, '32; Deputy Director Dzhapiashvili, Viktor P., C. PM. S., '62. (GSE 2, 437)

Physical Technical Institute in Sukhumi.

Founded in 1946. The institute consists of two facilities that concentrate on controlled thermonuclear fusion, plasma, nuclear and particle physics, plasma acceleration, nuclear magnetic resonance, and isotope separation at low temperatures. It is the primary institute for ion source work in the USSR. Director: Salukvadze, Rezo G., '76; Deputy Directors: Demirkhanov, R. A., D. Tech. S., '76; and Menabde, Nikolai E., '76.

Physics Institute in Tbilisi.

Address : Tamarashvili street 6, GE-380 077 Tbilisi

Telephone : + 7 8832 391976, 7 8832 391750

Telex : 212236 kvant su

Email : hep@physics.aod.georgia.su

Founded in 1951. The institute studies plasma physics, semiconductors, nuclear reactors and low-temperature radiation materiology. Research is also conducted in low-temperature, solid state, high-energy, and cosmic ray physics. Director: Andronikashvili, Elevation L, D. PM. S., '51; Deputy Directors: Mandzhavidze, Zurab S., '69; and Naskidashvili, Ilia 'A., C. PM. S., '62. In 1996, the institute listed its main research in theoretical and experimental physics as: Theoretical physics, Experimental physics: t-quark mass and cross-section determination; multiple production at cosmic-ray energies (Pamir); multiple production in hA interactions (UNK-MPS/GLUON); high-energy nucleus

collisions; cosmic rays (primary composition; dark matter; he muons); models of soft hadronic interactions (string, Regge); hard diffraction scattering; GUTs and horizontal symmetries and early universe; topological objects and cosmology; and high-energy hA and AA collisions.

Computer Center , Tbilisi.

Established in 1956. The institute does basic research in computer mathematics, digital computer software, and programming problems. Formerly called the Computer Center, it assumed its present name in July 1983. Director: Kveselava, David A., D. PM. S., '57.

Physiology and Experimental Medicine Department

Members of the Department:

Academician Secretary

Oniani, T. N.., C. Bio. S. Academician of the department since 1979. Academician secretary since 1980. Member of the Presidium since 1981.

Academicians

Dzhavakhishvili, Nina A.., D. Med. S. Born in 1914. Since 1960, she has been the director of the A. N. Natishvili Experimental Morphology Institute in Tbilisi. The institute was established about 1955 to research in cytology, histochemistry, anatomy, carcinogenesis, and cardiac surgical techniques. Academician since 1979. .

Gudushauri, Otar N.., D. Med. S. Academician since 1974.

Ioseliani, Teymuraz K. . Born in 1929. Academician since 1983.

Okudzhava, Vazha M.., D. Med. S. Born in 1930. Academician since 1974. .

Oniani, T. N.., C. Bio. S. (See academician secretary above.)

Zurabashvili, Avlipii D.., D. Med. S. Born in 1902. Academician since 1955. .

Corresponding Members

Asatiani, A. V. . Corresponding member since 1979.

Bakuradze, Aleksandr N. . Corresponding member since 1955. Since 1969, he has directed the research of the I. S. Beritashvili Physiology Institute in Tbilisi which is engaged in the study of the general physiology and biochemistry of the central nervous system, as well as pathologic physiology. (LDA 89-11378.)

Dekanosidze, T. I.., D. Med. S. Corresponding member since 1983.

Gedevanishvili, Dmitrii M. . Born in 1902. Corresponding member since 1955.

Kurashvili, Boris., D. Bio. S. Born in 1921. Corresponding member since 1979. Since 1966, he has been the director of the Zoology Institute in Tbilisi, which performs research in the protection and reproduction of the natural resources of animals in the republic. It is also involved in efforts to confine the spread of dangerous infections by animals and the eradication of parasitic and infectious diseases. (LDA 89-11378.)

Naneyshvili, Bidzina R. . Born in 1920. Corresponding member since 1979.

Narikashvili, Sergei P.., D. Med. S. Born in 1906. Corresponding member since 1960.

Pagava, Iraklii K.., D. Med. S. Corresponding member since 1967.

Zaalishvili, Malkhaz M. . Born in 1920. Corresponding member since 1979.

Physiology and Experimental Medicine Department: Research institutes subordinate to the department by order of founding:

Zoology Institute in Tbilisi.

No date given in source (in existence in 1941). The institute does research in the protection and reproduction of the natural resources of animals in the republic. It is also involved in efforts to confine the spread of dangerous infections by animals and the eradication of parasitic and infectious diseases. Director: Kurashvili, Boris, D. Bio. S., 1966.

D. N. Uznadze Psychology Institute in Tbilisi.

No date given in source (in existence in 1941). This is the republic's central institute for psychological research. It works in general theory, industrial, social, physiological, and experimental psychology. Director: Prangishvili, Aleksandr S., D. Ped. S., '54.

The Social Sciences Department

Members:

Apakidze, Andrei M. Academician secretary since 1980. Academician of the department since 1983.

Academicians

Apakidze, Andrei M. (See academician secretary above.)

Beridze, Vakhtang , D. Arts. Academician since 1974.

Chantladze, V. G ., D. Econ. S. Academician since 1979.

Chitaya, Georgii S ., D. Hist. S. Academician since 1969.

Gorgiladze, Leonid E. , D. Hist. S. Academician since 1983.

Gugushvili, Paata V ., D. Econ. S. Born in 1905. Corresponding member since 1974.

Guniya, Avtandil L . Academician since 1979. Since 1981, he has been director of the Economics and Law Institute in Tbilisi which is subordinate to the Social Sciences Department of the Georgian Academy and which carries out its research cooperatively with AN SSSR institutes, with other union republic academies' institutes, and with economic institutes belonging to CEMA nations.

Melikishvili, Georgii A . Born in 1918. Academician since 1960. .

Mileladze, Iraklii S ., D. Econ. S. Academician since 1969.

Prangishvili, Aleksandr S ., D. Ped. S. (See vice president above.)

Corresponding Members

Chavchavadze, Nikolai A ., D. Phil. S. Corresponding member since 1979.

Chkikhvishvili, David I ., D. Hist. S. Born in 1921. Corresponding member since 1979. .

Dumbadze, M. K. Corresponding member since 1979.

Dzhavakhishvili, A. I ., D. Hist. S. Corresponding member since 1983.

Dzhioyev, Otari I ., D. Phil. S. Corresponding member since 1983.

Dzidzariya, Georgii A ., D. Hist. S. Born in 1914. Corresponding member since 1974. CPSSU member.

Kacharava, Iu. M ., D. Hist. S. Corresponding member since 1983.

Khakhutayshvili, D. A ., D. Hist. S. Corresponding member since 1983.

Lordkipanidze, M. D ., D. Hist. S. Corresponding member since 1983.

Melkadze, Valerian I ., D. Econ. S. Corresponding member since 1979. .

Robakidze, A. I . Corresponding member since 1983.

Surguladze, A. N ., D. Hist. S. Corresponding member since 1974.

Social Sciences Department: Research institutes subordinate to the department by order of founding:

Economics and Law Institute in Tbilisi.

Although the academy was founded in 1941, it did not begin operation until after WWII at which time the Economics and Law Institute was among the first of the academy's institutes to begin to function. The institute's research is carried out in cooperation with economists from other institutes with the USSR Academy system, with other union academies, and with economic research institutes in the scientific academies of the Soviet bloc nations which comprise CEMA. Director: Gunia, Avtandil L., '81; Deputy Director Chikvaidze, Tamaz, '83. (See Ruble, Vol. I, p. 156 and p. 467.)

Management Systems Institute in Tbilisi.

No date given in source. The institute works closely with the Institute of Economics and Law to develop computer systems for economic management. Director: Eliashvili, A. I. (See: Ruble, Vol. I, p. 157.)

**I. A. Dzhavakhishvili History, Archeology and Ethnography
Institute** in Tbilisi.

No date given for founding. This institute is a major center of anthropological study in the republic. The institute also houses the Department of Concrete Sociological Research which conducts studies of family relations and development in Georgia. Its library, founded in 1917 as the Library of the Caucasian Historico-Archeological Institute, contains the personal libraries of former eminent professors. Director: Melikishvili, G. A. (See: Ruble, Vol. III, p. 134.)



THE AZERBAIJAN ACADEMY OF SCIENCES

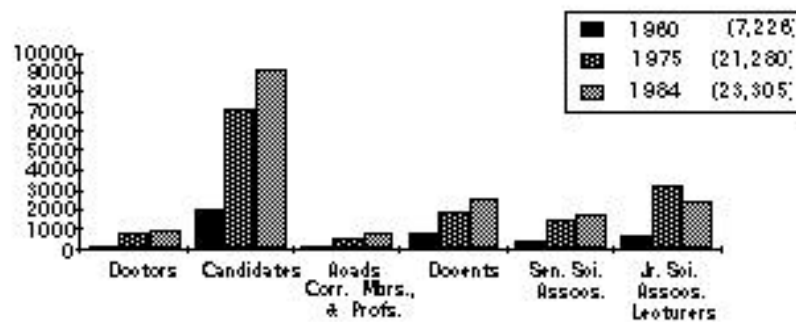
Some Facts About Azerbaijan: Azerbaijan is located in Southeastern Europe between Armenia and Turkmenistan bordering the Caspian Sea. It is a country only slightly larger than Maine in the United States, and it includes the autonomous Nakhichevan Republic and the Nagorno-Karabakh Autonomous Oblast--both of which were abolished by the Azerbaijan Supreme Soviet on 26 November 1991. The Republic has boundaries with Armenia on the west and the southwest, with Iran on the southwest, with Russia, and a small stretch of boundary with Turkey. Its border on the Caspian Sea is about 800 km in length. The Republic is beset with a number of border quarrels with its neighbors and by internal political disputes. It has a population of about 7.6 million people all of whom between the ages of 9 and 49 are literate. The Republic is poorer than and less developed industrially than either Armenia or Georgia, resembling more the Central Asian States with majority Muslim populations, high structural unemployment and low standards of living. It produces cotton and oil and gas--though the petroleum industry has been in decline in the last several years. Baku has historically been the center of the oil industry. (Source: CIA Facts Book on the Internet, 1996.)

Retrospect: The Azerbaijan SSR Academy of Sciences was established in 1945 upon the basis of the Azerbaijan branch of the national academy and its main headquarters are located in Baku. Research emphasis in the academy is primarily on mathematics, hydrodynamics, mathematical physics, cybernetics, computer mathematics, computer technology, the physics of semiconductors, electrophysics, petroleum chemistry, petrochemical synthesis, the development of new processing technology for oil and gas, the synthesis and development of technology for obtaining new monomers and polymers, the investigation of the chemistry and geochemistry of the republic's mineral resources and their exploitation, the structure and development of the earth's crust, herbicides, fertilizers, literature, language and history of the republic. [Azerbaijan/Academy of Sciences - Contact: Ali M. Abbasov, F. Agaev 9, 370141 Baku. Telephone:+7 89 22 390 167. Fax: +7 89 22 390 167. E-Mail: ali@dcacs.azeri.free.net, faik@dcacs.azeri.free.net]



Scientific Research Institutes: In 1987, there were 23 scientific research institutes subordinate to the six departments of the Azerbaijan SSR Academy of Sciences. The breakdown of those scientists may be seen in the figures below.⁷

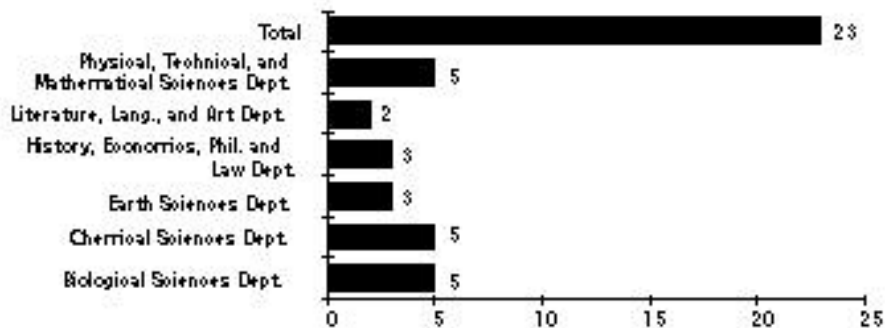
Scientists in the Azerbaijan SSR



No.'s in the legend box= total scientists in the Azerbaijan SSR.
 Source: Vestnik statistiki, No. 12, December 1985, pp. 69-72.

⁷ See: LDA 87-11012, pp. 161-167. Also, the GSE, "Azerbaijan SSR Academy", Vol. 1, 50. Vestnik statistiki, No. 12, December 1985, pp. 69-72.

Azerbaijan Academy SRIs, 1987



Source: LDA 87-11012, pp. 183-187.

Members of the academy: In 1987, total membership in the academy was 133 of whom 53 were academicians and 80 were corresponding members. Since 1969, the academy has added two research institutes and 34 members. Growth of the Azerbaijan academy has been slower than in many of the other republic academies although the republic itself ranked seventh in the total number of scientists in the republic in 1984. Twenty-eight of the members of the academy were directors or deputy directors of the subordinate research institutes in 1987. Only 13, or less than ten percent were listed as members of the CPSU.⁸ The birthdates of 11 of the directors of the 20 institutes under the subject matter departments of the presidium of the academy are known. The average age of those directors at the time of their accepting their directorships was 50 years.

The Presidium:

President

Salaev, Eldar Yunis ogly , D. PM. S. Since 1983, he has been an academician of the Physical, Technical, and Mathematical Sciences Department of the academy. In 1983, he was named president of the Azerbaijan Academy of Sciences (AN AzSSR). Since 1972, He has served as a deputy director of the Physics Institute in Baku which, before 1952 was referred to as the Physics and Mathematics Department. It does research in semiconductor physics and the physical-technical problems of power engineering. (LDA 87-11012.) (LDA 89-11378.)

Vice Presidents

Alekperov, Urkhan K. ogly . Born 1943. Corresponding member of the Biological Sciences Department since 1983. He has been acting vice-president of the AN AzSSR since 1988. He has served as the director of the V. L. Komarov Botany Institute in Baku since 1983. The institute was established in 1936 to study the acclimatization of plants in the republic and to assist in land reclamation. (LDA 89-11378.)

Guliev, Dzhamil Bagadur ogly , D. Hist. S. Since 1972, academician of the History, Economics, Philosophy, and Law Department of the academy. Since 1977, he has been a vice president of the academy. (LDA 87-11012.)

Guliev, Nariman Aga Kuli ogly. Since 1982, he has served as a vice president of the academy. Since 1983, academician of the Physical, Technical, and Mathematical Sciences Department (LDA 87-11012.)

⁸ Ibid

Kuliev, Aladdin M. ogly. Born 1927. Academician of the Earth Sciences Department since 1980. He was named a vice president in 1988. (LDA 89-11378.)
Volobuev, Vladimir R ., D. Agr. S. Born in 1909 in Krasnodar. Soviet soil scientist. Corresponding member since 1968. From 1957 to 1959, he was a vice-president of the academy, and from 1959, he was the academician secretary of the Department of Biological Sciences of the AzN SSR. He has been an academician of the Biological Sciences Department of the academy since 1958, and in 1981 he became a corresponding member of the Biochemistry, Biophysics, and Chemistry of Physiologically Active Compounds Department of the AN SSSR. He was named a vice president of the academy again in 1981. He graduated from the Kuban Agricultural Institute in 1930 and began work at Mugan Experimental Land-Reclamation Station. From 1952 to 1957, he was director of the Institute of Soil Science and Agrochemistry of the AzN SSR. His works have been in land reclamation districting and soil leaching, ecology, and soil classification and diagnostics. The V. V. Dokuchaev Prize, 1958. State Prize, 1967. (GSE 5, p. 576.) (LDA 89-11378.)

Chief Scientific Secretary

Nadirov, Asaf Abbas Kuli ogly , D. Econ. S. Corresponding member of the Earth Sciences Department since 1980. Since 1972, he has been deputy director of the Economics Institute in Baku which was founded in 1966 to conduct research on production incentives and questions of capital investment. Since 1981, he has served as the chief scientific secretary of the Azerbaijan academy. (LDA 87-11012.)

Abasov, Mitat Teymor ogly ., D. Tech. S. Academician secretary since 1979. Academician of the Earth Sciences Department since 1980. Since 1975, he has been the director of the Deep Petroleum and Gas Deposits Problems Institute in Baku which was created in 1960 to investigate problems associated with drilling for petroleum at depths of over 4,000 meters. (LDA 87-11012.)

Aliev, Dzhahal Ali Rza ogly . Born in 1928. Academician of the Biological Sciences Department since 1980. He was named academician secretary in 1981. (LDA 87-11012.)

Aliev, Igrar Gabib ogly . Since 1980, corresponding member of the Literature, Language, and Art Department of the academy. Since 1982, academician secretary of the History, Economics, Philosophy, and Law Department of the academy. (LDA 87-11012.)

Aliev, Vagab S ., D. Tech. S. Born in 1908. Academician of the Chemical Sciences Department since 1968. Academician secretary since 1981. Since 1962, he has been the director of the Iu. G. Mamedaliev Petrochemical Processing Institute in Baku which was created in 1929 and is a major research organization in the republic for the study of petroleum and petrochemical synthesis. (LDA 87-11012.)

Dzhafarov, Mamed Dzhafar Zeynal Abdin ogly . Born in 1909. Academician of the Literature, Language, and Art Department since 1976. Academician secretary since 1981. (LDA 87-11012.)

Maksudov, Faramaz Gazanfar ogly . Academician of the Physical, Technical, and Mathematical Sciences Department of the academy since 1980. Academician secretary since 1981. Since 1983, he has been the director of the Mathematics and Mechanics Institute in Baku which was established in 1961 to study wave dynamics, failure mechanics, and oil and mineral exploration problems. (LDA 87-11012.) (LDA 87-11012.)

Useinov, Mikael A ., D. Arch. S. Born in 1905. In 1945, he was named an academician of the Literature, Language, and Art Department of the academy. He was elected to the Presidium of the academy in 1981. (LDA 87-11012.)

The Biological Sciences Department

Members:

Academician Secretary

Aliev, Dzhahal Ali Rza ogly . Born in 1928. Academician of the Biological Sciences Department since 1980. He was named academician secretary in 1981. (LDA 87-11012.)

Academicians

Abdullaev, Ilyas Kerim ogly . Academician since 1955. . (LDA 87-11012.)

Abutalibov, Muzafar Geydar ogly , D. Bio. S. Born in 1903. Academician since 1967. (LDA 87-11012.)

Akhundov, Veli Yusuf ogly , D. Med. S. Born in 1916. Academician since 1969. (LDA 87-11012.)

Aliev, Dzhahal Ali Rza ogly . (See academician secretary above.)

Dzhavadzade, Mir Mamed Dzhavad ogly , D. Med. S. Born in 1927. Academician since 1980. (LDA 87-11012.)

Gasanov, Guseyn Geyday ogly ., D. Bio. S. Academician since 1976. Since 1979, he has been the director of the A. Karaiev Physiology Institute in Baku which was established in 1968 to conduct research on the mechanisms of all living processes, including the links existing between the cortex and inner organs. (LDA 87-11012.) (LDA 89-11378.)

Musaev, Musa Abdurakhman ogly , D. Vet. S. Born in 1921. Academician since 1967. Since 1967, director of the Zoology Institute in Baku which does research in the protection of the natural resources of animals. (LDA 87-11012.)

Mustafaev, Iman Dashdemir ogly ., C. Agr. S. Born in 1910. Academician since 1950. Since 1971, he has directed the work of the Genetics and Selection Institute in Baku which was established in 1958 and which performs research in agriculture to improve the yield of various crops. .(LDA 87-11012.)

Namazova, Adiliia A . Academician since 1983. (LDA 87-11012.)

Ulianishchev, Valerii I ., D. Bio. S. Academician since 1972. (LDA 87-11012.)

Volobuev, Vladimir R ., D. Agr. S. (See vice president above.)

Corresponding members

Agaev, B. A . Corresponding member since 1980.

Alekperov, Kyazim Abdul Manal ogly ., D. Agr. S. Corresponding member since 1968. (LDA 87-11012.)

Alekperov, Urkhan Kyazim ogly . Born in 1943. Corresponding member since 1983. Since 1983, he has been the director of the V. L. Komarov Botany Institute in Baku which was established in 1936 and which studies the acclimatization of plants and assists in land reclamation. (LDA 87-11012.)

Gadzhiev, Damir Vagid ogly , D. Bio. S. Corresponding member since 1972. (LDA 87-11012.)

Gadzhiev, Vagid Dzhahal ogly Corresponding member since 1983. (LDA 87-11012.)

Kasumov, R. Iu. . Corresponding member since 1983. (LDA 87-11012.)

Kasimov, Abdul Guseyn Ali ogly ., C. Bio. S. Corresponding member since 1980.

Mamedova, Siddiga Rza kyzy . Corresponding member since 1983. (LDA 87-11012.)

Ragimov, Ragim Nurmamed ogly . Corresponding member since 1983. (LDA 87-11012.)

Safarov, Ibragim Safar ogly ., D. Bio. S. Corresponding member since 1980. (LDA 87-11012.)

Samedov, Niyazi Gamid ogly ., D. Bio. S. Corresponding member since 1980. (LDA 87-11012.)

Tagiev, Shamkhal Kerim ogly ., D. Bio. S. Corresponding member since 1976. Since 1982, he has been a deputy director for science of the A. Karaev

Physiology Institute in Baku which was established in 1968 to conduct research on the mechanisms of all living processes. (LDA 87-11012.)

Biological Sciences Department: Research institutes subordinate to the department by order of founding:

Zoology Institute in Baku.

Founded in 1935. The institute does research in the protection of the natural resources of animals. The institute publishes Trudy. Director: Musaiev, Musa A. ogly, D. Vet. S., '67. (See: Ruble, Vol. I., p. 305.) (GSE 3, p. 308.)

Soil Science and Agrochemistry Institute in Baku.

Founded in 1945. The institute conducts land reclamation and soil fertility studies in the Transcaucasus. The institute traces soil deposits from Siberian rivers. Director: Guseinov, G. M., '84; Deputy Director Abduiev, M. R., '69. (See: Ruble, Vol. I., p. 305.) (GSE 3, p. 308.)

V. L. Komarov Botany Institute in Baku.

Founded in 1934. The institute studies the acclimitization of plants and land reclamation. Director: Alekperov, Urkhan K., ogly, '83. (See: Ruble, Vol. I., p. 304.) (GSE 3, p. 308.)

Genetics and Selection Institute in Baku.

Founded in 1958. The institute is involved in plant breeding for the improvement of the various crop yields in the region. Director: Mustafaiev, Iman D., ogly, C. Agr. S., CPSU, '71; Deputy Director Sadikov, I., '74.

A. Karaiev Physiology Institute in Baku.

Founded in 1968. The institute conducts research on the mechanisms of all living processes, including the links existing between the cortex and inner organs. Director: Gasanov, Gusein G., ogly, D. Bio. S., '79; Deputy Director Tagiev, Shamkhal K. ogly, D. Bio. S., '82.

The Chemical Sciences Department

Members:

Academician Secretary

Aliev, Vagab S ., D. Tech. S. Born in 1908. Academician of the Chemical Sciences Department since 1968. Academician secretary since 1981. Since 1962, he has been the director of the Iu. G. Mamedaliev Petrochemical Processing Institute in Baku which was created in 1929 and is a major research organization in the republic for the study of petroleum and petrochemical synthesis. (LDA 87-11012.)

Academicians

Aliev, Vagab S ., D. Tech. S. (See academician secretary above.)

Dalin, Mark A ., D. Tech. S. Born in 1906. Academician since 1959. He is the director of the All-Union Scientific Research Institute for the Synthesis and Processing of Low Molecular Olefins and its pilot plant. He is a twice-winner of the USSR State Prize; and a winner of the USSR Council of Ministers Prize. (LDA 87-11012.)

Kuliev, Ali Musa ogly, D. Chem. S. Born in 1912. Academician since 1959. Since 1965, director of the Chemical Additives Institute in Baku which was created in 1965 and which is concerned with improving the quality of lubricating oils. (LDA 87-11012.)

Shakhtakhtinskii, Togrul N ., D. Chem. S. Born in 1925. Academician since 1976. Since 1976, he has been the director of the Theoretical Problems of Chemical Technology Institute in Baku. The institute is involved in the research of petrochemical synthesis and organic catalysts. (LDA 87-11012.)

Corresponding members

Aliev, Sakhiv Museiv ogly Corresponding member since 1983. (LDA 87-11012.)

Babakhanov, Rauf Ali Mamed ogly ., D. Chem S. Corresponding member since 1980. (LDA 87-11012.)

Dadashev, B. A. Corresponding member since 1980. (LDA 87-11012.)

Guseinov, Mustafa Mamed ogly ., D. Chem S. Corresponding member since 1980. Since 1979, he has been director of the Chloro-organic Synthesis Institute in Sumgait which was established in 1959 to develop new applications for monomers and polymers. (LDA 87-11012.)

Guseinov, Nazim Museib ogly ., D. Tech. S. Born in 1929. Corresponding member since 1980. Since 1969, he has served as a deputy director of the Iu. G. Mamedaliev Petrochemical Processing Institute in Baku which was created in 1929 and which is a major research organization for the study of petroleum and petrochemical synthesis. (LDA 87-11012.)

Kambarov, Iunis Geydar ogly . Corresponding member since 1980. (LDA 87-11012.)

Kerimov, I. G ., Lt. Gen. Avn., C. Tech. S. Corresponding member since 1980. (LDA 87-11012.)

Mamedov, Khudu Surlhai ogly ., D. GM. S. Born in 1927. Corresponding member since 1976. (LDA 87-11012.)

Mamedov, Shamkhal Ali Mamed ogly ., D. Chem. S. Corresponding member since 1968. . (LDA 87-11012.)

Mardanov, Medzhid A. ., D. Chem. S. Corresponding member since 1968. Since 1968, he has been a deputy director of the Iu. G. Mamedaliev Petrochemical Processing Institute in Baku which , created in 1929, is a major research organization in the republic for the study of petroleum and petrochemical

synthesis. (LDA 87-11012.)

Movsumzade, Mamed Mirza ogly ., D. Chem. S. Corresponding member since 1967. (LDA 87-11012.)

Rizae, Ramiz G. Corresponding member since 1983. (LDA 87-11012.)

Rustamov, P. G. Corresponding member since 1983. (LDA 87-11012.)

Sadikhov, Kyamil Ismail ogly . Corresponding member since 1980. (LDA 87-11012.)

Zeinalov, Bagadur Kasum ogly ., D. Chem. S. Corresponding member since 1976. (LDA 87-11012.)

Zulfugarly, Dzhumshud Ismail ogly ., D. Chem. S. Corresponding member since 1968. (LDA 87-11012.)

Zulfugarov, Zulfugar Guseyn-Guli ogly ., D. Chem. S. Corresponding member since 1976. Since 1975, he has been the director of the Inorganic and Physical Chemistry Scientific Research Institute in Baku which develops new materials for use in semiconductors and other fields of special chemical technology from fertilizers to electronic memory elements. (LDA 87-11012.)

Chemical Sciences Department: Research institutes subordinate to the department by order of founding:

Iu. G. Mamedaliyev Petrochemical Processing Institute in Baku.

Established in 1959. This institute is a major research organization in the republic for the study of petroleum and petrochemical synthesis. Maintains a branch in Sumgait. Director: Aliev, Vagab S., D. Tech. CPSU, '62; Deputy Directors: Guseinov, Nazim M. ogly, D. Tech. S., '69; and, Mardanov, Medzhid A., D. Chem. S., '68. (GSE 28, p. 116.)

Chloro-organic Synthesis Institute in Sumgait.

Established in 1959. The institute develops new applications for monomers and polymers. Director: Guseinov, Mustafa Mamed ogly, D. Chem. S., '79; Deputy Director Mustafaiev, Vefa Abdul Ali ogly, C. Chem. S., '82.

Inorganic and Physical Chemistry Scientific Research Institute in Baku.

Founded in 1965 from the 1935 Chemistry Institute and became an affiliate of the Nakhichevan Scientific Center in 1972.. The institute develops new materials for use in semiconductors and other fields of special chemical technology from fertilizers to electronic memory elements. Director: Zulfugarov, Zulfugar Gusei-Guli ogly, D. Chem. S., '75. (GSE 28, p. 116.)

Theoretical Problems of Chemical Technology Institute in Baku.

Founded in 1965. The institute researches petrochemical synthesis and organic catalysts. Director: Shakhatkhtinskii, Togrul N., D. Chem. S., '76; Deputy Director Nasirov, Faik Mirza Aga ogly, '80. (GSE 28, p. 116.)

Chemical Additives Institute in Baku.

Founded in 1965 from the laboratory for the technology and synthesis of additives of the Petrochemical Synthesis Institute of 1959. The institute researches ways to improve the quality of lubricating oil. Director: Kuliev, Ali Musa ogly, D. Chem. S., '65; Deputy Director Namazov, N., '69. (GSE 28, p. 116.)

The Earth Sciences Department

Members:

Academician Secretary

Abasov, Mitat Teymor ogly ., D. Tech. S. Academician secretary since 1979. Academician of the Earth Sciences Department since 1980, and since 1984, he has been a corresponding member of the Geology, Geophysics, Geochemistry and Mining Sciences Department of the AN SSSR. Since 1975, he has been the director of the Deep Petroleum and Gas Deposits Problems Institute in Baku which was created in 1960 to investigate problems associated with drilling for petroleum at depths of over 4,000 meters. (LDA 87-11012.)

Academicians

Abasov, Mitat Teymor ogly . D. Tech. S. (See academician secretary above.)

Alizade, Kambay A ., D. GM. S. Academician since 1962. (LDA 87-11012.)

Bagirzade, Faik Mamed ogly . Academician of the Earth Sciences Department of the Azerbaijan academy since 1983. Since 1971, he has served as rector of the S. M. Kirov Azerbaijan State University in Baku which was established in 1919. (LDA 87-11012.)

Gulizade, Mamed Pasho Piri ogly ., D. Tech. S. Born in 1914. Academician since 1972. (LDA 87-11012.)

Ibragimov, Ismail Ali ogly ., D. Tech. S. Born in 1915. Academician since 1980. (LDA 87-11012.)

Kuliev, Aladdin Musa ogly . Born in 1927. Academician since 1980. (LDA 87-11012.)

Kuliev, Alekper Mamed ogly ., D. Bio. S. Born in 1911. Academician since 1967. (LDA 87-11012.)

Mamedov, Shirali N . Academician since 1968. (LDA 87-11012.)

Mekhtiev, Shafayat Farkhad Radkevich ogly ., D. GM. S. Born in 1910. Academician since 1958. (LDA 87-11012.)

Shikhalibeyli, Edkhem Shakhlar-Bek ogly ., D. GM. S. Academician since 1983. (LDA 87-11012.)

Sultanov, Azal Dzhafar ogly ., D. GM. S. Academician since 1960.

Tutaiuk, Valida Kh ., Maj. Gen. Born in 1914. Academician since 1968.

Corresponding members.

Aliiev, Spartak A ., D. Agr. S. Corresponding member since 1976. (LDA 87-11012.)

Alizade, Akif Aga-Mekhti ogly . Since 1976, director of the I. M. Gubkin Geology Institute in Baku which prospects for deposits of oil and gas, iron ore, cobalt, copper, zinc, rare metals and other valuable raw materials. Corresponding member since 1980. (LDA 87-11012.)

Budagov, Budag Abdulali ogly ., D. Geo. S. Corresponding member since 1976. Since 1981, he has been a deputy director of the Geography Institute in Baku which was established in 1958 and which performs research in agriculture seeking methods of improving crop yields. (LDA 87-11012.)

Dzhalilov, Kurban Nizameddin ogly ., D. Tech. S. Corresponding member since 1972. Since 1976, he has been a deputy director of the Deep Petroleum and Gas Deposits Problems Institute in Baku which was created in 1960 to investigate problems associated with drilling for petroleum at depths of over 4,000 meters. (LDA 87-11012.)

Gyulakhmedov, Abdurakhman Niyaz ogly ., D. Agr. S. Corresponding member since 1976. (LDA 87-11012.)

Nadirov, Asaf Abbas Kuli ogly ., D. Econ. S. (See chief scientific secretary above.)

Rustamov, Musa I. Corresponding member since 1980. (LDA 87-11012.)
Salaev, Mamed Emin Mamed Ali ogly ., D. Agr. S. Corresponding member since 1972. (LDA 87-11012.)
Salaev, Subkhi Gashum ogly Corresponding member since 1983. (LDA 87-11012.)
Samed-zade, Ziyad Ali Abbas ogly ., D. Econ. S. Corresponding member since 1980. . (LDA 87-11012.)
Seidrza, Mir Kerim ogly ., D. Tech S. Born in 1925. Corresponding member since 1980. (LDA 87-11012.)
Shikhlinskii, Enver Mamay ogly ., C. Geog S. Corresponding member since 1972. (LDA 87-11012.)
Sultanov, Kadyr Mamed ogly ., D. GM. S. Born in 1918. Corresponding member since 1968. (LDA 87-11012.)
Tairov, N. D . Corresponding member since 1983. (LDA 87-11012.)

Earth Sciences Department : Research institutes subordinate to the department by order of founding:

I. M. Gubkin Geology Institute in Baku.

No date given in source. The institute prospects for deposits of oil and gas, iron ore, cobalt, copper, zinc, rare metals and other valuable raw materials using such methods as superdeep borehole drilling. Conducts research on topography of the republic and evaluates the general climatic and meteorological conditions of the republic. Studies water balances and quality of the Caspian Sea. Director: Alizade, Akif A., '76. (See: Ruble, Vol. I., p. 305.)

Geography Institute in Baku.

Established in 1945. The institute conducts research in the physical and economic geography of the republic. Director: Aliev, Gasan Ali Rza ogly, '73; Deputy Director Budagov, Budag A., '81. (See: Ruble, Vol. I., p. 304.)

Deep Petroleum and Gas Deposits Problems Institute in Baku.

Created in 1960. The institute investigates problems associated with deep drilling of over 4,000 meters. Director: Abasov, Mitat T., D. Tech. S., '75; Deputy Director Dzhalilov, Kurban N., '76.

The History, Economics, Philosophy, and Law Department

Members:

Academician Secretary

Aliev, Igrar Gabib ogly . Since 1980, corresponding member of the Literature, Language, and Art Department of the academy. Since 1982, academician secretary of the History, Economics, Philosophy, and Law Department of the academy. (LDA 87-11012.)

Academicians

Alizade, Abdul Kerim Ali Ru ogly . D. Hist. S. Born in 1906. Academician since 1958. (LDA 87-11012.)

Azizbekova, Pyusta Aziz Aga kyzy ., D. Hist. S. Academician since 1980. (LDA 87-11012.)

Buniatov, Ziia M . , D. Hist. S. Born in 1921. Since 1964, he has been director of the People of the Near and Middle East Institute in Baku which was established in 1965 and which has become an important center for Turkic, Iranian, and Arabic studies. It specializes in historical and philological research. Academician since 1976. (LDA 87-11012.)

Guliev, Dzhamil Bagadur ogly ., D. Hist. S. (See vice president above.)

Kerimov, Dzhangir Ali Abbas ogly ., D. Jur. S. Born in 1923 in Baku. Soviet jurist. Corresponding member of the Philosophy and Law Department of the AN SSSR since 1966. Since 1967, academician of the Azerbaijan Academy of Sciences History, Economics Philosophy and Law department. From 1951 to 1957, he headed the subdepartment of the theory and history of state and law at the M. I. Kalinin Institute of Law in Leningrad and at the Leningrad State University. From 1957 to 1959, he was a professor at the Ulbricht German Academy of State and Law and at the University of Berlin in East Germany. From 1959 to 1965, he headed the subdepartment of state and law at Leningrad State University and since 1968, he has served as a prorector of that University. Between 1969 and 1971, he was a senior researcher at the Institute of Marxism-Leninism of the CC of the CPSU. Since 1971, he has headed the subdepartment of the theory of state and law at the Academy of Social Sciences of the CC CPSU. His works deal with the philosophical problems of jurisprudence, with the theory of state and law, and with the problems of applying cybernetics to social research and of social management and planning. . (GSE 12, p. 421.) (LDA 89-11378.)

Kocharli, Firudin Kasum ogly ., D. Phil. S. Academician since 1976. He is the director of the Philosophy and Law Institute in Baku which conducts research on Islamic and Azerbaijani legal history and contemporary legal theory. . (LDA 87-11012.)

Makhmudov, Akhmed Akper ogly ., D. Econ. S. Born in 1923. Academician since 1983. Since 1970, he has directed the work of the Economics Institute in Baku which was founded in 1966 to study production incentives and questions of capital investment. (LDA 87-11012.)

Sumbatzade, Alisoybat S . , D. Hist. S. Born in 1907. Academician since 1958. . (LDA 87-11012.)

Corresponding members

Aslanov, Aslan Mamed ogly . Corresponding member since 1980. (LDA 87-11012.)

Dasdamirov, Afrand F . , D. Phil. S. Corresponding member since 1983. . (LDA 87-11012.)

Guseinov, B. M . Corresponding member since 1980. Since 1984, he has served as director of the Soil Science and Agrochemistry Institute in Baku which was

founded in 1945 to conduct land reclamation and soil fertility studies in the Transcaucasus. (GSE 3, p. 308.) (LDA 87-11012.)

Ismailov, M. A . Corresponding member since 1983. (LDA 87-11012.)

Kagramanov, V. P . Corresponding member since 1972. (LDA 87-11012.)

Kocharli, Tafik Kasum ogly ., D. Hist. S. Born in 1929. Corresponding member since 1980. . (LDA 87-11012.)

Madatov, Garash Ali ogly . Corresponding member since 1983. (LDA 87-11012.)

Veliev, T. S . Corresponding member since 1983. (LDA 87-11012.)

History, Economics, Philosophy, and Law Department : Research institutes subordinate to the department by order of founding:

History Institute in Baku.

In existence at academy's founding in 1945. In the mid-1950s, its scholars concentrated on the physical anthropology of the peoples of Azerbaijan. In the late 1970s, a conference held at the institute in Baku produced a number of papers on aspects of ancient and middle ages archeology, ethnography, epigraphy and architecture. Reports of the investigations of the Azykh cave, and other important archeological digs were also given. Director: Sumbat-Zade, A. S. (See: Ruble, Vol. III, pp. 124-125.)

Economics Institute in Baku.

Founded in 1966, the institute specializes in research on energy reserves, manpower availability, production incentives and questions of capital investment. Director: Makhmudov, Akhmed Akper ogly, D. Econ. S., '70; Deputy Directors: Aleskerov, A., '84; and Nadirov, Asaf Abbas Kuli ogly, D. Econ. S., '72. (See: Ruble, Vol. I, p. 147. Listed as the Institute of Economics.)

Philosophy and Law Institute in Baku.

No date of founding in source. The institute conducts research on Islamic and Azerbaijani legal history and contemporary legal theory. Director: Kocharli, F. B. (See: Ruble, Vol. I, p. 463.)

The Literature, Language, and Art Department

Members:

Academician Secretary

Dzhafarov, Mamed Dzhafar Zeynal Abdin ogly . Born in 1909. Academician of the department since 1976. Academician secretary since 1981. (LDA 87-11012.)

Academicians

Dzhafarov, Mamed Dzhafar Zeynal Abdin ogly . (See academician secretary above.)

Ibragimov, Mirza Azhdar ogly ., D. Phlg. S. Born in 1911. Academician since 1945. . (LDA 87-11012.)

Shiraliyev, Mamedaga Shirali ogly ., D. Phlg. S. Born in 1909. Academician since 1963. He is director of the Nasimi Linguistics Institute in Baku which was founded in 1945, assuming its present name and function in 1969. Its departments include the history of language, contemporary language, dialectology, lexicography, culture of speech and the comparative study of Turkic languages. It is the republic's leading center of linguistic research.

(LDA 87-11012.) (See also Ruble, Vol. III, pp. 494-495.)

Useynov, Mikael A ., D. Arch. S. Born in 1905. Academician since 1945. (LDA 87-11012.)

Corresponding members

Aliev, Igrar Gabib ogly . Corresponding member since 1980. (LDA 87-11012.)

Azimov, B. A ., D. Tech. S. Corresponding member since 1971. (LDA 87-11012.)

Budagova, Z. I ., D. Bio. S. Corresponding member since 1980. (LDA 87-11012.)

Kerimov, K. D . Corresponding member since 1980. (LDA 87-11012.)

Kurbanov, Aman M. Corresponding member since 1983. (LDA 87-11012.)

Mirakhmedov, A. M . Corresponding member since 1980. (LDA 87-11012.)

Nabiev, B. A . Corresponding member since 1983. (LDA 87-11012.)

Orudzhev, Ali Geydar Ali Abbas ogly . Corresponding member since 1968. (LDA 87-11012.)

Talibzade, K. A . Corresponding member since 1980. (LDA 87-11012.)

Vagabzade, Bakhtiyar M . Corresponding member since 1980. (LDA 87-11012.)

Zamanov, A. F . Corresponding member since 1983. (LDA 87-11012.)

Literature, Language, and Art Department : Research institutes subordinate to the department by order of founding:

Nasimi Linguistics Institute in Baku.

Founded in 1945. In 1969 assumed its present name and function. Its departments include: history of language, contemporary language, dialectology, lexicography, culture of speech and the department of the comparative study of Turkic languages. It is the republic's leading center of linguistic research. Director: Shiraliev, M. Sh. (See: Ruble, Vol. III, pp. 494-495.)

Peoples of the Near and Middle East Institute in Baku.

Founded in 1965. The institute is an important center for Turkic, Iranian, and Arabic studies. It specializes in historical and philological research. (See: Ruble, Vol. I., p. 412.) Director: Buniatov, Zia M., D. Hist. S., '64; Deputy Director Rzayev, A. K., '83.

The Physical, Technical, and Mathematical Sciences Department

Members:

Academician Secretary

Maksudov, Faramaz Gazanfar ogly . Academician of the Physical, Technical, and Mathematical Sciences Department of the academy since 1980. Academician secretary of the department since 1981. Since 1983, he has been the director of the Mathematics and Mechanics Institute in Baku which was established in 1961 to study wave dynamics, failure mechanics, and oil and mineral exploration problems. (LDA 87-11012.) (LDA 87-11012.)

Academicians

Abdullaev, Gasan Mamed Bagir ogly ., D. PM. S. Born in 1918 in Nakhichevan ASSR. Soviet physicist. From 1968-70 he was academician secretary of the division of physico-technical and mathematical sciences of the Azerbaijan academy. He has been a corresponding member of the General

Physics and Astronomy Department since 1970. From 1970 to 1983, he served as president of the Azerbaijan Academy of Sciences. He graduated from the Azerbaijan Pedagogical Institute in 1941 and joined the Institute of Physics and Mathematics of the Azerbaijan Academy of Sciences in 1945 becoming director of that institute in Baku in 1959. The institute was referred to as the Physics and Mathematics institute before 1959. It does research in semiconductor physics and the physical-technical problems of power engineering. His work has been in semi-conductor physics. Originally elected to the General and Applied Physics Department of the Moscow academy. . (GSE 30, p. 1) (LDA 89-11378.)

Aliev, Maksud Isfandiyar ogly ., D. PM. S. Born in 1924. Academician since 1980. (LDA 87-11012.)

Amirkhanov, Khabibulla I ., D. PM. S. Born in 1907 in the Dagestan SSR. Soviet Physicist. He has been a corresponding member since 1970. . He graduated from the Azerbaijan university in 1930 and served as a professor there from 1946. He was a member of the staff of the Institute of Physics and Mathematics of the Azerbaijan academy from 1932 and served as institute director from 1944-50. He worked at the Moscow Research institute of Instrument Making in 1945 and joined the Radio Engineering Institute in 1947. Since 1949, he has been an academician of the Azerbaijan Academy of Sciences. Since 1950, he has served as chairman of the Dagestan Affiliate of the academy of sciences. Since 1959, he has been director of the Physics Institute at Makhachkala which was established in 1957 to work on problems of semiconductor physics, thermophysics, cryophysics, theoretical physics and geophysics. Subordinate to the Dagestan Affiliate. His major work has been in solid-state physics. Deputy to the 5th convocation of the Supreme Soviet. (GSE 30, p. 12.)

Dzhuvarly, Chingiz Mekhti ogly ., D. Tech. S. Academician since 1962. (LDA 87-11012.)

Efendizade, Azad Ali ogly ., D. Tech. S. Born in 1907. Academician since 1969. (LDA 87-11012.)

Guliev, Nariman Aga Kuli ogly . Since 1982, vice president of the academy. Academician since 1983. (LDA 87-11012.)

Ibragimov, Ibragim Ibishevich ogly ., D. PM. S. Born in 1912. Academician since 1968. (LDA 87-11012.)

Maksudov, Faramaz Gazanfar ogly . (See academic secretary above.)

Mirzadzhanzade, Azat Khalilovich ogly ., D. Tech. S. Born in 1928. Academician since 1968. (LDA 87-11012.)

Rasulov, Medzhid Lyatif ogly . Academician since 1983. (LDA 87-11012.)

Salaev, Eldar Yunis ogly ., D. PM. S. (See president above.)

Sultanov, Gadzhebek F ., D. PM. S. Born in 1921. Academician since 1972. Since 1971, he has directed the research of the Astrophysical Observatory in Shemakha which was established in 1953. The observatory possesses several large telescopes, including a 2-meter solar instrument used to research celestial bodies. (LDA 87-11012.)

Corresponding members

Abdullaev, Asker Akperovich ogly ., D. Tech. S. Born in 1927. Corresponding member since 1969. (LDA 87-11012.)

Aliev, Talaman A. Corresponding member since 1983. In 1988, he was named the director of the Cybernetics Institute in Baku which was established in 1965. The institute is responsible for the design, construction, and installation of automated control and display systems for industrial applications. (LDA 87-11012.)

Aliev, Tofik M., D. Tech. S. Born in 1928. Corresponding member since 1980. CPSU member. (LDA 87-11012.)

Alizade, Aga Samed Abdul Guseyn ogly ., D. Tech. S. Corresponding

member since 1968. (LDA 87-11012.)

Allakhverdiev, Dzhahal Eyvaz ogly ., D. PM. S. Born in 1929. Corresponding member since 1972. From 1970 to 1988, he was director of the Cybernetics Institute in Baku which was converted to its present status in 1965 and which is responsible for the design, construction, and installation of automated control and display systems for industrial and other applications. (LDA 87-11012.)

Babaev, Arif Aligeydar ogly . Corresponding member since 1976. (LDA 87-11012.)

Badalov, Rza Abdul ogly ., D. Tech. S. Corresponding member since 1968. (LDA 87-11012.)

Gadzhiyev, S. A . Corresponding member since 1983. (LDA 87-11012.)

Gashimzade, Firuza M. ., C. PM. S. Corresponding member since 1980. (LDA 87-11012.)

Gasimov, Mir Abbas Geogdzha ogly ., D. PM. S. Corresponding member since 1980. (LDA 87-11012.)

Guseynov, F. G . Corresponding member since 1980. (LDA 87-11012.)

Kadimov, Iakub Bala ogly ., D. Tech. S. Born in 1917. Corresponding member since 1968. (LDA 87-11012.)

Kadzhar, Ch. O. Corresponding member since 1980.

Mamedov, Iakhia Dzhafar ogly ., D. PM. S. Born in 1930. Corresponding member since 1983. Since 1975, prorektor of the S. M. Kirov Azerbaijan SSR State University in Baku. (LDA 87-11012.)

Mukhtarov, Abdulla Ibragim ogly ., D. PM. S. Corresponding member since 1972. (LDA 87-11012.)

Ramazanzade, Malik Geidor ogly ., D. PM. S. Corresponding member since 1976. (LDA 87-11012.)

Seidov, Iukhannas Mirgasan ogly . Corresponding member since 1980. (LDA 87-11012.)

Shakhtakhtinskii, Magomed Gabibulla ogly . Born in 1932. Corresponding member since 1980. (LDA 87-11012.)

Physical, Technical, and Mathematical Sciences Department :
Research institutes subordinate to the department by order of founding:

Astrophysical Observatory in Shemakha.

Established in the mid-60s. Located 150 km from Baku. The observatory has several large telescopes, including a 2-meter solar instrument. It does research on celestial bodies. Director: Sultanov, Gadzhebek F., D. PM. S., '71; Deputy Directors: Ismailov, Zokhrab, '84; and Rzaiev, Oktai, '73. (GSE 2, p. 437).

Physics Institute in Baku.

Address : 33, prospekt Azizbekova,
AZ-370 143 Baku 143 Telephone :
+ 7 8922 387227, 7 8922 392432

Before 1959 the institute was called the Physics and Mathematics Institute. The institute does research in semiconductor physics and the physical-technical problems of power engineering. Director: Abdullaev, Gasan Mamed Bagir ogly, D. PM. S., CPSU, '59; Deputy Directors: Dzhafarov, T., '82; and Salaiev, Eldar Yunis ogly, D. PM. S., '72. Research Type : Theoretical physics, Experimental physics, Other R&D related to HEP (High Energy Physics). Research Programme : Group-theoretical methods in elementary-particle physics, theoretical HEP, experimental hadron physics, neutrino physics, developments in electronics, particle detectors, online and offline software.

High Energy Physics Laboratory at Baku State University

Address : Z. Khalilov Street 23,

AZ-370 148 Baku

Telephone : + 7 8922 390617,
7 8922 390523, 7 8922 396119

Research Type: Theoretical physics, Experimental physics, Other R&D related to HEP (High Energy Physics) Research Programme : Physics of particle polarization, hadron physics, semiconductor particle detectors.

Mathematics and Mechanics Institute in Baku.

Established in 1961. The institute studies wave dynamics, failure mechanics, and oil and mineral exploration. Director: Maksudov, Faramaz Gazanfar ogly, '83.

Cybernetics Institute in Baku.

Established in 1965. The institute is responsible for the design, construction, and installation of automated control and display systems for industrial and other applications. Director: Aliev, Talamon A., 1988; Deputy Directors: Babaiev, Dzhangir Ali Ikram, D. Tech. S., '65; and Makhmudov, Yunis A., '71.

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Rasim Alguliev E-mail: rasim@dcacs.ab.az

Faik Farmanov E-mail: faik@dcacs.ab.az

Academy of Sciences, Baku, Azerbaijan]

Space Research of Natural Resources Institute , Baku.

Established in 1978. The institute develops applications for aerospace data in oceanology, geology, meteorology, and agriculture. Director: Ismailov, Tofik K., D. Tech. S., '78; First Deputy Director Mekhteev, Arif S., '81; Deputy Director Abbasov, A., '81.

Nakhichevan Scientific Center

Chairman: Mamediarov, M. M. , D. Chem. S. He has been chairman of the center since 1977. (LDA 87-11012.)

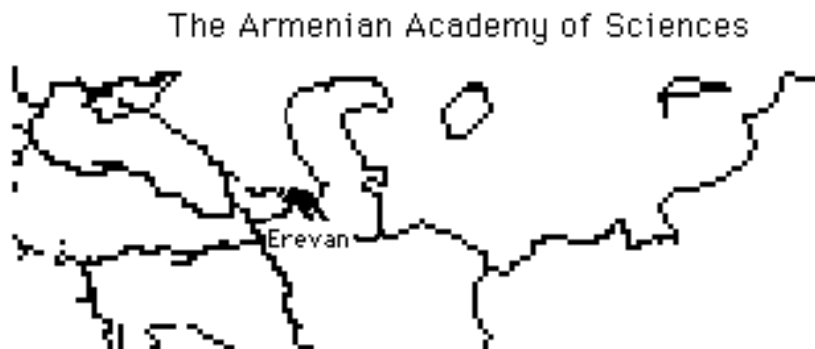


THE ARMENIAN ACADEMY OF SCIENCES

Some Facts About Armenia: Armenia is located in Southeastern Europe, between Turkey and Azerbaijan. It has a land area of approximately 28,400 km², slightly larger than Maryland of the United States. It is bordered by Azerbaijan on the east and the south, and by Georgia, Iran, and Turkey. It is landlocked. It is locked in territorial disputes with both Azerbaijan and Georgia. It has a population of about 3.5 million people, of whom 93% are Armenian. The population is 100% literate. Armenia got independence from the Soviet Union on 23 September 1991. (Source: CIA Facts Book, 1996.)

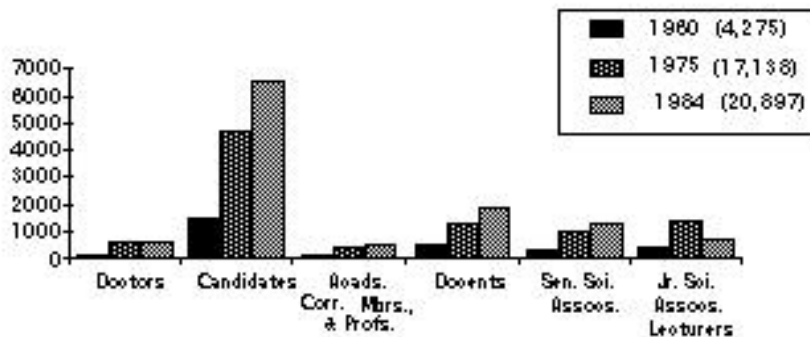
Retrospect: The Great Soviet Encyclopedia gives the date for the founding of the Armenian SSR Academy of Sciences as 1943 "on the basis of the Armenian branch of the Academy of Sciences of the USSR."¹ In 1968, the academy had 87 members; in 1987, it counted 126.

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Degree Distribution among Scientists: In 1984, the Armenian Republic ranked eighth in the number of scientists in the republic. As in the other republics, those holding candidates degrees far outnumbered those with doctoral degrees. In 1984, Armenia had 715 doctoral degree holders and 6512 candidates of science. Of the total number of scientists in the republic, 594 held the title of academician, corresponding member or professor; 1928 held that of "docent"; 1271 that of "senior scientific associate"; and 756 held the title of "junior scientific associate and assistant lecturer." The rate of growth of scientists in Armenia from 1960 to 1984 is impressive, amounting to almost 500 percent in a quarter of a century. The figure below gives graphic support for these generalizations.

Scientists in the Armenian SSR



No.'s in parentheses in legend box = total scientists in the Armenian SSR.
 Source: Vestnik statistiki, No. 12, December 1985, pp. 69-72.

Scientific Research Institutes in Armenia: In 1968, the five academy departments had some 21 scientific research institutes subordinate to them; in 1987, seven subject-matter departments controlled 26 institutes. The academy maintains a vigorous publications program which includes scientific papers, monographs, journals, transactions of the academy and of the institutes, and the publication of the Armenian Soviet Encyclopedia. There have been only two presidents in the academy's history: I. A. Orbeli (1943-47) and V. A. Ambartsumian since 1947.²

Research Thrusts in the Armenian Academy: Research in the Armenian academy is conducted in terrestrial and extra-atmospheric astronomy, mathematics and cybernetics, radiophysics and radio astronomy, the physics and mechanics of solids, the physics of semiconductors, the physics of polymers, radiation physics, geology, geophysics, engineering seismology, the chemistry of natural and synthetic materials, the development of quantitative methods of investigation in the social sciences, and in Armenian history and archaeology.³

Number of SRIs in the Armenian SSR Academy of Sciences, 1987



Source: LDA 87-11012, 1987, pp. 153-157. See also: The Great Soviet Encyclopedia, New York, 1983, "Armenian SSR Academy", Vol. 1, pp. 49-50.

The National Academy of Sciences in Armenia

42 Scientific Research Organisations
Marshall Baghramian Avenue 24
375019 Yerevan, Republic of Armenia
Tel +7 8852 527031; Fax +7 88539 06867
E-mail: academy@pnas.sci.am

Members of the academy: Of the total 126 members of the academy, 60 were academicians in 1987 and 66 were corresponding members. Nineteen of these members were directors or deputy directors of the research institutes under subordination to departments of the academy. Thirty (24 percent) members were also members of the CPSU in 1987. The average age of directors of 13 of the Armenian Scientific Research Institutes at the time of their appointment was 47 years old.

The Presidium

President

Ambartsumian, Victor A ., D. PM. S. Born in 1908 in Tiflis. Soviet astrophysicist working in the physics of stars and nebulae, astronomy, the dynamics of stellar systems, and the cosmogony of the stars and galaxies. He is the founder of a school of theoretical astrophysics in the USSR. Corresponding member of the General Physics and Astronomy Department of the AN SSSR since 1939; and, academician since 1953. Academician of the Armenian Academy of Sciences in 1943, and, at the age of 39 he became president of that academy in 1947. He is a professor at the University of Erevan. He founded the Biurakan Astrophysical Observatory of the Armenian academy in 1946 and has been its permanent director since. From 1948 to 1955 he served as vice president of the International Astronomical Union, and has been its president since 1968. He won State Prizes for his work in 1946 and in 1950. He was a deputy to the Supreme Soviet from its third through its seventh sessions. Since 1953, he has been an academician of the Nuclear Physics Department of the AN SSSR. Since 1957, member of the Academy Presidium. Since 1967, academician of the Physical and Mathematical Sciences Department of the Armenian Academy of Sciences. In 1988, appointed advisor to the national academy's Presidium. .

He is a prolific writer having produced some six major monographs from 1939 to 1968. Current member of Editorial board of Science in the USSR. (GSE 1, p. 327.)

Vice Presidents

Ambartsumian, Sergei A., D. Tech. S. Born in 1922. Academician of the Physical and Mathematical Sciences Department since 1967. Vice president of the academy since 1975. Since 1977, rector of Erevan State University in Erevan which was established in 1920. .

Fanardzhian, Viktor V., C. Med. S. Born in 1929. Since 1978, director of the L. A. Orbeli Physiology Institute in Erevan which was founded in 1943 to study problems of physiology, biochemistry, and pharmacology. The institute is the leading research facility of this kind in the USSR. Vice president of the academy since 1979. Academician of the Biological Sciences Department since 1982. Since 1984, corresponding member of the Physiology Department of the AN SSSR. (LDA 89-11378.)

Galoian, Galust A., D. Hist. S. Since 1982, vice president of the academy and chief scientific secretary of the academy. Since 1986, academician secretary and academician of the History and Economics Department of the Armenian academy. (LDA 87-11012.)

Ioannisian, Abgar R., D. Hist. S. Born in 1908. Academician of the History and Economics Department since 1954. Vice president of the Armenian academy since 1967. . (LDA 87-11012.)

Iosifian, Andronik G., D. Tech. S. Born in 1905. Since 1950, academician of the Physical, Technical, and Mechanics Department of the academy. Vice president since 1971. . (LDA 87-11012.)

Mergelian, Sergei N., D. PM. S. Born in 1928. Corresponding member of the Mathematics Department of the AN SSSR since 1953. Since 1956, academician of the Physical and Mathematical Sciences Department of the Armenian academy. Since 1971, vice president of the academy. . (LDA 87-11012.)

Chief Scientific Secretary

Sedrakian, D. M. Corresponding member of the Physical and Mathematical Sciences Department of the academy. He was named to Chief Scientific Secretary position in May 1988. (LDA 89-11378.)

Presidium: (Includes officers listed above, the academician secretaries and the following elected scientists):

Nersesian, Mkrtych G., D. Hist. S. Since 1953, academician of the History and Economics Department of the Armenian academy. .

Foreign Relations Department

Chief

Akopov, Akramayis N. Chief since 1975.

Biological Sciences Department

Members of the Department

Kazarian, Vagan O., D. Bio. S. Born in 1918. He has been director of the Botany Institute in Erevan since 1956. The institute was founded in 1922 and performs research on the flora of the republic. Academician of the Biological Sciences Department since 1978. Academician secretary of the department since 1978. (LDA 87-11012.)

Academicians

Afrikan, Evrik G ., D. Bio. S. Since 1971, director of the Microbiology Institute in Erevan which was established in 1961 and which studies the physiology and biochemistry of microorganisms as well as the microbiological synthesis of physiologically active compounds. Academician since 1982. (LDA 87-11012.)

Baklavadzhan, Oganis G . Academician since 1986. (LDA 87-11012.)

Chailakhian, Mikhail K ., D. Biol S. Born in 1902 in Rostov-on-Don. Soviet plant physiologist. Honored scientist of the Armenian SSR in 1967. Academician of the Biochemistry, Biophysics, and Chemistry of Physiologically Active Compounds Department of the national academy since 1968. Academician of the Biological Sciences Department of the Armenian Academy of Sciences since 1971. He graduated from the University of Erevan in 1926. He has been chief of the Plant Growth and Development Laboratory of the K. A. Timiriazev Plant Physiology Institute in Moscow since 1935. From 1941 to 1948, he chaired the department of plant physiology and anatomy of the University of Erevan, becoming a professor in 1943. He also chaired the department of plant physiology and microbiology of the Armenian Agricultural Institute from 1941 to 1946. His works have been in plant growth and development (ontogenesis) and the photoperiodic and thermal regulation of flowering. He is founder of the hormone theory of plant development. (LDA 87-11012.) (LDA 89-11378.) (GSE 29, p. 42.)

Fanardzhian, Viktor V ., D. Med. S. (See vice president above.)

Galoian, Armen A ., D. Bio. S. Since 1972, deputy director of the Biochemistry Institute in Erevan which was created about 1965 to study chemical substances and processes in living organisms, including studies of enzymes, proteins, vitamins, and antibiotics. Academician of the Biological Sciences Department of the Armenian academy since 1986. (LDA 87-11012.)

Gulkanian, Vartun O . Born in 1902. Academician since 1943. . (LDA 87-11012.)

Karapetian, Saak K . Born in 1906. Academician since 1943. . (LDA 87-11012.)

Kazarian, Vagan O ., D. Bio. S. (See above.)

Takhtadzhian, Armen L ., D. Bio. S. Born in 1910 in Susha, Nagorno-Karabakh Autonomous Oblast. Soviet botanist. Corresponding member since 1966; academician since 1972 of the General Biology Department of the AN SSSR. Since 1971, he has been an academician of the Biological Sciences Department of the Armenian Academy of Sciences. He graduated from the All-Union Institute of Sub-tropical Crops in Tbilisi in 1932. From 1938 to 1948, he headed a subdepartment at the University of Erevan and from 1944 to 1948, he was director of the Botanical Institute of the Armenian Academy of Sciences. From 1949 to 1961, he was a professor at Leningrad University, while also serving as head of a department of the Botanical Institute of the AN SSSR. He has been vice president of the International Union of Biological Sciences since 1970; and, since 1973 he has been president of the All-Union Botanical Society. From 1978 to 1986, he was director of the V. L. Komarov Botany Institute in Leningrad. This institute was founded in 1714 and is one of the most important in the world. It is the primary botanical research institute in the USSR. His works deal with the systematics, evolutionary morphology, and phylogeny of higher plants; the origin of angiosperms; and with phyto-geography and paleobotany. He is a member of the U.S. Academy of Sciences and of many other foreign societies. . V. L. Komarov Prize, 1969. (GSE 25, p. 33.)

Ter-Karapetian, Mkrtich A . Born in 1910. Academician since 1956. Holder of a doctorate in natural science from the Sarbonne in Paris. (LDA 87-11012.)

Corresponding Members

Aleksian, Iurii T . Corresponding member since 1986. (LDA 87-11012.)

Avdالبekian, S. K ., C. Med. S. Corresponding member since 1977. (LDA 87-11012.)

Badalian, G. O . Corresponding member since 1982. (LDA 87-11012.)

Davtian, Eduard A ., D. Bio. S. Born in 1903. Corresponding member since 1956. (LDA 87-11012.)

Davtian, Misak A. Corresponding member since 1986. (LDA 87-11012.)

Demirchoghlian, Grant G ., D. Bio. S. Born in 1927. Corresponding member since 1962. (LDA 87-11012.)

Gabriyelian, Emil S . Born in 1931. Corresponding member since 1977. . (LDA 87-11012.)

Gevorkian, Ivan K ., D. Med. S. Corresponding member since 1962. (LDA 87-11012.)

Karagezian, Konstantin G ., C. Bio. S. Born in 1927. Since 1962, deputy director of the Biochemistry Institute in Erevan which was established about 1965 to study chemical substances and processes in living organisms, including studies of enzymes, proteins, vitamins, and antibiotics. Corresponding member since 1986. (LDA 87-11012.)

Karamian, Artashes I ., D. Med. S. Born in 1908. Since 1960, he has been a deputy director of the I. M. Sechenov Evolutionary Physiology and Biochemistry Institute in Leningrad, which was created in 1956 to study the problems of evolutionary physiology and the biological effects of radiation. Corresponding member since 1963. . (LDA 87-11012.)

Karamian, Artashes I ., D. Med. S. Born in 1908 in Kafan, Armenian SSR. Soviet neuro-physiologist. Corresponding member of the Physiology Department of the AN SSSR since 1970. Corresponding member of the Armenian academy since 1963 and since 1978, academician secretary of the Biological Sciences Department of the Armenian Academy of Sciences. He graduated from the Erevan Medical Institute in 1935, a student of Orbeli's. He worked at the Institute of Physiology of the AN SSSR from 1945 to 1950, and at the Institute of Experimental Medicine of the Academy of Medical Sciences from 1950 to 1959. Since 1960, he has been deputy director of the I. M. Sechenov Evolutionary Physiology and Biochemical Institute in Leningrad. His work deals with the evolution of cerebellar and cerebral functions in the phylogenetic vertebrate series (cyclostomes, fishes, amphibians, reptiles, and mammals) and with the comparative pathology of the central nervous system and the tropic-adaptive role of the autonomic nervous system in regulation the functions of the higher divisions of the brain. . I. P. Pavlov Prize, 1957. (GSE 11, p. 431.)

Mikaelian, Aleksandr L ., D. Med. S. Corresponding member since 1986. (LDA 87-11012.)

Mkhitarian, Vagan G ., C. Med. S. Corresponding member since 1968. (LDA 87-11012.)

Movsesian, Sedrak G ., D. Bio. S. Born in 1932. Since 1973, deputy director of the Biochemistry Institute in Erevan which was created about 1965 and which studies chemical substances and processes in living organisms, including enzymes, proteins, vitamins, and antibiotics. Corresponding member since 1977. (LDA 87-11012.)

Osipian, Liia L. Corresponding member since 1986. (LDA 87-11012.)

Stamboltsian, Rafael P ., D. Med. S. Corresponding member since 1971. (LDA 87-11012.)

Biological Sciences Department : Research institutes subordinate to the department by order of founding:

Botany Institute in Erevan.

Originally founded in 1922. Performs research on the flora of the republic.

The institute coordinates environmental research in the Soviet Union. Director: Kazarian, Vagan O., D. Bio. S., '56; Deputy Director Minasian, Ashot I., '74. (See: Ruble, Vol. I., p. 299.) (GSE 3, p. 308.) [See Below]

INSTITUTE OF BOTANY

**Address - Avan,
375063, Yerevan,
Republic of Armenia**

Founded in 1938

Phone: (007-8852) 62-17-81

The Head: D. Sc., Ashot Charchoglyan

Total number of employees is 70 of whom all are research scientists, and of whom 12 hold the Doctor of Science and 45 the Candidate of Science degrees.

Specialisation : Botany

Main trends of scientific investigations are: Investigation of the flora and vegetation of Armenia: Conservation and reproduction of different taxa of plants; taxonomy phytogeography and phylogeny of different taxa of higher plants; phytosociology and ecology of vegetation of Armenia, its improvement and rational using, productivity and bioenergy; peculiarities of silviculture of the Sevan basin and ways of its improvement; resources of medical plants of Armenia.

Investigations of the results of introduction of different species of flowering plants in the Yerevan Botanic Garden and its branches in Vanadzor and Sevan, evaluation in the different floristic regions of the World as better sources for their introduction in Armenia and inculcating in the plant verduring of cities of Armenia.

Received scientific important results: Fundamental multi-volume edition of "Flora of Armenia"; "Red Data Book" with slide of rare and threatened species and coenosis; "Plant resources of Armenia"; rich scientific collections of living plants; "Index Seminum", etc.

The institute co-operates with 400 botanical gardens in seed exchange, with Vacratot Botanical Garden (Hungaria), Botanical Institute (Sanct-Peterburg), Botanical Garden (Moscow); also co-operates with Royal Botanic Gardens Kew (London), Botanischer Garten and Botanisches Museum (Berlin), Conservatoire et Jardin botaniques de la Ville de Geneve (Switzerland), Institute für Botanik und Botanischer Garten der Universität Wien, Österreich, etc.

A group of senior researchers received grants from the Soros International Scientific Foundation. [Material taken from the Armenian Academy of Sciences Home Page on the Internet, 1996.]

Zoology Institute in Erevan.

Founded in 1935. It has the primary responsibility for the study of the fauna of the Armenian SSR. The institute is also involved in efforts to protect aquatic bird life on Lake Sevan. It studies the formation of sand dunes at many lakes in the USSR. Director: Sarkisian, Sanatruk M., D. Bio. S., '74. (See: Ruble, Vol. I., p. 302. Ruble locates the institute at Ulitsa Paruira Sevaka, 7, Erevan.) (GSE 3, p. 308.) [See below]

INSTITUTE OF ZOOLOGY
Address - 7 P. Sevak St.,
375044, Yerevan, Republic of Armenia

Founded in 1943

Phone: (007-8852) 28-14-70

The Head: NAS Academician Sergei O. Movsessian

Total number of employees is 213 Scientific workers of whom 83 are research scientists and of whom five hold the Doctor of Science and 64 the Candidate of Science degrees.

Specialisation : Study of Animal World of Armenia Biodiversity

Main trends of scientific investigations are: Study of fauna, systematics, ecology and evaluation of animals. Protection and rational usage of animal world of Armenia. Development of biological bases of control against dangerous insects, parasites and other pests of agricultural and forest economies.

Received scientific important results: Study of vertebrate fauna of Armenia; Study of helminthofauna of a number of high taxons of invertebrates and plants.

The method of artificial breeding of Ararat cochineal; methods of genetic, biological and endogenous chemicals; control against some agricultural pests; a number of methods of prophylaxis and curing of parasitic diseases of agricultural animals and pests; Results of a great number of studies have been generalised in a hundred monographs, keys, zoological collections, Red Book of Armenia, more than 3500 scientific articles. Seven All-Union conferences and many other republican conferences have been organised. The Institute cooperates with the Institute of Parasitology RAS (Moscow); the University of Uppsala (Sweden); Laboratory of Molecular Systematics, Smithsonian Institute (USA); National Museum of Paris (France); Agricultural Institute of Brno; Zoological Institute of St. Petersburg; University of Lomonosov (Moscow); Institute of Archaeology (Moscow), etc.

The Institute participated during 1990-1994 in International Conferences in Washington, Paris, Kushiro (Japan), Vienne (Austria).

One theme is pursued under supervision of ISF. Fourty-three researchers are awarded with a diploma for Soros grants. [Material taken from the Armenian Academy of Sciences Home Page on the Internet, 1996.]

L. A. Orbeli Physiology Institute in Erevan.

Founded in 1943. Studies problems of physiology, biochemistry, and pharmacology. It is the leading institute of its kind in the USSR. Director: Fanardzhian, Viktor V., C. Med. S., '78. (GSE 3, p. 308.) [See below]

L. A. ORBELI INSTITUTE OF PHYSIOLOGY

Address - 22, Orbeli St.,
375028, Yerevan,
Republic of Armenia
Founded in 1943

Phone: (007-8852) 27-04-41

Fax: (007-8852) 27-22-47

The Head: Academician of NAS, D. Sc., Victor V. Fanardjian

Total number of employees is 210 of whom 104 are research scientists, and of whom 16 hold the Doctor of Science and 64 hold the Candidate of Science degrees.

Specialisation : Neurophysiology

Main trends of scientific investigations are: A great number of studies have been carried out with field of general physiology regulation of neuron system and neuronal mechanisms of central regulation of somatomotor and autonomic functions of a body. The Institute develops the questions of neuronal and synaptic organisation of cerebellum and motor nuclei of brainstem.

Received scientific important results: Clarification of synaptic mechanisms of cerebellar and brainstem motor nuclei activity, central mechanisms of vegetative nervous system regulatory processes and peculiarities of neuronal plasticity etc.

The Institute co-operates with Department of Biophysical Engineering, Faculty of Engineering, Osaka University, Japan; Frontier Research Programme, Rikem, Tokyo, Japan; Department of Physiology and Biochemistry, University of Pisa, Italy; Institute of Physiology University of Fribourg, Switzerland; Institute of Physiology, University of Jena, Germany; Laboratory of Functional Neurosciences, CNRS, Marseille, France; Institute of Anatomy, Medical University, Budapest, Hungary; Department of Physiology, University of Patras, Greece.

The Institute participated in many international scientific forums.

The Institute got grants from Soros International Science Foundation; NATO special program on collaboration of the NATO-countries with the countries of the former USSR. [Material taken from the Armenian Academy of Sciences Home Page on the Internet, 1996.]

Experimental Biology Institute in Erevan.

Founded in 1952. Conducts research on the problems of molecular biology, including the macromolecular organization and structure of DNA, the molecular mechanism of mutation, and the mechanism of interaction in the virus bacteria system. Director: Gambarian, Levon S., D. Med. S., '73; Deputy Director Panosian, Gerasim A., D. Bio. S., '72. (See: Ruble, Vol. I., p. 300.) (GSE 3, p. 308.)

Agrochemical Problems and Hydroponics Institute in Erevan.

Founded in 1966 on the basis of the 1947 Laboratory of Agrochemistry. The institute is engaged in studying the soil-less culture of plants, and also floricultural and horticultural crops. Director: (vacant) (See: Ruble, Vol. I., p. 299.) (GSE 3, p. 308.)

Institute of Soil Studies and Agrochemistry in Erevan.

Listed as the Institute of Agrochemical Problems and Hydroponics in the GSE. Founded in 1966 and opened initially as a section within the Armenian Academy. The institute researches soil geography and cartography, local soil erosion patterns, and the use of agrochemicals in farming. It publishes Trudy. (See: Ruble, Vol. I., p. 301. Ruble lists a different founding date.) (GSE 28, p. 116.) [See below]

INSTITUTE OF AGROCHEMICAL PROBLEMS AND HYDROPONICS

Address - 108 Noragyugh St., 375082,

Yerevan, Republic of Armenia

Founded in 1966

Phone: (007-8852) 56-51-62

The Head of the institute is D. Sc., Stepan Kh. Mairapetyan

The total number of employees is 124 of whom 42 are researchers, and of whom two hold the Doctor of Science and 19 the Candidate of Science degrees.

Specialisation : Biology, agriculture.

Main trends of scientific investigations are: Physiological-agrochemical, biochemical and biotechnological basis of soilless cultivation of plants, Rotation, balance of the main nutrient elements and radionuclides in forest biocenoses of Armenia.

Received scientific important results: The research of theoretical and practical problems of industrial botany; Development of technologies of soilless planting of some valuable plants; Elaboration of new system, with polymer shell using, which the first in the soilless plant engineering problems field.

The Institute co-operates with the International Society on soilless culture (ISOSC), Netherlands.

The Institute participated in ISOSC congresses. [Material taken from the Armenian Academy of Sciences Home Page on the Internet, 1996.]

Microbiology Institute in Erevan.

Founded in 1961. Studies the physiology and biochemistry of microorganisms as well as the microbiological synthesis of physiologically active compounds. Director: Afrikian, Evrek G., D. Bio. S., '71. (See: Ruble, Vol. I., p. 301.) (GSE 3, p. 308.

INSTITUTE OF MICROBIOLOGY

Address: 378510, Abovian,

Republic of Armenia

Founded in 1961

Phone: (007-88561) 2-16-22

Head: Academician of NAS, Evric G. Afrikian

Total number of employees is 186, of whom 35 are researchers, of and of whom three hold the Doctor of Science and 32 the Candidate of Science degrees.

Specialisation : microbiology

Main trends of scientific investigations are: Ecology, systematics and basic metabolism of

microorganisms, especially aerobic sporeforming bacteria and their extremophilic forms, yeasts, lactobacteria, fungi, chemo- and photoautotrophs; microbial enzymes and their use for biocatalysis; biology of nitrogen-fixing bacteria and their use for production of fertilisers; entomopathogenic bacteria and their use for pest control.

Received scientific important results: The Institute has pilot and semi-industrial installations for production of microbial preparation.

Based on application of original cultures, efficient technologies by use of microbial enzymes and cells for production of l-alanine, l-aspartic acid, different types of cyclodextrins and their derivatives, l-malic and lactic acids were developed.

The purity of products mentioned is not less than 98 percent, the prices by agreement are lower to international ones.

The Institute using original strains has developed new microbial preparations, as follows: the acido-lactic product "Narine" for prophylaxis and treatment of gastro-intestinal and other diseases, especially in childhood; the bacterial insecticide preparations "BIP" and "BLP" for control of lepidopteran pests and mosquitoes respectively; the bacterial nitrogen fixing fertilisers.

The Institute is for many years actively engaged in the research and applied work related to the production of fructose-glucose sirup and fructose from inulin-containing plants.

Long-term researchers are carrying out in fields for: intensification of methane fermentations; bacterial leaching of copper and other metals; production of feed and food products on microalgae.

The Institute co-operates with scientific organisations of Russia, Ukraine, Japan, USA and Europe.

The institute has received grants from INTAS, PECO and from Soros International Science Foundation.

The Chemical Sciences Department

Members:

Academician Secretary

Vartanian, Sarkis A., D. Chem. S. Born in 1917. Since 1973, director of the O. L. Mndzhoian Fine Organic Chemistry Institute in Erevan which was created in 1973 to conduct research on the synthesis of medicines for the treating of cardiovascular, neuropsychic, infectious, and other diseases. Academician of the department since 1977. Academician secretary since 1984.

Academicians

Babaian, Araksiiia T., D. Chem. S. Academician since 1968.

Manvelian, Manuel G., C. Chem. S. Born in 1913. Academician since 1963. From 1970 to 1988, he served as director of the General and Inorganic Chemistry Institute in Erevan which produces chemical fibers, plastics, and petrochemicals. He was replaced by Suren Karakhanian. (LDA 87-11012.)

Matsoyan, Stepan G., D. Chem. S. Since 1973, director of the Organic Chemistry Institute in Erevan which conducts research on the structure and reaction mechanisms of unsaturated organic compounds and on polymers, pesticides, and pneumatic conveyors. Academician since 1982. (LDA 87-11012.)

Nalbandian, Aram B., D. PM. S. Born in 1908. Academician since 1963. Since 1978, director of the Chemical Physics Institute in Erevan which was created in 1974 to conduct theoretical studies of the mechanisms of oxidation of organic substances in gaseous and liquid phases. (LDA 87-11012.)

Vartanian, Sarkis A., D. Chem. S. Born in 1917. (See academician secretary above.)

Corresponding Members

Dovlatian, Vram V. Corresponding member since 1986. (LDA 87-11012.)

Gasparian, Artsruni M. Corresponding member since 1968. (LDA 87-11012.)

Indzhikian, Maia G. Corresponding member since 1986. (LDA 87-11012.)

Kostanian, K. A. Corresponding member since 1977. (LDA 87-11012.)

Vardanian, Irma A. Corresponding member since 1986. (LDA 87-11012.)

Chemical Sciences Department: Research institutes subordinate to the department by order of founding:

O. L. Mndzhoian Fine Organic Chemistry Institute in Erevan.

Founded in 1955. Conducts research on synthesis of medicines for the treating of cardiovascular, neuropsychic, infectious, and other diseases. Director: Vartanian, Sarkis A., D. Chem. S., '73. (See: Ruble, Vol. I., p. 301.) (GSE 28, p. 116.) [See below]

MNJOYAN INSTITUTE OF FINE ORGANIC CHEMISTRY

Address - 26 Azatutjian ave.,

375014, Yerevan, Republic of Armenia

Founded in 1955

Phone: (007-8852) 28-83-34

Fax: (007-8852) 28-83-32

The Head: D. Sc., Bagrat T. Garibjanian

Total number of employees is 460 of whom 221 are research scientists, and of whom 11 hold the Doctor of Science and 92 hold the Candidate of Science degrees.

Specialisation: Revealing the regularities of the correlations between the chemical structure and biological activity of synthesised original compounds and to apply them in creating new drugs through planned synthesis.

Main trends of scientific investigations are: Discovering efficient drugs for the treatment of cardio-vascular, neuro-psychic and infectious diseases, malignant tumours as well as for use in surgical practice.

Received scientific important results: Discovery of 12 drugs, which have been used and now are used in the region of the former USSR .

The Institute co-operates with the Central Chemical Research Institute of Hungarian Academy of Sciences; the Kitazato University of Japan; the National Anticancer Institute of USA.

The Institute participated in numerous international scientific conferences in Moscow, Haidarabad, Bratislava, Varna, Riga, Houston and St.Petersburg. The institute has been granted by the Soros grant. [Material taken from the Armenian Academy Home Page on the Internet, 1996.]

Organic Chemistry Institute in Erevan.

Founded in 1957 from the Organic Chemistry Department of the Chemistry Institute of 1935. The institute conducts research on the structure and reaction mechanisms of unsaturated organic compounds and on polymers, pesticides, and pneumatic conveyors. A leading Soviet institution for research on amonia compounds. Director: Matsoian, S. G., '73; Deputy Director Mailian, Sh. M., '71. (See: Ruble, Vol. I., p. 301.) (GSE 28, p. 116.)

INSTITUTE OF ORGANIC CHEMISTRY

**Address - 167a Zakharia Khanakhertsi St.,
375091, Yerevan, Republic of
Armenia**

Founded in 1935

Phone: (007-8852) 28-35-21

The Head: Prof., D. Sc., Shaliko H. Badanian

Total number of employees is 180 of whom 109 are researchers, and of whom 13 hold the Doctor of Science and 47 the Candidate of Science degrees.

Specialisation : Organic synthesis, polymer chemistry.

Main trends of scientific investigations are: Investigation of methods of functionalisation of unsaturated molecules for the constuction of low molecular bioregulators. Synthesis and study of the oxygen, phosphorus and nitrogen unsaturated containing compounds and also polymers with a complex of properties.

Received scientific important results: The reactions of intra- molecular cyclazation have been disclosed, the application field of Stevens and Sommelet rearrangements reactions

has been expanded; Some regularities concerning regio-, stereo- and chemo-selectivity as well as specificity of functionalisation of unsaturated systems have been established; The reactions of nucleophilic substitution of vinylpropargylic systems; The generalised rule of proceeding of elimination reactions has been proposed; The nucleus of phosphororganic compounds; The perspective methods of preparation of phosphines, phosphine oxides and phosphonates have been worked out; The extraordinary phototropic isomerisation and nucleophilic addition reactions in unsaturated phosphonium salts have been revealed; the synthesis methods of numerous natural bioregulators, fragrant and spice substances as well as reagents which are necessary for fine organic synthesis have been elaborated; The production of some feromonts used in the newest methods of plant defence has been organised; The regularities of polymerisation of different functionally substituted styrenes triazine and other monomers have been investigated; the possibility of cyclopolymerisation of eninic and diacetylenic compounds has been shown; It has been established that the o-derivatives of above compounds undergo the intramolecular thermal and catalytic cyclisation; On the basis of polyvinylacetate and polychloroprene the high fillery composites have been prepared; On the basis of obtained water soluble polymers the gluc compositions of high quality indexes have been proposed.

The scientific achievements of the Institute are reflected in 9 monographs and collections. There are more 3000 published articles and nearly 500 author's certificates of former USSR.

The Institute participated during 1979-1993 in following conferences: IUPAC (Japan, BRD, Moscow, Yugoslavia, Helsinki); Mendeleev XIII and XIV (Moscow, Tashkent); Metalorganic chemistry (Riga); Organic Synthesis (Moscow); Phosphorus chemistry (Tallin); Chemistry of Heterocyclic compounds (Bratislava); Chemical ecology of insects (Czechoslovakia), Chemistry and Chemical technology (Iran). Institute received a grant from Soros Foundation. [Material from the Armenian Academy Home Page on the Internet, 1996.]

Biochemistry Institute in Erevan.

Founded in 1961. It studies chemical substances and processes in living organisms, including studies of enzymes, proteins, vitamins, and antibiotics. Director: Bunatian, Grachia Kh., '65; Deputy Directors: Galoian, Armen A., D. Bio. S., '72; Karagezian, Konstantin G., C. Bio. S., '62; and, Movsesian, Sedrak G., D. Bio. S., '73. (See: Ruble, Vol. I., p. 299. The institute is a center for neurochemical research and the study of environmental influences on embryonic growth.) (GSE 3, p. 308.) (See new material below.)

H. Kh. BUNATIAN INSTITUTE OF BIOCHEMISTRY

Address - 5/1 Paruir Sevak St., 375044,

Yerevan, Republic of Armenia

Founded in 1961

Phone: (007-8852) 28-18-40

Fax: (007-8852) 28-19-51

The Head: Academician of NAS, Aram A. Galoian

Total number of employees - 243 Scientific workers - of whom 131 are researchers and of whom 14 hold the Doctor of Science and 78 the Candidate of Science degree.

Specialisation : Neurochemistry

Main trends of scientific investigations are: Biochemistry of novel cardioactive hormones and specific proteins of hypothalamus and atrium; Neurohormonal regulation of cyclic nucleotides and catecholamine biosynthesis; Biochemistry of new metal-containing

proteins and enzymes in the brain and other organs.

Received scientific important results: In H.Kh.Buniatian Institute of Biochemistry of NAS RA for the first time there have been discovered in brain several new hormones of protein nature which regulate cardiac blood circulation as regulators of the secondary messengers. There is discovered a number of proteins and peptides regulating Ca-CaM-dependent enzymes which influence without Ca and CaM presence. There is revealed a new level of regulation of CaM-dependent enzymes in the cell. Recently in the Department of Hormone Biochemistry there was isolated from the brain a new group of immunomodulators including thymosin b4 (1-39), immunophilin FK-506 - an immunodepressant receptor. There were deciphered the primary structures of hormones contracting the coronary vessels, as well as of the above mentioned receptor protein of immunodepressant. The structures of the majority of the substances mentioned are affirmed by chemical synthesis too. A radioimmunochemical assay was worked out for determination of novel hormones in the blood and other organs affecting the coronary vessels which is very important for early diagnosis of the infarction of myocardium and other spasmatic diseases of cardiovascular system. Having determined the corresponding protein- hormonal complex in the brain, it is clear now that one of them, neurohormone C, is of a great importance for the treatment of the infarction of miocardium, pancreatitis, pancreonecrosis, etc. The method of isolation of these hormones from brain and blood have received certificates from different countries, such as USA, Canada, France, Switzerland, etc. There are obtained new data of metal-containing proteins. The primary structure of plantacianin was discovered. Important data are obtained on embryonal and aging neurochemistry, as well as on the chemical composition of mitochondrial and synaptic lipids.

The institute co-operates with Medical Academy of Gdansk (Poland); Institute of Botany in Munchen; Max-Plank Institute of Biochemistry in Munchen; Institute of Physiological Chemistry of Tuingen University (Germany); Institute of Chemical Biology of Strassburg (France); Washington National Health Centre; Beckman Research Institute of the City-Of-Hope (USA); Medical Institute of Seattle; Korean Gensing and Tobacco Research Institute; Brussels University (Belgium); A.N.Bach Institute of Biochemistry of Russian Academy of Sciences.

The institute participated in Scientific forums in Houston, Montpellier, Zurich, Pushcino, Moscow, St.Petersburg and New Orleans.

The institute received numerous grants from different international scientific foundations. [Material taken from the Armenian Academy of Sciences Home Page on the Internet, 1996.]

General and Inorganic Chemistry Institute in Erevan.

Founded in 1969. The institute produces chemical fibers, plastics, and petrochemicals. Director: Karakhanian, Suren, '88. (GSE 28, p. 116.) [See below]

INSTITUTE OF GENERAL AND INORGANIC CHEMISTRY

Address - 51 Fioletov St., 375051,

Yerevan, Republic of Armenia

Founded in 1957

Phone: (007-8852) 23-07-38

The Head: Cand. Sc., Souren S. Karakhanian

Total number of employees is 267 of whom 157 are researchers, and of whom

three hold the Doctor of Science and 44 the Candidate of Science degrees.

Specialisation : Complex wasteless retreatment of minerals. On Principle new methods of wastes retreatment and creation of principal new methods.

Main trends of scientific investigations are: Ion-exchange in inorganic systems with the creation of a new materials; Investigation of principle new methods of decomposition of minerals; Physic-chemical analysis in water solutions under hydro-thermal conditions; Development of general principles of neutralisation of industrial wastes; Creation of super-pure materials; Investigation of regarities of crystallisation of amorphous substances; Coating of metal surfacis by elastic wave, and so on.

Received scientific important results: Owing to complex retreatment of basic aluminium silicate, were created new technologies for receipt metasilicate of natrum, calcium, wolastonite, complex batches of glass, super pure silicat, some polisilicat, first by Institute's technology was expluataed a power prooluction of retreatment waste phosphorus gypsum. Have successes in receipt of pure-molibdenum disulphate, new adsorbents. They were included in production.

The Institute co-operates with Russian Academy's Institute of Syntetic Polymers, German "Graflangen" firm and French University of Pier and Mary Curie. The institute have a joint works with many Russian scientific centers (Institute of General and Inorganic Chemistry, Scientific-Research Institute of fertilisers fungieicles and insecticedes, "Quartz" scientific union, State Optical Institute, "Fonon" scientific industrial union and so on).

The Institute participated in International scientific congresses - the Institute reported an International chemist's chemical technologies congress (Tehran, 1993). [Material taken from the Armenian Academy of Science Home Page on the Internet, 1996.]

Chemical Physics Institute in Erevan.

Founded in 1974. The institute conducts theoretical studies of the mechanisms of oxidation of organic substances in gaseous and liquid phases. Director: (vacant) (See below.)

INSTITUTE OF CHEMICAL PHYSICS
Address - 5/2 Paruir Sevak St., 375044,
Yerevan, Republic of Armenia
Founded in 1975
Phone: (007-8852) 28-16-41
Fax: (007-8852) 28-87-27; 52-36-40
E-mail: bdb@mtd.armenia.su

The Head is Associative Member of NAS, Prof., D. Sc., **Adolf A. Mantashyan**

Total number of employees is 160, of whom 89 are researchers, and of whom six hold the Doctor of Science and 50 the Candidate of Science degrees.

Specialisation : Development of the theory of chemical conversion; Studing a kinetic sand a mechanism of complex chemical reactions proceeding with a participation of free radicals and atoms, including chain reactions as well as combustion and explosion in thegas and condensed phases.

Main trends of scientific investigations are: Complex and elementary chemical reactions with a participation of free radicals; Chemistry of free radicals; Chain reactions;

Combustion and explosion in the gas and condensed phases; Synthesis of inorganic materials under condition of combustion;. Development of technologies of refractory material production by means of SHS (self-propagating high temperature synthesis) method; Catalytic processes; Heterophase chemical processes. Conversion of solid inorganic compounds under influence of chain gas phase deposition; Photochemical, laser chemical processes and reactions of excited particles; Mathematical modelling and regulation of the chemical processes; Problems of environmental chemistry.

Received scientific important results: A new method for investigation of complex chain radicals had been developed at the Institute. That provided an opportunity to study the kinetics and the mechanism of the complex reactions on a level of the elementary processes; It was worked out a new approach of mineral and ore raw materials processing.

The Institute co-operates with the leading scientific centers of some countries such as the Institute of Chemical Physics RAS (Moscow); the Institute of Structural Makrokinetics RAS (Chernogolovka), the Institute of Chemical Kinetics and Combustion (Novosibirsk), the Institute of the Combustion Problems (Alma-Ata, Kazakhstan), Kazakh State University, University of Leeds (England), University of Lills (France), Catholic University of Louvain-la-Neuve (Belgium), the Central Research Institute for Chemistry Hungarian Academy of Sciences.

The Institute participated during 1993-1994 in III International Conference on Chemical kinetics (USA); in II International Combustion Symposium "Self-propagated High Temperature Synthesis" (USA); 25 International Combustion Symposium (USA); International Conference "Conversion of hydrocarbons" Krasnoyarsk, Russia; International Symposium on Catalysis (Japan).

Two programs at the Institute have financial support from the International Soros Foundation. [Material taken from the Armenian Academy of Sciences Home Page on the Internet, 1996.]

CENTER FOR ECOLOGICAL-NOOSPHERE STUDIES

Address - 19 Charents St., 375025, Yerevan, Republic of Armenia

Founded in 1989

Phone: (007-8852) 55-13-61

Fax: (007-8852) 52-36-40

E-mail: ecocentr@pnas.sci.am

The head of the Center is Armen K. Sagatelian, C. Chem. S.. Total number of employees - 76 Scientific workers - 46 of whom are research scientists and of whom ten hold the Doctor of Science degree and 28 hold the Candidate degree.

Specialisation : Environmental studies and geochemistry. Main trends of scientific investigations are: Environmental geochemistry, biogeochemical cycles, monitoring of radionuclides, effectiveness and energy capacity of environmental systems, industrial environmental, risk assessment, evaluation of environmental capacity of the region, methodology of analysis of risks of natural hazards, computer technologies and data bases in the sphere of environment protection.

Received scientific important results: As a basis for environmental risk assessment of enterprises being in project the territory of the Republic has been systematized according to the migration of chemical elements; Natural associations of chemical elements have been calculated for the administrative region of the Republic; The maps of atmospheric contamination of Yerevan and Kamo cities, Yerevan agglomeration and the basin of lake Sevan have been created; The maps of heavy metal contaminations of the territory of the

city of Yerevan have been created, it has been proved that as a result of intense contamination of the territory Pb-Zn-Sn- Ag-Cu-Mo-W technogene association has formed most of the elements of its being of 1-st and 2-nd degree of dangerousness; The index of natural monuments of the Republic of Armenia has been created; "Regional complex scheme of nature protection of Armenia", "Nature protection" sections of main urban development plans of Yerevan, Kamo and Arutch, dendrodesigns for forest station in the disaster zone have been worked out; The maps of heavy metal content according have been created as well as the map of ⁹⁰Sr and ¹³⁷Cs radionuclides content in the soil types of the Republic of Armenia; The rules of space distribution of technogene-anomalous zones have been discovered and the principles and methods of contaminative soils recovery have been worked out; The rules of distribution of chemical elements and radionuclides related to the vertical zones have been elucidated. It has been proved that the use of fertilisers reduces the accumulation of radionuclides in agricultural crops and meadow plants; The theoretical calorificity of vegetable massive and the rules of changeability of photocyanosis according to the vertical zones and related to the anthropogenecontamination were discovered. The method of implementation of bioenergy parameters for evaluation of environmental state of ecosystems is being worked out.

The institute co-operates with Armenian Engineers and Scientists of America, INC, Department of Environment; West Allis Memorial Hospital Industrial toxicology laboratory; the Center for main issues of rational utilisation of natural resources and energy; Academy of Sciences of Poland; Institute of Mineralogy and Crystallochemistry of Rare Elements, Academy of Sciences of RF; apparatus of RF; State University of Petrozavodsk; Institute of Geology and Geochemistry of Fuel Fossil, National Academy Of Sciences of Ukraine. The Institute participated in numerous scientific Congresses in USA, France, Russia, Checkoslovakia and other countries. [Material taken from Armenian Academy of Sciences Home Page on the Internet, 1996]

The Earth Sciences Department

Members:

Academician Secretary

Gabrielian, A. G. Academician of the department since 1982. Academician secretary since 1984. (LDA 87-11012.)

Deputy Academician Secretary

Bagdasarian, Andranik B. D. Geog. S. Born in 1918. Corresponding member since 1971. Deputy academician secretary since 1982. (LDA 87-11012.)

Academicians

Arakelian, Babken N. D. Hist. S. Born in 1912. Academician since 1977. (LDA 87-11012.)

Aslanian, Ashot T. D. GM. S. Since 1976, director of the Geology Institute in Erevan which was created in 1935 to study the mining industry of the Armenian SSR in order to improve working conditions and production. It also does basic geological research. Academician since 1986. (LDA 87-11012.)

Gabrielian, A. G. Academician since 1982. (LDA 87-11012.)

Magakian, Ivan G. D. GM. S. Born in 1914. Academician since 1948. (LDA 87-11012.)

Nazarov, Armenak G. D. Tech. S. Born in 1908. Academician since 1961. Since 1961, director of the Geophysics and Seismology Engineering Institute in Leninakan which was established in 1961 to study the deep geological structure of the Armenian SSR. It also researches explosion-produced seismic waves and the effects of earthquakes on buildings. It coordinates all Armenian earthquake research and develops experimental and special use seismological instruments for other Soviet research institutes. (LDA 87-11012.)

Paffengolts, Konstantin N ., D. GM. S. Born in 1893. Academician since 1943. (LDA 87-11012.)

Corresponding Members

Bagdasarian, Andranik B ., D. Geog. S. Born in 1918. Corresponding member since 1971. Deputy academician secretary since 1982. (LDA 87-11012.)

Dzhanpoladian, Levon M . Born in 1912. Corresponding member since 1971. (LDA 87-11012.)

Grigorian, Sergei V . Corresponding member since 1986. (LDA 87-11012.)

Matevosian, Artashes A . Corresponding member since 1971. (LDA 87-11012.)

Movsisian, Rafael A . Corresponding member since 1986. (LDA 87-11012.)

Nersesov, Igor' L ., C. PM. S. Born in 1919. Corresponding member since 1982. Since 1970, he has been chief of the Seismology Laboratory and since 1971 deputy director of the O. Iu Shmidt Earth Physics Institute in Moscow which was established in 1956 and is a center for the study of earthquakes and seismic phenomena. (LDA 87-11012.)

Ter-Stepanian, Georgii I ., D. Tech. S. Born in 1907. Corresponding member since 1977. (LDA 87-11012.)

Earth Sciences Department : Research institutes subordinate to the department by order of founding:

Geology Institute in Erevan.

Founded in 1935. Studies the mining industry of the Armenian republic in order to improve production. It also does research in broad geological areas of study. Institut geologi, Ulitsa Barekamutian 24a, Erevan. (Listed as Institute of Geological Sciences, established in 1958, and does research in climatology, hydrology, soil geography and biological geography. Institut geologicheskikh nauk AN Arm SSR, Ulitsa Barekamutian, 24b, Erevan. Director: Aslanian, A. T., D. GM. S., '76. (See: Ruble, Vol. I., p. 300.) [See below]

THE INSTITUTE OF GEOLOGICAL SCIENCES

Address - 24a Marshall Bagramian ave.,

375019, Yerevan, Republic of Armenia

Founded in 1935

Phone: (007-8852) 52-44-26

The Head: D. Sc., Ruben Djrbashian

Total number of employees - 331 of whom 110 are scientific researchers, and of whom 12 hold the Doctor of Science and 62 the Candidate of Science degrees.

Specialization : geology, geography

Main trends of scientific investigations are: Stratigraphy of phanerozoian (formations); Regional geology and tectonics; Lithogenesis of volcanic and sedimental sedimentations; Geology and petrology of magmatic and metamorphic formations; Recent and older volcanism; Ore formations and metallogenics; Energy resources (geology, regularities of geological distributions and prospects); Geochronology and isotopic geology; Geological engineering; Efficient utilisation of geological space and its conservation; Mathematical modelling and creation of geological data Base; Mining; Geographical problems (physical geography and geomorphology).

Received scientific important results: The Institute published ~The Geology of Republic of

Armenia~ monograph in 10 volumes and over than 100 monographs devoted to paleontology, regional geology and tectonics, lithology, magmatism and volcanology, ore formations and metallogenics, non-metallic ore deposits, geological engineering, geography of Armenia and Lesser Caucasus.

The Institute participated in International Geological Congresses (USA, Japan, France, Moscow), International Mineralogical Association (Novosibirsk, Bulgaria, Italy),

Volcanological Congress Germany, Turkey, International Association of Ore Deposits genesis (Canada, Japan, China). The Institute received research grant of D. Soros` es ISF. [Material taken from the Armenian Academy Home Page on the Internet, 1996.]

Geophysics and Seismology Engineering Institute in Leninakan.

Founded in 1961. It studies the deep geological structures in the republic, researches explosion-produced seismic waves, and the effects of earthquakes on structures. It coordinates all Armenian earthquake research and develops seismological instruments for other Soviet research institutes and ministries. Leninakanskii institut geofizikii i inzhenernoi seismologii (LIGIS). Leninakan Director: Nazarov, Armenak G., D. Tech. S., '61. (See Ruble, Vol. I., p. 302.) [See below]

INSTITUTE OF GEOPHYSICS AND ENGINEERING SEISMOLOGY

**Address - 5 Leningradian St., 377501,
Gyumry, Republic of Armenia**

Founded in 1961

Phone: (007-8852) 28-64-12; 56-53-85

The Head: D. Sc., Sevada M. Hovhanissian

Total number of employees is 126 Scientific workers, of whom 52 are researchers and of whom five hold the Doctor of Science and 28 hold the Candidate of Science degrees.

Specialisation : Geophysics, Engineering seismology and Seismic-resistant building

Main trends of scientific investigations are: The study of seismicity and discovery of seismic foretokens of earthquakes; The study of earthquake focus and physics; The study of earth internal structure and tensedformative condition of earth-core; Search of effective foretokens of earthquakes; Elaboration of the new and well-known methods of mine-geophysics; Study of seismic features of grounds to make perfect the methods of detailed seismic zonation, seismic microzonation, general seismic zonation; Elaboration of new method for account on seismic-resistance; To make perfect the theory of resemblance and practice of modelling the seismic processes.

Received scientific important results: The method of engineering analysis of seismic forces; Made perfect the theory of resemblance and practice of modelling the seismic processes; Creation of general seismic zonation and seismic microzonation of territory of Armenia; The creation of earth-core model by gravimagnetic data of the territory of Armenia; Elaboration of Armenian mines of underground geophysical methods.

The Institute co-operates with the United Institute of Geophysics and Russian Academy of Sciences; Ural Scientific Center of Russian Academy of Sciences; St. Petersburg "Minegeophusics" scientific union; Ukraine Geophysics Institute; Polish Geophysical Investigation Enterprise.

The Institute participated in the International Geological Congress in 1992, the fifth year of Spitak earthquake in 1993, Iran first World seismological and earthquake conference in 1991. The Institute received a Soros Prize. [Material taken from the Armenian Academy of Sciences Home Page on the Internet, 1966,]

Geographical Sciences Institute in Erevan.

No date in source. The institute conducts research on water and climatic resources, agroclimatic geography and the general state of local environmental conditions. Institute geograficheskikh nauk AN Arm SSR, Ulitsa Barekamutian, 24a, Erevan. See: Ruble, Vol. I., p. 300.)

Water Problems Institute in Erevan.

No date in source. Scientists of this institute study and evaluate the quality of the republic's waterways. Institut vodnikh problem AN ArmSSR., Erevan. (See Ruble, Vol. I., p. 302.) [See below]

INSTITUTE OF HYDROECOLOGY AND ICHTHIOLOGY

Address - 90/32 Sunsukian St., 375012,
Yerevan, Republic of Armenia

Founded in 1923

Phone: (007-8852) 22-74-23; (007-88276) 2-34-19

The Head: D. Sc., Raphael H. Hovhannessian

Total number of employees - 102, of whom 40 are scientific researchers, and of whom four have the Doctor of Science and 17, the Candidate of Science degrees.

Specialisation : Hydroecology

Main trends of scientific investigations are: Studying essential regularities of biochemical circulation of substances and energy, qualitative, quantitative and spatial changes of the structure and function of trophic (nutrient) chains and their eutrophication mechanisms in hydroecosystem. Developing measures (suggestions) on restoration, conservation and rational utilisation of natural resources (water, biological, etc.) of Alpine lakes, rivers and reservoirs.

Studying the ichthiofauna of lakes and rivers, and taking into account the ecological possibilities of the presented reservoir to develop measures of conservation, restoration and productive utilisation of fish stock, as well as intensification of fish-production and acclimatisation of new fish species. Proceeded from the required direction of economic and energetic development of the country the develop scientifically founded measures providing the quality of water usage of water resources of lakes, rivers and reservoirs for drinking, energetic, industrial, agricultural, fish-production and recreational purposes, concerning the ecosystem of the exploited reservoir to maximum normal state.

Received scientific important results: Anthropogenic eutrophication mechanisms by changeable morphometry have been revealed; the autotroph subsystem of the lake has been exposed to mathematical modelling; Measures of lake deeutrophication ecosystem, restoration, conservation and regional utilisation of its natural resources have been developed; Data bank and hydroecological monitoring have been organised.

The Institute co-operates with Moscow state University; Institute of Lake Management of Russia; Institute of Zoology of RAS; Institute of Evolutional Morphology and Ecology of Animals after Severtsov of RAS; All-Russian Research Institute of Pond-Fish Economy; Institute of Hydroecology of NAS of Ukraine; Institute of Zoology of Belorussian AS; Oregon State University (USA); Institute of Freshwater Ecology (UK); Instituto Italiano di Idrobiologia (Italy); Institute of Hydroecology (Japan); Balaton Institute of Lymnology (Hungary). The Institute participated in International Congress of Northern American Lymnologists (Sietl, USA). [Material from Armenian Academy Home Page on Internet,1996]

The History and Economics Department

Members:

Academician Secretary

Agaian, Tsatur P ., D. Hist. S. Born in 1911. Academician of the department since 1968. From 1968 to 1986, academician secretary. . (LDA 87-11012.)

Galoian, Galust A ., D. Hist S. (See vice president above.)

Academicians

Agaian, Tsatur P ., D. Hist. S. (See academician secretary above.)

Arakelian, Artashes A ., D. Econ. S. Born in 1909. Academician since 1960. Since 1963, director of the Economics Institute in Erevan which was elevated to institute status in 1955 and which specializes in research on labor resource allocation, computer technology, and input-output analysis. (LDA 87-11012.)

Galoian, Galust A ., D. Hist. S. (See academician secretary above.)

Garibdzhanian, Gevorg B. Academician since 1971. . (LDA 87-11012.)

Ioannisian, Abgar R ., D. Hist. S. (See vice president above.)

Khachikian, Levon S ., D. Hist. S. Born in 1918. Academician since 1971. (LDA 87-11012.)

Kotanian, Mikhail Kh . Academician since 1986. (LDA 87-11012.)

Nersesian, Mkrtich G ., D. Hist S. Born; in 1910. Academician since 1953. Since 1968 member of the Presidium of the academy. . (LDA 87-11012.)

Piotrovskii, Boris B ., D. Hist. S. Born in 1908 in St. Petersburg. Soviet archaeologist and orientalist. Academician of the History Department of the AN SSSR since 1970. Academician of the History and Economics Department of the Armenian Academy of Sciences since 1968. Honored art worker of the RSFSR (1964). From 1953 to 1964, he directed the Leningrad section of the Institute of Archaeology of the AN SSSR. In 1964, he became director of the Hermitage in Leningrad, and in 1966, he assumed additional responsibilities as head of the subdepartment of the Ancient East at the University of Leningrad. In 1930, he began investigating archaeological remains in Transcaucasia, the northern Caucasus, and Middle Asia. From 1961 to 1963, he led an archaeological expedition of the AN SSSR in Nibia (the Arab Republic of Egypt) . Between 1939 and 1971, he excavated an Urartian city and fort on Karmir-Blur hill, near Erevan. His works are on history, culture and art of the Caucasus and the Ancient East, in particular, the Urartu Kingdom, and to the origin and ancient history of the Armenian people. In 1988, he was appointed advisor to the national academy's Presidium. . State Prize, 1946--for the History and Culture of Urartu. (LDA 87-11012.)(GSE 19, p. 551.)

Sarkisian, Gagik Kh ., D. Hist. S. Born in 1926. Director of the Oriental Studies Institute in Erevan, which was established in 1958. In the 1970s scientists at the institute conducted research on Turkey, Iran, Arab Countries, Kurdish Studies, the Ancient Orient, and the Caucasus and the Byzantium. He has been an academician since 1986. (LDA 87-11012.)

Corresponding Members

Asratian, Morus S ., C. Hist. S. Corresponding member since 1963. (LDA 87-11012.)

Avetisian, Grant A . Born in 1927. Corresponding member since 1986. (LDA 87-11012.)

Barkhudarian, Vladimir B . Corresponding member since 1986. (LDA 87-11012.)

Eremian, Suren T ., D. Hist. S., Corresponding member since 1953. (LDA 87-11012.)

Khodzhabekian, V. E. , D. Econ. S. Corresponding member since 1982. (LDA 87-11012.)

Kotandzhian, Gaik S. Corresponding member since 1977. . (LDA 87-11012.)

Simonian, Grachik R ., D. Hist. S. Born in 1928. Corresponding member since 1986. . (LDA 87-11012.)

History and Economics Department: Research institutes subordinate to the department by order of founding:

Economics Institute in Erevan.

Elevated to Institute status in 1955. The institute specializes in research on labor resource allocation, computer technology, and input-output analysis. In 1978, the institute was organized into seven departments: 1. Political Economics of Socialism, 2. Effectiveness of Capital Investment, 3. Fundamental Funds and New Technology, 4. Economic Accounting and Material Stimulation, 5. Labor Economics, 6. Agrarian Relations, and 7. Economic History and Thought. Director: Arakelian, Artashes A., D. Econ. S., '63; Deputy Director Bronshtein, Ia. T., '83. (See: Ruble, Vol. I., pp. 144-145. Listed as Institute of Economics.)

ECONOMICS INSTITUTE

Address - 15 Abovian St., 375001,

Yerevan, Republic of Armenia

Founded in 1955

Phone: (007-8852) 58-19-71; 56-53-85

The Head: Academician, D. Sc., Mikael Kh. Kotanian

Total number of employees - 43 Scientific workers of whom 30 are researchers, and of whom six hold the Doctor of Science and 12 hold the Candidate degree

Specialisation : Development of Economic Co-operation in different spheres of the economy in RA, Investigations on basic problems forecasting in science and industry.

Main trends of scientific investigations are: Slacken of demographic strain; Realisation of prohibited and contractual themes; Basic problems of domestic mineral resources utilisation; Basic economic problems of scientific potential development; basic problems of agro-relations start-up and development; Economic problems of external economic co-operation development; Basic economic problems of ecology; Development of ownership forms; Forecating of complex projects for scientific-technical and socio-economic development; adaptation of scientific- technical potential to market economy.

The institute co-operates with the Economics Institute under the Russian Academy of Sciences; "Haik" organisation in Washington; "Armenian scientists and engineers union" in Los-Angeles.

The institute participated in international symposia in California, Austria, Bulgaria, France and Russia. [Material taken from the Armenian Academy of

Oriental Studies Institute in Erevan.

Established in 1958, the new institute pulled scholars scattered throughout the academy together and in the late 1970s, the institute conducted research in six departments: Turkey; Iran; Arab Countries; Kurdish Studies, Ancient Orient; and, Caucasus and Byzantium. Director: Sarkisian, G. Kh. (See: Ruble, Vol. I., p. 411.) [See below]

INSTITUTE OF ORIENTAL STUDIES
Address - 24g Marshall Bagramian St.,
375019, Yerevan, Republic of Armenia

Founded in 1971

Phone: (007-8852) 58-33-82; 52-93-11

The Head: NAS Academician Gagik Kh. Sarkissian

Total number of employees is 53 of whom 26 are researchers and of whom two hold the Doctor of Science and ten the Candidate of Science degrees.

Specialisation : History and Philology of the Near and Middle East

Main trends of scientific investigations are: Assyriology, Caucasian Studies, Turkology, Iranistics, Christian Orient, Kurdology, Arabistics, Oriental written sources and Oriental Philology

Received scientific important results: New History of Armenia in Investigation of Foreign Modern Authors; Anthology of Persian Potry Luwian Kingdoms of Asia Minor and Surrounding Regions in the XII- VIII c. B.C.

The Institute co-operates with England, France, Germany, USA, Egypt, Lebanon, Syria, Italy, Poland, Belgium, Israel, Sweden and Australia. In October 1994 two scholars of the Institute will participate in a conference (Greece).

Archeology and Ethnography Institute in Erevan.

In 1959, the Archeology sector and the ethnography group of the Institute of History were combined to form a separate Institute of Archeology and Ethnography within the Armenian Academy of Sciences. Institute scientists have sponsored important digs throughout the republic and have issued studies on primitive society in Armenia; 4th millennium B. D. agricultural life of the settlement at Tekhuta; Siunik cave art; the culture of 3rd millennium B. C. Armenian hill dwellers; Bronze and Early Iron Age Armenia; the Erebuni murals, and the art of Armenia in the Urartu period. (See: Ruble, Vol. III, p. 121.) [See below]

INSTITUTE OF ARCHAEOLOGY & ETHNOGRAPY
Address - Carnets St., 375025,
Yerevan, Republic of Armenia
Founded in 1959

Phone: (007-8852) 55-68-96

The Head: Prof., Ph. D., Aram A. Kalantarian

Total number of employees, 147 Scientific workers, of whom 86 are research scientists, and of whom eight hold the Doctor of Science and 49 the Candidate of Science degrees.

Specialisation : Armenology.

Main trends of scientific investigations are: Archaeology, Ethnology, Folk-lore, Ethno-sociology, Anthropology, Epigraphy.

Received scientific important results: The investigation of the material and spiritual culture of the Armenian nation; The epigraphical and anthropological investigation of Armenia's historico-archaeological monuments from the beginning of Stone Age until Late medieval times; The investigation of the Armenian's traditional and present ethno-sociological movements; The Armenian folk-lore. The study of mythology, theatre and artistic dances; The result of all the mentioned directions are already published in five series or separate monographs and scientific articles.

The institute co-operates with The college of Wellesly Massachusetts. USA; The University of Kent (Belgium); The Institute of Mycene Egeo Anatolian studies. Rome, (Italy).

The Institute participated in An International symposium devoted to Armenia Art, Yerevan, 1978; Rome, 1981; Yerevan, 1985; Venice, 1988; An International symposium devoted to the Assyriology, Leipzig, 1984; Poznan, 1989.; An International symposium of ethno-sociologists, Yerevan, 1991; An International symposium of ancient and medieval Armenian literature, Yerevan, 1987; An International symposium devoted to 1500 anniversary of Movses Khorenatsy's "History of Armenia", Yerevan, 1991

The Institute received a grant from the National Library of Congress in Washington, D. C. [Material taken from the Armenian Academy of Sciences Home Page on the Internet, 1996]

THE SCIENTIFIC INFORMATION CENTER OF SOCIAL SCIENCES

Address - 24d Marshal Baghramian ave.,

375019, Yerevan, Republic of Armenia

Founded in 1970

Phone: (007-8852) 58-72-02; 52-93-11

The Head: Academician of NAS George B. Gharibjanian

Total number of employees is 53 of whom 26 are scientific researchers, and of whom two hold the Doctor of Science and 10 hold the Candidate of Science degrees.

Specialisation : Information

Main trends of scientific investigations are: Armenology, philology, history, economics, jurisdiction, art history, etc.

Received scientific important results: Many research-analytical, bibliographic and abstract collected articles have been published by the Centre, including: "Armenia-Russia", "Richard Hovhannisian", "From the History of the Genocide of Armenians", "Armenian Monodic Music". The following collections are ready for publication: "On the History Armenia", "Sayat- Nova", "About the Research Work of Morus Hasratian", etc.

The Institute co-operates with Moscow Scientific Information Centre on Social Sciences, the search centres of Ekaterinburg, St.Petersburg, as well as the cultural centres of Armenian diaspora of abroad. In 1995, April-May the Centre is planing to call up a conference in Yerevan. [Material taken from the Armenian Academy Home Page on the Internet, 1996,]

DEPARTMENT OF HISTORY AND CULTURE OF ARMENIAN COMMUNITIES

Address - 24d Marshal Baghramian ave., 375019,

Yerevan, Republic of Armenia

Founded in 1980

Phone: (007-8852) 56-06-48

The Head: D. Sc., K. Dallakian

Total number of employees - 21 Scientific workers of whom 16 are researchers and of whom seven hold the Doctor of Sciences degree and two hold the Candidate degree.

Specialisation : Scientific study of history and culture of Armenian diaspora. Main trends of scientific investigations are: The study of diaspora parties, political currencies, ideology of social institutions, the formation of diaspora; Activities of the Armenian diaspora in different social, legal, cultural environments; The role of the diaspora in the Armenian Question, in various periods of history.

Some published works: "Notes on the history of Bulgarian Armenian communities" ; "The Iranian Armenian community", The history of diaspora brief notes" and others.

The Iinstitute co-operates with many organisations abroad as "Armenian charity union"(in USA, Syria), with Zorian establishment, "The Armenian American international college", with "HOM" in France. [Material taken from Armenian Academy of Sciences Home Page on the Internet, 1996]

The Philosophy and Philology Department

Members of the Department

Academician Secretary

Brutian, Gevorg A ., D. Phil. S. Born in 1926. Academician secretary since 1980. Academician of the department since 1982. (LDA 87-11012.)

Academicians

Abramian, A. A . Academician since 1977. (LDA 87-11012.)

Agaian, Eduard B ., D. Phlg. S. Born in 1913. Academician since 1982. (LDA 87-11012.)

Brutian, Gevorg. A ., D. Phil. S. (See academician secretary above.)

Dzhrbashian, Eduard M . Academician since 1982. (LDA 87-11012.)

Karinian, Artashes . Born in 18899. Academician since 1956. . (LDA 87-11012.)

Sevak, Gurgen G . Academician since 1971. (LDA 87-11012.)

Voloshin, I. F . Academician since 1963. (LDA 87-11012.)

Zarian, Ruben V . Born in 1909. Academician since 1986. (LDA 87-11012.)

Corresponding Members

Arevshatian, Sen S ., D. Phil S. Born in 1926. Corresponding member since 1982. (LDA 87-11012.)

Ataian, Eduard R . Corresponding member since 1986. (LDA 87-11012.)
Davtian, Vaagin A . Corresponding member since 1986. (LDA 87-11012.)
Dzhaukian, Gevork B . Born in 1920. Corresponding member since 1968.
(LDA 87-11012.)
Khandzhian, Grigor S . Born in 1926. Corresponding member since 1982.
(LDA 87-11012.)
Nalbandian, Bache S. Corresponding member since 1971. (LDA 87-11012.)
Tamrazian, Grant S. Corresponding member since 1986. (LDA 87-11012.)

THE HRACHJA ATCHARIAN INSTITUTE OF LANGUAGE

Address - 15 Abovian St.,
375001, Yerevan, Republic of Armenia
Founded in 1943
Phone: (007-8852) 56-53-37

The Head: NAS Academician Gevork B. Djahukian

Total number of employees - 113 of whom 82 are scientific researchers, and of whom 13 hold the Doctor of Science and 38 hold the Candidate of Science degrees.

Specialisation : Armenian studies(a thorough investigation of the history of the Armenian language and the functioning of Armenian)

Main trends of scientific investigations are: Theory of linguistics; Comparative linguistics; History of Armenian Dialectology; Modern Armenian; Applied linguistics; Sociolinguistics Terminology and speech culture; Experimental phonetics; Lexicology and lexicography

Received scientific important results: Lexicography: A 4-volume dictionary of modern Armenian; "Armenian-Russian" and "Russian-Armenian" dictionaries; "Dictionary of Armenian Dialect of Words"; "Dictionary of Armenian Synonyms" History of the Armenian language: "History of the Armenian language", "Historical Grammar of Armenian"

Modern Armenian: "Modern Armeian"; "The Syntax of Modern Armenian" Comparative linguistics: "Comparative Grammar of Armenian"; "Problems of Comparative Grammar of Armenian"

Armenian dialectology:"Armenian Dialectology"; "Introduction to Armenian Dialectology"

General Linguistics: "History of Linguistics"; "General Linguistics" The institute co-operates with the centers, studying Armenian in USA, France, Italy, Germany, Netherlands, Canada, Switzerland, Australia and other countries

The institute participated in all the international symposia on Armenia studies (the USA, Italy, Netherlands, Canada, Switzerland, Armenia), as well as in symposia indifferent problems of general and comparative linguistics (the USA, Canada, Russia, etc.).

[Material taken from the Armenian Academy Home Page on the Internet, 1996.]

MANOUG ABEGHIAN INSTITUTE OF LITERATURE

**Address - 15 Grigor Lousavorich St.,
375015, Yerevan, Republic of Armenia**

**Founded in 1943
Phone: (007-8852) 56-32-45**

The Head: NAS Academician Dzhrbashian, Eduard M .

Total number of employees is 81 of whom 70 are researchers, and of whom 54 hold the Candidate of Sciences degree.

Specialisation : History of the Armenian literature, preparation of the works of classics for scientific publication.

Main trends of scientific investigations are: The research of the ancient, medieval, new and the newest periods of the history of the Armenian literature, the life and literary career of the classics and the contemporary writers, history of different genres, national peculiarities of the Armenian literature and scientific publications of the works of the classics of the Armenian literature.

Received scientific important results: The 9 volumes of "The History of the Armenian literature", the scientific publications of the Complete works of more than twenty classics, more than hundred monographic publications on the life and work of Armenian classical and contemporary writers.

The Institute co-operates with the scientific centers and individual scientists in Russia, Ukraine and the other countries of former SU, as well as with armenological centers in the USA and France.

Institute participated in an International Conference on Ancient and Medieval literature in Yerevan, A number of employees of the Institute have participated in the armenological conferences abroad. [Material taken from the Armenian Academy of Sciences Home Page on the Internet, 1996]

INSTITUTE FOR PHILOSOPHY AND LAW

**Address - 44 Aram St., 375010,
Yerevan, Republic of Armenia**

Founded in 1969

**Phone: (007-8852) 53-05-71
The Head: Prof., Ph. D. , Hamlet A. Gevorkian**

The total number of employees in 1996 was 78 of whom 63 were researchers, and of whom 15 hold the Doctor of Science and 33 the Candidate of Science degrees.

Specialisation : Philosophical, sociological, psychological and legal studies

Main trends of scientific investigations are: General problems of contemporary philosophy; History of the Armenian medieval philosophy; The phenomenon of nationality and national culture; Psychological adaptation in extremal situations; Constitutional law; The Constitution of the Republic of Armenia and the perspectives of democracy.

Received scientific important results: The Method of Historical Reconstruction in the History of Science. Ed. by H.Gevorkian. 1990 (in Russian); Arevshatian S., Gevorkian H.,

Mirumian K., Mirzojan H. The Armenian Philosophy in the System of Spiritual Culture. 1992 (in Armenian). and so on.

In 1993-1994 grants were awarded to researchers of the Institute from Boston University (USA); Forsham University (USA); Soros Foundation; Alexander von Humboldt Foundation (Germany). [Material taken from the Armenian Academy of Sciences Home Page on the Internet, 1996.]

SOCIOLOGICAL RESEARCH CENTER

Address - 44 Aram St.,
375010, Yerevan,
Republic of Armenia
Founded in 1992
Phone: (007-8852) 53-10-96

The Head: C. phil., Gevork A. Pogosian

Total number of employees - 10 of whom seven are researchers and of whom three hold the Candidate of Science degree.

Specialisation : Sociological studies

Main trends of scientific investigations are: Theoretical and applied researches in the field of sociology of disasters, public opinion polls, methodology and publishing of proposals, monography.

Received scientific important results: permanent studies of public opinion and large investigation "An Armenian's Life in Armenia"

The Institute co-operates with Sociological Institute of Russian Academy of Sciences; Sociological Centers of Ukraine and Beloruse Academies of Sciences; Disaster Research Center of Delaware University (USA); Institute for International Studies of University of Nevada; Reno and with Armenian offices of UNISEF and UNDP.

The Institute participated in 7 international scientific conferences, and in the XIII World Congress of Sociology in Bilefeld (Germany,1994). The Institute took a grant of W. Fulbright Program. [Material taken from the Armenian Academy Home Page on the Internet, 1996.]

The Physical and Mathematical Sciences Department

Members:

Academician Secretary

Garibian, Grigorii M., D. PM. S. Born in 1924. Academician of the department since 1971. Academician secretary since 1977. (LDA 87-11012.)

Academicians

Aleksandrian, Rafael A. Born in 1923. Academician since 1986. (LDA 87-11012.)

Ambartasmian, Ruben V . Born in 1941. Academician since 1986. (LDA 87-11012.)

Ambartsumian, Sergei A ., D. Tech. S. (See vice president above.)

Ambartsumian, Viktor A ., D. PM. S. (See academy president above.) (LDA 87-11012.)

Dzhrbashian, Mkhitar M ., D. PM. S. Born in 1918. Academician since 1956. Since 1980, director of the Mathematics Institute in Erevan which was created in 1955 and which specializes in applied mathematics with applications in mechanics, and in designing computers. (LDA 87-11012.)

Garibian, Grigorii M ., D. PM. S. Born in 1924. Academician since 1971. (LDA 87-11012.)

Gurzadian, Grigor A . Academician since 1986. (LDA 87-11012.)

Mergelian, Sergei N ., D. PM. S. Born in 1928 in Simferopol. Soviet mathematician. Corresponding member since 1953. Originally elected to the Physical Mathematical Sciences Department. He is an academician of the Physics and Mathematics Department of the Armenian Academy of Sciences. Since 1971, he has been vice president of the Armenian Academy of Sciences. He graduated from Erevan University in 1947, and worked there from 1945 to 1957. From 1954 to 1958 and from 1964 to 1968, he worked at Moscow University. From 1950 to 1960, he was director of the SRI of Mathematical Machines and of the Computing Center of the Armenian Academy of Sciences. From 1961 to 1971, he worked at the Institute of Mathematics of the AN SSSR. Since 1978, he has been director of the L. A. Orbeli Physiology Institute in Erevan which was established in 1943 to study problems of physiology, biochemistry, and pharmacology. His works include theory of functions of a complex variable, theory of approximation, and theory of potential and harmonic functions. He served as a deputy to the 5th, 6th, 7th, and 8th convocations of the Supreme Soviet. . State Prize, 1952. (GSE 16, p. 136.)

Saakian, Gurgen S . Academician since 1982. (LDA 87-11012.)

Ter-Mikaelian, Mikhail L ., D. PM. S. Born in 1923. Since 1970, director of the Physics Research Institute in Ashtarak which was established in 1967 to study lasers and their effects. Academician since 1982. (LDA 87-11012.)

Vartapetian, Gamlet A . Born in 1927. Academician since 1977. . (LDA 87-11012.)

Corresponding Members

Ambartsumian, Rafael V ., C. PM. S. Born in 1940. Corresponding member since 1982. (LDA 87-11012.)

Avakian, Robert O ., D. PM. S. Born in 1931. Corresponding member since 1986. (LDA 87-11012.)

Dzhrbashian, V. A. Corresponding member since 1982. (LDA 87-11012.)

Kazarian, Rafael' A ., D. Tech. S. Born in 1924. Corresponding member since 1986. (LDA 87-11012.)

Martirosian, Radik M . Born in 1936. Since 1983, director of the Radio Physics and Electronics Institute in Erevan which was founded in 1961 and whose research involves radio spectroscopy and radiophysical investigations. Corresponding member since 1986. (LDA 87-11012.)

Matinian, Sergei G., D. PM. S. Born in 1931. Corresponding member since 1982. (LDA 87-11012.)

Mirzoian, Liudvik V ., D. PM. S. Born in 1923. Since 1961, deputy director of the Astrophysics Observatory in Biurakan which was established in 1956 to study the structure of the galaxy, non-stable stars and nebulae, radio-astronomy, stellar cosmogony, and the theory of super-dense configurations of matter. Corresponding member since 1986. . (LDA 87-11012.)

Mkrtchian, Alpik R . Born in 1931. Corresponding member since 1986. . (LDA 87-11012.)

Movsesian, Melist E. ., C. PM. S. Born in 1928. Corresponding member since 1977. (LDA 87-11012.)

Muradian, Rudolf M ., D. PM. S. Born in 1936. Corresponding member since 1986. (LDA 87-11012.)

Nersesian, Anri B . Corresponding member since 1986. (LDA 87-11012.)

Orlov, Iurii F . C. PM.S. Born in 1924. Corresponding member since 1968. (LDA

87-11012.)

Petrosiants, Andronik M. Born in 1906. Corresponding member of the Physical and Mathematical Sciences Department since 1977, and academician of the Physical, Technical, and Mechanics Department since 1982. . (LDA 87-11012.)

Sedrakian, D. M . Corresponding member since 1982. (LDA 87-11012.)

Physical and Mathematical Sciences Department : Research institutes subordinate to the department by order of founding:

Mathematics Institute in Erevan.

Founded in 1955. The institute specializes in applied mathematics with application in mechanics, and designing computers. Director: Dzhrbashian, Mkhitar M., D. PM. S., '80. [See below]

INSTITUTE OF MATHEMATICS

Address - 24b Marshall Bagramian ave.,
375019, Yerevan, Republic of Armenia

Founded in 1971

Tel. (007-8852)52-47-91;52-48-01

E-mail:mamgin@math.armenia.su

The Head: Corresponding Member of NAS, **Alexander A. Talalian**

Total number of employees is 40 of whom 35 are research scientists, and of whom eight hold the Doctor of Science and 27, the Candidate of Science degrees.

Specialisation : Mathematics

Main trends of scientific investigations are: Section of complex analysis: Theory of integral transforms in the complex domain; Applications of this theory in boundary value problems; Waited integral representation in multidimensional complex analysis. Representations and boundary properties of subharmonic functions; Applications of factorisation theory of meromorphic functions in spectral analysis of linear operators; Cauchy type integral operators and waited Lipschitz classes. Boundary behavior and uniqueness theorems for analytic function classes; Classes of almost periodic analytic and meromorphic functions and their generalisations

Section of approximation theory: Problems concerning approximation and the best approximation by analytic functions; Applications of results on uniform and asymptotic approximation in the following areas of complex analysis: boundary properties of analytic functions, Nevanlinna's value distribution theory efficient analytic continuation. Location of a - points and geometric behavior of meromorphic functions

Section of real analysis: Trigonometrical and general orthogonal series; Theory of bases in Banach and weighted spaces; Spline theory and multidimensional polynomial interpolation; Differentiation theory of multidimensional integrals; questions of representation and uniqueness for Haar, Walsh and multiple trigonometrical series; Convergence of general orthogonal series; Problems concerning densities of lacunary subsystems of orthogonal systems.

Section of methods of probability theory: Integral and stochastic geometry: combinatorial

integral geometry; point processes of intersections and stereological problems for geometric processes; Measure generation by finitely-additional functionals in classical geometric spaces. Mathematical problems of statistical physics: limit theorems for Gibbs random processes and fields; Asymptotic properties of spin and phase transitions in lattice systems. statistics of stationary processes; asymptotic distributions of Toeplitz type random functionals; applications in the estimation problems.

Section of differential and integral equations: Correctness questions of initial and mixed problems for the equations with multiple characteristics and for the equations with single coefficients; nonlinear partial differential equations and equations with infinite number of independent variables. Solvability of integral equations especially generalising the equations with displacement kernels; problems concerning factorisation of operator-functions. Construction of sequential and parallel fast solution algorithms for differential and integral equations.

The Institute co-operates with universities of Potsdam, Mainz and Technology of Fraiberg, Essen, Pisa, Kamerino, Roma, Madrid, Paris-Sud, Le Man, Montreal, Alberta, Cornell, Northeastern California, Temple, Bolyai, Gdansk and Royal Technological Institute (Sweden).

The Institute participated in International congresses of mathematicians, of mathematical physics, international conferences on probability and statistics and on approximation theory. The institute received the International Science Foundation grants, Former Soviet Union Aids grant of American Mathematical Society. **[Material taken from the Armenian Academy of Sciences Home Page on the Internet, 1996.]**

Astrophysics Observatory in Biurakan.

Construction begun in 1946 formal date of founding given as 1956. The observatory studies the structure of the galaxy, non-stable stars and nebulae, radio-astronomy, stellar cosmogony, the theory of super-dense configurations of matter, and the theory of radiative transfer. It has a 2.6 meter telescope. Director: Ambartsumian, Viktor A., D. PM. S., CPSU, '46; Deputy Directors: Khachikian, Eduard E., D. PM. S., '79; Mirzoian, Liudvik V., D. PM. S., CPSU, '61; Tovmasian, Grant M., C. PM. S., '79. (GSE 2, 437).

[BYURAKAN ASTROPHYSICAL OBSERVATORY]

**Address - Byurakan, Ashtarak district, 378433,
Republic of Armenia**

Founded in 1946

Phone: (007-8852) 28-34-53

Telex: 243-344 ORION SU

E-mail: byurakan@adonis.ias.msk.su

Total number of employees - 202 Scientific workers - 68, of whom eleven held the Doctor of Sciences and 40 held the Candidate of Science Degrees.

Specialisation : Astrophysics

Main trends of scientific investigations are: In the field of investigations of galaxies: Search and detailed investigations of the galaxies with active nuclei and the galaxies processing megamassers and infrared radiation. Many-sided study of blue dwarf galaxies of First and Second Byurakan spectral surveys. Investigation of systems of galaxies including close and wide groups of galaxies.

In the field of investigation of star formations regions as well as young, nonstable objects of our Galaxy:

Search and study of stellar associations and their typical population--non-stable stars as well as flare stars. Ha emission stars, young stars possessing anisotropical activity and optical jets, nebulae. Investigations of radial systems dark globules of Galaxy. Search and investigation of blue stellar objects of the First Byurakan survey. Physics of flare stars.

In the field of theoretical astrophysics and mathematical physics: Mathematical modelling of direct and inverse problems of theoretical astrophysics. Interpretation of the spectra of cosmic objects. The inner structure of celestial bodies processing large masses. Investigations of the surface brightness fluctuation of stellar systems. Hadron cosmology Radiation transfer theory in stochastically inhomogeneous media. Solution of one-dimensional and multi-dimensional conservative equations. Integral equations of mathematical physics and applications. Received Scientific important results: discovery of stellar associations; discovery of galaxies with active nuclei.

The institute co-operates with the French astronomers on research work; Special Astrophysical Observatory and Astronomical Institute of Russian Academy of Sciences; Crimean Astrophysical Observatory; Abastumani Astrophysical Observatory of Georgian Academy of Sciences; Marseille and Meudon Observatories (France); Paris Astrophysical Institute; Padova Observatory (Italy); Muont Palomar and Lick Observatories (USA); Cornell and Stanford Universities (USA); Tonantzintla Obsrvatory (Mexico) and others.

The institute participated in many international symposia, among which are the International Astronomical Union Symposia Nos. 29 (1966), 121 (1986), 137 (1989), and international conferences in 1956, 1964, 1971, 1981, 1984, invited in Byurakan Observatory. [Recent Information (1995-6)--taken from the Armenian Academy of Sciences Home Page on the Internet]

Computer Center in Erevan.

Established in 1957, subordinate to the Physical and Mathematical Sciences Department of the Academy. Director: Abgarian, Karlen A., D. Tech. S., '79; Deputy Director Melik-Shakhnazarov, Bogdan B., '78. (See below)

INSTITUTE FOR INFORMATICS AND AUTOMATION PROBLEMS

**Address: P. Sevak St. 1,
Yerevan 375044, Armenia.**

Founded in 1957

Tel: (8852) 285812

Fax: (8852) 285812

E-mail: shouk@pnas.sci.am

Telex: 243344 ORION.SU

The head of the institute is Corresponding Member **Yuri H. Shoukourian**

The institute employes a total number of 186 employees of whom 116 are researchers and of whom ten hold the Doctor of Science and 50 hold the Candidate degree.

Specialisation: The main tasks of the Institute are fundamental investigations in informatics and Computer science, design of intellectual systems on the base of these investigations, and their installation. Institute performs training of high level specialists in these areas.

Main trends of scientific investigation are: Discrete Mathematics, Coding Theory and Information Theory, Mathematical Logic and Theory of Algorithms, Theory of automata, Artificial intelligence, Image analysis, Pattern recognition, Software engineering.

Researches and development on the Programming Intelligent Tools on the base of mathematical grounded methods were started the last years.

Decidability of optimisation problem for new classes discrete converters (automata with terminal state, which interact with information environment) has been proved, specially, when operator's semigroup over information environment is a free partially commutative semigroup. Algebraic structure of processes in pipe-lines of arbitrary configuration has been investigated and full specification of this structure has been obtained. The minimum number of cosets required to cover a set of all solutions of quadratic over finite field equation is estimated. A covering with almost minimum complexity is constructed. The problems of synthesis of the full examples system (tests) and verification problem for program models has been investigated. The problem of bypasses in directed graphs has been investigated and some sufficient conditions for pancyclics and hamiltonians of these graphs have been obtained. New classes of perfect graphs have been constructed and colouring problem for special type graphs has been investigated.

ARMVERIFY and ARMCAST PC program package for verification and stabilisation of the logical circuits has been developed. The package for simulation of the micro programming processors is developed.

During the existence of the Department the Albert Meyer problem on m -degrees of the sets of minimal indices of partial recursive functions has been solved. Kolmogorov complexity and asymptotically optimal functions have been investigated. A necessary and sufficient condition of the solution existence for general form recursive equations has been obtained. These results are extended on $*$ -calculus and the domain theory. The R -categories connected with the Martin-Löf type theory have been introduced and investigated. Recursively innumerable mitotic sets and the degrees having minimal cover, the relationships between total $*$ -degrees and total first order theories, M -free endomorphisms of the free finitely generated semigroups have been investigated. A valid extension of $*$ -calculus was introduced and investigated. A series of program synthesisers have been developed. An environment generator for autonomous program debugging has been developed.

The synthesiser APS-1 and the environment generator UNIGEN have been developed and utilised in Communication and Control Systems Research Institute. The synthesiser APS-1 was used for the program development connected with the solution of communication theory problems and in atomic energetic for the solution of the problems concerning the atomic heater thermodynamics. The developed program package for the Bessel functions high accuracy computing is used in the Institute of Radiophysics and Electronics to study the problems of hail clouds long-range detection. The developed Optimizer of recursive C-programs is ready to use.

A series of problems of discrete optimisation and modelling, such as minimisation of weakly defined boolean functions, the discrete isoperimetric problem have been solved. A new approach to the constructing of algorithms and systems for pattern recognition problem, which is based on intellectual elements, has been developed .

Application software systems for solving various extremal problems as well as software system for optical character recognition (for multylanguage uses) have been developed. Software system for seismogram analysis including standard seismic tomography treatments and earthquake risk estimation as well as a hardware-software system for geophysical applications have been developed. Algorithms and programs using the finite

element methods have been developed for earthquake engineering problems solving. A software system for earthquake catalogical database visualisation with geographical maps has been developed for retrospective analysis of earthquake timeseries. The database covers more than 45000 earthquakes of various intensities since 50 A.D. A distributed database management system and an integrated information processing system have been developed for a large enterprise "ArmElectroMash". A problem from additive number theory has been solved, thus allowing to construct optimal multi-error correcting codes for binary asymmetrical channel. An algorithm of constructing irreducible polynomials of arbitrary degree over any finite field has been developed with low complexity. An adaptive coding system for information transmission for special channels has been developed. New classes of so-called De'Bruijn sequences have been constructed. Some important combinatorial problems from information theory have been solved. Results concerning optimisation problem in communication networks are obtained.

The main achievements of department include development of best known code constructions for multiple-access adder channel, and two-user switching channel, the methods of word synchronisation in alphabetic codes for digital transmission systems, construction of new classes of maximum-distance separable codes.

In the area of applicable research a new system of digital magnetic recording, which makes it possible to double the density of magnetic recording, has been developed.

A new conception of rate-reliability function, applied for studying the data optimal transmission by various multiterminal information systems is suggested. A combinatorial method for proving of "converse theorems" was worked out and successfully used.

Constructive theory for antagonistic games with complete information and, also, for inductive synthesis of classification and game control algorithms have been elaborated. Strategy description language, productional semantics and conditions of strategy specification completeness in it have been elaborated. A complete polynomial solution of combinatorial problems on construction of systems of incomparable and arbitrary sets with minimal number of subsets have been obtained. Precise potentiality description for different subclasses of reliable inductive synthesis algorithms have been obtained. Hamiltonian graph recognition local algorithms and criteria of their stability, as well as criteria of interval and one way interval bipartial graphs colorability have been elaborated. The main regularities of the khaz notation system have been revealed and, based on them, 300 sharakans (ancient musical texts) have been decoded. Systems KHAZ1 and 2 have been elaborated to support this research. The set of investigations in the constructive analysis is developed; some basic properties of constructive real numbers, constructive functions, constructive curves are established. New logical systems (Symmetric Constructive Logic, Sub constructive Logic) are created and investigated. Program systems are created for automated logical deduction in non-classical logical calculi and for the automatical analysis of the testability and structural peculiarities of electronic circuits.

Development of expert system for automated analysis of testability of electronic circuits. The program system is to be developed which enables one to decide, with reasonably good safety, whether a given electronic circuit (described by its figure) is suitable for realisation or not. The system must work for circuits having large volume (for example, for Large Integral Circuits and cards containing LSI). New classes of discrete orthogonal transformations intended to the practical task have been synthesised for Walsh-Hadamard, Hadamard and Haar transformations, weighted Walsh-Hadamard transformations providing concentration of the energy in any given area of an image, (l,m)-orthogonal n-dimensional transformations, Fibonacci transformations, trigonometrical and sliding transformations, frequently ordered slant transformations of order p.

Optimal and superfast methods for signal or image compression. Signal adaptive filtration

methods. Image processing systems on mini-, personal and super-computers, tomographical image processing. Line, systolic, pipe-line and parallel specialised processors of signal processing, including processors for Hadamard, Haar-like and Fibonacci transformations.

Solution of the inverse problem of Karhunen-Loeve. Investigation of displacement operators and invariant systems. Fast Fourier transform on finite hyper groups. Theory and applications of the best approximations of discrete random processes by special orthogonal polynomials. Spectral methods for factual dimension estimation.

The graphical digital signal processing system "SPECTRUM" are designed for IBM PC/AT compatible computers. The graphical "Surf 3D" system for IBM PC/AT which provides reconstruction of surfaces from small square network, observing from different view points in 3-D space and isolines drawing are designed.

Methods for the construction of diagnostic tests for special classes of networks (e.g., for networks consisting of a sequence of standard blocks) have been developed. Methods for the design of testable networks are developed as well. Results describing the solutions of the discrete isoperimetrical problem in the Hamming space have been obtained. Analogous results have been obtained for other related extremal problems.

The Institute co-operates with 2 abroad scientific organisations: Since 1975 with Research institute of Automation and Computer Sciences of Hungarian Academy of Sciences (2 topics),--Since 1990 with Technical University of Darmstadt, Germany (2 topics).

Besides mentioned organisations, our Institute is also collaborating with the University of Osaka (Japan), with EIATCS--European International Association of Theoretical Computer Sciences, and with the University of Tampere (Finland).

Radio Physics and Electronics Institute in Erevan.

Founded in 1961. Its research involves radio spectroscopy and radiophysical investigations. Director: Martirosian, Radik M., '83. [See below]

INSTITUTE OF RADIOPHYSICS & ELECTRONICS

Address- 378410, Ashtarak-2,

Republic of Armenia

Founded in 1960

Phone: (007-8852) 28-78-50

The Head: Academician of NAS Radick M. Martirossian

Total number of employees is 313 of whom 175 are researchers and of whom six hold the Doctor of Science and 42 hold the Candidate of Science degrees.

Specialisation : Fundamental and applied researches in radiophysics, electronics, and automatic control.

Main trends of scientific investigations are: Fundamental: radiophysics, quantum radio engineering, superconductivity, solid-state physics, theory of generation and propagation of electromagnetic waves, data transmission communication and its recording by efficient coding methods. Applied: development and manufacturing of high-sensitivity microwave receivers and their elements, laser- pulse epitaxi of semiconductor structures and IR receiver manufacturing on their basis, development of angular and linear encoders.

Received scientific important results: Characteristics of intensive microwave radiation first detected in IRPhE were studied; in narrow-gap $Pb_{81-x}S_{18-x}Te$ semiconductors having small efficient mass and controllable forbidden gap, for the first time photoconductivity was revealed in the range of 2 mm wave length; high-sensitivity receivers were developed in the range of wavelenths 2 mm to 30 cm; high-accuracy angular and linear encoders were developed; effect of external magnetic field intensity and direction, as well as ultrasound deformation, on modulation of submillimeter emission in ferromagnetic sample.

The Institute co-operates with "Hengstler" company (Germany); has an agreement on joint researches with Sogang University (South Korea) in superconductivity. performs joint researches in digital communication, agreements were signed between IRPhE and Manchester and Warwick Universities in UK, under which exchange of specialists and lecturing is provided.

The Institute participated in the International Conferences held in USA, United Kingdom, Spain, Germany, South Korea, Japan, Switzerland and other countries.

Individual grants were received by specialists from ISF (Soros) foundation, and a group projects were awarded annual research grants from ISF.

Physics Research Institute in Ashtarak.

Founded in 1967. The institute studies lasers and their effects. Director: Ter-Mikaelian, Mikhail L., D. PM. S., '70; Deputy Directors: Mardirosian, Radik, '73; Vartanian, E. S. '82.

INSTITUTE FOR PHYSICAL RESEARCH

Address - Republic of Armenia,

Ashtarak-2, 378410,

Founded in 1967

Phone: (007-8852) 28-81-50 E-mail: ifi@arminco.com

The head of the institute is Academician **Mikhael Ter-Mikhaelian**

Employees totalled some 290, of whom 99 were researchers, and of whom 13 hold the Doctor of Science and 51 the Candidate of Science degrees.

Specialisation : Physics

Main trends of scientific investigations are: Laser Physics (non-linear optics, quantum optical electronics); Solid state physics and crystallophysics; Throretical physics (theory of radiation of charged particles, theory of interaction of radiation with matter, quantum and classical electrodynamics); High temperature superconductivity

Received scientific important results: Theory of radiation: The theory of coherent bremsstrahlung in crystals has been developed; the resonance transition radiation has been predicted which served a base for high energy particle detector having been designed.

Non-linear optics: Simultaneously and independently of USA researchers the effect of stimulated electronic Raman scattering has been discovered. A great number of many-photon non-linear processing has been for the first time investigated in gases interacting with laser radiation near resonant transitions.

The basic equations have been derived for the interaction of single atom with coherent radiation out of framework of perturbation theory. A number of

new non-linear effects is theoretically predicted.

Quantum electronics: Quasiclassical rate equations have been derived for solid-state quantum generators and amplifiers. On this basis in 1970-80s a number of generators has been designed and produced in the Republic at "Crystal" factories.

For use in quantum electronics and non-linear optics, new crystals have been created: lead molybdate and large size high quality non-linear crystal of lithium iodate.

The crystals of lithium niobate with various impurities have been investigated and improved, active erbium doped garnets have been created, generating in 3mm region and using those, the optical quantum generators have been designed. Using the second harmonic generation in non-linear crystal a new technique for measuring the ultrashort pulses has been suggested and developed in collaboration with the Hungarian Central Institute of Physics.

High-temperature superconductivity: In high-temperature superconductors the phase sloping centers have been discovered; high-temperature superconductive thin films have been synthesised. The institute co-operates with the University of Crete, Iraklion, Crete, Greece; Rice University, Houston, Texas, USA; Weizmann Institute of Science Rehovot, Ben-Gurion University Ber-Shiva, Israel; Institute for Molecular Science, Okazaki, Japan; Konstanz University, Konstanz, Germany. The Institute participated in 8 international conferences held in USA, Italy, France, Japan in 1993-94. The Institute received five grants from the International Science Foundation. [Material taken from the Armenian Academy of Sciences Home Page on the Internet, 1996.]

SPECIAL EXPERIMENTAL-CONSTRUCTIVE TECHNOLOGICAL INSTITUTE

**Address - 5a Leningradian St.,
377501, Yerevan, Republic of Armenia
Founded in 1976
Phone: (007-8269) 3-49-83**

The Head: Dr.Sc. Robert Y. Sarkissian

Total number of employees - 48 of whom two hold the Candidate of Science degree.

Specialisation : Scientific instrument-structuring

Main trends of scientific investigations are: Seismic instrument-construction, laboratory instruments for chemical and biological investigations.

Received scientific important results: Elaborated figure data of stations, produced seismic instruments for all former USSR.

The Institute co-operates with the Institute of oceanology of Russian Academy of Sciences.

Solid State Physics Institute in Yerevan.

Founded in 1976. The institute produces crystals, optical components, lasers and other devices. Its research also includes the study of the interaction of laser radiation with condensed media and gamma resonance spectroscopy of such media. The institute is also known as the Quantum Electronics Institute and the Scientific Research Institute of Condensed Media Physics. Directors:

Mkrtchian, Alrik Rafaelovich, D. PM. S., '85.

INSTITUTE OF APPLIED PROBLEMS OF PHYSICS

**Address - 25 Hratchia Nersisian St., 375014,
Yerevan, Republic of Armenia,**

Founded in 1980

Phone: (007-8852) 24-14-70

FAX: 26 28 27

The Head: Corresponding member of NAS RA, Prof., Dr., **Alpic R. Mkrtchian**

Total number of employees - 330 Scientific workers of whom 106 are research scientists and of whom 13 hold the Doctor of Science and 57, the Candidate of Science degrees.

Specialisation : The fields of research of the institute cover the solid state physics, nuclear physics, acoustics, particle physics and physics of low temperature plasma

Main trends of scientific investigations are: -interactions of electromagnetic radiations (Mössbauer, x-ray, synchrotron, optical millimetre) with solids in the presence of external excitations (acoustic waves, thermal gradient, electromagnetic, electric and magnetic fields); -interaction of elementary particles (neutrons, electrons and positrons) with solids in the presence of external excitations (acoustic waves, thermal gradient, electromagnetic, electric and magnetic fields); -problems of the control of parameters of low temperature plasma by means of sound fields; -influence of external factors (pressure, acoustic waves, magnetic fields) on physical, electrophysical and contact properties of the matter (semiconductors, semiconductor heterogeneous junctions, high - temperature superconductors, liquid crystals).

Received scientific important results: -Experimentally observed for the first time and theoretically interpreted in Laue case were: 1) the phenomenon of complete and lossless repumping of X-rays in quartz crystal from the direction of propagation to that of diffraction by excited acoustic oscillations or a thermal gradient; 2) the phenomenon of focusing and defocusing of diffracted X-rays in piezocrystals in the presence of acoustic oscillations or a thermal gradient. These effects were observed also with synchrotron radiation and neutron beams.

Based on these phenomena some optical elements for the range of X-rays were constructed (lenses, prisms, mirrors and practically 100% modulators and monochromators).

-Oscillations of intensities of modulation Mössbauer lines down to the nullification of the resonance line intensity under the influence of coherent ultrasonic field as well as a broadening and splitting of the resonance line under sonic and infrasonic oscillations were first observed experimentally. A theory was constructed on the basis of a novel method of analytical solution for a class of incorrectly formulated inverse problems.

-Based on the theory of catastrophes, theoretical investigations were conducted for the description of different phase transitions in the presence of external factors (electric, magnetic, luminous, thermal, acoustic). Predicted for the first time were new effects connected with the interaction of light waves with liquid crystals media and some well-known effects were interpreted in a different way.

-Theoretical and experimental investigations of the effect of electron multiplication in the process of their drift in porous substances under the action of electric field have been

carried out, in the course of which the problems of elimination of substance polarisation were solved, the optimal degree of substance porosity and the optimal substance were chosen. Based on obtained results, fast response, high-sensitivity radiation detectors (for gamma, X-rays), and particle detectors (for α -particles, β -radiation and neutrons) were developed, which were operable in the integral and co-ordinate regimes.

-It is shown that in the energy band structure of anisotropically (locally) deformed semiconductors (Ge, Si) of cubical symmetry there arise a novel type of varizional structure, - the cumulation varizional structure.

On the basis of this theory physical mechanisms were provided for the following earlier observed experimental facts:

- effect of the presence of saturation section on current-voltage characteristics of uniformly and locally deformed p-n junctions and Schottky diodes based on semiconductors of cubical symmetry;

- effect of formation and vanishing of N-type negative differential conductivity (NDC) on inverse branches of the current-voltage characteristic of locally deformed germanium p-n junctions and Schottky diodes, and

- effect of formation of sections of abrupt rise and fall of electric capacitance of such diodes if there exists N-type NCD on the current-voltage characteristics.

Based on the study of these effects some miniature, supersensitive, precision electromechanical transducers were prepared.

The institute co-operates with International scientific centers: Parma University (Italy); Laue-Langevin Institute (Grenoble, France); Electron accelerator DESY (Hamburg, Germany); Technical University (Munich, Germany); Institute of High Energies (Peking, China); Different centers of Russia.

The institute participated in 10 International Conferences on Mössbauer effect; XII European Crystallographic Meeting; Moscow 1989; International Conference on Ionisation Phenomena in Gases; Belgrad 1989; International Conference on Electron-Atomic Collisions; Sanct- Petersburg 1992; VIIIth Conference of Socialist Countries on Liquid Crystals; Krakow 1989; International Summer Conference on Liquid Crystals; Vilnius 1991; XIV International Conference on Liquid Crystal; Pisa 1992; XV International Conference on Liquid Crystals; Budapest 1994; Abstracts of Reports at the 4th International Conference of Socialist Countries on Liquid Crystals. Tbilisi; 1981; Abstracts of Reports at the International Topical Meeting on Optics of Liquid Crystals. Torino; 1988.

Participation in international conferences: International grants: the International Science Foundation--14, Co-operation in Science and Technology with Central and Eastern European Countries--one. **[Material taken from the Armenian Academy of Science Home Page on the Internet, 1996,]**

The Physical, Technical, and Mechanics Department

Members:

Academician Secretary

Atoian, Robert V. Academician since 1986.

Kasian, Martin V ., D. Tech. S. Born in 1905. Academician of the department since 1956. Academician secretary since 1985. (LDA 87-11012.)

Academicians

Adonts, Grant T ., D. Tech. S. Academician since 1982. (LDA 87-11012.)

Arutiunian, Nagush Kh ., D. Tech. S. Born in 1912. Academician since 1950. . (LDA 87-11012.)

Atoian, Robert V . Academician since 1986. (LDA 87-11012.)

Iosifian, Andronik G ., D. Tech. S. Born in 1905. Academician since 1950. . (LDA 87-11012.)

Kasian, Martin V ., D. Tech. S. Born in 1905. Academician since 1956. (LDA 87-11012.)

Petrosiants, Andronik M. Born in 1906. Corresponding member of the Physical and Mathematical Sciences Department since 1977, and academician of the Physical, Technical, and Mechanics Department since 1982. . (LDA 87-11012.)

Sarkisian, Fadei T ., D. Tech. S. Born in 1923. Academician since 1977. . (LDA 87-11012.)

Corresponding Members

Abramian, Benjamin L ., D. PM. S. Born in 1913. Corresponding member since 1971. (LDA 87-11012.)

Aleksandrian, K. V . Corresponding member since 1982. (LDA 87-11012.)

Alekseevskii, Vadim V ., C. Tech. S. Corresponding member since 1960. . (LDA 87-11012.)

Areshian, Georgii L . Born in 1925. Corresponding member since 1982. (LDA 87-11012.)

Geruni, Paris M . D. Tech. S. Born in 1933. Corresponding member since 1982. (LDA 87-11012.)

Kuchukian, Arman T ., C. Tech. S. Corresponding member since 1986. (LDA 87-11012.)

Sarkisian, Vladimir S . Corresponding member since 1986. (LDA 87-11012.)

Simonov, Mikhail Z ., D. Tech. S. Born in 1941. Corresponding member since 1956. (LDA 87-11012.)

Terzian, Arutiun A . Born in 1932. Corresponding member since 1986. (LDA 87-11012.)

Varshamov, Rom R., C. PM. S. Born in 1927. Corresponding member since 1977. (LDA 87-11012.)

Physical, Technical, and Mechanics Department : Research institute subordinate to the department by order of founding:

Mechanics Institute in Erevan.

Founded in 1971. The institute studies the mechanics of composite material structures, the hydrodynamics of combustion, and the theories of elasticity, plasticity, creep, and strength. Director: Azolovian, N., '88. [See below]

INSTITUTE OF MECHANICS
Address - 19 Marshall Bagramian Av.,
375019, Yerevan, Republic of Armenia

Founded in 1956

Phone: (007-8852) 52-48-90; 37-50-19

The Head: D.Sc. Lenser A. Aghalovian

Total number of employees is 140 of whom 76 are engineer scientists, and of whom 11 hold the Doctor of Science, and 50 the Candidate of Science degrees.

Specialisation : Mechanics of Solid media

Main trends of scientific investigations are: Mathematical theory of elasticity; Theory of anisotropic plates and shells; Theory of plasticity, creep and viscoelasticity; Magnitoelectricity; Theory of contact and mixed boundary problems of deformable Solids mechanics;

Interaction of media and different physical fields with thin-shelled systems; Waves propagation in continuous media; Composite materials and design optimisation of constructions; Mechanics of soils, basis and foundations; Mechanics of seismic center seismic waves propagation in layered media; Mechanics of fluids and mixtures; Mechanics of robotics systems

Received scientific important results: An invention is done concerning the weak-stress phenomenon, more than ten monographs are published and are being published.

The Institute co-operates with California Naghdi Berkli's university (USA). The Institute participated in all-Union Symposium on theoretical and applied mechanics, international congresses and conferences on Solid media mechanics. A scientist of the institute has been awarded Soros grant.



The Asian Border Academies

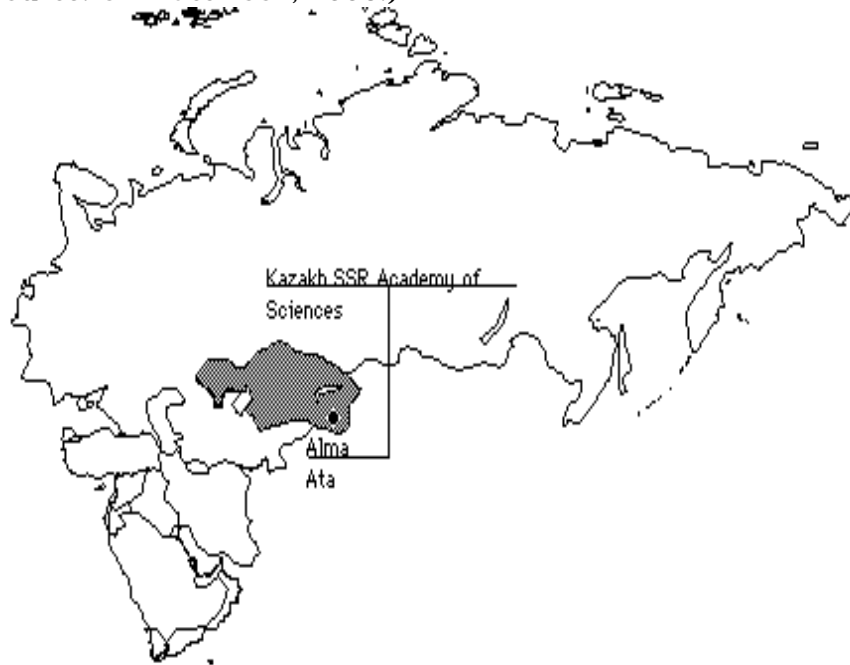


The Research Institutes in the Asian Border Academies: The five Asian academies had some 110 scientific research institutes under their administration in 1989, with Kazakh and Uzbek accounting for one-half of the total. The Uzbek academy institutes date further back in their historical development than do the institutes of the other academies, and show a wider range of modern scientific research development than do the other academies. Both the Kazakh and Uzbek academies may trace their earlier and broader development to the deployment of many Soviet scientists and engineers to those republics during the Great Patriotic War. The five Asian Border academies are: Kazakh, Uzbek, Kirghiz, Tadzhik, and Turkmenia.

The Asian Border Academy Membership: The five Asian Academies, several of which developed their departments, research institutes, and academic personnel much later than the other republics in the Soviet Union, in 1989, could count only three academician and four corresponding members of the five academies who were also members of any of the AN SSSR departments. The relative simplicity of the division of the sciences into departments suggests that the scientific institutional structure in these republics will undergo many changes toward a greater complexity reflecting the organization of the Ukrainian or the Georgian academies, which, in turn have evolved themselves upon a model of the AN SSSR structure.

THE KAZAKH ACADEMY OF SCIENCES

Geographic Background: Kazakhstan is located in South Asia between Russia and Uzbekistan, and borders on the Caspian and Aral Seas. It is huge in land mass, being slightly less than four times the size of Texas in the United States--an area of some 2,717,300km². There are some boundaries with Russia, Azerbaijan, and Turkmenistan in the Caspian Sea yet to be resolved. It is rich in natural resources such as petroleum, coal, iron, manganese, chrome, nickel, cobalt, copper, molybdenum, lead, zinc, bauxite, gold, and uranium. Its population is about that of the State of Texas: 17.2 million people. Russians constitute some 37% of the population. The population is highly literate. (Source: CIA Fact Book, 1996.)



Interestingly, Kazakh has a national advisory committee called the Kazakh Advisory Committee on Science and New Technologies. It is made up of the following persons:

DR. GALIM ABILSIITOV

Chairman

Minister of Science and New Technologies

DR. DJUMADIL BAIGUMCHENOV

Institute of Mechanics, Kazakh Academy of Sciences

DR. SABIT BAIKAKOV

Kazakh Academy of Agricultural Sciences

DR. ASKAR DJUMADILDAEV

Institute of Mathematics, Kazakh Academy of Sciences

DR. SAMAT NURKEEV

Kazakh Polytechnical Institute

DR. KENZHEGALI SAGADIEV

President, Kazakh Academy of Sciences

DR. ALEKSANDR SOKOLOV

Kazakh State Medical Institute

DR. GAUKHAR ZAKUMBAEVA

Institute of Catalysis and Organic Chemistry, Kazakh Academy of Sciences

Retrospect: Scientific institutions first appeared in Kazakhstan in the mid-1920s. They included a regional station for the protection of plant life, a fertilizer and soil-science institute. The opening of the Kazakh Academy of Sciences was held on 1 June 1946. The research conducted by Kazakh scholars ranges from microbiology to astronomy. The Kazakh SSR Academy of Sciences was founded as a branch of the Academy of Sciences of the USSR. In 1968 it had 54 "acting members" and 45 corresponding members. Twenty years later it had 50 Academicians and 75 Corresponding Members. In 1968, it controlled 21 scientific research institutes; in 1987, it presided over the work of 26 institutes. The central library of the academy contained some 2,700,000 items in 1968.⁹ Today, the Kazakh oversees the research in some 37 scientific research institutes. The structure of the academy today is as follows:

Physics and Mathematics Science Department

- Institute of Mechanics and Machines
- Institute of Information and Management
- Institute of Nuclear Physics
- Institute of High Energy Physics
- Fesenkov Institute of Astrophysics
- Institute of Ionosphere
- Physics Technical Institute

Earth Science Department

- Satpayev Institute of Geology
- Institute of Mining
- Akhmedsafin Institute of Hydrogeology and Hydrophysics
- Institute of Seismology
- Institute of Geography

Chemistry and Technology Science Department

- Institute of Metallurgy
- Institute of Chemistry
- Sokolskiy Institute of Organic Catalysis and Electrochemistry
- Institute of Oil Chemistry and Natural Salts

Biology Science Department

- Institute of Soil
- Botanics Institute
- Institute of Zoology
- Institute of Physiology
- Institute of Experimental Biology
- Institute of Microbiology and Virology
- Aitzhozhin Institute of Molecular Biology and Biochemistry
- Main Botanical Garden

Humanitarian Department

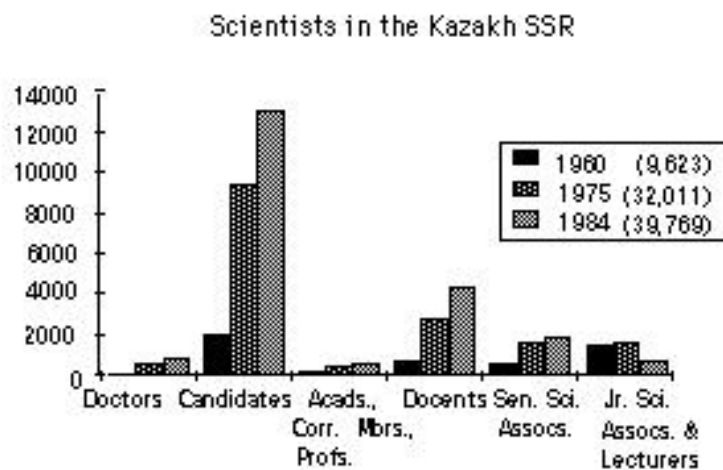
- Institute of Economics
- Valikhanov Institute of History and Ethnology
- Institute of Philosophy
- Baitursunov Institute of Linguistics
- Auevov Institute of Literature and Arts
- Institute of Uigur Culture

⁹ The Great Soviet Encyclopedia, New York, Macmillan, 1983, (translation of the Third Edition). "Kazakh SSR Academy", Vol. 1, p. 52; and, Vol. 12, p. 497.

Central Kazakhstan Department

Institute of Chemistry and Metallurgy
Institute of Organic Synthesis and Chemistry of Coal
Institute of Physiology and Trade Hygiene

Growth: The growth of scientific capacity in the republic from 1946 to the present is truly remarkable--particularly when the fact that at the time of the revolution in the Soviet Union, according to Sh. E. Esenov, former president of the Kazakh academy, only two percent of the population of the republic was literate. In 1984, the republic ranked fourth among Soviet republics in the total number of scientists located within the republic.¹⁰ In twenty-four years the number of scientists in Kazakh had more than quadrupled as the figure below shows.

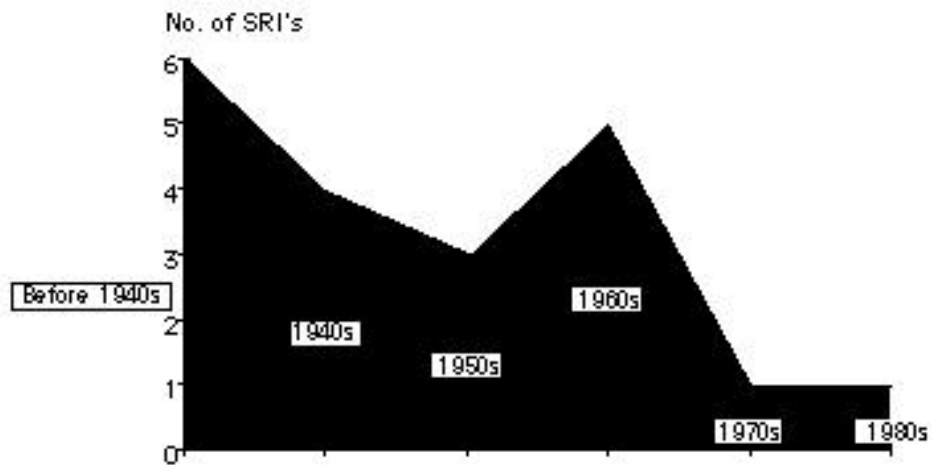


No.'s in parentheses in legend box = total scientists in the Kazakh SSR.
Source: *Vestnik statistiki*, No. 12, December 1985, p. 70.

Following a spurt in the 1940s the period of greatest growth in the establishment of Scientific Research Institutes by departments of the Kazakh Academy of Sciences was in the 1960s. The total number of research institutes was relatively low when compared with Armenia, or Byelorussia, or the Ukraine, for that matter. But it was a very significant development in an area of the world to which the sciences were rather late in showing significant development.

¹⁰ Sh. Esenov, "A Nation of Advanced Science," *Technology and Armament*, December 1972, pp. 75-81. Esenov was president of the academy from 1967 to 1974. He was replaced by A. M. Kunaiev who served in that capacity until 1986 when Murat A. Aitkhozhin, biologist, became president of the academy.

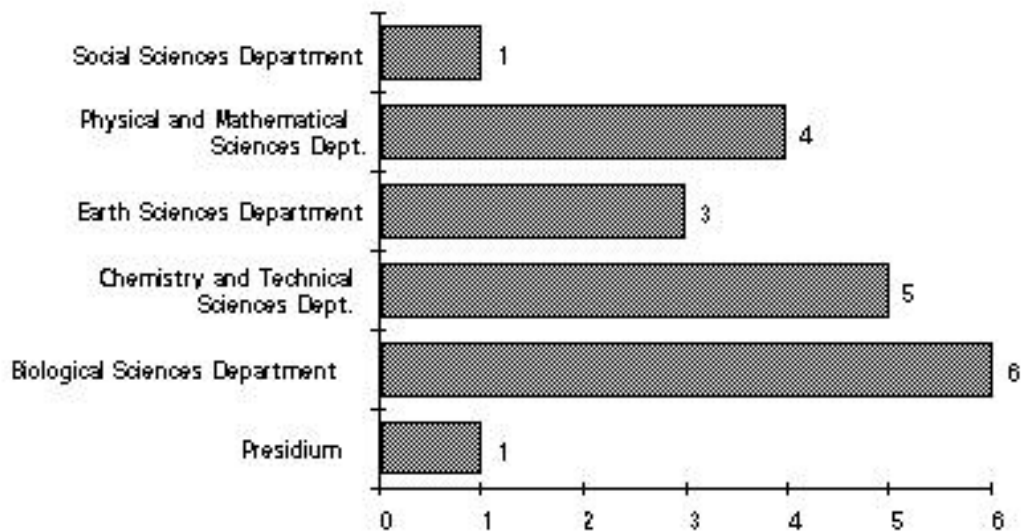
Kazakh SRI's, by Decade of Establishment



Compiled from: LDA 87-11012, 1987, pp. 199-203.

By 1987, however, the number of Scientific Research Institutes subordinate to the Kazakh Academy of Sciences numbered 26 and the number of scientific workers researching in them exceeded 10,000.¹¹

Number of SRI's by Department in the Kazakh SSR Academy of Sciences in 1987



Source: LDA 87-11012, 1987, pp. 199-203.

¹¹ Ibid. See also, Vestnik statistiki, No. 12, Dec., 85, p. 70.

Research Coordination: By 1984, academy scientists and institutes in Kazakhstan, like their counterparts in the other republics and in response to the activities of the Council for the Coordination of the Scientific Activity of the Academies of Sciences of the Union Republics attached to the presidium of the Academy of Sciences of the USSR, had developed methods for collaborating with scientists in the republic ministerial Scientific Research Organizations as well as with scientists working in the VUZy system, and with the staffs of the planning-design institutions. Academy institutes were, in fact, taking the lead in developing the directions for scientific and technological progress for the republic to the year 2005 and beyond. Academy scientists had worked on some 17 "combined scientific and scientific-technological programs."¹² In 1985, in reporting on the 41st meeting of the Council for the Coordination of the Scientific Activity of the Academies of Sciences of the Union Republics mentioned above, an unsigned article in *Vestnik akademii nauk Kazakhstskoy SSR*, observed that the academies of the various union republics were developing research in the areas of creating efficient domestic technology through automation of production, of more extensive use of electronics, computers, and robots, of the development of prefabricated materials of all kinds, of studying waste-free and energy saving technologies, and of the automation of planning and design work.¹³

National and Local Research: During the Tenth Five-Year Plan, some 200 All-Union scientific and technical programs had been implemented, and Kazakh SSR scientists had participated in 50 of them. Kazakh Academy of Sciences institute scientists had played a lead role in 18 republic ministerial Scientific Research Organizations and national ministerial SROs located in the republic had participated in the rest. For the period from 1981-1985, 170 All-Union comprehensive goal programs and programs on the solution of the most important scientific and technical problems had been approved by the USSR Academy of Sciences, GOSPLAN, and GKNT. Kazakh institutions and personnel participated in 104 of these programs, drawing up in the process "The Comprehensive Program of Scientific and Technical Progress of the Kazakh SSR for 1986-2005" broken down by five year periods. At the time of the publication of this article, Kazakh academy scientists were taking part in implementing 35 All-Union and eight republic programs including the study of natural resources, the extraction and processing of mineral raw materials, the chemicalization of the national economy, scientific instrument making, seismology, nature conservation and the solution for agricultural production problems.¹⁴

Members of the Academy : In 1987, there was a total of 118 members of the Kazakh academy--43 of whom were academicians and 75 were corresponding members. Altogether 21 of the members of the academy had been or were, in 1987, deputy directors (6) or directors (15) of the institutes under subordination to the academy departments--a significantly high percentage. Only 14 members of the academy were listed as members of the CPSU in 1987--a percentage of less than 12 percent--which, if true, reveals an independence among scientists in Kazakhstan which departs from the ship patterns thus far encountered in this study. The average age of the scientific research institutes in Kazakh--of the nine whose birthdates and appointment dates are known--was 51 years.

¹² M. Sergeichik, "On the Basis of Business-Like Collaboration," *Kazakhstanskaia Pravda*, 15 kApril 1984, p. 4. In this article the president of the Kazakh academy A. M. Kunaiev was interviewed.

¹³ *Vestnik akademii nauk Kazakhskoy SSR*, No. 1, January 1985, pp. 23-25.

¹⁴ *Ibid.*

The Presidium: The presidium of the academy includes officers, departmental academician secretaries and scientists elected by the academy's general assembly.

President

Sultangazin, Umirzak M., D. PM. S. Born in 1936. Academician since 1983. Academician secretary of the Physical and Mathematical Sciences Department since 1985. Since 1986, he has been the director of the Mathematics and Mechanics Institute in Alma Ata which was established in the 1960s to do research in the field of infinite systems of differential equations and their application to problems in fields allied with mathematics such as mechanics, the theory of non-linear oscillation, and the theory of stability. Since 1988, he has served as president of the academy. (LDA 89-11378.)

First Vice President

Sokolskii, Dmitrii V ., D. Chem. S. Born in 1910. Since 1951, academician of the Chemical and Technological Sciences Department of the academy. Since 1965, first vice president of the academy. Since 1969, he has been the director of the Organic Catalysis and Electrochemistry Institute in Alma Ata which was established in 1969. It is involved in creating new catalysts, in studying methods to obtain extra pure metals, and in conducting research on new types of chemical sources for electric current. . (LDA 89-11378.)

Chief Scientific Secretary:

Erofeev, I. E. He has been chief scientific secretary since 1987.

Abdildin, Zhabaikhan M. , D. Phil. S. Born in 1933. Academician since 1983. Academician secretary of the Social Sciences Department since 1984.

Abishev, Dzhanat N ., C. Tech. S. Since 1976, deputy director of the Chemistry and Metallurgy Institute in Karaganda which was established about 1958 to discover ways to improve metallurgical processes for introduction into industry. Since 1983, corresponding member of the Chemical and Technological Sciences Department of the academy. Since 1986, academician secretary to the Central Kazakhstan Department.

Bok, Ivan I ., D. GM. S. Born in 1898. Academician since 1954. Academician secretary of the Earth Sciences Department since 1968.

Galuzo, Illarion G. , D. Bio. S. Born in 1899. Member of the Presidium since 1972.

Ilaletdinov, Alfarid N. , D. Bio. S. Born in 1929. Academician of the department since 1983. Academician secretary of the Biological Sciences Department since 1985. Since 1966, he has been the director of the Microbiology and Virology Institute in Alma Ata which is engaged in the study of general virology, the genetics and biochemistry of viruses, and the immunological and molecular-cytological processes of the interaction of RNA and DNA containing viruses within the cell. Work is also being done on the molecular structure and immunogenic properties of supercapsidal antigens and mutagenesis of microorganisms. .

Kozhakhmetov, Sultanbek M., C. Tech. S. Elected member of the Presidium since 1982. Academician of the Chemical and Technological Sciences Department of the academy since 1983.

Nadirov, Nadir K. , D. Chem. S. Elected member of the Presidium since 1979. Academician of the Chemical and Technological Sciences Department of the academy since 1983.

Zhubanov, Bulat A., D. Chem. S. Born in 1929. Academician secretary of the Chemical and Technological Sciences Department since 1972. Academician of the department since 1975. Since 1969, he has been the director of the Chemical Sciences Institute in Alma Ata which was established in 1945 to do research in organic, inorganic and macromolecular chemistry, especially in relation to the problems of more intensive farming, the chemical industry,

and nonferrous metallurgy.

Research Institute Subordinate to the Presidium:

Ionosphere Research Institute in Alma Ata.

Established in 1983. The institute engages in a broad range of atmospheric physics research, including the lower layers of the atmosphere and offers special courses in geophysics and radiophysics. Director: Rudina, Mariia P., 1984.

Central Kazakhstan Department

Academician Secretary

Abishev, Dzhantore N., C. Tech. S. Since 1976, deputy director of the Chemistry and Metallurgy Institute in Karaganda which was established about 1958 to discover ways to improve metallurgical processes for introduction into industry. Since 1983, corresponding member of the Chemical and Technological Sciences Department of the academy. Since 1986, academician secretary to the Central Kazakhstan Department.

Biological Sciences Department

Members of the Department

Academician Secretary

Ilialetdinov, Alfarid N., D. Bio. S. Born in 1929. Academician of the department since 1983. Academician secretary of the Biological Sciences Department since 1985. Since 1966, he has been the director of the Microbiology and Virology Institute in Alma Ata which is engaged in the study of general virology, the genetics and biochemistry of viruses, and the immunological and molecular-cytological processes of the interaction of RNA and DNA containing viruses within the cell. Work is also being done on the molecular structure and immunogenic properties of supercapsidal antigens and mutagenesis of microorganisms.

Academicians

Aitkhozhin, Murat A., D. Bio. S. Born in 1939. Academician of the Biological Sciences Department of Academy since 1983. Member of the Presidium until 1986. He served as President of the Kazakh academy from 1986 to 1988.

Balmukhanov, Saim B., D. Med. S. Born in 1922. Academician since 1967.

Beklemishev, Nikolai D., D. Med. S. Born in 1915. Academician since 1975.

Biyashev, Gakash Z., D. Agr. S. Born in 1906. Academician since 1967.

Bikov, Boris A., D. Bio. S. Born in 1910. Academician since 1967.

Darkanbaiev, Temir-Bay B., D. Bio. S. Born in 1910. Academician since 1958.

Gvozdev, E. V., D. Bio. S. Academician since 1979.

Ilialetdinov, Alfarid N., D. Bio. S. (See above, Academician secretary.)

Mukhamedgaliev, Fazul M., D. Bio. S. Born in 1911. Academician since 1967. Since 1962, he has been the director of the Experimental Biology Institute in Alma Ata which was established in 1962 to do research on the cytology, histology, embryology, and genetics of animals.

Corresponding Members

Aliev, Mukhtar A. Born in 1933. Corresponding member since 1983.

Atchabarov, Bakhiia A. Corresponding member since 1975.

Baytulin, Isa O. Born in 1928. Corresponding member since 1983.

Masenov, Tulegen M. Corresponding member since 1983.

Murzamadiiev, Atzhomaret., D. Bio. S. Corresponding member since 1975.

Polimbetova, Fatima A. Corresponding member since 1975.

Rakhishev, Alshinbai R. Corresponding member since 1975.

Shigaeva, Maiia Kh., D. Bio. S. Corresponding member since 1975.

Tashenov, Kazis T. Corresponding member since 1975.

Udolskaia, Nadezhda L., D. Bio. S. Born in 1903. Corresponding member since 1967.

Biological Sciences Department : Research Institutes Subordinate to the Department by order of founding:

Zoology Institute in Alma Ata.

Founded in 1944. The institute investigates means of exploiting the saiga ecology and searches for biological methods of fighting mosquitoes and gnats. The institute publishes Trudy. Director: Gvozdev, Evgenii V., D. Bio. S., CPSU, '77; Deputy Director Ivanov, I. K., '77. (See: Ruble, Vol. I., p. 321.) (GSE 3, p. 308.)

Physiology Institute in Alma Ata.

Founded in 1945. The institute studies the physiology of man and animals, especially problems of the nervous control of blood circulation, respiration, and lymph circulation. Director: Bazanova, Nailia U., D. Bio. S., CPSU, '66. (GSE 3, p. 308.)

Soil Science Institute in Alma Ata.

Established in 1945. The institute examines cultivation and irrigation techniques for agricultural zones of the Kazakh Republic. Director: (vacant). (See: Ruble, Vol. I., p. 321.) (GSE 3, p. 308.)

Botany Institute in Alma Ata.

Founded in 1946. (GSE 3, p. 308.)

Clinical and Experimental Surgery Institute in Alma Ata.

No date given in source. The institute researches and develops new surgical techniques and methods for early detection of illnesses. Director: Tkachenko, Gavriil K., C. Med. S., 79.

Microbiology and Virology Institute in Alma Ata.

Founded in 1956. The institute is engaged in the study of general virology, the genetics and biochemistry of viruses, and the immunological and molecular-cytological processes of the interaction of RNA and DNA containing viruses within the cell. Work is also being done on the molecular structure and immunogenic properties of supercapsidal antigens and mutagenesis of microorganisms. Director: Ilialetdinov, Alfarid N., D. Bio. S., CPSU, '66. (See: Ruble, Vol. I., p. 320.) (GSE 3, p. 308.)

Experimental Biology Institute in Alma Ata.

Established in 1962. The institute does research on cytology, histology, embryology, and genetics of animals, seeking new ways to further develop the breeding of stock. Director: Mukhamedgaliev, Fazul M., D. Bio. S., CPSU, '62. (See: Ruble, Vol. I., p. 319.) (GSE 3, p. 308.)

The Chemical and Technological Sciences Department

Members of the Department:

Academician Secretary

Zhubanov, Bulat A., D. Chem. S. Born in 1929. Academician secretary of the Chemical and Technological Sciences Department since 1972. Academician of the department since 1975. Since 1969, he has been the director of the Chemical Sciences Institute in Alma Ata which was established in 1945 to do research in organic, inorganic and macromolecular chemistry, especially in relation to the problems of more intensive farming, the chemical industry, and nonferrous metallurgy.

Academicians

Benkovskii, Vasilii G., D. Tech S. Born in 1912. Academician since 1967.

Kozhakhmetov, Sultanbek M., C. Tech. S. Academician since 1983.

Kunaev, Askar M., D. Tech. S. Born in 1929. Academician of the Physical Chemistry and Technology of Inorganic Materials Department of the national academy since 1981. Since 1972 he has been an academician of the Chemical and Technological Sciences Department of the Kazakh academy. He was the director of the Metallurgy and Ore Dressing Institute in Alma Ata from 1970 to 1988. The institute was established in 1956 to develop new methods of extracting and producing metals used in industry such as alumina, low-grade bauxite and rhenium. It is subordinate to the Chemical Technical Sciences Department of the Kazakh Academy of Sciences. From 1974 to 1986, he served as president of the Kazakh Academy of Sciences. . (LDA 87-11012.)

Nadirov, Nadir K., D. Chem. S. Academician since 1983.

Sokolskii, Dmitrii V., D. Chem. S. Born in 1910. Academician since 1951. Since 1965, he has been the first vice president of the Kazakh Academy of Sciences. Since 1969, he has been the director of the Organic Catalysis and Electrochemistry Institute in Alma Ata which was established in 1969 to create new catalysts, study methods of obtaining extra pure metals, and for conducting research on new types of chemical sources for electric current. .

Suleimenov, Sultan S. Born in 1928. Academician since 1972.

Suvorov, Boris V., D. Chem. S. Academician since 1983.

Talipov, Shukur T., D. Chem S. Born in 1908. Academician since 1967.

Zhubanov, Bulat A., D. Chem. S. (See Academician secretary above.)

Corresponding Members

Abishev, Dzhantore N., C. Tech. S. Corresponding member of the department since 1983. Since 1986, he has been the academician secretary of the Central Kazakhstan Department. Since 1976, he has been a deputy director of the Chemistry and Metallurgy Institute at Karaganda, which was established in 1958 to find ways of improving metallurgical processes for introduction into industry.

Battalova, Sharban., D. Chem. S. Corresponding member since 1975.

Bekturov, E. A. Corresponding member since 1983.

Getskin, Lev. S., D. Tech. S. Born in 1911. Corresponding member since 1967.

Isakova, Rufina A. Corresponding member since 1979.

Khubanov, Bulat A. Born in 1929. Corresponding member since 1970.

Muldakhmetov, Zainulla M. Corresponding member of the Chemical and Technological Sciences Department of the Kazakh academy since 1983. Since 1986, he has served as rector of the Karganda State University in Karaganda which was established in 1972. (LDA 89-11378.)

Ni, Leonid P., D. Tech. S. Corresponding member since 1975.

Omarov, Ashim K ., D. Tech. S. Born in 1929. Corresponding member since 1983.

Onaev, Ibragim A. , D. Tech. S. Corresponding member since 1972.

Ponomareva, Evgenii I. , D. Tech. S. Corresponding member since 1975.

Sharifkanov, Akhmedzhan S ., D. Chem S. Corresponding member since 1972.

Songina, Olga A ., D. Chem S. Born in 1901. Corresponding member since 1970.

Yerozhin, E. E. , C. Chem. S. Corresponding member since 1983.

Zakumvbaieva, Gaukhar D ., D. Chem. S. Born in 1932. Corresponding member since 1979.

Zazubin, Arkadii I ., D. Tech. S. Corresponding member since 1983.

Chemical and Technological Sciences Department: Research institutes subordinate to the department by order of founding:

Chemical Sciences Institute in Alma Ata.

Founded in 1945. The institute is involved in organic, inorganic and macromolecular chemistry, especially in relation to the problems of more intensive farming, chemical industry, and nonferrous metallurgy. Director: Zhubanov, Bulat A., D. Chem. S., '69. (See: Ruble, Vol. I., p. 319.) (GSE 28, p. 116.)

Metallurgy and Ore Dressing Institute in Alma Ata.

Established in 1956. The institute develops new methods of extracting and producing metals used in industry such as alumina, low-grade bauxite and rhenium. Director: Liakishev, Nikolai P., D. Tech. S., 1988.

Chemistry and Metallurgy Institute in Karaganda.

Established in 1958. The institute conducts research on ways to improve metallurgical processes for introduction into industry. Director: (vacant); Deputy Director Abishev, Dzhantore N., C. Tech. S., '76. (GSE 28, p. 116.)

Petroleum and Natural Salts Chemistry Institute in Guriev.

Established in 1960. The institute studies techniques for the improvement of oil extraction and processing technology. Director: Sarbaiev, Telman G., '67. 112b. Oil Chemistry and Mineral Salts Institute in Alma Ata. Founded in 1960. (GSE 28, p. 116.)

Organic Catalysis and Electrochemistry Institute in Alma Ata.

Established in 1969. The institute produces new catalysts, studies methods to obtain extra pure metals, and conducts research on new types of chemical sources for electric current. Director: Sokolskii, Dmitri V., D. Chem. S., CPSU, '69. (GSE 28, p. 116.)

The Earth Sciences Department

Members of the Department:

Academician Secretary

Bok, Ivan I ., D. GM. S. Born in 1898. Academician since 1954. Academician secretary of the Earth Sciences Department since 1968.

Academicians

Abdulin, Aitmukhamed A., D. GM. S. Academician since 1979. Since 1979, he has been the director of the K. I. Satpaev Geological Sciences Institute in Alma Ata. Established in 1940, the institute does research in regional geology, metallogenic studies, geophysics and seismology.

Bok, Ivan I., D. GM. S. (See Academician Secretary above.)

Esenov, Shakmardan E., D. GM. S. Born in 1927. Academician since 1967.

Kayupov, Ariktaï K., D. GM. S. Born in 1914. Academician since 1972.

Saginov, Abilkas S., D. Tech. S. Born in 1915. Academician since 1970. Director of the Karaganda Branch of the academy since 1982.

Shcherba, Georgii N., D. GM. S. Born in 1914. Academician since 1972.

Shligin, E. D., D. GM. S. Academician since 1972.

Corresponding Members

Altaiev, Shaukat A., D. Tech. S. Corresponding member since 1979.

Aitaliiev, Shmidt M. Corresponding member since 1983.

Bolgozhin, Shabden A. Corresponding member since 1975. Since 1976, he has been the director of the Mining Institute in Alma Ata, which was established to design coal mining equipment.

Chulakov, Pangerei C. Corresponding member since 1983.

Diarov, Muftakhi. Corresponding member since 1983.

Ermekov, Magaviak A., D. GM. S. Corresponding member since 1983.

Medoiev, Georgii T., C. GM. S. Born in 1901. Corresponding member since 1962.

Mustafina, Asiia M., D. Tech. S. Corresponding member since 1972

Nurlibaïiev, Abdrakhman N. Corresponding member since 1983.

Popov, Ivan I., D. Tech. S. Corresponding member since 1979.

Rakishev, Baian. Corresponding member since 1983.

Suleimenov, Imanbek S., D. Agr. S. Born in 1914. Corresponding member since 1970.

Sidikov, Zhurumbek S., D. G:M. S. Born in 1922. Corresponding member since 1970.

Zhilinskii, German B., D. GM. S. Born in 1914. Corresponding member since 1970.

Earth Sciences Department: Research institutes subordinate to the department by order of founding:

Mining Institute in Alma Ata.

No date given in source. The institute designs coal mining equipment. Its scientists are engaged in land re-use following strip-mining operations. Director: Bolgozhin, Shabden A., '76. (See: Ruble, Vol., I., p. 320.)

K. I. Satpaev Geological Sciences Institute in Alma Ata.

Founded in 1940. Researches regional geology, metallogenic studies, geophysics, and seismology. Director: Abdulin, Aitmukhamed A., D. GM. S., '79. (See: Ruble, Vol. I., p. 319.)

Hydrogeology and Hydrophysics Institute in Alma Ata.

Established in 1964. The institute studies the distribution and utilization of surface and underground water supplies (particularly in desert areas) in the republic. It is also involved in forecasting water sources and designing ways to efficiently utilize water supplies. Director: (vacant.) (See: Ruble, Vol. I., p. 320.)

The Physical and Mathematical Sciences Department

Members of the Department:

Academician Secretary

Sultangazin, Umirzak M., D. PM. S. Born in 1936. Academician since 1983. Academician secretary of the Physical and Mathematical Sciences Department since 1985. Since 1986, he has been the director of the Mathematics and Mechanics Institute in Alma Ata which was established in the 1960s to do research in the field of infinite systems of differential equations and their application to problems in fields allied with mathematics such as mechanics, the theory of non-linear oscillation, and the theory of stability. Since 1988, he has served as president of the academy. (LDA 89-11378.)

Academicians

Dobrotin, Nikolai A., D. PM. S. Born in 1908. Academician since 1967. He has been a deputy director of the High Energy Physics Institute in Alma Ata since 1977. The institute was established in 1970 to conduct theoretical investigations in nucleonics, to develop systems for automation of physical experiments by means of electronic computing engineering, and to study cosmic rays.

Ibragimov, Shavkat S., D. Tech. S. Born in 1923. Academician since 1970. He has been the director of the Nuclear Physics Institute in Alma Ata since 1973. The institute was established in the late 1950s to do research in nuclear physics, solid-state physics, optics, and spectroscopy. The institute has a cosmic ray station attached to it.

Erzhanov, Zhakan S., D. Tech S. Born in 1922. Academician since 1970.

Sultangazin, Umirzak M., D. PM. S. (See Academician secretary above.)

Zhautikov, Orimbek A., D. PM. S. Born in 1911. Academician since 1962.

Corresponding Members

Amanov, Tuleubai I., D. PM. S. Born in 1923. Corresponding member since 1972.

Amervaiev, Vilzhan M., D. Tech. S. Corresponding member since 1972.

Boos, Ernst G., D. PM. S. Corresponding member since 1983.

Chasnikov, Ivan Ia., D. PM. S. Since 1979, he has been the director of the High Energy Physics Institute in Alma Ata which was established in 1970 to conduct theoretical investigations in nucleonics, to develop systems for the automation of physical experiments by means of electronic computing engineering, and to study cosmic rays. Corresponding member since 1983.

Kalinin, Sergei K., D. Tech. S. Corresponding member since 1972.

Kasimov, Kulzhabai A. Corresponding member since 1983.

Lukianov, Aleksei T., D. PM. S. Corresponding member since 1979.

Okolovich, Vladimir N. Since 1968, he has been deputy director of the Nuclear Physics Institute in Alma Ata which was established in the late 1950s to do research in nuclear physics, solid-state physics, optics, and spectroscopy. A cosmic ray station is attached to the institute. Corresponding member since 1979.

Omarov, Tuken B., D. PM. S. Since 1977, he has been the director of the Astrophysical Institute in Alma Ata which was founded in 1942 and is engaged in the study of the physical properties of celestial bodies, such as luminosity, size, mass, density, temperature, and chemical composition. Corresponding member since 1979.

Pomerantsev, Gleb B. Corresponding member since 1975.

Urazbaiev, Bazarbai M., D. PM. S. Born in 1921. Corresponding member since 1967.

Physical and Mathematical Sciences Department: Research Institutes Subordinate to the department by order of founding:

Astrophysical Institute in Alma Ata.

Founded in 1950, based on the Astrophysical Institute which was originally begun in 1942. The institute is engaged in the study of the physical properties of celestial bodies, such as luminosity, size, mass, density, temperature, and chemical composition. The first large Soviet 50-cm meriscus telescope designed by D. D. Maksutov was installed in this Institute's mountain observatory. Director: Omarov, Tuken B., D. PM. S., '77. (GSE 2, p. 437).

Nuclear Physics Institute in Alma Ata.

Established in the late 1950s. The institute researches nuclear physics, solid-state physics, optics, and spectroscopy. There is a cosmic ray station attached to the institute. Director: Ibragimov, Shavkat S., D. Tech. S., '73; Deputy Director Okolovich, Vladimir N., '68.

Mathematics and Mechanics Institute in Alma Ata.

Founded in the 1960s. The institute does research in the field of infinite systems of differential equations and their application to problems in fields allied with mathematics such as mechanics, theory of non-linear oscillation, and the theory of stability. Director: Sultangazin, Umirzak M., D. PM. S., '86.

High Energy Physics Institute in Alma Ata.

Established in 1970. The institute conducts theoretical investigations in nucleonics, develops systems for the automation of physical experiments by means of electronic computing engineering, and studies cosmic rays. Director: Chasnikov, Ivan Ia., D. PM. S., '79; Deputy Director Dobrotin, Nikolai A., D. PM. S., CPSU, '77.

The Social Sciences Department

Members of the Department:

Academician Secretary

Abdildin, Zhabaikhan M. , D. Phil. S. Born in 1933. Academician of the department since 1983. Academician secretary of the Social Sciences Department since 1984.

Academicians

Abdildin, Zhabaikhan. M . (See Academician secretary above.)

Akhmetov, Zaki A. Academician since 1983.

Ashimbaev, Tuimebai A . Since 1974, he has been the director of the Economics Institute in Alma Ata which researches the economic history of the republic. Academician since 1983. .

Baimakhanov, Murat T . Academician since 1983.

Beisembaiev, Serkbaib B ., D. Hist. S. Academician since 1975. .

Dzholdasbekov, Umirbek A ., D. Tech S. Academician since 1979.

Kaidarov, Abbu-Ali T ., D. Phlg. S. Academician since 1983.

Kazankov, Vladimir . No date available.

Kenesbaiev, Smet K ., D. Phlg S. Born in 1907. Academician since 1946.

Polukhin, Petr I. , D. Tech. S. Born in 1911. Academician since 1975. .

Tulepbaev, Baidabek A. Born in 1921. Since 1975, academician of the Social Science Department of the Kazakh Academy of Sciences. Corresponding member of the History Department of the AN SSSR since 1981. . (LDA 89-11378.)
Zimanov, Salik Z ., D. Jur. S. Born in 1921. Academician since 1967.

Corresponding Members

Akhanov, Kaken A . Corresponding member since 1975.
Amantaev, Baket ., D. Phil. S. Corresponding member since 1972.
Asilbekov, Malik-Aidar Kh ., D. Hist. S. Corresponding member since 1983.
Aubakirov, Ia. A. Corresponding member since 1975.
Baimuratov, Urazgeldi B ., D. Econ. S. Corresponding member since 1979.
Diusenbaiev, Iskhak T ., D. Phlg. S. Corresponding member since 1975.
Erenov, Abduali E ., D. Jur. S. Born in 1923. Corresponding member since 1967.
Erzakovich, Boris G ., D. Arts Born in 1908. Member since 1967.
Iskakov, Akhmedii I ., D. Phlg. S. Corresponding member since 1972.
Kabdulov, Zeinulla K., D. Phlg. S. Corresponding member since 1983.
Karataev, Mukhamedzhan K. ., D. Phlg. S. Born in 1910. Corresponding member since 1975. .
Koshanov, Amanzhol K . Corresponding member since 1983.
Kozibaev, Manash K ., D. Hist. S. Corresponding member since 1979.
Kshibekov, Dosmukhamed ., D. Phil. S. Corresponding member since 1972.
Lizunova, E V ., D. Phlg. S. Corresponding member since 1975.
Petukhov, Rem M. ., D. Econ. S. Born in 1928. Corresponding member since 1967.
Sadvakasov, Gozhakhmet S . Corresponding member since 1975.
Sartgaev, Sultan S . Corresponding member since 1975.
Saribaiev, Shora S ., D. Phlg. S. Corresponding member since 1983.
Satpaeva, Shamshiiabanu K. ., D. Phlg. S. Corresponding member since 1979.
Suleimenov, Begezhan I ., D. Hist. S. Corresponding member since 1972. .
Suleimenov, Ramazan B ., D. Hist. S. Corresponding member since 1979.
Sizdikova, Rabiga G. ., D. Phlg S. Corresponding member since 1979.
Tolibekov, Sergali E ., D. Econ. S. Corresponding member since 1967.

Social Sciences Department: Scientific Research Institutes Subordinate to the department by order of founding:

Economics Institute in Alma Ata.

Founded in 1952 by a merger between the economic sector of the Kazakh Academy and the Institute of Agricultural Economics of the Kazakh Branch of the All-Union Academy of Agricultural Sciences. The institute studies the economic history of the republic. The institute houses some 13 departments, employs more than over 36 degreed scientists who contribute research articles to the academy's publication, Izvestia as well as other publications. Director: Ashimbaiev, Tuymeabay A., CPSU, '74. (See: Ruble, Vol. I, pp. 159-160.)

Philosophy and Law Institute in Alma-Ata.

Established in 1947, the institute employs more than 60 scholars in its research on the theory and history of state and law. Director: Abaldin, Zh. A. (See: Ruble, Vol. I., p. 468.)

Ch. Ch. Valikhanova History, Archeology and Ethnography Institute in Alma-Ata.

Shortly after the organization of the Kazakh Academy of Sciences in 1946, an ethnography section was established which has become the center of anthropological research in the republic. Institute scholars have published studies on Kazakh contemporary culture, Kazakh tribal distribution and settlement, on the physical characteristics of ancient settlers, and on the life and culture of the Uigurs, Dungans, Kirghiz, Uzbeks, and other Asian peoples. The institute began to publish Trudy in 1956. The central library of the institute houses some 3 million volumes. In 1973, the Museum of Archeology was opened under the auspices of this institute. The museum has four divisions on Stone, Bronze, early Iron, and the Middle Ages. On exhibit are Bronze Age decorations and implements from the grave excavations at Tau-Tara and Kara-Kuduk. Director: Nuzupbekov, A. N. (See: Ruble, Vol. III, pp. 140-141.)

Linguistics Institute in Alma-Ata.

Having originally be a part of the Institute of Language, Literature and History of the Kazakh Academy of Sciences, this institute received independent status in 1961. Some 15 doctors and 150 candidates of sciences of the philological sciences were working at this institute in the late 1960s and early 1970s. The institute has eight departments: Contemporary Kazakh Language Theory, Turkology and the History of the Kazakh Language, Dialectology, Speech and Culture, Onomastics, Comparative Study of Kazakh and Russian Languages, Explanatory Dictionary, and Bilingual Dictionaries. Director: Kenesbaev, S. K. (See: Ruble, Vol. III, pp. 515-516.)

M. O. Auezova Literature and Art Institute in Alma-Ata.

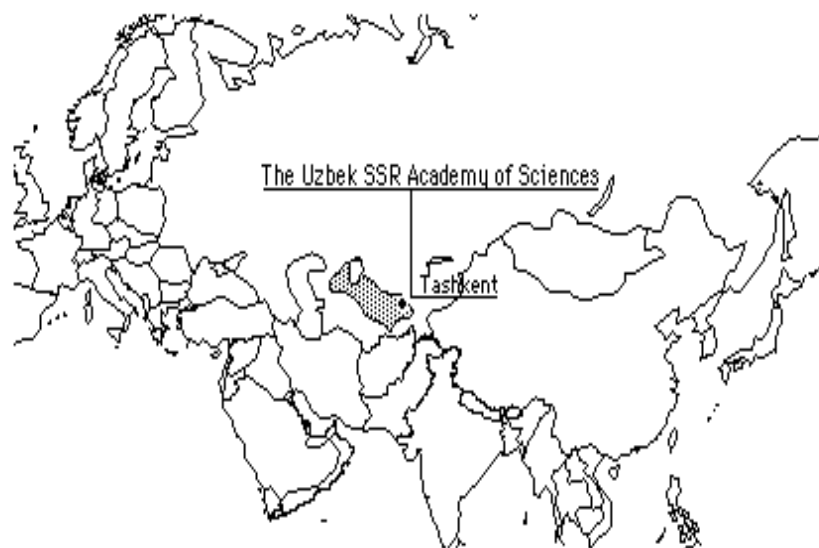
Founded in 1961, this institute is the center for the study of Kazakh literature. It maintains an active graduate program. Director: Sharipov, A. S. (See: Ruble, Vol. III, p. 516.)



THE UZBEK ACADEMY OF SCIENCES

Some Facts About Uzbek: Uzbek is located in Central Asia, bordering on the Aral Sea--a highly polluted area--between Kazakhstan and Turkmenistan. In size it is slightly larger than California in the United States, having some 447,400 km². It shares boundaries with Afghanistan, Kazakhstan, Kirgizistan, Tajikistan, and Turkmenistan. It borders on the Aral Sea for some 420 km, though it is landlocked. It is rich in natural resources, many of which remain to be developed. Uzbek's population in 1993 was approximately 22.13 million people. Its population is literate. It gained its independence from the Soviet Union in August of 1991 and adopted a constitution in December of 1992. It is a major cotton-producing area. (From The Gutenberg Project Header to CIA World Factbook on the Internet, 1996.)

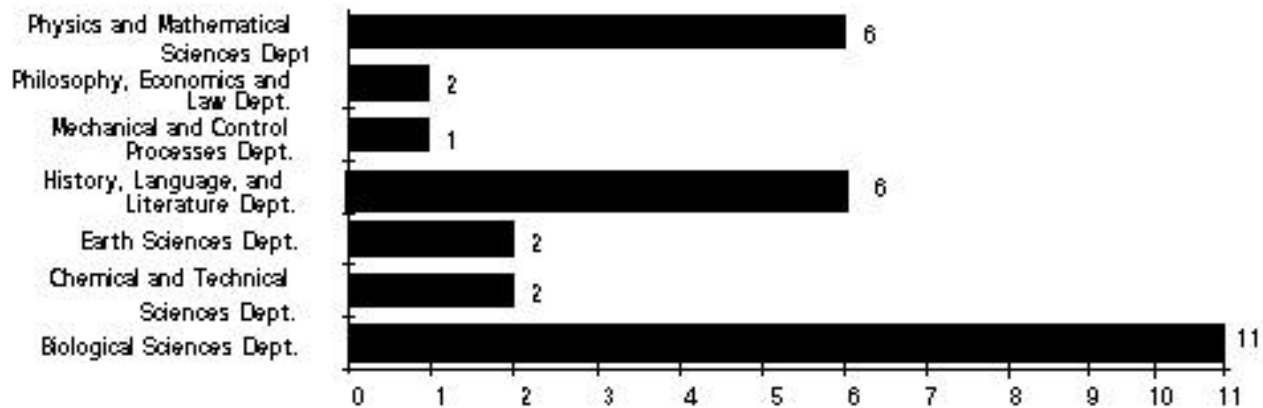
Beginnings and Structure: The Uzbek Academy of Sciences was founded in 1943 from what had previously been a branch of the national academy. Its headquarters are located in Tashkent. While in 1969 it had a total of 104 members, in 1987 it had some 124 members--47 academicians and 77 corresponding members. According to the Great Soviet Encyclopedia, the academy is organized in five divisions: physics, engineering and mathematical sciences; earth sciences; chemical engineering and biological sciences; philosophical, economic, and juridical sciences; and history, linguistics, and literary criticism.



In 1969, these five Uzbek academy departments had 28 scientific research institutes and institutions subordinate to them. Included in this total are the council on the studies of productive forces of the republic, the academy library of some 1,750,000 volumes, and the Fan publishing house.¹⁵

¹⁵ The Great Soviet Encyclopedia. New York, 1983. "Uzbek SSR Academy", Vol. I, pp. 57-58.

Number of SRIs by Department in the Uzbek
SSR Academy of Sciences in 1987



Source: LDA 87-11012, pp. 267-270. This source lists only 17 institutes. Others are derived from the Great Soviet Encyclopedia and from the three volumes of Ruble's work.

The Progress of Scientific Development Since 1917: An article by the academy president at the time--A. Sadikov--which appeared in *Technology and Armament* in 1972, described the giant strides which science had made in the Uzbek Republic since the Bolshevik revolution. At that time, according to him, "only one single Uzbeki had a higher education," while in 1972 every third person was in a higher educational institution--a total of over 230,000. There were 150 "scientific establishments in the republic, 31 of which were part of the Uzbek academy system. The republic boasted of 26,000 "scientific workers and educators," 12,000 of whom were women.¹⁶ Academy institutes had a total of 3400 scientific workers of this total of whom over half had either the candidate or doctoral degrees. By 1984, the Uzbek Republic ranked fifth among the Soviet republics in the total number of scientists working in the republic.¹⁷ Graduate work responsibility in the Uzbek Republic is shared between the Scientific Research Institutes of the academy and the institutions of higher education, although the academy is the primary training institution for doctoral-level work. In 1980, for example, 1,576 postgraduate students were studying in scientific institutions, and 1,735 in the VUZy system.¹⁸

Uzbek Scientific Personnel: In 1981, there were a total of 4,029 scientific personnel working in the Uzbek academy, of whom 1626 held candidates degrees and 230 had doctoral degrees. Scientific personnel in the academy system amounted to about 11 percent of the total number of scientists listed in the republic in 1981.¹⁹ If this ratio remained constant, in 1984, the Uzbek academy would have had approximately 4400 scientific workers in its institutes. By way of contrast, the institutions of higher education in Uzbek counted some 20,354 scientific workers of whom some 500 held doctorates and 7400 held candidates degrees. The two largest scientific centers in the republic

¹⁶ A. Sadikov, "A Nation of Advanced Science," *Technology and Armament*, December 1972, pp. 68-74.

¹⁷ *Vestnik statistiki*, No. 12, Dec. 1985, pp. 69-72.

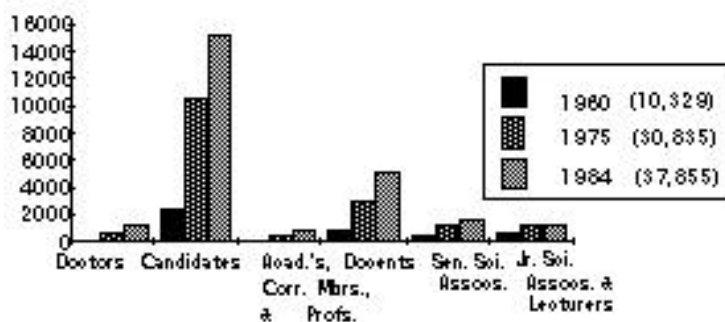
¹⁸ N. Mutalov, "The Scientific Intelligentsia of Uzbekistan Under the Conditions of Developed Socialism," *Obshchestvennyye nauki v Uzbekistane*, No. 2, February 1983, pp. 14-19.

¹⁹ *Ibid.*

are Tashkent State University and the Uzbek Academy of Sciences. Both institutions are tied together by contract through 1990 for all aspects of research and for the introduction of scientific technology into production at the economic and industrial enterprises of the republic.²⁰

Coordination of Research: In addressing the annual meeting of the Uzbek academy in 1982, Y. A. Ovchinnikov, vice president of the Academy of Sciences of the USSR emphasized the need for the building of experimental production bases at research institutes which should be open to the use of research scientists. He went on to emphasize the necessity for the national academy and the republic academies to become "the chief centers for the coordination of research work in the nation. He believed it necessary "to make greater demands not only upon the academic, but also upon the branch scientific institutions, and to make assiduous use of the funds which are allocated for scientific development."²¹ As the chief of the Science and Technology Administration in the Uzbek Republic later observed, the isolation of academic science, ministerial science and the science of higher educational institutions was being overcome by the implementation of the "goal program methods" of management under which the coordinating activities of the republic GKNT, GOSPLAN, and the Uzbek Academy of Sciences were becoming increasingly effective.²²

Scientists in the Uzbek SSR



No.'s in parentheses in the legend box = total scientists in the Uzbek SSR

Source: Vestnik statistiki, No. 12, December 1985, pp. 69-72; N. Mutalov, "The Scientific Intelligentsia of Uzbekistan Under the Conditions of Developed Socialism," Obshchestvennyye nauki v Uzbekistane, No. 2, February 1983, pp. 14-19.

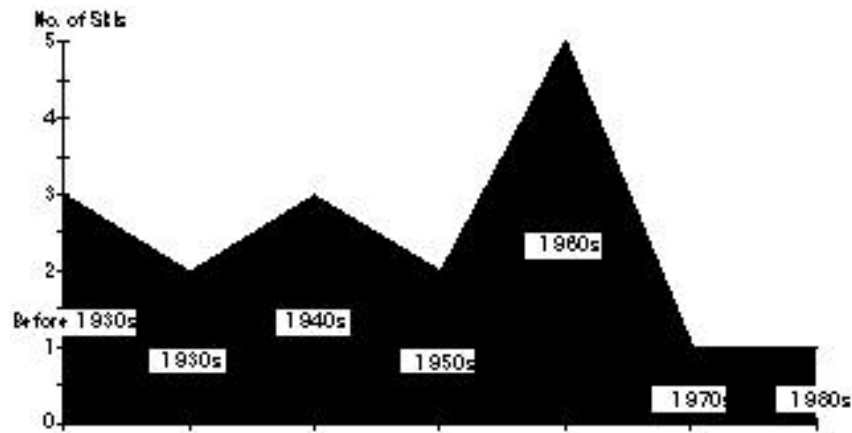
Growth of Scientific Research Institutes: Although, as the figure below shows, the establishment of the scientific research institutes began while the academy was still a branch of the national academy, the period of greatest growth in the number of research institutes established occurred in the 1960s.

²⁰ "The Cooperation of Scientific Centers Is Becoming Stronger," Pravda Vostoka, 12 September 1985, p. 3.

²¹ "Strengthen the Alliance Between Science and Production: Annual Meeting of the Academy of Sciences Uzbek SSR," Pravda Vostoka, 30 April 1982, pp. 1-2.

²² Interview with Vakhid Akhmedovich Khoadzhimatov, chief of the Science and Technology Administration of the Uzbek State Planning Committee, reported in Ekonomika i zhizn, No. 5, May 1985, pp. 44-48.

Uzbek SRIs, by Decade of Establishment



Source: LDA 87-11012, pp. 267-270.

Science and Technology in Uzbek Today: Uzbek after independence established a National Advisory Committee, probably modelled after the GKNT of the former Soviet Union--that is, A State Committee for Science and Technology. That committee studies problems and establishes policy for the scientific, economic, and technological development of the country. Members of that Advisory Committee are:

Uzbek Advisory Committee

- DR. B. A. TASHMUHAMEDOV
Chairman
Institute of Physiology and Biophysics, Uzbek Academy of Sciences
- DR. F. Kh. Abdullaev
Physico - Technical Institute, Uzbek Academy of Sciences
- DR. Sh. A. Ayupov
Institute of Mathematics, Uzbek Academy of Sciences
- DR. A. N. SULTANKHODJAEV
Institute of Seismology, Uzbek Academy of Sciences
- DR. T. B. Usmanov
Institute of Electronics, Uzbek Academy of Sciences
- DR. T. B. Yunusov
Institute of Plant Chemistry, Uzbek Academy of Sciences

It is interesting to note that all members of the National Advisory Committee are members of the Uzbek Academy of Sciences and many are also directors of either research or technical institutes under Academy jurisdiction.

One of the major steps being taken by scientists and engineers in Uzbek as well as in other Asian Republics of the former Soviet Union, is that of network development of computers--that is, establishing information linkages with scientists and institutions in the rest of the world.

As a proposal for financial assistance to achieve such a purpose puts it:

". . .In case of building the Internet-node with permanent TCP/IP connection, Republics of

Central Asia will perhaps have perhaps to unite in Central Asian network with the centre in Tashkent, because Tashkent has a strong base of engineering resources. Tashkent is [the] geographical nucleus of Central Asia and it is reasonable to bring leased lines up to Tashkent rather than to Moscow which will allow to reduce to cost of communication lines, creation of new lines and channels.

Program goals and objectives.

The main goal of the project is to provide permanent and reliable information exchange for Central Asia on the base Internet-node via leased-line. This service will provide the access to databases for students of universities, will help to businessmen in their search for business partners, [and] will help to organize exchange of information between news agencies and any private and governmental organization and individuals. And the world will have the access to [the] databases of Uzbekistan. This will be extremely helpful to economical and technical reforms in Uzbekistan. . . ."

Members of the academy: Of the 124 members of the Uzbek academy, eighteen were directors of research institutes under academy control and one was a deputy director in 1987. About 16 percent of the members of the academy were members of the CPSU--a relatively small percentage of the total.

The Presidium (Includes officers, academician secretaries, and scientists elected by the general assembly.)

President

Salakhitdinov, Makhmud S ., D. PM. S. Born in 1933. Academician of the Physical and Mathematical Sciences Department of the Uzbek Academy since 1974. Since 1968, he has been the director of the V. I. Romanovskii Mathematics Institute in Tashkent which was created in 1943 and which focuses on the study of number, form, arrangement, and associated relationships, using rigorously defined literal numerical and operational symbols. Vice president of the academy from 1984 to 1988. He was named president in 1988. (LDA 89-11378.)

Vice Presidents

Iusupov, Erkin Iu. , D. Phil. S. Born in 1929. Academician of the Philosophy, Economics and Law Department of the Uzbek Academy of Sciences since 1984. Vice president of the Uzbek Academy since 1979. Corresponding member of the Philosophy and Law Department of the AN SSSR since December 1987. . (LDA 89-11378.)

Lapkin, Kuzma I ., D. Econ. S. Academician of the Philosophy Economics, and Law Department of the Uzbek Academy of Sciences since 1979. Vice president of the academy since 1981. (LDA 89-11378.)

Lebedev, Oleg V. , Vice president since 1988. (LDA 89-11378.)

Rashidov, Tursunbay R. , D. Tech S. Vice president since 1985. (LDA 89-11378.)

Musaev, Dzhura A. Academician of the Biological Sciences Department of the Uzbek Academy since 1984. Vice president since 1986. (LDA 89-11378.)

Chief Scientific Secretary of the academy:

Khalmuradov, Askar G. , D. Bio. S. He was named chief scientific secretary of the Uzbek academy in 1988. (LDA 89-11378.)

Other members of the presidium

Akramkhodzhaev, Abid M ., D. GM. S. Born in 1920. Academician of the Earth Sciences Department since 1966. Academician secretary of the Earth Sciences Department since 1969.

Glushchenko, Aleksei D. Academician of the Mechanics and Control Processes Department since 1984. Academician secretary of the department since 1984.

Iunusov, Sabir Iu. , D. Chem. S. Born in 1909. Academician of the department since 1952. Academician secretary since 1986. .

Kamalov, Sabir K., Born 1910. Since 1978, chairman of the Kara Kaalpak Affiliate of the academy. . (LDA 878-11012.)

Pugachenkova, Galina A ., D. Arts. Born in 1915. Since 1984, academician of the History, Linguistics, and Literature Department of the academy. Elected as a member of the Presidium in 1985.

Saidov, Mukhtar S ., D. PM. S. Born in 1925. Academician of the Biological Sciences Department of the academy since 1968. Since 1970, director of the Botany Institute in Tashkent, which was established in 1932 and researches the flora and vegetation of the Uzbek SSR, with emphasis upon improving agricultural production. Elected as a member of the Presidium in 1985.

Biological Sciences Department

Members:

Academician Secretary

Muzafarov, Akhrar M ., D. Bio. S. Born in 1909. Academician of the department since 1960. Academician secretary since 1986.

Academicians

Aripov, Uktam A ., D. Med. S. Born in 1927. Academician since 1974.

Mukhamediev, Auliia M. , D. Bio. S. Born in 1906. Academician since 1968.

Musabayev, Iskhak K ., D. Med. S. Born in 1910. Academician since 1966. .

Muzafarov, Akhrar M ., D. Bio. S. (See Academician Secretary above.)

Saidov, Dzhura K ., D. Bio. S. (See Presidium above.)

Turakulov, Ialkin Kh ., D. Bio. S. Born in 1916. Academician since 1966.

Vakhidov, Vasit V . Born in 1917. Academician since 1979. .

Zufarov, Kamildzhan A ., C. Med. S. Born in 1925. Academician since 1968.

Corresponding Members

Abdirov, Charzhau A . Corresponding member since 1979. .

Abdullaev, Abdumavlian A . Born in 1930. Corresponding member since 1979. Since 1976, he has been the director of the Experimental Plant Biology Institute in Tashkent which studies the biology, morphology, and genetics of plants. (LDA 89-11378.)

Dadabaev, Akram D . Born in 1908. Corresponding member since 1966.

Granitov, Ippolit I ., D. Bio. S. Born in 1900. Corresponding member since 1968.

Ibragimov, Akhmed P ., D. Bio. S. Corresponding member since 1984.

Irgashev, Irkin Kh., D. Vet. S. Born in 1933. Corresponding member since 1964.

Iuldashev, Sadrutdin Kh ., D. Bio. S. Born in 1917. Corresponding member since 1968. Since 1978, he has served as a vice president of the V. I. Lenin Academy of Agricultural Sciences which was founded in 1929 and is the highest scientific institution in the USSR in the fields of agriculture, water resource management, and forestry. (LDA 89-11378.)

Kasimov, Akmaldzhan K. Corresponding member since 1984. .

Katsenovich, Rauf-Rafail A . Corresponding member since 1979.

Khamidov, Dzhakhangir Kh ., D. Bio. S. Corresponding member since 1974. Since 1976, he has been the director of the Biochemistry Institute in Tashkent which was established in 1967 to study the chemical processes and compounds

of living organisms. (LDA 89-11378.)

Mavlani, Moshkhura I. , Corresponding member since 1979.

Nikolaiev, Aleksandr I. , D. Med. S. Corresponding member since 1979.

Rakhimdzhonov, Abdumannap R. , D. Med. S. Corresponding member since 1979.

Sultanov, Mukhamed A. , D. Bio. S. Corresponding member since 1968. Since 1969, he has been the director of the Zoology and Parasitology Institute in Tashkent. The institute was established in 1950 and does experimental research on animals. It has a museum and a library. (LDA 89-11378.)

Tashmukhamedov, Begdhan A., D. Bio. S. Born in 1914. Corresponding member since 1979. Since 1985, he has been the director of the Physiology Institute in Tashkent which was established in 1957 and whose research is concerned mainly with human and animal physiology. (LDA 89-11378.)

Tuliaganov, Akhrar T. , D. Bio. S. Corresponding member since 1966.

Vlasova, Nina A. . Corresponding member since 1984.

Biological Sciences Department: Scientific research institutes of the department by order of founding:

Botanical Garden in Tashkent.

Established in 1921. The garden scientists conduct important studies on the republic's plant life. (See: Ruble, Vol. I., p. 356.)

D. K. Zabolotnii Institute of Microbiology and Virology in Tashkent.

Founded in 1928. (GSE 3, p. 308.)

Botany Institute in Tashkent.

Founded in 1931. The institute researches flora and vegetation of the republic. Director: Saidov, Dzhura K., D. Bio. S., '70; Deputy Director Khudaiberdiev, R. Kh., '76. (GSE 3, p. 308.)

Hydrobiology Institute in Tashkent.

Founded in 1939. (GSE 3, p. 308.)

Zoology and Parasitology Institute in Tashkent.

Established in 1950 based on the 1930 Zoology Institute. The institute studies the protection of cotton crops from insects and the dynamics of controlling rodent populations. Director: Sultanov, Gani S., C. Bio. S., '69; Deputy Director Khairutdinov, Kh. S., C. Bio. S., '76. (See: Ruble, Vol. I., p. 360.) (GSE 3, p. 308.)

Botanical Chemistry Institute in Tashkent.

Established in 1956 based upon the Alkaloid Chemistry Laboratory of the Chemistry Institute of 1943. (GSE 28, p. 116.)

A. O. Kovalevskii Institute of the Biology of the Southern Seas in Tashkent.

Founded in 1963 on the basis of the A. O. Kovalevskii Sevastapol Biological Station which was originally established in 1871-1872. (GSE 3, p. 308.)

Biochemistry Institute in Tashkent.

Established in 1967 based on a 1925 institute forerunner. It studies the chemical processes and compounds of living organisms. The institute employs nearly 100 scholars working in eight laboratories. Director: Khamidov, Dzhakhangir Kh., D. Bio. S., '76; Deputy Director Babaev, T. A., C. Med. S., '75. (See: Ruble, Vol. I., p. 357.) (GSE 3, p. 308.) (GSE 28, p. 116.)

Experimental Plant Biology Institute in Tashkent.

No date given in source. The institute studies the biology, morphology and genetics of plants. Director: Abdullaev, Abdumavlian A., '76.

A. A. Bogomolets Physiology Institute in Tashkent.

Established in 1975 based on a 1953 institute. The institute does research on human and animal physiology. Director: Tashmukhamedov, Bekdzhon A., D. Bio. S., '85. (GSE 3, p. 308.)

Interdisciplinary Institute of Natural Sciences in Nukus.

Subordinate to the Karakalpak Branch of the Uzbek SSR Academy of Sciences. No date of founding given in source. The institute scientists participate in efforts to protect the wild animal populations of the republic. (See: Ruble, Vol. I., p. 362.)

Chemical and Technological Sciences Department

Members:

Academician Secretary

Iunusov, Sabir Yu., D. Chem. S. Academician of the Chemical and Technological Sciences Department since 1952. Academician secretary since 1986. Since March of 1989, Iunusov has been the director of the Nuclear Physics Institute in Tashkent which was begun in 1956 to conduct fundamental research in nuclear physics, the utilization of atomic energy in science and in the national economy. Its facilities include an atomic reactor and a cyclotron. . (LDA 89-11378.)

Academicians

Akhmedov, Karim S., D. Chem S. Academician since 1966.

Iunusov, Sabir Yu., D. Chem. S. (See academician secretary above.)

Nabiev, Malik N., D. Tech. S. Academician since 1956. .

Sadikov, Abid S., D. Chem. S. Academician since 1947. .

Usmamov, Khamdam U., D. Chem S. Academician since 1966.

Corresponding Members

Abidova, Mukhabbat F. . Corresponding member since 1984.

Abuvbakirov, Nail K. , D. Chem. S. Corresponding member since 1979.

Askarov, Mirkhodzhi A. , D. Chem. S. Corresponding member since 1974.

Glushenkova, Anna I. Corresponding member since 1984.

Parpiev, Nusrat A. Corresponding member since 1984

Rustamov, Kh. R. , D. Chem. S. Corresponding member since 1968.

Salimov, Zakirzhan S. Corresponding member since 1984.

Tashpulatov, Yunus T. . Corresponding member since 1984.

Chemical and Technological Sciences Department: Research Institutes

subordinate to the department by order of founding:

Chemistry Institute in Tashkent.

Founded in 1943. Today the institute numbers more than 250 scientists of whom approximately half hold graduate degrees. The institute has more than 24 laboratories. Its research covers a wide range of fields and problems, including metal corrosion problems, production and hardening of cement, production of glass and ceramics, and pesticide production. Director: Beglov, Vladimir M., D. Chem. S., '83; Deputy Directors: Aripov, Ergash, '81; and, Sirazhiddinov, Nasiriddin A., '83. (See: Ruble, Vol. I., p. 359.) (GSE 28, p. 116.)

Polymer Chemistry and Physics Institute in Tashkent.

Created in 1981. The institute studies the chemistry of coordination compounds, macromolecular compounds, and composite materials. Director: (vacant).

Earth Sciences Department

Members:

Academician Secretary

Akramkhodzhaev, Abid M ., D. GM. S. Academician of the Earth Sciences Department since 1966. Academician secretary of the department since 1969. (LDA 89-11378.)

Academicians

Akramkhodzhaev, Abid M ., D. GM. S. (See academician secretary above.)

Baymukhamedov, Khasil N ., D. Econ. S. Academician since 1979.

Ianisheskii, Nikolai A ., D. Tech. S. Academician since 1956.

Khamrabaev, Ibragim Kh ., D. GM. S. Born in 1920. Academician since 1974. Since 1976, he has been the director of the Kh. M. Abdullaev Geology and Geophysics Institute in Tashkent which was established in 1937 and which conducts research on the earth's crust and mantle in the Central Asia area. (LDA 89-11378.)

Mavlianov, Gani A ., D. GM. S. Academician since 1960. Since 1966, he has acted as director of the Seismology Institute in Tashkent which was founded in 1966 and whose research is concentrated in geology and seismology. (LDA 89-11378.)

Mukhamedzhanov, Mirza-Ali V ., D. Agr. S. Academician since 1952.

Popov, Vladimir I ., D. GM. S. Academician since 1966.

Corresponding Members

Alimov, Rakhmatulla A . Corresponding member since 1943.

Askarov, Akhmadali A ., D. Phlg S. Corresponding member since 1984.

Babaev, Arshavir G . Corresponding member since 1974.

Borisov, Oleg M . Corresponding member since 1984.

Faizullaev, Dzharulla F . Corresponding member since 1974.

Rakhimov, Vakhab T . Corresponding member since 1984.

Sadikov, Saddat S . Corresponding member since 1952.

Sultankhodzhayev, Abdumubdi N ., D. GM. S. Corresponding member since 1979.

Ulomov, Valentin I ., D. PM. S. Born in 1933. Since 1966, he has been a deputy director of the Seismology Institute in Tashkent which was established in 1966 to conduct research in geology and seismology. (LDA 87-11012.)

Earth Sciences Department: Research institutes subordinate to the department by order of founding:

Kh. M. Abdullaev Geology and Geophysics Institute in Tashkent.

Established in 1937. It conducts research on the earth's crust and mantle in the Central Asian area. The institute has some 24 laboratories manned by over 200 employees. Between 1955 and 1975, institute scholars published some 2500 articles in scientific journals. Director: Khamrabaev, Ibragim Kh., D. GM. S., '76. (See: Ruble, Vol. I., p. 360.)

Seismology Institute in Tashkent.

Established in 1966. Conducts research in earthquakes and their prediction. Director: Mavlianov, Gani A., D. GM. S., '66; Deputy Directors: Kasimov, S. M., '84; and, Ulomov, Valentin I., D. PM. S., '66.

History, Linguistics, and Literature Department

Members:

Academician Secretary

Vacant

Academicians

Babakhodzhaev, Abdusamat Kh ., D. Hist. S. Academician since 1961.

Dodonov, Ivan K. , D. Hist. S. Academician since 1947.

Kamalov, Sabir K. Academician of the department and chairman of the Kara Kalpak ASSR Affiliate of the Uzbek Academy of Sciences since 1979. . (LDA 87-11012.)

Nugmanov, Kamil N . Academician since 1968. .

Pugachenkova, Galina A ., D. Arts. Academician since 1984. Member of the Presidium of the Uzbek Academy since 1985. (LDA 87-11012.)

Shaabdurakhmanovc, Shanazar S ., D. Phlg S. Academician since 1974.

Tursunov, Kh. T ., D. Hist. S. Academician since 1984. .

Yuldashev, Mukhamedzhan Yu ., D. Hist. S. Academician since 1968.

Zhitov, Konstantin E D. Hist. S. Academician since 1954.

Corresponding Members

Abdurakhmanov, Gani A ., D. Phlg. S. Corresponding member since 1968. .

Akhunova, Melya A ., C. Hist. S. Corresponding member since 1979.

Aminova, Rakhima Kh ., D. Hist. S. Corresponding member since 1966. .

Atakuziev, Uygun A. , D. PM. S. Corresponding member since 1974. .

Bulgakov, Pavel G. , D. Phlg. S. Corresponding member since 1979.

Fazylov, Ergash I . Corresponding member since 1979.

Ishanov, Atabay I. , D. Jur. S. Corresponding member since 1960.

Karimov, Ubaydulla I. , D. Phlg. S. Corresponding member since 1974.

Koshchanov, Matyakub K . Corresponding member since 1979.

Rakhmanov, Mamadzhan R. Corresponding member since 1979.

Sagitov, Ismail T . Corresponding member since 1966.

Sultanov, Izzat A ., D. Phlg S. Corresponding member since 1966.

Tursunmukhamedov, Sattar P . Corresponding member since 1979.

History, Linguistics, and Literature Department: Research institutes subordinate to the department by order of founding:

Oriental Studies Institute in Tashkent.

In 1918, the Bolsheviks opened the Tashkent Oriental Institute, which became a major center for the study of Oriental, especially Turkic philology. During WW II, the Tashkent community of scholars was expanded greatly by evacuees from the European USSR areas. Following the establishment of the Uzbek Academy of Sciences in 1943, the State Public Library in Tashkent was elevated to the status of an Institute for the Study of Oriental Manuscripts of the Uzbek Academy. In 1950, it was renamed the Institute of Oriental Studies and was given research responsibility for the history and contemporary politico-economic development of the nations bordering Uzbekistan, for their foreign policies, for the history of their national liberation movements, and for the literary and cultural development of the countries involved. Emphasis continued to be placed upon the preservation and study of the valuable manuscript collection. It publishes *Sobranie Vostochnykh rukopisei AN UzSSR*. Director: Varatov, M. V. (See: Ruble, Vol. I., pp. 416-417 and Vol. III, pp. 179-180.)

History Institute in Tashkent.

Organized in 1943, this institute has been a leading center of ethnography and anthropology. (See: Ruble, Vol. III, p. 178.)

M. T. Aibeka Museum of the History of the Peoples of Uzbekistan in Tashkent.

Founded in 1876, the museum now under the Uzbek Academy of Sciences jurisdiction continues to be the republic's major repository of archeological, historical and folkloric materials, numbering more than 200,000 items. Museum scholars conduct research and publish extensively on Uzbek and Central Asian history and culture. Director: Sadykova, N. S. (See: Ruble, Vol. III, p. 180.)

Archeology Institute in Samarkand.

Created in 1970, the institute combined several local institutions in its structure. By 1976, there were over 140 workers at the institute studying and researching archeology, architecture, restoration and numismatics. The institute had sectors on Stone and Bronze Age studies, Ancient and Middle Ages Archeology, and the history of irrigation. Its scientists are interested in primitive technology. Some 30-odd expeditions originate from the institute annually. Study of ancient urban cultures are of primary concern to scholars in the institute. Director: Askarov, A. A. (See: Ruble, Vol. III, pp. 183-184.)

A. S. Pushkin Language and Literature Institute in Tashkent.

Opened originally in 1934 as an institute of the Uzbek Branch of the USSR Academy. In 1943, it attained independent institute status under the Uzbek Academy of Sciences. Linguistics, folklore and literary studies constitute the major areas of research at the institute. (See: Ruble, Vol. III, p. 546.)

N. Davkareva History, Language and Literature Institute (Nukus Branch of the Uzbek Academy).

No date for founding given in source. This institute is located in northern Uzbekistan and supports research on the languages and literature of the Karakalpak ASSR. Director: Maksetov, K. M. (See: Ruble, Vol. III, p. 547.)

Mechanics and Control Processes Department

Department members:

Academician Secretary

Glushchenko, Aleksei D. Academician since 1984. Academician secretary since 1984.

Academicians

Fazilov, Khasil F. D., D. Tech. S. Academician since 1956.

Glushchenko, Aleksei D. (See academician secretary above.)

Kabulov, Vasil K., D. PM. S. Academician since 1966. He has been the director of the Cybernetics Institute and Computer Center in Tashkent since 1977. The institute was established in 1966 and studies the optimal planning of the national economy and the use of biocybernetics to develop methods of diagnosing Central Asian diseases. (LDA 87-11012.)

Rakhmatulin, Kh. A., D. PM. S. Academician since 1947. .

Rashidov, Tursunbay R., D. Tech S. Academician since 1984.

Usmankhodzhaev, Kh. K., D. Tech. S. Academician since 1984.

Corresponding Members

Abdullaev, Dzhura A., D. Tech. S. Corresponding member since 1984.

Makhkamov, Rufat G. Corresponding member since 1984.

Rasulev, Utkur Kh. Corresponding member since 1984. Since 1986, he has been the director of the U. A. Arifov Electronics Institute in Tashkent which was founded in 1967 to do research on laser emission problems. (LDA 89-11378.)

Mechanics and Control Processes Department : Research institute subordinate to the department:

M. T. Urazbayev Mechanics and Seismic Resistant Construction Institute in Tashkent.

Established in 1947. Its research involves the studying of earthquakes and the testing of seismic resistance in construction. Director: Dzhuraev, Tukhtamurad D., D. PM. S., '76; Deputy Director Shamsiyev, Ubaidilla S., C. Tech. S., '75.

Philosophy, Economics, and Law Department

Department members:

Academician Secretary

Iskanderov, Ibragim I., D. Econ. S. Academician of the Philosophy, Economics, and Law Department since 1979. Academician secretary since 1984. (LDA 87-11012.)

Academicians

Iskanderov, Ibragim I., D. Econ. S. (See academician secretary above.)

Iusupov, Erkin Iu., D. Phil. S. Born in 1929. Academician of the Philosophy, Economics and Law Department of the Uzbek Academy of Sciences since 1984. Vice president of the Uzbek Academy since 1979. Corresponding member of the Philosophy and Law Department of the AN SSSR since December 1987. (LDA 89-11378.)

Lapkin, Kuzma I., D. Econ. S. Academician since 1979. Vice president of the Uzbek Academy of Sciences since 1981.

Ziadullaev, Said Karim ogly . Academician since 1974. .

Corresponding Members

Agzamkhodzhaev, Anvar A. Corresponding member since 1968.

Basratov, Mubinzhan B ., D. Phil. S. Corresponding member since 1979.

Bedrintsev, Kirill N . Corresponding member since 1962.

Khayrullaev, Muzafar M ., D. Phil S. Corresponding member since 1968.

Khikmatov, Aman Kh . Corresponding member of the Philosophy, Economics and Law Department since 1984. Since 1978, he has served as director of the Economics Institute in Tashkent which conducts research in local economic history and provides graduate training in economics. (LDA 87-11012.)

Kim, Vladimir V . Corresponding member since 1979.

Tulenov, Zhander T ., D. Phil S. Corresponding member since 1984.

Urazayev, Shavkat Z ., D. Jur. S. Corresponding member since 1966.

Philosophy, Economics, and Law Department: Research institutes subordinate to the department by order of founding:

Economics Institute in Tashkent.

Founded in 1943. The institute benefited greatly from the present of evacuated economists from Moscow and Leningrad during WWII. Currently, the institute studies local economic history and development and provides graduate economics training. Director: Khikmatov, Aman Kh., '78; Deputy Director Ubaidullaieva, R. A., '80. (See: Ruble, Vol. I., p. 202.)

Philosophy and Law Institute in Tashkent.

No date of founding given in source, but in 1974, the Department of State and Law of the Institute alone was listed as having some eight sections, and some 51 researchers. Director: Khairullaev, M. A. (See: Ruble, Vol. I., p. 480.)

Physical and Mathematical Sciences Department

Department members:

Academician Secretary

Vacant

Academicians

Atakhodzhaev, Akbar K ., D. PM. S. Academician since 1979.

Azimov, Sadik A ., D. PM. S. Born in 1914. Academician since 1962. Since 1961, he has been the director of the S. V. Starodubtsev Physical Technical Institute in Tashkent, which was established in 1943 to conduct research in high energy physics, semiconductors, cosmic rays, and solar energy. It develops semiconductor instruments and devises methods for the concentration of solar energy. (LDA 87-11012.)

Khabibullaev, Pulat K ., D. PM. S. Academician of the Uzbek Academy's Physical and Mathematical Sciences Department since 1984. President of the Uzbek Academy from 1984 to 1988. Corresponding member of the Physical Technical Problems of Power Engineering Department of the USSR Academy of Sciences since 1984. From 1979 to 1989, he was the director of the Nuclear Physics Institute in Tashkent which was established in 1956 and which conducts fundamental research in the areas of nuclear physics and the utilization of atomic energy in science and in the national economy. Its

facilities include a cyclotron and a nuclear reactor. . (LDA 89-11378.)

Saidov, Mukhtar S ., D. PM. S. Academician since 1984. Member of the Uzbek Academy of Sciences Presidium since 1985. Since 1980, he has been a co-director of the U. A. Arifov Electronics Institute in Tashkent which was founded in 1967 to do research on laser emission problems. (LDA 87-11012.)

Salakhitdinov, Makhmud S . Born in 1933. Academician since 1974. Since 1968, he has directed the work of the V. I. Romanovskii Mathematics Institute in Tashkent which was established in 1943 and whose research concentrates on the study of number, form, arrangement, and associated relationships, using rigorously defined literal numerical and operational symbols. (LDA 87-11012.)

Sarimsakov, Tashmukhamed A ., D. PM. S. Academician since 1943. .

Sirazhdinov, Sagdi Kh ., D. PM. S. Academician since 1966. In 1979, he was named rector of the V. I. Lenin Tashkent State University in Tashkent which was established in 1920. . (LDA 87-11012.)

Corresponding Members

Abdurazakov, Abduzhabbar A ., C. PM. S. Corresponding member since 1984.

Abutaliev, Faraday B ., D. PM. S. Corresponding member since 1984.

Alimov, Shavkat A., D. PM. S. Born in 1945. Corresponding member of the Physical and Mathematical Sciences Department of the Uzbek academy since 1984. In 1987, he was named rector of the V. I. Lenin Tashkent State University which was established in 1920. (LDA 89-11378.)

Azlarov, Tursun A . Corresponding member since 1979.

Begzhanov, Rakhim B. , D. PM. S. Corresponding member since 1968.

Dzhuraev, Tukhtamurad D ., D. PM. S. Corresponding member of the department since 1979. Since 1976, he has been the director of the M. T. Urazbaev Mechanics and Seismic Resistant Construction Institute in Tashkent which was created in 1947 to study earthquakes and to develop earthquake resistant materials and structures. (LDA 87-11012.)

Filatov, Aleksandr N. , C. PM. S. Corresponding member since 1974.

Ganiev, Abduali G . Corresponding member since 1984.

Guliamov, Ulug G. , C. PM. S. Corresponding member since 1974.

Khadzhiev, Dzhavvart Kh . Corresponding member since 1984.

Kukles, Isaak S ., D. PM. S. Corresponding member since 1960.

Matvievskaia, Galina P ., D. PM. S. Corresponding member since 1984.

Muminov, Ramizulla A. . Corresponding member since 1984.

Satimov, Numan. , C. PM. S. Corresponding member since 1979.

Umarov, Giyas Ia. , D. Tech. S. Corresponding member since 1968.

Vakhidov, Shavkat A ., D. PM. S. Corresponding member since 1984.

Iuldashbaev (Yuldashbaev), Taimaz S . Corresponding member since 1984. Since 1983, he has directed the Astronomy Institute in Tashkent which was established in 1966 and studies astronomy, solar and stellar physics, and the effects on time of variations in the Earth's rotations. (LDA 87-11012.)

Physical and Mathematical Sciences Department : Research institutes subordinate to the department by order of founding:

V. I. Romanovskii Mathematics Institute in Tashkent.

Established in 1943. The institute research focuses on the study of number, form, arrangement, and associated relationships, using rigorously defined literal numerical and operational symbols. Director: Salakhitdinov, Makhmud S., D. PM. S., '68; Deputy Director Mukhamedkhanova, R. I., '75.

S. V. Starodubtsev Physical Technical Institute in Tashkent.

Established in 1943. The institute does research in high energy physics, semiconductors, cosmic rays, and solar energy. Director: Azimov, Sadik A., D. PM. S., '61; Deputy Directors: Mirzabaev, M. M., '78; Trukhov, Vasili S., '81. (See: Ruble, Vol. I., p. 360.)

Nuclear Physics Institute in Tashkent.

Established in 1956. The institute does fundamental research in nuclear physics and the utilization of atomic energy in science and in the national economy. Its facilities include an atomic reactor and a cyclotron. Director: Iunusov, Makhmadzhan S. D. PMS. Prof., March '89; Deputy Directors: Abdukaiumov, M., '82; Kist, Aleksandr A., '78; Talipov, Tuliagan T., '76; Usmanova, Manzura M., '81.

Cybernetics Institute and Computer Center in Tashkent.

Established in 1966. It studies optimal planning of the national economy and use of biocybernetics to diagnose Central Asian diseases. Director: Kabulov, Vasil K., D. PM. S., CPSU, '77.

Astronomy Institute in Tashkent.

Established in 1966, based on the Tashkent Astronomical Observatory which was founded in 1873. It studies solar and stellar physics, variable stars, and the effects of time of variations in the earth's rotation. Director: Yuldashbaev, Taimaz S., '83; Deputy Director Latipov, Abdusaliam A., C. PM. S., '68. (GSE 2, 437).

U. A. Arifov Electronics Institute in Tashkent.

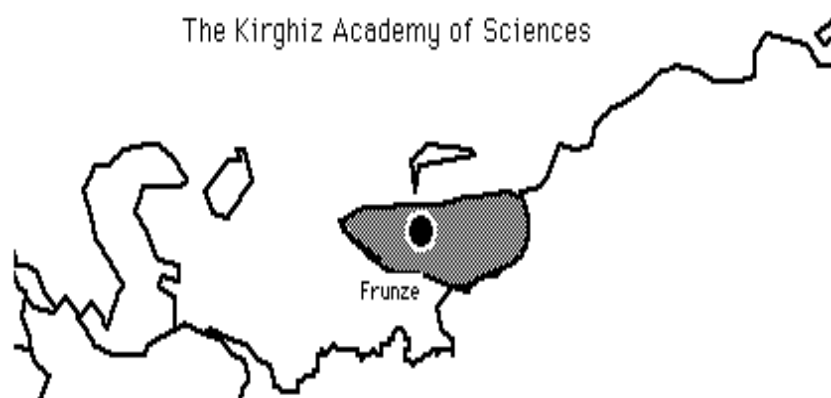
Established in 1967. It does research on laser emission problems. The CPSU Central Committee and the USSR Council of Ministers awarded the 1984 USSR State Prize in Science and Technology to scientists at Gomel State University in Byelorussia; the S. I. Vavilov State Optics Institute ; the Institute of General Physics of the AN SSR; the Vilnius State University; the laboratory of the U. A. Arifov Electronics Institute of the Uzbek Academy of Sciences; and to the laboratory of the Institute of Applied Physics of the AN SSR for the series of works "Higher Efficient Nonlinear Frequency Conversion in Crystals and the Development of Adjustable Sources of Coherent Optical Radiation," which were published during 1961-1982. Directors: Rasulev, Utkur Kr., '86; and Saidov, Mukhtar S., D. PM. S., '80; Deputy Director Rakhimov, Rakhmane R., C. PM. S., '72.



THE KIRGHIZ ACADEMY OF SCIENCES

Some Facts About Kirghizistan: The Republic of Kirgizistan is about 76,641 square miles in size, and its capital and largest city is Bishkek (formerly Frunze (now Bishkek)), with a population of about 630,000. The population of the country is about 4.6 million and Russians constitute almost 22% of that total--there are some Uzbeks, Ukrainians, Germans, and Tatars also mixed in the population in smaller numbers. Kirghiz natives constitute 52.4% of the total population. There are nine institutions of higher learning, and 46 technical and teacher training institutions in the country. The Republic gained its independence in 1991. It is bordered by China on the east and south, by Tajikistan on the south and west, by Uzbekistan on the west, and by Kazakhstan on the north. Kyrgyzstan's small economy (less than 1% of the total for the former Soviet Union) is oriented toward agriculture, producing mainly livestock such as goats and sheep, as well as cotton, grain, and tobacco. Industry, concentrated around Bishkek, produces small quantities of electric motors, livestock feeding equipment, washing machines, furniture, cement, paper, and bricks. Mineral extraction is small, the most important minerals being coal, rare earth metals and gold. Kyrgyzstan is a net importer of many types of food and fuel but is a net exporter of electricity. In 1992, the Kirghiz leadership made progress on reform, primarily by privatizing business, granting life-long tenure to farmers, and freeing most prices. Nonetheless, in 1992 overall industrial and livestock output declined because of acute fuel shortages and a widespread lack of spare parts. [Material from CIA Factbook on the Internet, 1996]

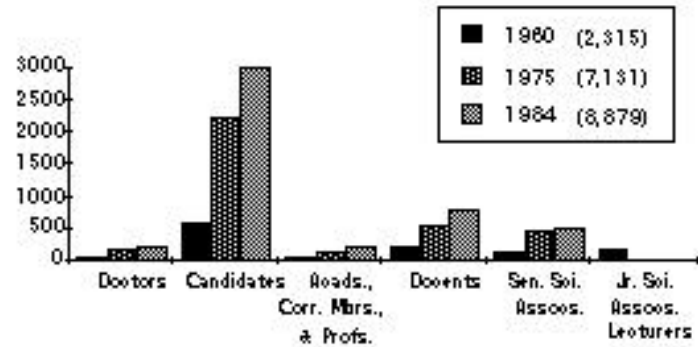
Establishment and growth: The Kirghiz SSR Academy of Sciences was founded in 1954 from a branch of the national Academy of Sciences of the USSR. In 1969, it boasted a membership of 48, a number which had grown to 64 in 1987.



Organization: The academy is organized in three departments: chemical, technological, and biological sciences; physical technical, and mathematical sciences; and the social sciences. It has 13 scientific research institutes, several biological research stations, a botanical garden, and a central library with over half a million volumes.

Research Thrusts : The academy's research includes rock physics and mechanics, integrated automation and process control equipment for industry, geology, biochemistry and the physiology of plants and animals, the economy, history, language and literature of the republic. The academy publishes a number of scientific works and the Kirghiz Soviet Encyclopedia.²³

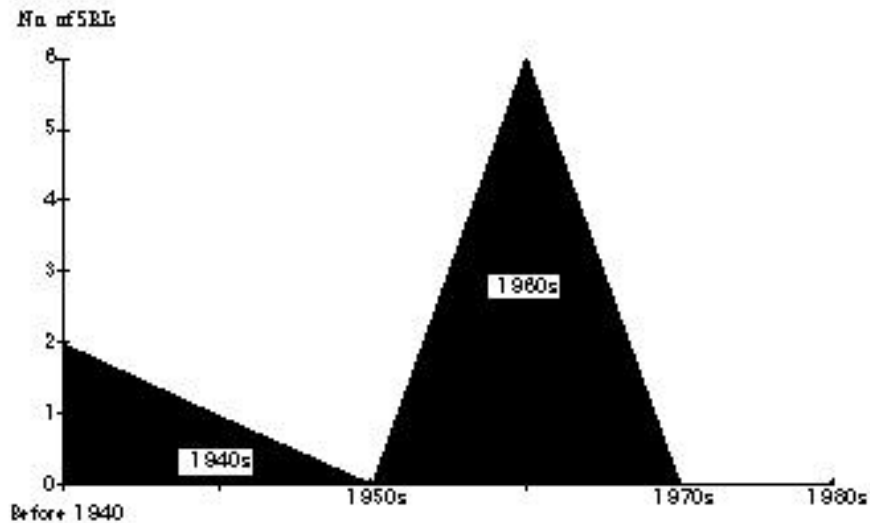
Scientists in the Kirghiz SSR



No.'s in the parentheses in the legend box = total scientists in the Kirghiz SSR.
Source: Vestnik statistiki, No. 12, December 1985, pp. 69-72.

Scientific Personnel and Degree Holding: In 1984, the Kirghiz SSR ranked 12th in the number of scientists working in the republic listing a total of 8879 scientists of whom 216 held doctorates and 2995 held candidates degrees.²⁴

Kirghiz SRI's, by Decade of Establishment



Source: LDA 87-11012, 1987, pp. 208-210

Growth: The period of greatest growth in the academy was in the 1960s.

²³ The Great Soviet Encyclopedia, New York, Macmillan, 1983, "Kirghiz SSR Academy," Vol. I, 52.

²⁴ Vestnik statistiki, December 1985, pp. 69-72.

Role in Planning: As in the other republics, scientists in the Kirghiz academy were involved in long-range planning with GOSPLAN personnel for scientific and technical progress of the region and the nation in 1983, developing a program for the years from 1986 to 2005--in five-year segments.²⁵

Members of the academy: Nine of the 64 members of the Kirghiz academy were directors or deputy directors of the 13 research institutes subordinate to one of the three departments of the academy in 1987.²⁶ Fifteen of the members were also members of the CPSU--about 23 percent. Half of the birthdates and appointment dates of the directors of the Kirghiz scientific research institutes is known: the average age of those directors at the time of their becoming directors was 54 years.

The Presidium: (Includes the officers, the academician secretaries of the departments, and the elected scientists listed below.)

President

Laverov, Nikolai P. Born in 1930. Corresponding member since 1979. Academician of the Geology, Geophysics, Geochemistry, and Mining Department of the national academy since December 1987. Since 1987, he has been president of the the Kirghiz Academy of Sciences. He was named vice-president of the AN SSSR for the Earth Sciences Section in October, 1988. . (LDA 89-11378.)

Vice Presidents

Alimov, Oleg D ., D. Tech S. Born in 1923. Academician of the Physical, Technical, and Mathematical Sciences Department of the academy since 1974. Vice president since 1978. .

Iakovlev, Vladimir G ., D. Bio. S. Since 1967, director of the Biochemistry and Physiology Institute in Frunze (now Bishkek) (now Bishkek) which studies chemical substances and physiological processes in living organisms, including studies of enzymes, proteins, vitamins, and antibiotics. Academician of the Chemical, Technological, and Biological Sciences Department of the academy since 1974. Since 1984, vice president of the academy. "Acting" president of the academy from 1986 to 1987. (LDA 89-11378.)

Koychuiev, T. K. Vice president since 1987.

Chief Scientific Secretary

Zhivogliadov, Valerii P ., C. Tech. S. Chief scientific secretary since 1987.

Other elected members of the presidium:

Bakirov, Apas ., D. GM. S. Since 1984, corresponding member of the Physical, Technical, and Mathematical Sciences Department. Member of Presidium since 1984.

Karakeev, Kurman-Gaily K . Born in 1913. Academician of the Social Sciences Department since 1960. Member of the Presidium since 1978. .

Mirrakhimov, Mirsaid M ., D. Med. S. Born in 1927. Academician of the Chemical, Technological, and Biological Sciences Department since 1974. Member of the Presidium since 1984. .

Oruzbaeva, Byubiyna O ., D. Phlg. S. Academician of the Social Sciences Department since 1979. Member of the Presidium since 1984.

Sherstobitov, Viktor P ., D. Hist. S. Born in 1929. Academician of the Social

²⁵ "Strengthen the Union of Science and Production--Annual General Meeting of Kirghiz SSR Academy of Sciences," *Sovetskaia Kirgiziya*, 1 April 1984, p. 3.

²⁶ LDA 87-11012, 1987, pp. 207-210

Sciences Department since 1984. Member of the Presidium since 1984.

Chemical, Technological, and Biological Sciences

Department members :

Academician Secretary

Vacant

Academicians

Altimishev, Arstanbek A ., D. Med. S. Academician since 1984.

Since 1980, he has acted as a deputy director of the Organic Chemistry Institute in Frunze (now Bishkek) (now Bishkek) which was created in 1960 to research the commercial production of carbohydrates, alkaloids, and glycoalkaloids. Investigations are conducted on plants which serve as raw material for obtaining physiologically active substances. (LDA 87-11012.)

Druzhinin, Ivan G ., D. Chem. S. Born in 1904. Academician since 1954. .

Iakovlev, Vladimir G ., D. Bio. S. Academician of the Chemical, Technological, and Biological Sciences Department of the academy since 1974. Since 1984, vice president of the academy. "Acting" president of the academy from 1986 to 1987. Since 1967, director of the Biochemistry and Physiology Institute in Frunze (now Bishkek) (now Bishkek) which studies chemical substances and physiological processes in living organisms, including studies of enzymes, proteins, vitamins, and antibiotics.

Mamitov, Aman M., D. Agr. S. Born in 1925. Academician of the Chemical, Technological, and Biological Sciences Department of the academy since 1961. Vice president since 1978.

Mirrakhimov, Mirsaid M ., D. Med. S. (See Presidium above.)

Murzaliev, Arstanbek M . Academician since 1984.

Popov, Vasilii M ., D. GM. S. Academician since 1960.

Riskulova, Kakish R ., D. Med. S. Academician since 1969.

Shatemirov, Kadyr S ., D. Chem. S. Academician since 1984.

Sulaymankulov, Kakin S ., D. Chem. S. Academician since 1984.

Volkova, Anna A ., D. Vet. S. Born in 1902. Academician since 1954. .

Zakhariev, Nikolai I ., D. Bio. S. Born in 1902. Academician since 1954. .

Corresponding Members

Aldashev, Abdulkhay A ., D. Vet. S. Corresponding member since 1961.

Andrievskii, Rostislav A . Corresponding member since 1984.

Asanov, Usen A . Corresponding member since 1984. Since 1985, he has been a deputy director of the Inorganic and Physical Chemistry Institute in Frunze (now Bishkek) (now Bishkek) which was established in 1960 to research in the areas of inorganic and physical chemistry associated with the mineral resources of the republic. (LDA 87-11012.)

Aymukhamedova, Gulsym B ., D. Tech. S. Corresponding member since 1961.

Bakasova, Zaryl B ., C. Chem. S. Corresponding member since 1984.

Bleshinskii, Stanislav V ., D. Chem. S. Corresponding member since 1961.

Eremenko, Leonid T ., D. Chem. S. Born in 1923. Corresponding member since 1961.

Evtushenko, Gavriil A ., D. Bio. S. Corresponding member since 1954.

Imanakunov, Beyshen I., D. Chem. S. Since 1977, director of the Inorganic and Physical Chemistry Institute in Frunze (now Bishkek) which was created in 1960 to do research in the areas of inorganic and physical chemistry associated with the mineral resources of the republic. It also develops refractory materials and corrosion-resistant coatings. Corresponding member since 1977.

Isabaeva, Valentina A ., C. Med. S. Born in 1927. Corresponding member since 1961. .

Khanduiev, Tsiren T . Corresponding member since 1984.

Tokobaev, Marat M., D. Bio. S. Born in 1932. Corresponding member since 1977. Since 1980, director of the Biology Institute in Frunze (now Bishkek) which was established in 1964 to conduct research on various ways of improving the lands of the Kirghiz Republic by such means as humus fertilizers, terracing mountain slopes, and irrigation.

Usubakunov, Mamyt ., D. Chem. S. Corresponding member since 1984.

Chemical, Technological, and Biological Sciences Department :
Research institutes subordinate to the department by order of founding:

Inorganic and Physical Chemistry Institute in Frunze (now Bishkek).

Established in 1960 from the 1943 Chemistry Institute. The institute does research in areas of inorganic and physical chemistry associated with the mineral resources of the Kirghiz republic. It also develops refractory materials and corrosion-resistant coatings. Director: Imanakunov, Beishen IO., D. Chem. S., 1977. (GSE 28, p. 116.)

Organic Chemistry Institute in Frunze (now Bishkek).

Established in 1960. The institute does research in the commercial production of carbohydrates, alkaloids, and glycoalkaloids. Investigations are conducted on plants which serve as raw material for obtaining physiologically active substances. Director: Afanasiev, Vitalii A., 1976. (GSE 28, p. 116.)

Biochemistry and Physiology Institute in Frunze (now Bishkek).

Founded in 1964. The institute studies chemical substances and physiological processes in living organisms, including studies of enzymes, proteins, vitamins and antibiotics. Director: Iakovlev, Vladimir G., D. Bio. S., 1967. (GSE 3, p. 308.) (GSE 28, p. 116.)

Biology Institute in Frunze (now Bishkek).

Founded in 1964. The institute conducts research on various ways of improving the lands of the Kirghiz Republic by such means as humus fertilizers, terracing mountain slopes, and irrigation. The institute also studies environmental issues relating to bird and animal life in the republic. Director: Tokobaev, Marat M. D. Bio. S., 1980. (See: Ruble, Vol. I., p. 323.) (GSE 3, p. 308.)

Physical, Technical, and Mathematical Sciences Department

Members:

Academician Secretary
Vacant

Academicians

Alimov, Oleg D ., D. Tech. S. (See vice president above.)

Chalov, Pavel I . Born ;in 1923. Academician of the Physical, Technical, and Mathematical Sciences Department of the academy since 1984. Academician secretary of the academy since 1984.

Demenev, Nikolai V ., D. Tech. S. Academician since 1961.

Imanaliyev, Murzabek I ., D. PM. S. Born in 1931. Since 1979, academician of Physical and Mathematical Sciences Department of the Georgian Academy of Sciences and of the Physical, Technical, and Mathematical Department of the

Khirgiz Academy of Sciences ; and since 1981, a corresponding member of the Mathematics Department of the AN SSSR. From 1979 to 1986, he served as president of the Kirghiz Academy of Sciences. . (LDA 87-11012.) (LDA 89-11378.)

Leonov, Mikhail Ia ., D. PM. S. Born in 1912. Academician since 1961.

Makovskii, Eduard E ., C. Tech. S. Academician since 1979. Since 1982, he has directed the affairs of the Automation Institute in Frunze (now Bishkek) which was founded in 1960 to develop the scientific basis for the comprehensive automation of industrial processes. (LDA 87-11012.)

Otorbaev, Kaip O ., C. Geog. S. Born in 1922. Academician of the Physical, Technical, and Mathematical Sciences Department of the Kirghiz academy since 1979. Since 1980, rector of the 50th Anniversary of the USSR Kirghiz State University in Kirghiz which was established in 1951. .

Zhivogliadov, Valerii P ., C. Tech. S. Academician since 1984. Since 1970, he has been a deputy director of the Automation Institute in Frunze (now Bishkek) which was begun in 1960 for discovering and developing the scientific basis for the comprehensive automation of industrial processes in the republic. (LDA 87-11012.)

Corresponding Members

Akaev, Aksar A . Corresponding member since 1984.

Asanaliev, Usengazy A ., D. GM. S. Corresponding member since 1979.

Bakirov, Apas. D. GM. S. Corresponding member since 1984. (See Presidium above.)

Bolshakov, Mikhail N ., C. Tech. S. Born in 1907. Corresponding member since 1954.

Dvornikov, Leonid T . Corresponding member since 1977.

Frolov, Anatolii V . Corresponding member since 1984.

Kalmurzaev, Kanyy E ., D. GM. S. Corresponding member since 1977.

Kashirin, Fedor T ., D. GM. S. Born in 1911. Corresponding member since 1954. Since 1984, director of the Geology Institute in Frunze (now Bishkek) which was founded in 1943 and which carries out research connected with the investigation of raw material resources of the republic. .

Knauf, Vladimir I ., C. GM. S. Corresponding member since 1984.

Kochergin, Vladimir P ., C. PM. S. Born in 1927. Corresponding member since 1984.

Sekisov, Gennadii V ., D. Tech. S. Corresponding member since 1979. Since 1974, he has been a deputy director of the Physics and Mechanics of Rocks Institute in Frunze (now Bishkek) which was established in 1960 to study the disintegration of rock by blasting and methods of underground and strip ore mining of nonferrous land rare metals and coal. (LDA 87-11012.)

Ukhov, Vladilen F . Corresponding member since 1979.

Physical, Technical, and Mathematical Sciences Department:

Research Institutes Subordinate to the department by order of founding:

Geology Institute in Frunze (now Bishkek).

Established in 1943. The institute carries out research connected with the investigation of raw material and mineral resources of the republic Director: Kashirin, Fedor T., D. GM. S., CPSU, '84.

Automation Institute in Frunze (now Bishkek).

Founded in 1960. The institute works to develop a scientific basis for the comprehensive automation of industrial processes in the republic. Director: Makovskii, Eduard E., C. Tech. S., '82; Deputy Directors: Busargin, Vladimir M., C.

Tech. S., '65; Mamitov, D. M., '75; Zhivogliadov, Valeri P., C. Tech. S., '70.

Physics and Mathematics Institute in Frunze (now Bishkek).

Established in 1960. The institute does work on qualitative theory, mechanics, and spectral analysis of solutions and powders. Director: Zheenbaiev, Zhanibek Z., D. PM. S., '79.

Physics and Mechanics of Rocks Institute in Frunze (now Bishkek).

Founded in 1960. The institute conducts research in disintegration of rock by blasting and methods of underground and strip ore mining of nonferrous and rare metals and coal. Director: Aitmatov, Ilgiz T., C. Tech. S., '70; Deputy Directors: Kovalenko, A., C. Tech. S., '73; and Sekisov, Gennadi V., D. Tech. S., '74.

Social Sciences Department

Members :

Academician Secretary

Vacant

Academicians

Altmishbaev, Asylbek A ., D. Phil. S. Born in 1912. Academician since 1954. .

Iliasov, Satar I ., D. Hist. S. Academician since 1969. .

Izmailov, Aziz E ., D. Ped. S. Academician since 1969.

Karakeev, Kurman-Galiy K . Born in 1913. Academician since 1960. .

Oruzbaeva, Byubiyna O ., D. Phlg. S. Academician since 1979. (See Presidium above.)

Sherstobitov, Viktor P ., D. Hist. S. Born in 1929. Academician since 1984. (See Presidium above.)

Sidikbekov, Tugelbay . Academician since 1954.

Tokombaev, Aaly . Born in 1904. Academician since 1954.

Corresponding Members

Akhmatov, Toktosun K . Corresponding member since 1984.

Chernova, Elena P . Corresponding member since 1984.

Dzhunusov, Maskhud S ., D. Phil. S. Born in 1919. Corresponding member since 1961.

Kerimzhanova, B. K ., C. Phlg. S. Corresponding member since 1954.

Moldokulov, Aidarkan M ., D. Econ. S. Born in 1930. Since 1966, director of the Economics Institute in Frunze (now Bishkek) which studies economic modeling for the republic. Corresponding member of the Social Sciences Department of the academy since 1977. Vice president since 1983.

Orozaliev, Kerimkul K . Corresponding member since 1974. .

Ploskikh, Vladimir M ., D. Hist. S. Corresponding member since 1984.

Saliev, Aziz A ., C. Phil. S. Born in 1925. Corresponding member since 1954.

Sartbaev, Kalkabay K ., D. Phlg. S. Corresponding member since 1954.

Tabishaliev, Salmorbek T ., D. Hist. S. Born in 1928. Corresponding member since 1961. .

Zhamankulova, Gulbubu . Corresponding member since 1984.

Social Sciences Department : Research institutes subordinate to the department by order of founding:

Economics Institute in Frunze (now Bishkek).

Founded in 1954. The institute studies republic economic modeling. Director: Moldokulov, Aidarkan M., D. Econ. S., '66; Deputy Director Lailiev, Dzhumakan S., '66. (See: Ruble, Vol. I, pp. 165.)

History Institute in Frunze (now Bishkek).

No date of founding given in source. The institute supports research on contemporary and historical Kirghiz ethnography, on the ethno-cultural connections between the Kirghiz and Kazakh peoples, and on Dungan studies. Director: Orozaliev, K. K. (See: Ruble, Vol. III, p. 144.)

Language and Literature Institute in Frunze (now Bishkek).

No date for founding given in source. The institute researches Kirghiz folklore, and has worked on a Turkic dialectological atlas since the late 1970s. Director: Tursunov, A. T. (See: Ruble, Vol. III, p. 145 and p. 520.)

Philosophy and Law Institute in Frunze (now Bishkek).

Founded in 1964, the institute consists of two departments: 1. Philosophy, and, 2. State Law. State Law is made up of three sections: 1. Collective Farm and Land Law; 2. State Studies; and, 3. Criminal Legal Science. In 1974, 14 scholars worked in the institute. (See: Ruble, Vol. I, p. 470.)

Department of Oriental Studies in Frunze (now Bishkek).

This department was formerly called the Department of General Turkic and Dungan Studies. No date for its founding given in the source. Scholars at the institute perform interdisciplinary studies on the Turkic and Dungan populations of the republic and the institute has sponsored research on Chinese treatment of national minorities in the northwestern area of the Peoples' Republic of China since the 1970s. Department chairman: Sushanlo, M. (See: Ruble, Vol. III, p. 144.)

**CENTER OF SOCIAL RESEARCH
NATIONAL ACADEMY OF SCIENCES OF KYRGYZSTAN
720071 Bishkek,
Chuisk Prospekt 265-A
Center of Social Research
National Academy of Sciences
Kyrgyzstan
E-mail:academy@eawarn.bishkek.su**

The Center of Social Research under the Department of Humanities and Economic Sciences of the National Academy of Sciences of Kyrgyzstan is the governmental scientific and applied research structure of the National Academy of Sciences of Kyrgyzstan.

The Center of Social Research combines an entire complex of functions of the scientific and applied research subdivision under the Department of Humanities and Economic Sciences and was created for tying together the theoretical work of the Department's institutes (the Institutes of Philosophy and Law, Languages and Literature, Economics, etc) with applied research, with the objective of producing a wide range of scientific research work and social research for satisfying the demands of society in the operative scientific analysis of social processes, as well as for attracting additional financial

resources.

The basic tasks of the Center are:

- * conducting scientific research work in the sphere of humanities and economic sciences
- * working out methodology and methods of conducting applied social research in various spheres of social knowledge (in accordance with the needs of the client)
- * sociological analysis of the socio-political situation and the study of the situation of interethnic relations in Kyrgyzstan (and in the Central Asian states of the CIS)
- * creation of a bank of data of new ideas, technologies and social projects (search for potential clients)
- * participation in the working out, review, and publication of new textbooks, student aids and monographs; discussion and recommendation in the defense of candidate and doctoral dissertations
- * organization and conducting of international conferences, symposia, seminars and congresses, aiding the broadening and development of scientific and culturalties of Kyrgyzstan
- * organization of training programs, study, business trips abroad, as well as inviting foreign specialists, training-researcher from the near and far abroa, working out joint research projects with foreign research centers
- * organization of courses for increasing qualifications and specializations of scientific teaching cadres, employees in state institutions and commercial structures
- * publishing and advertising
- * organization of courses on kyrgyz, russian, or foreign languages
- * organization of commercial exhibits, fairs, sale of office goods, organizational technology, IBM, materials and equipment necessary for conducting scientific research work
- * carrying out independent foreign economic activity

Employees of the Center have sufficient scientific potential and experience to conduct large-scale sociological research. Thus, a series of sociological research studies on the study of the interethnic and political situation in various regions of the country were carried out at the request of the Apparatus of the President and the Apparatus of the Government of Kyrgyzstan:

- * in Osh region (professional opinion poll) - 1991
- * in Bishkek (mass opinion poll) - 1991 and 1992
- * in Chuisk region (professional opinion poll) - 1991
- * in Osh oblast (mass opinion poll) - 1992
- * in Jalal-Abad oblast (mass opinion poll) - 1992
- * in Chuisk oblast (mass opinion poll) - 1992
- * analysis of socio-political movements and unions of Kyrgyzstan - 1991
- * analysis of political parties, social movements and national-cultural centers - 1993

With the results of the research data the following works were published:

1. Elebaeva A.B., Dzhushupbekov A.K., Omuraliev N.A. Osh Interethnic Conflict: Sociological Analysis (Bishkek, 1991)
2. Dzhangaracheva M.K., Omuraliev N.A., Elebaeva A.B. Sociological Analysis of the Interethnic Situation in Bishkek (Bishkek, 1992)
3. Elebaeva A.B., Omuraliev N.A., et al. The Interethnic Situation in Chuisk Region (Bishkek, 1992)
4. Omuraliev N.A., Elebaeva A.B. The Contemporary Situation of Interethnic Relations in Kyrgyzstan (Bishkek, 1993)

5. Civil Movements in Kyrgyzstan (Bishkek, 1991)

The Center of Social Research of the National Academy of Sciences of Kyrgyzstan firm ties with corresponding scientific subdivisions of the National Academies of Sciences of Kazakhstan, Uzbekistan, Tajikistan and Turkmenistan. Therefore as necessary the Center of Social Research of the National Academy of Sciences of Kyrgyzstan can organize scientific research over the entire territory of Central Asia. The Center of Social Research of the National Academy of Sciences of Kyrgyzstan welcomes establishment of mutually advantageous scientific contacts.

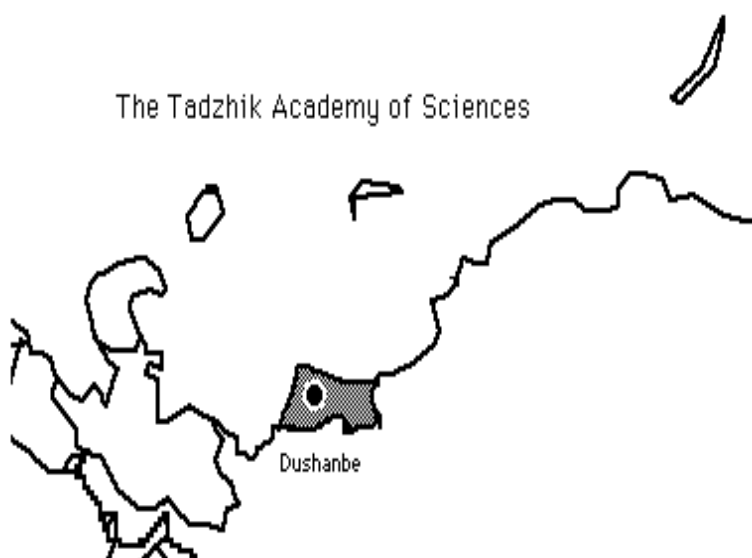
Scientific supervisor: Professor Ainura Bekkulovna Alebaeva, D. Phil S. ; Home Tel: (3312) 47-26-12. **Director : Nurbek Ashimkanovich Omuraliev, C. Phil. S.** ; Home Tel: (3312) 42-99-16; Work Tel: (3312) 24-37-35; FAX: (3312) 21-85-22; FAX: (3312) 24-36-07; E-mail:academy@eawarn.bishkek.su



THE TADZHIK ACADEMY OF SCIENCES

Some Facts about the Tadzhik Republic: Tadzhik is located in South Asia between Uzbekistan and China. It is slightly smaller than Wisconsin in the United States, having a total land area of 143,100 km². It has boundaries with Afghanistan, China, and Kirghiz. It is rich in natural resources. Its population is 5.8 million people (1993), and the literacy rate for those ages 9-49 is 100%. It obtained independence in September 1991 and adopted its constitution in 1993. (Source: The Gutenberg Project Header to CIA World Factbook, 1996.)

Founding: The Tadzhik SSR Academy of Sciences was founded in 1951 on the basis of a department of the national academy.

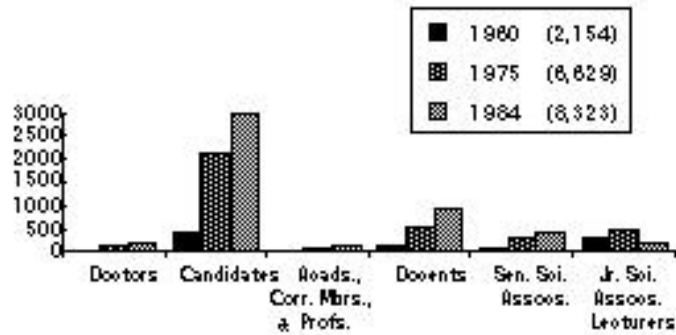


Organization and Growth: By 1969 it had a membership of 41 members; by 1987, the numbers had grown to 52 members of whom 22 were academicians. The academy is organized in three departments with 17 research institutes subordinate to them.²⁷ The republic ranked 13th in the number of scientists in the republic in 1984.²⁸

²⁷ The Great Soviet Encyclopedia, New York, Macmillan, 1983, "Tadzhik SSR Academy", Vol. I, 53; LDA 87-11012, 1987, pp. 231-234

²⁸ Vestnik statistiki, No. 12, December 1985, pp. 69-72.

Scientists in the Tadzhik SSR

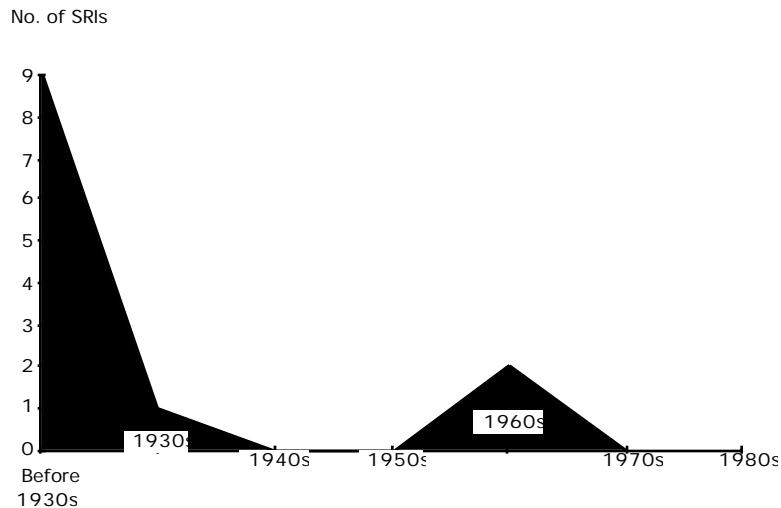


No.'s in parentheses in the legend box = total scientists in the Tadzhik SSR.
 Source: Vestnik statistiki, No. 12, December 1985, pp. 69-72.

Research Institutes: A large number of research institutes subordinate to the departments of this academy existed long before the academy received independent status. There is some discrepancy too in the number of research institutes listed from various sources. The 17 listed in this guide appear to be the correct number of independent research institutes.

Figure 82

Tadzhik SRI's, by Decade of Establishment



Source: LDA 87-11012, 1987, pp. 231-234.

Members of the academy: Twenty-two of the 52 members of the Tadzhik academy are academicians. Of the total membership, 15 are directors or deputy directors of the institutes subordinate to the departments of the academy. Nine are listed as members of the CPSU--17 percent. The scientific research institutes in the Tadzhik Republic hold the record for the appointment of the

youngest directors to head them up. With about half of the birthdates and dates of assumption of position of the directors known, they averaged only 35.5 years of age at appointment. One was only 27 years old when he became director of the Seismic Resistant Construction and Seismology Institute in Dushanbe--he was only 51 when he assumed the presidency of the Tadzhik Republic Academy of Sciences.

The Presidium: (Includes the officers and the academician secretaries of the departments of academy.)

President

Negmatullaev, Sobit Kh. Born in 1937. He has been the director of the Seismic Resistant Construction and Seismology Institute in Dushanbe since 1964. The institute does work in seismic resistant engineering and does research in earthquake prediction. He was named president of the Tadzhik academy in May of 1988. (LDA 89-11378.)

Vice Presidents

Babadzhanov, Pulat B ., D. PM. S. Born in 1930. Academician of the Physical, Mathematical, Geological, and Chemical Sciences Department of the academy since 1973. Vice president of the academy since 1986. .

Baratov, Rauf B ., D. GM. S. Since 1954, director of the Geology Institute in Dushanbe which studies the geological construction and mineral distribution of the republic. Academician of the Physical, Mathematical, Geological and Chemical Sciences Department of the academy since 1968.

Iusufbekov, Khudoyev Iu ., D. Bio. S. Academician of the Biological Sciences Department since 1976. Academician secretary since 1986.

Maksumov, Akbar N ., C. Agr. S. Born in 1928. Since 1968, academician of the Biological Sciences Department of the academy. Since 1971, vice president of the academy.

Radzhabov, Sali A ., D. Jur. S. Academician of the department since 1958. Academician secretary of the Social Sciences Department since 1974.

Solozhenkin, Petr M., D. Tech. S. Born in 1930. Since 1973, academician of the Physical, Mathematical, Geological, and Chemical Sciences Department of the academy. Vice president since 1975.

Usmanov, Zafar D ., D. PM. S. Academician of the Physical, Mathematical, Geological, and Chemical Sciences Department since 1981. Academician secretary of that department since 1985. Since 1973, he has been the deputy director of the Mathematics Institute in Dushanbe which studies the relationship and symbolism of numbers and magnitudes, including quantitative operations and the solution of quantitative problems. (87-11012.)

Chief Scientific Secretary

Saidmuradov, Khabibullo M ., D. Econ. S. Academician of the Social Sciences Department of the academy since 1976. Since 1977, chief scientific secretary of the academy.

Biological Sciences Department

Department Members:

Academician Secretary

Iusufbekov, Khudoyev Iu ., D. Bio. S. Academician of the department since 1976. Academician secretary since 1986.

Academicians

Aliev, Gulam A. Born in 1915. Academician since 1950. .

Iusufbekov Khudoyev Yu ., D. Bio. S. (See academician secretary above.)

Karimov, Khurshed Kh ., C. Bio. S. Academician since 1985. Since 1966, he has been the deputy director of the Plant Physiology and Biophysics Institute in Dushanbe which was established prior to 1967 and which does research on photosynthesis and the resistance of plants to environmental extremes. (LDA 87-11012.)

Maksumov, Akbar N ., C. Agr. S. Born in 1928. Academician since 1968. Vice president of the academy since 1971.

Mansurov, Khamid Kh ., D. Med. S. Born in 1925. Academician since 1978. Since 1963, he has been the director of the Gastroenterology Institute in Dushanbe which studies current and urgent questions of modern hepatology, and examines cholestases for further improvement in jaundice diagnostics. .

Nasirov, Iusuf S., D. Bio. S. Born in 1932. Academician since 1981. Since 1966, he has been the director of the Plant Physiology and Biophysics Institute in Dushanbe which was established prior to 1967 and which researches photosynthesis and the resistance of plants to environmental extremes.

Corresponding Members

Abdusalyamov, I. A ., D. Bio. S. Corresponding member since 1976.

Pulatov, Azam T ., D. Med. S. Corresponding member since 1985.

Rakhimov, Iakhia A ., C. Med. S. Born in 1916. Corresponding member since 1951.

Rasulova, Mukharam R ., C. Bio. S. Corresponding member since 1981.

Since 1977, he has directed the Botany Institute in Dushanbe which studies botanical ecology including floristic affinities and realms, and classification of vegetation regions. It also studies the revegetation of overgrazed and eroded regions of the republic. (LDA 87-11012.)

Sanginov, Bobo S ., C. Agr. S. Corresponding member since 1976.

Shukurov, Arif S ., C. Bio. S. Corresponding member since 1957.

Usmanov, Pulat D ., C. Bio. S. Corresponding member since 1985.

Biological Sciences Department: Research institutes subordinate to the department by order of founding:

Botanical Garden in Tadzhiik.

Founded in 1934, it remains one of the largest and oldest centers for the study of plant life in the republic. Also: **Pamir Botanical Garden** in Khorog. Established in 1940, these gardens are at one of the highest elevations of any such facility in the world and the institute specializes in the study of plant life at these altitudes. (See: Ruble, Vol. I., p. 334-5.)

Botany Institute in Dushanbe.

Established in 1941. The institute studies botanical ecology including floristic affinities and realms, and classification of vegetation regions. Research is also conducted on the revegetation of overgrazed, eroded regions of the republic. Director: Rasulova, Mukharam R., C. Bio. S., '77; Deputy Director Ashurov, Akram A., C. Bio. S., '75. (See: Ruble, Vol. I., p. 331.) (GSE 3, p. 308.)

Chemistry Institute in Dushanbe.

Founded in 1945, the institute analyzes natural resources, including vegetation, of the republic. It employs over 200 specialists who have also been involved in analyzing gas, oil and coal deposits in the republic as well as the distribution of micro-elements in the biosphere and the development of chemical fertilizers. Director: Numanov, Ishankul U., D. Chem. S., 1976. (See: Ruble, Vol. I., p. 332.) (GSE 28, p. 116.)

E. N. Pavlovskii Zoology and Parasitology Institute in Dushanbe.

Established in 1961. The institute does research on the utilization and development of vertebrate fauna, specifically mammals, marketable animals, and birds. Director: (vacant). (See: Ruble, Vol. I., p. 333.) (GSE 3, p. 308.)

Gastroenterology Institute in Dushanbe.

No date given in source. The institute studies current and urgent questions of modern hepatology, and examines cholestases for further improvement in jaundice diagnostics. Director: Mansurov, Khamid Kh., D. Med. S., CPSU, '63.

Plant Physiology and Biophysics Institute in Dushanbe.

Established in 1961. The institute researches photosynthesis and the resistance of plants to environmental extremes. Director: Nasirov, Iusuf S., D. Bio. S., '66; Deputy Director Karimov, Khurshed Kh., C. Bio. S., '67. (See: Ruble, Vol. I., p. 332.) (GSE 3, p. 308.)

Pamir Biology Institute in Khorog.

Founded in 1969. The institute studies the effects of radiation and temperature fluctuations on vegetable and animal organisms and problems connected with the economic development of mountain areas. Director: Aknazarov, D. A., '85; Deputy Director Tolibekov, Davliat, C. Bio. S., '75.

Physical, Mathematical, Geological, and Chemical Sciences Department

Department Members:

Academician Secretary

Usmanov, Zafar D ., D. PM. S. Academician of the department since 1981. Academician secretary since 1985. Since 1973, he has been the deputy director of the Mathematics Institute in Dushanbe which studies the relationship and symbolism of numbers and magnitudes, including quantitative operations and the solution of quantitative problems. (87-11012.)

Academicians

Adkhamov, Akobir A ., D. PM. S. Born in 1928. Since 1968, academician of the department. Since 1965, he has been the director of the S. U. Umarov Physical Technical Institute in Dushanbe which conducts research in several areas of physics, including the study of solar radiation and elementary processes at high energies in cooperation with other facilities. (LDA 89-11378.)

Babadzhanov, Pulat B ., D. PM. S. Born in 1930. Academician since 1973. .

Baratov, Rauf B ., D. GM. S. Since 1968, academician of the department. Since 1954, he has been the director of the Geology Institute in Dushanbe which studies the republic's geological construction and mineral distribution. (LDA 87-11012.)

Dobrovolskii, Oleg V ., D. PM. S. Born in 1914. Academician since 1966.

Dzhuraev, Abdukhamid D ., D. PM. S. Born in 1932. Since 1973, academician of the department. Since 1975, he has been the director of the Mathematics Institute in Dushanbe which studies the relationship and symbolism of numbers and magnitudes, including quantitative operations and the solution of quantitative problems. (LDA 87-11012.)

Nedzvetskii, Anton P . Born in 1902. Academician since 1935. .
Numanov, Ishankul U ., D. Chem. S. Academician of the department since 1985. Since 1976, he has been the director of the Chemistry Institute in Dushanbe which was established in 1911 and which studies the chemistry of natural resources of the republic. (LDA 87-11012.)
Solozhenkin, Petr. M ., D. Tech. S. Born in 1930. Academician since 1973. Since 1975, vice president of the academy.
Usmanov, Zafar D ., D. PM. S. Academician since 1981. Academician secretary since 1985. Since 1973, he has been the deputy director of the Mathematics Institute in Dushanbe which studies the relationship and symbolism of numbers and magnitudes. (LDA 87-11012.)
Zakharov, Sergei A ., Born in 1910. Academician since 1978.

Corresponding Members

Dzhalilov, M. R ., C. GM. S. Corresponding member since 1981.
Dzhuraev, Kandil S ., D. Geog. S. Corresponding member since 1973.
Glukhov, Ivan A ., D. Chem. S. Corresponding member since 1981.
Kukhtikov, Mikhail M ., D. GM. S. Since 1973, corresponding member of the department. Since 1968, he has been the deputy director of the Geology Institute in Dushanbe which studies the geological construction and mineral distribution in the republic. (LDA 87-11012.)
Mikhailov, Leonid G ., D. PM. S. Born in 1928. Member since 1968.
Negmatullaiev, Sobit Kh . Born in 1937. Since 1972, corresponding member of the department. Since 1964, he has served as the director of the Seismic Resistant Construction and Seismology Institute in Dushanbe which is involved in seismic resistant engineering and earthquake prediction research. President of the Tadzhik Academy of Sciences since May 1988. (LDA 89-11378.) (LDA 87-11012.)
Pachadzhanov, Daler N., C. Chem. S. Corresponding member of the department since 1985. Since 1974, he has served as a deputy director of the Chemistry Institute in Dushanbe which studies the chemistry of the republic's natural resources. (LDA 87-11012.)
Starikov, Viktor A ., C. Tech. S. Born in 1898. Corresponding member since 1958.
Stetsenko, Vladislav Ia. , D. PM. S. Corresponding member since 1985.

Physical, Mathematical, Geological, and Chemical Sciences Department: Research institutes subordinate to the department by order of founding:

Chemistry Institute in Dushanbe

Established in 1911. The institute studies the chemistry of natural sources of the republic. Director: Numanov, Ishankul U., D. Chem. S., '76; Deputy Director Pachadzhanov, Daler N., C. Chem. S., '74.

Astrophysics Institute in Dushanbe

This institute is based upon the Stalinbad Astronomical Observatory which was originally founded in 1932. The institute conducts photographic, visual, and radar investigation of meteors, comets, and variable stars, as well as performing research in the field of theoretical physics. Director: Maksumov, M.: N., '77; Deputy Directors: Getman, Vladimir S., '68; and Rubvtsov, Lev N., C. PM. S., '72. (GSE 2, 437).

Geology Institute in Dushanbe.

No date given in source. The institute studies the republic's geological construction and mineral distribution. The institute helps to locate and evaluate oil and gas deposits and ore fields in the republic. The institute publishes Trudy. Director: Baratov, Rauf B., D. GM. S., '54; Deputy Director Kukhtikov, Mikhail M., D. GM. S., '68. (See: Ruble, Vol. I., p. 332.)

Mathematics Institute in Dushanbe.

Founded in 1973. The institute studies the relationship and symbolism of numbers and magnitudes, including quantitative operations and the solution of quantitative problems. Director: Dzhuraiev, Abdukhamid D., D. PM. S., '75; Deputy Director Usmanov, Zafar D., D. PM. S., '73. (GSE 15, p. 585.)

S. U. Umarov Physical Technical Institute in Dushanbe.

No date given in source. The institute conducts research in several areas of physics, including the study of solar radiation and elementary processes at high energies in cooperation with other facilities. Director: Adkhamov, Akobir A., D. PM. S., '65; Deputy Director Marupov, Rakhim, C. PM. S., '83.

Seismic Resistant Construction and Seismology Institute in Dushanbe.

No date given in source. The institute is involved in seismic resistant engineering and earthquake prediction research. Director: Negmatullaiev, Sobit Kh., '64; Deputy Director Mirzoiev, Kamil M., C. PM. S., '71.

Social Sciences Department

Members:

Academician Secretary

Radzhabov, Sali A ., D. Jur. S. Born in 1912. Academician of the department since 1958. Academician secretary of the Social Sciences Department since 1974.

Academicians

Amonov, Radzhab A ., D.Phlg. S. Academician since 1981.

Asimov, Mukhamed S ., D. Phil. S. Born in 1920. Academician of the Social Sciences Department of the academy since 1965. President of the academy from 1965 to 1988. . (LDA 87-11012.) (LDA 89-11378.)

Iskandarov, Bukhodor I ., D. Hist. S. Academician since 1973.

Litvinskii, Boris A ., D. Hist. S. Born in 1923. Academician since 1985.

Radzhabov, Sali A ., D. Jur. S. (See academician secretary above.)

Radzhabov, Zarif S ., D. Hist. S. Born in 1906. Academician since 1962.

Corresponding Members

Ashurov, Gafor A ., C. Phil. S. Corresponding member since 1976.

Braginskii, Iosif S ., D. Phlg. S. Born in 1905. Corresponding member since 1950. .

Maniyazov, Abdukadyr M ., C. Phlg. S. Born in 1931. Corresponding member since 1981.

Masumi, Nasyrdzhon A ., C. Phlg. S. Born in 1915. Corresponding member since 1968. .

Mukhtarov, Akhror M . Corresponding member since 1978.

Nazarov, Talbak N . Corresponding member of the Social Sciences

Department of the Tadzhik academy since 1981. Since 1982, he has served as rector of the V. I. Lenin Tadzhikistan State University located in Dushanbe which was established in 1948. (LDA 89-11378.)

Negmatov, Numan N ., D. Hist. S. Corresponding member since 1978.

Rakhimov, Rashid K ., D. Econ. S. Born in 1932. Corresponding member since 1973. Since 1966, he has been the director of the Economics Institute in Dushanbe which examines the development of Central Asian economics, the productivity in Tadzhik industry, the impact of capital investment upon industrial productivity, and labor resource allocation. (LDA 87-11012.)

Saidmuradov, Khabibullo M ., D. Econ. S. Corresponding member since 1976. Chief scientific secretary of the academy since 1977.

Shukurov, Mukhammed S ., D. Phlg. S. Corresponding member since 1981.

Tabarov, S. Sh . Corresponding member since 1974.

Ulug-Zade, Satim U . Born in 1911. Corresponding member since 1950. .

Yusufbekov, Rustambek Iu ., C. Econ. S. Corresponding member since 1966.

Zapryagayeva, Vera I ., D. Bio. S. Corresponding member since 1978.

Social Sciences Department : Research units subordinate to the academy department by order of founding:

Economics Institute in Dushanbe.

In the 1940s an economics section was established in the Tadzhik branch of the USSR Academy of Sciences which became the Economics Institute in 1951 when the Tadzhik SSR Academy opened its doors. The institute examines the development of Central Asian economics, the productivity in Tadzhik industry, the impact of capital investment upon industrial productivity, and labor resource allocation. By the mid-1970s some 25 candidates of science and one doctor of science worked in the institute. Director: Rakhimov, Rashid K., D. Econ. S., '66. (See Ruble, Vol. I, p. 176.)

A. Rudaki Language and Literature Institute in Dushanbe.

Established in 1941 as an independent institute of the academy. The institute is the world's center for the study of the Pamir Language group. The institute possesses extensive holdings of Tadzhik, Uzbek and Iranian folk materials. Director: Maniiazov, A. M. (See: Ruble, Vol. III, pp. 531-533.)

Akhmada Donisha History Institute in Dushanbe.

The institute was established in 1951 and an Institute of History, Archeology and Ethnography, and anthropology remains a major aspect of the History Institute's research program. The institute fields some 10-12 archeological dig expeditions a year in Central Asia. Its work in ethnography is also quite extensive. New quarters for the Institute's Archeology, Numismatic, and Ethnography sectors were being planned for the early 1980s. Director: Iskanderov, B. I. (See: Ruble, Vol. III, pp. 155-156.)

Oriental Studies Institute in Dushanbe.

Established in 1958, seven years after the founding of the Tadzhik Academy, a Department of Oriental Studies and Written History was begun. This became the Oriental Studies Institute in 1970. It specializes in Turkic and Persian philology. (See: Ruble, Vol. I, p. 414.)



THE TURKMEN ACADEMY OF SCIENCES

Some Facts About Turkmenistan: The Turkmen Republic is located between Iran and Uzbekistan and borders the Caspian Sea for a distance of some 1768 km. In area it is slightly larger than California in the United States and has a population of almost 4 million people (1993). Its major natural resources are petroleum, natural gas, coal, sulphur, and salt. Only three percent of its land is arable. Turkmen achieved its independence in October 1991 and adopted its constitution in May 1992. (Source: The Gutenberg Project Header to CIA World Factbook, Internet, 1996.)

Founding and Development: The Turkmen SSR Academy of Sciences was established first as a branch of the national academy in 1941 and elevated to the status of an independent Republic Academy of Sciences in 1951. It is located in Ashkhabad. In 1969 it had a total membership of 44 of whom 23 were academicians. In 1972, the academy maintained ten scientific research institutes in which some 730 "scientific workers" labored, of whom 32 held doctoral and 330 held candidates degrees.²⁹



Scientific Personnel: In 1984, the Turkmen SSR republic ranked 15th--or last--among the Soviet Republics in the total number of scientists within its borders.³⁰

Research Thrusts: Research in the academy emphasizes the use of solar energy, study of the deep structures of the earth's crust and upper mantle, seismology, petroleum chemistry, desertification studies, indigenous medicine, and the history, philosophy, law, language, and literature of the Turkmen people.³¹

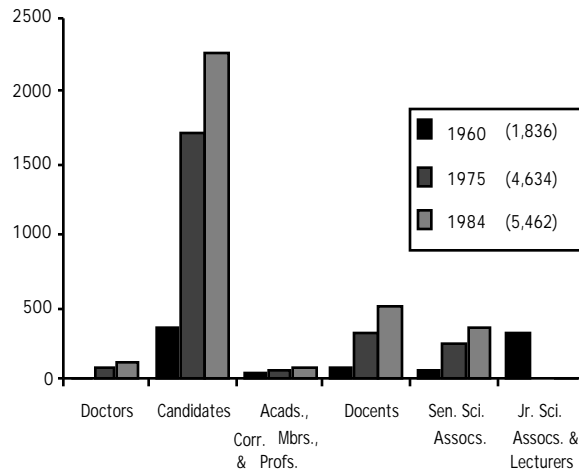
²⁹ P. Azimov, "A Nation of Advanced Science," *Technology and Armament*, December 1972, pp. 141-147.

³⁰ *Vestnik statistiki*, No. 12, December 1985, pp. 69-72.

³¹ *The Great Soviet Encyclopedia*, New York, Macmillan, 1983, "Turkmen SSR Academy," Vol. I, 54.

Figure 83

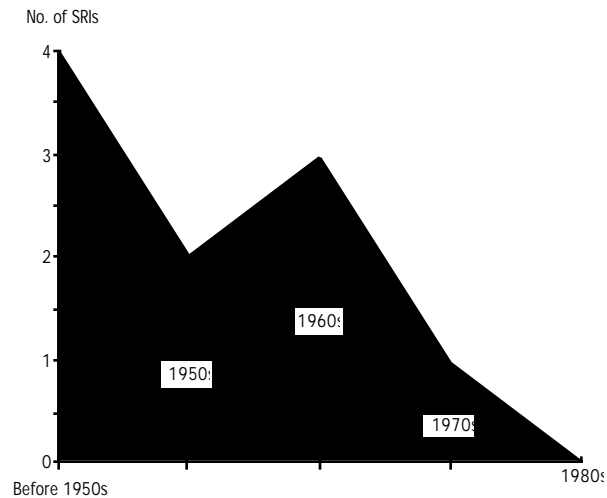
Scientists in the Turkmen SSR



No.'s in parentheses in the legend box = total number of scientists in the Turkmen SSR.
 Source: Vestnik statistiki, No. 12, December 1985, pp. 69-72.

Figure 84

Turkmen SRI's, by Decade of Establishment



Source: LDA 87-11012, 1987, pp. 237-239.

Growth: Today, the Turkmen SSR Academy of Sciences has 14 scientific research institutes under the direction of its three departments. The departments are the biological sciences; the physical, technical, and chemical sciences; and the social sciences.³²

³² LDA 87-11012, 1987, pp. 232-234; Ruble, Vol. I, pp. 178, 335-337, and 474; Vol. III, pp. 158 and 534; The Great Soviet Encyclopedia (GSE) Vol. 3, p. 308, and Vol.

Members of the academy: Membership in the academy has experienced a slow growth over the past several years. In 1987, the academy reported only 48 members of whom 21 were academicians. Among the membership, seven were directors of the research institutes subordinate to the academy departments. None of the members of the Turkmen Academy held either corresponding memberships or academician appointments in the national academy. Only five were listed as members of the CPSU--about 10 percent.

The average age of the directors whose birthdates are known was 42 at the time of appointment.

The Presidium: (Composed of the officers, academic secretaries of the departments, and scientists elected by the general assembly of the academy.)

President

Ovezgeldyyev, Oraz G ., D. PM. S. Born in 1936. Academician of the Physical, Technical, and Chemical Sciences Department of the academy since 1978. President of the academy since 1986. Since 1982, he has been the director of the Physical Technical Institute in Ashkhabad which conducts research on semiconductor materials and on thermal electric energy conversion. (LDA 89-11378.)

Vice President

Rosliakov, Aleksandr A ., D. Hist. S. Vice president since 1980. Academician of the Social Sciences Department since 1981.

Chief Scientific Secretary

Sultanov, Fuad F ., D. Med. S. Born in 1928. Academician of the Biological Sciences Department of the academy since 1975. Chief scientific secretary since 1975.

Annanepesov, Murad A., D. Hist S. Born in 1932. Corresponding member of the department since 1978. Academician secretary of the Social Sciences Department since 1979.

Babaeva, Aksoltan Kh ., D. Bio. S. Corresponding member of the Biological Sciences Department since 1975. Member of the Presidium since 1979. Since 1963, he has been the director of the Regional Medicine Institute in Ashkhabad which was established in 1962 to study the effects of the climate on the human organism and which works to develop more effective methods for treating regional diseases. Academician secretary of the Biological Sciences Department of the academy since 1975. (LDA 87-11012.)

Lavrinenko, Valentina T ., D. Econ. S. Born in 1919. Corresponding member of the Social Sciences Department of the academy since 1973.

Volkhin, Vladimir V. Corresponding member of the department since 1981. Academician secretary of the Physical, Technical, and Chemical Sciences Department since 1982.

Biological Sciences Department

Members:

Academician Secretary

Babaeva, Aksoltan Kh ., D. Bio. S. (See Presidium above.)

Academicians

Karanov, Sari K ., D. Med. S. Born in 1909. Academician since 1954.

Mamedniazov, Ovez N ., C. Chem. S. Born in 1910. Academician since 1954. .

Nechaeva, Nina T ., D. Bio. S. Born in 1909. Academician since 1965.
Sultanov, Fuad F ., D. Med. S. (See chief scientific secretary above.)

Corresponding Members

Amanniazov, Kurban N ., D. GM. S. Corresponding member since 1981.
Babaeva, Aksoltan Kh ., D. Bio. S. (See Presidium above.)
Bairiev, Chary B ., D. Med. S. Corresponding member since 1969.
Berdilichev, Murat G ., C. Med. S. Corresponding member since 1971.
Kharin, Nikolai G ., D. Bio. S. Corresponding member since 1981.
Khodzhakuliev, Geldi K ., D. Med. S. Corresponding member since 1969.
Khodzhakuliev, Iagshimurad A ., D. GM. S. Born in 1923. Corresponding member since 1981.
Kogan, Sholom I ., D. Bio. S. Born in 1917. Corresponding member since 1973.
Muradov, Klich M ., C. Bio. S. Born in 1926. Corresponding member since 1969. Since 1970, he has been the director of the Botany Institute in Ashkhabad which was established in 1930 and which creates new varieties of cotton and fodder crops increasing yields and improving crop quality.
Nikitin, Vasilii V . Born in 1906. Corresponding member since 1969.
Nikolaev, Viktor N ., D. Bio. S. Corresponding member since 1981.
Ovezmuradov, Sapar O ., D. Agr. S. Born in 1910. Corresponding member since 1969.

Biological Sciences Department: Research institutes subordinate to the department by order of founding:

Botany Institute in Ashkhabad.

Founded in 1930. The institute creates new varieties of cotton and fodder crops to increase yields and to improve product quality. Director: Muradov, Klich M., C. Bio. S., '70. (See: Ruble, Vol. I, p. 335.) (GSE 3, p. 308.)

Zoology Institute in Ashkhabad.

Established in 1957. The institute studies the wildlife of the region in an effort to increase food production and promote consumption. Director: Tashliev, Ata O., C. Bio. S., '59; Deputy Director Ushakova, Alda, C. PM. S., '80. (See: Ruble, Vol. I, p. 337.) (GSE 3, p. 308.)

Arid Zones Physiology and Experimental Pathology Institute in Ashkhabad.

Founded in 1962. The institute studies the effects of arid heat on organisms and the physiological dynamics of basic human life processes in actual working conditions. Director: Serebriakov, Evgenii P., C. Med. S., '78.

Deserts Institute in Ashkhabad.

Founded in 1962. The institute does research on the theory and development of deserts. In 1978, the institute employed over 290 persons of whom 100+ were involved in scientific research. The institute publishes the journal Problemy osvoennia pustyn. Director: Babaev, Agadzhan G., D. Geog. S., CPSU, '61; Deputy Directors: Batirov, A. C. Geog. S., '78; Orlovskii, Nikolai S., C. Geog. S., '72; and, Sheripov, D., C. Agr. S., '82. (See: Ruble, Vol. I, p. 336.) (GSE 3, p. 308.)

Regional Medicine Institute in Ashkhabad.

Founded in 1962. The institute studies the effects of the climate on the human organism and works to develop more effective methods for treating regional diseases. Director: Babaeva, Aksoltan Kh., D. Bio. S., '63. (See: Ruble, Vol. I., p. 337. Ruble lists this institute as the Institute of the Physiology and Experimental Therapy of Arid Regions.)

Physical, Technical, and Chemical Sciences Department

Members :

Volkhin, Vladimir V. Corresponding member of the department since 1981. Academician secretary of the Physical, Technical, and Chemical Sciences Department since 1982.

Academicians

Bairamov, Redzhep B ., D. Tech. S. Born in 1933. Academician since 1981. Since 1979, he has been the director of the Solar Energy Institute in Ashkhabad which was created in 1979 to develop solar furnaces and to investigate their applications. (LDA 87-11012.)

Berdyayev, Ata A ., D. PM. S. Born in 1914. Academician since 1969.

Niyazov, Aid M ., D. Chem. S. Academician since 1969. Since 1984, he has been the director of the Chemistry Institute in Ashkhabad which was established in 1957 to conduct research on the production of fuels, lubricants, and synthetic fibers using local petroleum resources.

Ovezgeldyev, Oraz G ., D. PM. S. (See president above.)

Sergienko, Semen R ., D. Chem. S. Born ;in ;1909. Academician since 1954.

Corresponding Member

Agaev, Yazdzhah A ., D. PM. S. Corresponding member since 1978.

Erofeev, Nikolai M ., C. PM. S. Corresponding member since 1954.

Khuday-Verenov, Ovez M. G ., D. PM. S. Corresponding member since 1973.

Meredov, Mukhammed . Corresponding member since 1981.

Odekov, Odek A ., D. GM. S. Since 1966, director of the Physics and Geophysics Institute in Ashkhabad which does research in seismic and geomagnetic research and conducts studies on the geological structure of the Turkmen Republic. Also known as the Earth and Atmospheric Physics Institute. Corresponding member since 1973.

Volkhin, Vladimir V . Corresponding member since 1981.

Physical, Technical, and Chemical Sciences Department : Research institutes subordinate to the department by order of founding:

Chemistry Institute in Ashkhabad.

Established in 1957. The institute conducts research to produce fuels, lubricants, and synthetic fibers using local petroleum resources. Director: Niyazov, Aid M., D. Chem. S., '84; Deputy Directors: Ernepesov, Kh., '83; and Khodzhammedov, Agamamed, '82. (GSE 28, p. 116.)

Physics and Geophysics Institute in Ashkhabad.

No date given in source. The institute does research in seismic and geomagnetic research and conducts studies on the geological structure of the Turkmen Republic. Also known as the Earth and Atmospheric Physics Institute. Director: Odekov, Odek A., D. GM. S., '66; Deputy Director Shrimamedov, Mukhammed, '69.

Physical Technical Institute in Ashkhabad.

No date given in source. The institute conducts research on semiconductor materials and on thermal electric energy conversion. Director: Ovezgeldyyev, Oraz G., D. PM. S., '82; Deputy Director Ashirov, Aman, '81.

Solar Energy Institute in Ashkhabad.

Established in 1979. The institute develops solar furnaces and investigates their applications. Director: Bairamov, Redzhap B., D. Tech. S., '79; Deputy Director Ushakova, Alda, C. PM. S., '80.

Physics of the Earth and Atmosphere Institute in Ashkhabad.

No date for founding given in source. The institute works closely with the Geological administration of the republic's Council of Ministers in studies of the earth's crust. It has helped to construct a map of local and regional magnetic anomalies and seismic conditions. It maintains a number of research stations in the republic. Its scientists study solar radiation and solar power generation.

Astrophysical Laboratory in Ashkhabad.

No date given for establishment. The laboratory studies meteors and zodiacal light using radio location equipment. (See: Ruble, Vol. I., p. 337.)

Social Sciences Department

Members:

Academician Secretary

Annanepesov, Murad A., D. Hist. S. Born in 1932. Corresponding member of the Department since 1978. Academician secretary of the Social Sciences Department since 1979.

Academicians

Azimov, Pigam A., D. Phlg. S. Born in 1914. Academician since 1951.

Babaev, Agadzhan G., D. Geog. S. Born in 1929. Academician since 1965. Since 1961, he has been the director of the Deserts Institute in Ashkhabad which was founded in 1962 to do comprehensive research on the theory and development of deserts.

Kekilov, Aman K. Born in 1912. Academician since 1969.

Masson, Mikhail E. Born in 1897. Academician since 1951.

Palvanova, Bibi P., D. Hist. S. Academician since 1969.

Rosliakov, Aleksandr A., D. Hist. S. (See vice president above.)

Rustamov, Anver K., D. Bio. S. Born in 1917. Academician since 1975.

Smirnov, Boris L. Academician since 1951.

Tashliev, Shamurad T., D. Hist. S. Academician since 1978.

Corresponding Members

Agadzhanov, S. G., D. Hist. S. Corresponding member since 1973.

Annaklichev, A., D. Econ. S. Corresponding member since 1963.

Annanepesov, Murad A., D. Hist. S. (See academy secretary of the

department above.)

Bekmuradov, Kh ., C. Phil. S. Corresponding member since 1954.

Charyyarov, Byashim C ., D. Phil. S. Corresponding member since 1975.

Deriaev, Khydyr . Born in 1905. Corresponding member since 1969.

Khidirov, Mamed N ., D. Phlg. S. Corresponding member since 1968.

Kuliev, Klych M ., C. Hist. S. Born in 1913. Corresponding member since 1954.

Lavrinenko, Valentina T ., D. Econ. S. Born in 1919. Corresponding member since 1973.

Manakov, V. S ., D. Econ. S. Corresponding member since 1973.

Masson, Vadim M ., D. Hist. S. Born in 1929. Corresponding member since 1978.

Mukhamedova, Zelikha B ., D. Phlg. S. Corresponding member since 1969.

Social Sciences Department : Research institutes subordinate to the department by date of founding:

Economics Institute in Ashkhabad.

Opened with the founding of the Turkmen SSR Academy in 1951, though a smaller unit had operated in the Turkmen branch of the USSR Academy of Sciences. The institute specializes in Agricultural Economics, helping to develop new planning and management techniques. Director: Muradov, G. M., D. Econ. S., '85. (See: Ruble, Vol. I., p. 178.)

Philosophy and Law Department in Ashkhabad.

Probably founded in 1951. Researches Turkmen legal history and philosophy. (See: Ruble, Vol. I., p. 474.)

Sh. B. Batyrova History Institute in Ashkhabad.

Established in the academy in 1951, the Institute of History is the primary center for anthropological research in the Turkmen republic. In 1960, an Oriental Studies sector was added to the institute. Over 90 workers were employed in the institute in the early 1970s and the institute was comprised of five departments: Soviet History; Pre-Soviet History; Archeology; Ethnography; and Art and Culture. Director: Annanepesov, M. (See: Ruble, Vol. III, p. 158.)

Makhtumkuli Language and Literature Institute in Ashkhabad.

Founded in 1951. The institutes scholars specialize in studies of the Turkic language. (See: Ruble, Vol. III, p. 534.)



The Baltic Academies of Science



The Lithuanian Academy of Sciences

Retrospect : The Lithuanian Academy of Sciences was founded in 1941, From 1946 until 1984, Dr. Iu. Matulis was the president of the academy. In 1972, there were ten scientific research institutes under the direction of the three major divisions or subject-matter departments of the academy: the Physical, Technical and Mathematical Sciences Department, the Chemical and Biological Sciences Department, and the Social Sciences and Humanities Department.³³ By 1987, the academicians belonging to these three departments numbered 26 and the corresponding members totalled 32. The number of scientific research institutes numbered nine. During this period of time, the Lithuanian Academy was structured like the Academy in Moscow, with a president and vice presidents, a chief scientific secretary, and a presidium which included the officers of the academy and a varying number of elected senior scientists. Each of the three departments (broad divisions of sciences) had an Academician Secretary, and the membership of each department was made up of academicians and corresponding members. Each of the broad subject matter

³³ Iu. Matulis, "A Nation of Advanced Science," *Technology and Armament*, December 1972, pp. 96-102.

areas had under its direction several research institutes.³⁴

Membership of the Academy

[Presidium]

President **Pozhela, Iuras K.** , D. PM. S. Born in 1925. Was named President in 1984.

Vice Presidents

Statulyavichyus, Vitautas A. , D. PM. S. Born in 1929. He was named vice president in 1985.

Zhukauskas, Algirdas A. , D. Tech. S. Born in 1935. Named vice president in 1986.

Chief Scientific Secretary: **Vilkas, Eduardas I.** , D. PM. S. Born in 1935. Became chief scientific secretary in 1986.

[Elected members of the Presidium]

Kayryukshtis, Leonardas A. . C. Agr. S. Born in 1928. C. Agr. S. Born in 1928, Academician since 1972. Elected to the presidium in 1986.

Kubilyus, Ionas P. , D. PM. S. Born in 1921, elected to the presidium in 1962.

Lankutis, Ionas I. , C. Phlg. S. Born (n.d.), elected to the presidium in 1986.

Matulis, Iuozas Iu. , D. Chem. S. Born in 1899, elected to the presidium in 1984, when he stepped down as president of the academy.

Merkis, Alfonas I. , D. Bio. S. Born (n.d.) Academician since 1976. In 1982, he was director of the Botany Institute. Elected to the presidium in 1986.

Foreign Relations Department:

Kosakovskii, Gerasim I. . He has been chief of the foreign relations department since 1975.

Chemical, Technological, and Biological Sciences Department

Members:

Academician Secretary:

Kontrimavichus, Vitautas L. , D. Bio. S. Born in 1930. Member of the academy since 1980. He became academician secretary of the department in 1984.

Academicians:

Kayryukshtis, Leonardas A. , C. Agr. S. Born in 1928, Academician since 1972. Elected to the presidium in 1986.

Kontrimavichus, Vitautas L. , D. Bio. S., (see above) Academician since 1980. He became academician secretary of the department in 1984.

Krishchyunas, Ionas V. , D. Agr. S. Born (n.d.). Academician since 1948.

Matulis, Iuozas Iu. , D. Chem. S. (see above). Born in 1899, elected to the presidium in 1984, when he stepped down as president of the academy.

³⁴ Directory of Soviet Officials: Science and Education, Washington, D. C.: Directorate of Intelligence, [LDA 87-11012, 1987 pp.218-220; and LDA 89-11378, 1989, pp.160-162.]

Academician since 1946.

Merkis, Alfonsas I., D. Bio. S. Born (n.d.) Academician since 1976. In 1982, he was director of the Botany Institute. Elected to the presidium in 1986.

Vishomirskis, Romanas M., D. Chem. S. Born (n.d.) Academician since 1976. Director of the Chemistry and Chemical Technology Institute in Vilnius in 1978.

Yanitskis, Ivan V., D. Chem. S. Born in 1905. Academician since 1956.

Corresponding Members:

Dagis, Jonas K., D. Bio. S. Born (n.d.) CM since 1956.

Kadzhyulis, Leonas Ju., D. Agr. S. Born (n.d.) CM since 1985.

Kanopkayte, Sofiya I., D. Bio. S. Born in 1926, CM since 1976.

Prashkyavichyus, Antanas K., D. Bio. S. Born (n.d.) CM since 1985.

Prokopchik, A. Iu. Born (n.d.) CM since 1972.

Rasteykene, Lyuda P., C. Chem. S. Born (n.d.) CM since 1962.

Sadauskas, P. B., D. Bio. S. Born (n.d.) CM since 1972. Deputy director of the Biochemistry Institute in Vilnius since 1983.

Strukchinskis, Mindaugas T., D. Bio. S. Born (n.c.) CM since 1985.

Vasinauskas, Petras K., C. Agr. S. Born in 1906. CM since 1956.

Yasaytis, Antanas A., D. Bio. S. Born in 1921. CM since 1976.

Research Institutes Subordinate the Chemical, Technological, and Biological Sciences Division in the order of their founding include :

Chemistry and Chemical Technology Institute in Vilnius. Founded in 1945. The institute develops chemical and technological processes for use in industry, including the development of metal polymers and corrosion resistant nickel plating. The institute offers the Doctor of Science degree with specializations in Electrochemistry and Physical Chemistry. Director Vishomirskis, Romanas M., D. Chem. S., '78; Deputy Directors: Dobrovolskis, P., '79; Poshkus, D. P., '83; and Stiaponavichius, A., '83. (GSE 28, p. 116.)

Botany Institute in Vilnius. Founded in 1959. The institute is engaged in the study of flora and vegetation in the Lithuanian SSR and performs studies on the introduction and acclimatization of plants, land reclamation, and cross fertilization. In 1984, the laboratory of the Introduction and Acclimatization of Plants and the Laboratory of Medicinal Plants were united into the Laboratory of Introduction and Landscaping. The laboratory of the Genetics of Microorganisms and the Mutagenesis of Plants was renamed the Laboratory of Genetics. The institute offers the Candidate of Science degree with specialties in Botany and Plant Physiology. Director Merkis, Alfonsas I., D. Bio. S., '82; Deputy Director Machiulenis, Vistautas-Kasimeras I., '83. (See: Ruble, Vol. I., p. 327.) (GSE 3, p. 308.)

Zoology and Parasitology Institute in Vilnius. Founded in 1959. The institute researches problems particular to Lithuania, including controlling various insects that harm agriculture and improving the productivity of reservoirs. In 1984, the laboratories of Ichthyology and Hydrobiology were combined into the Laboratory of Ichthyology. The laboratory of Carcinology was renamed the Laboratory of Hydrobiology. Scientific Personnel: Director Zaianchkauskas, P., C. Bio. S., '67; Deputy Director Gudialis, Vitautas K., D. Geog. S., '80. (See: Ruble, Vol. I., p. 327.) (GSE 3, p. 308.)

Biochemistry Institute in Vilnius. Founded in 1967. The institute does research in a broad range of uses for enzymes, especially in the food industry and agriculture and research is also conducted on the preparation of

anticancer medicines. The institute offers the Candidate of Science degree with specializations in Biochemistry and Cytology. Director(vacant); Deputy Director Sadauskas, P. B., D. Bio. S., '83. (GSE 28, p. 116.)

Geography department of the Lithuanian Academy in Vilnius. In 1960, the department began a systematic survey of all materials relating to the environment of the republic as well as the condition of the Baltic Sea.

Physical, Technical and Mathematical Sciences Division

Physical, Technical and Mathematical Sciences Department

Members:

Academician Secretary:

Shileyka, Algirdas Ju., D. PM. S. Born in 1932. Academician since 1985. Academician Secretary since 1986, serving until 1991 when **Boris Tamm** was named director of the division.

Academicians:

Brazdzyunas, Povikas P., D. PM. S. Born in 1897. Academician since 1956.
Chiras, Aleksandras A., C. Tech. S. Born in 1927. Academician since 1985.
Kubilyus, Ionas P., D. PM. S. Born in 1921. Academician since 1962. Elected to the presidium in 1962.
Motskus, Ionas B., D. Tech. S. Born in 1931. Academician since 1976.
Pozhela, Iuras K., D. PM. S. Born in 1925. Academician since 1968. President of the academy from 1984.
Shileyka, Algirdas Ju., D. PM. S. Born in 1932. Academician since 1985.
Statulyavichyus, Vitautas A., D. PM. S. Born in 1929. Academician since 1972.
Vilkas, Eduardas I., D. PM. S. Born in 1935. Academician since 1985.
Vishchakas, Iurgis K., D. PM. S. Born in 1927. Academician since 1976.
Zhukauskas, Algirdas A., D. Tech. S. Born in 1923. Academician since 1962.

Corresponding Members:

Burneykis, Iuozas P., D. Geog. S. Born (n. d.) CM since 1976.
Domarkas, Vladislavas I., D. Tech. S. Born (n.d.) CM since 1985.
Eydukas, Danelyus Ju., D. Tech. S. Born (n.d.) CM since 1976.
Grigelionis, Bronyus I., D. PM. S. Born in 1935. CM since 1972.
Kudzis, Antanas P., Born in 1925. CM since 1980.
Lasinskas, Mikolas I., D. Geog. S. Born (n.d.) CM since 1980.
Nemura, Antanas A., C. Tech. S. Born in 1927. CM since 1962.
Rudzikas, Z. B., D. PM. S. Born (n.d.) CM since 1985.
Telksnis (Tel'ksnis), Laymutis A., C. Tech. S. Born in 1930. CM since 1980.
Vaytkus, Iuozas-Vidmantis Ju., D. PM. S. Born (n.d.) CM since 1985.
Vilemas, Iurgis V., D. Tech. S. Born in 1938. CM since 1985.

Scientific Research Institutes Subordinate to the Physical, Technical and Mathematical Sciences Department by order of founding:

Physical and Technical Problems of Energetics Institute in Kaunas. Founded in 1966. The institute conducts research on the development of power engineering equipment, including nuclear reactors, MHD generators, and

heat exchangers. It also studies highly refractory materials and heat-exchange processes in fluid flows and high-temperature gas flows. In 1984, a laboratory of the Identification of Systems was added to the institute, while the laboratory for Computer Control Devices was dissolved. The institute offers the Candidate of Science degree with specializations in the theory of Heat Engineering, Heat and Power Engineering of Industry, and Thermal Physics. Director Vilemas, Iu. V., D. Tech. S., '82; Deputy Directors: Makariavichius, V. V., C. Tech. S., '75; and Nemura, Antanas A., C. Tech. S., '61.

Semiconductor Physics Institute in Vilnius. Founded in 1967. The institute conducts semiconductor physics research and studies problems of quantum radiophysics. It is the chief organization of the 'Elektronika' Research and Production Association in the USSR. In 1984, a laboratory of Nonequilibrium Processes was added to the institute. Director: Shileika, Algirdas Iu., D. PM. S. Born in 1932. Director, 1985; Deputy Directors: Dagis, Raimondas S., D. PM. S., '80; and Zkaniavichius, Donaldas I., C. Tech. S., '78.

Physics Institute in Vilnius. Founded in 1977. The institute conducts research on basic problems of theoretical and mathematical physics, experimental and theoretical spectroscopy, stellar problems, and means of eliminating atmospheric pollution. Its former director was Vishchakas, Iurgis K., D. PM. S., from 1977 until the reorganization of the institute; and its deputy directors were: Rudzikas, Z. B., D. PM. S., from 1982; and Stiro, Boleslav B., from 1982. **The Institute of Physics in 1995:** Following its reorganization in 1991, The Institute of Physics became a **state scientific research** institute of Lithuania. It joins scientists and laboratories for basic and applied research in molecular physics and biophysics, modern laser spectroscopy and nonlinear optics, nuclear physics, physics of atmosphere and some related areas of sciences. In addition to scientific research the Institute now is actively involved in the educational process through the development of tight links with several universities of Lithuania. The scientists of the Institute participate in providing the undergraduate, graduate and postgraduate studies as lecturers, tutors and advisers of scientific research work of the students as well as by using their research facilities for training courses. The scientists of the Institute also take part in expert examination concerning the environmental pollution, nuclear energetics, etc. This is because in some fields of activities the Institute of Physics is the main or even the only research institution in Lithuania. Research directions for the institute in 1995 were: **environmental physics and chemistry** : processes in atmosphere and hydrosphere, investigations of atmospheric pollution regularities, background, anthropogenic pollution and radioecological monitoring; **molecular biophysics and chemical physics** : dynamic processes in proteins, polymers and organized molecular structures; **development and application of nuclear and optical spectroscopy** ; **development of nonlinear and adaptive optics, laser construction, and investigations of megasystem evolution** . Facing a lot of difficulties of the present economic decline period and a great shortage of financial support for science, during the last few years the Institute is twice decreased in staff size, however, the main scientific staff has been preserved while the number of postgraduates has increased significantly. One hundred and seventy six scientists and other employees (8 habil. doctors, 53 doctors and 19 postgraduates among them) were working in the Institute at the end of 1995.

In 1995 the Institute carried out scientific investigations on 45 projects, 14 of which were supported by the Lithuanian government by a basic grant for the Institute, six--through the grants of the Lithuanian foundation of science and studies, two--by the Lithuanian State research programs, 20--by international funds, and some applied research was supported by the Environmental Protection Ministry or ordered by other organizations. Investigations in the

laboratories of Western countries made up somewhat for the lack of some laboratory equipment in Lithuanian laboratories. Such collaboration is constantly growing. In 1995 the Institute participated in several collaborative research projects, the joint project with Argonne National Laboratory in USA, European programs, etc. Leonas Valkunas is the current director of the Institute and Kestutis Makariunas is Chairman of the Board of the Institute under its new organizational structure. **[Some of this information taken from the Institute Home Page on the World Wide Net, March 1996.]**

Mathematics and Cybernetics Institute in Vilnius. Founded in 1977. The institute does research on calculus of probability and the statistics of accidental processes, coordinates automation of research, and supervises the installation of program equipment. In 1984, a new department of Systems Programming, a laboratory of the Control of Computations, and an Experimental Plant of Assemblies of Computerized Instruments and Software were added to the institute. Director Statuliavichius, Vitautas A., D. PM. S., '77; Deputy Directors: Telksnis, Laimutis A., C. Tech. S., '80; and Vilkas, Eduardas I., D. PM. S., '80.

The Social Sciences Department

Members:

Academician Secretary:

Matsyavichyus, Ionas A., C. Phil. S. Born in 1922. Academician Secretary since 1984.

Academicians:

Belyukas, Kazis K., Born in 1901. Academician since 1946.

Burachas, Antanas I., D. Econ. S. Born (n.d.) Academician since 1976.

Gaudrimas, Iu. K., Born (n.d.) Academician since 1972.

Korsakas, Kostas P., D. Phlg. S. Born in 1909. Academician since 1957.

Lankutis, Ionas I., C. Phlg. S. Born (n.d.) Academician since 1985.

Malishauskas, Vatslovas I., D. Econ. S. Born (n.d.) Academician since 1980.

Mazhyulis, Vitautas-Iozapas P., D. Phlg. S. Born in 1926. Academician since 1976.

Meshkauskas, Kazimeras A., D. Econ. S. Born in 1917. Academician since 1962.

Yurginis, Iuozas M., D. Hist. S. Born (n.d.) Academician since 1968.

Corresponding Members:

Gaydis, Antanas A., Born in 1926. CM since 1976.

Gudyalis, Vitautas K., D. Geog. S. Born (n.d.) CM since 1980.

Kulikauskene, Regina, D. Hist. S. Born (n.d.) CM since 1972.

Matsyavichyus, Ionas A., C. Phil. S. Born in 1922. CM since 1953.

Minkyavichyus, Yakov V., D. Phil. S. Born (n.d.) CM since 1985.

Navitskas, Konstgantin V., D. Hist. S. Born (n.d.) CM since 1985.

Rayatskas, Raymondas L., D. Econ. S. Born in 1937. CM since 1980.

Sharmaytis-Romaytis, Romas Ia., C. Hist. S. Born in 1909. CM since 1972.

Vaytkyavichyus, Bronyus Iu., D. Hist. S. Born in 1920. CM since 1980.

Vlvidas (VI'vidas), Kazis M., C. Phlg. S. Born (n.d.) CM since 1972.

Zilenas, Alfonsas D., D. Econ. S. Born (n.d.) CM since 1976.

Scientific Research Institutes Subordinate to the Social Sciences department by order of founding :

Economics Institute in Vilnius. First began economic research in 1946. The institute specializes in economic planning for the Lithuanian SSR and provides graduate training for Lithuanian economists. In 1984, the department of the Economic Efficiency of Scientific and Technical Progress was renamed the department of the Comprehensive Program of Scientific and Technical Progress, and the Laboratory of Software of Economic Research was renamed the department of the Automation of Economic Calculations. The institute offers the Candidate of Science degree with specializations in the Economics of the National Economy, Management, and Planning. Director: Vilkas, Eduardas I., D. PM. S., '85; Deputy Directors: Blazhis, Bernardis, '77; and, Puronas, Vitautas, '66. (See Ruble, Vol. I, p. 171.)

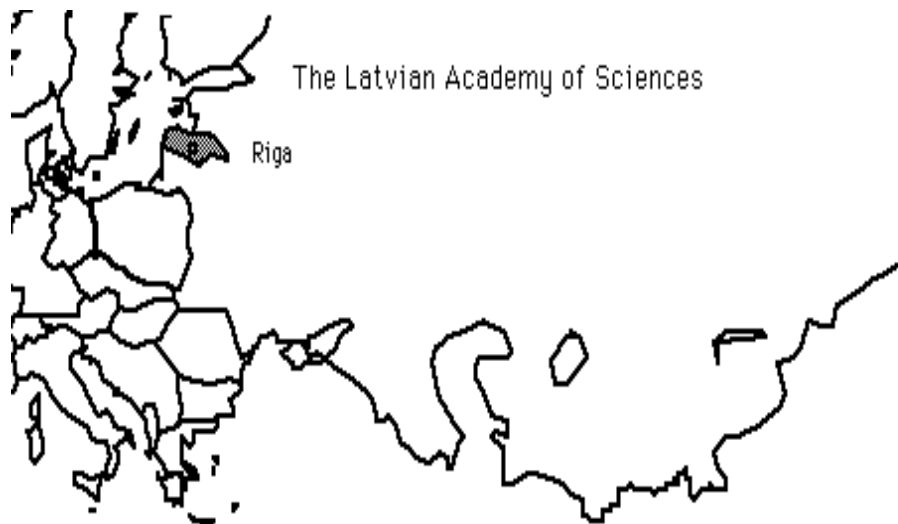
History Institute in Vilnius. The institute offers the Candidate of Science degree with specializations in the History of the USSR and in Archeology. It was from this institute that the department of Philosophy, Law and Sociology was taken to be given institute status. Director: Vaitkevichius, B. Iu. (See: Ruble, Vol. I., p. 471 and Vol. III, p. 151.)

Institute of the Lithuanian Language and Literature (ILYaL), Vilnius. Established in 1952 with the merger of the language and the literature institutes into the Institute of the Lithuanian Language and Literature. Its scientists have produced a 15-volume Academic Dictionary of the Lithuanian Language. It has also produced a Dictionary of River and Lake Names in the Lithuanian SSR, a Dictionary of Lithuanian Synonyms, and some 20 bilingual dictionaries. Its scholars are preparing a Lithuanian Linguistic Atlas. The institute offers the Doctor of Science degree with a specialization in the history of philosophy. Since 1947 it has published the philology series of the Lithuanian Academy's Trudy. Director: Korsaka, K. P. (For an extended and well-documented discussion of this institute see: Ruble, Vol. III, pp. 524-526.)

Philosophy, Sociology and Law Institute (IFSP), Vilnius. Associated with the Center of Scientific Information on the Social Sciences (TsNION). In 1984, the department of Sociological Problems of Management was renamed the department of Problems of the Socialist Way of Life. In 1985, V. Lazutka was confirmed as Director of the Institute. Scientific Personnel: Unknown.



The Latvian Academy of Sciences



Membership of the Academy

President

Purin, Bruno A., D. Chem. S. Born in 1928. Named President of the academy in 1984.

Vice Presidents

Drizul, Aleksandr A., D. Hist. S. Born in 1920. Vice president since 1975.

Yakubaytis, Eduard A., D. Tech. S. Born in 1924. Vice president since 1969.

Chief Scientific Secretary

Samson, Vilis P., C. Phil. S. Born in 1920. Chief Scientific Secretary since 1963.

Chemical and Biological Sciences Division

Chemical and Biological Sciences department

Members:

Academician Secretary: Kukayn, Rita A., D. Med. S. Born in 1922. Academician Secretary since 1986.

Academicians:

Anselevics, Julius, D. Med. S. Born in 1931. Elected in 1992. Member of the Latvian Medical Academy.

Bamberg, Karl K. Elected to Academician status in 1951.

Bankovskis, Iurii A., D. Chem. S. Born in 1927. Academician since 1982. Scientist at the Inorganic Chemistry Institute.

Bekers, Martins., D. Tech. S. Born in 1928. Academician since 1978. Scientist at the Latvian University Microbiology and Biotechnology Institute.

Blugers, Anatolis, D. Med. S. Born in 1926. Academician since 1978. Member of the Latvian Medical Academy.

Cimdins, Peteris, D. Bio. S. Born in 1944. Elected academician in 1992. Scientist at the Biology Institute. His primary field is in ecology.

Cipens, Gunars, D. Chem. S. Born in 1933. Academician since 1982. Research chemist at the Organic Synthesis Institute.

Duburs, Gunars, D. Chem. S. Born in 1934. Elected an academician in 1992. Research chemist at the Organic Synthesis Institute.

Erenpreiss, Janis O., D. Med. S. Born in 1929. Elected an academician in 1992. Researcher at the Latvian Experimental and Clinical Medicine ZPI.

Freimanis, Janis, D. Chem. S. Born in 1935. Elected academician in 1992. Research chemist at the Organic Synthesis Institute.

Grens, Elmars, D. Chem. S. Born in 1935. Academician since 1987. Professor at the University Biomedical center.

Gudriniece, Emiliya, D. Chem. S. Born in 1920. Academician since 1978. Professor at the Riga Technical University.

Kalnberzs, Viktors, D. Med. S. Born in 1928. Elected academician in 1992. Researcher at the Latvian Traumatology and Orthopedic center.

Kalnins, Martins, D. Chem. S. Born in 1939. Elected academician in 1992. Professor at the Riga Technical University.

Karklins, Romans, D. Chem. S. Born in 1928. Academician since 1982.

Klusa, Vija, D. Chem. S. Born in 1940. Elected academician in 1992. Researcher at the Organic Synthesis Institute. His field is pharmacology.

Kondratovics, Rihards, D. Bio. S. Born in 1932. Professor at the Latvian University. His field is biology.

Kukaine, Rita, D. Med. S. Born in 1922. Academician since 1971. She is a virologist at the Kirhensteina Microbiology and Virusology Institute.

Lazovskis, Ilmars, D. Med. S. Born in 1931. Elected academician in 1992. He is a member of the Latvian Medical Academy.

Lidaka, Margeris, D. Chem. S. Born in 1928. Elected academician in 1990. Research chemist at the Organic Synthesis Institute.

Lukevics, Edmunds, D. Chem. S. Born in 1936. Academician since 1987. Research chemist at the Organic Synthesis Institute.

Millers Talis, D. Chem. S. Born in 1929. Elected academician in 1992. Research chemist at the Inorganic Chemistry Institute.

Neilands, Ojars, D. Chem. S. Born in 1932. Elected academician in 1992. Professor at the Riga Technical University. His field is chemistry.

Pumpens, Pauls, D. Biol. S. Born in 1947. Elected academician in 1992. Biologist at the Latvian University Biomedical Studies Center.

Purins, Bruno A., D. Chem. S. Born in 1928. Academician since 1971. He is located at the Inorganic Chemistry Institute and is the President of the Latvian Academy of Sciences.

Sedmalis, Uldis, D. Chem. S. Born in 1933. Elected academician in 1992. He is a professor at the Riga Technical University. His field is chemistry.

Sergejeva (Sergeeva), Varvara, D. Chem. S. Born in 1902. Academician since 1971. Her field is chemistry.

Skinkis, Censonis, D. Ag. S. Born in 1930. Elected academician in 1993. His field is agriculture.

Stradins (Stradyn), Janis, D. Chem. S. Born in 1933. Academician since 1973. Research chemist at the Organic Synthesis Institute.

Valdmanis, Andrejs, D. Bio. S. Born in 1906. Academician since 1963. His field is biology.

Valters, Raimonds, D. Chem. S. Born in 1938. Elected academician in 1992. Professor at the Riga Technical University.

Vedernikovs, Nikolajs, D. Chem. S. Born in 1937. Elected academician in 1992.

Viesturs, Uldis, D. Tech. S. Born in 1936. Academician since 1987.

Corresponding Members of the Department:

Alksnis, Arnolds, D. Chem. S. Born in 1932. Elected CM in 1992.

Andrusaitis, Gunars, D. Bio. S. Born in 1930. CM since 1990. Biologist at the Biology Institute.

Baumane, Viktorija, D. Bio. S. Born 1919. CM since 1971.

Calitis, Andris, D. Ag. S. Born in 1933. Elected CM in 1992.

Eberhards, Guntis, D. Geol. S. Born in 1936. Elected CM in 1992. Professor at the Latvian University.

Ferdats, Andris, D. Bio. S. Born in 1941. Elected CM in 1992. Virologist.

Gromovs, Valerijs, D. Chem. S. Born in 1923. CM since 1982. Chemistry is his field.

Ievins, Imants, D. Bio. S. Born in 1928. CM since 1989. His field is forestry.

Jemeljanovs, Aleksandrs, D. Ag. S. Born in 1938. Elected CM in 1992. His field is agriculture.

Kalvins, Ivars, D. Chem. S. Born in 1947. Elected CM in 1992. Research chemist at the Organic Synthesis Institute.

Karlivans, Vladimirs, D. Chem. S. Born in 1928. CM since 1982. Chemistry is his field.

Krauklis, Adolfs, D. GM. S. Born in 1937. Elected CM in 1993. His field is geography. He is a professor at the Latvian University.

Krauklis, Arnolds, D. Med. S. Born in 1920. CM since 1971. Professor at the Latvian Experimental and Clinical Medicine Center.

Kupce, Eriks, D. Chem. S. Born in 1955. Elected CM in 1992. He is a research chemist at the Organic Synthesis Institute.

Melluma, Aija, D. Bio. S. Born in 1935. Elected CM in 1990. Ecologist.

Rapoports, Aleksandrs, D. Bio. S. Born in 1946. Elected CM in 1993. Professor at the Latvian University Microbiology and Biotechnology Institute.

Rudzite, Vera, D. Med. S. Born in 1929, Elected CM in 1993. Researcher at the Latvian Cardiology Institute.

Strakovs, Andris, D. Chem. S. Born in 1934. Elected CM in 1992. Professor at the Riga Technical University.

Utkins, Vladimirs, D. Med. S. Born in 1932. Elected CM in 1993. Member of the Latvian Medical Academy.

Volkolakovs, Janis, D. Med. S. Born in 1931. Elected CM in 1992. Member of the Latvian Medical Academy.

Zalitis, Peteris, D. Bio. S. Born in 1937. Elected CM in 1993. His field is Forestry.

Zenkevics, Henriks, D. Bio. S. Born in 1937. Elected CM in 1992. Researcher at the Biology Institute.

Chemical and Biological Sciences department: Research institutes subordinate to the department in the order of their founding:

Wood Chemistry Institute in Riga. Established in the 1963 on the basis of the 1946 Institute of Forest Problems. The institute concentrates on chemical processing of wood to obtain new raw materials for pharmaceutical use. Director Karlivan, V. P., D. Tech. S., '79; Deputy Director Gromov, V. S., '82. (GSE 28, p. 116.)

Inorganic Chemistry Institute in Riga. Established in 1946. The institute is involved with the plasma chemistry of inorganic compounds, the reactivity of metals in different media, and selective extraction and determination of elements and their compounds. Director Purin, Bruno A., D. Chem. S., CPSU, '84; Deputy Director Miller, Talis N., C. Eng. S., '71. (GSE 28, p. 116.)

A. Kirkhenshtein Microbiology Institute in Riga. Founded in 1946. The

institute conducts investigations into virology and microbiology. Director Kukain, Rita A., D. Med. S., '62; Deputy Director Beker, Martin E., D. Tech. S., '62. (GSE 3, p. 308.)

Biology Institute in Salaspils. Founded in 1951. The institute is primarily engaged in researching the medical and behavioral aspects of electro-aerosols, static electrical fields, and electropuncture. Director Andrushaitis, Guars P., C. Bio. S., '83; Deputy Director Mikhelson, Kharri A., '73. (See: Ruble, Vol. I, p. 325.) (GSE 3, p. 308.)

Organic Synthesis Institute in Riga. Established in 1957 from several laboratories of the Forestry Problems Institute of 1946. The institute combines fundamental theoretical research on organic synthesis with production of new organic compounds such as pharmaceuticals. Director Lukevits, Edmund Ia., D. Chem. S., '82; Deputy Directors: Gren, Elmar Ia., D. Chem. S., '76; Lagoshnom, Timofei G., '84; Pelcher, Iu. E., '73; Shimanskaia, Maria V., D. Chem. S., '67; and, Iakobson, V. A., '69. (GSE 3, p. 308.) (GSE 28, p. 116.)

Physical and Technical Sciences Department

Membership:

Academician Secretary: Mihailovs, Jurij, D. PM. S. Born in 1927. Academician Secretary since 1970. Elected academician in 1968. He is a scientist in the Physics Institute. His field is thermophysics.

Academicians:

Barzdins, Janis, D. PM. S. Born in 1937. Elected academician in 1992. Professor at the Latvian University Mathematics and Informatics Institute. His is a computer scientist.

Bilinskis, Ivars, D. PM. S. Born in 1934. Elected academician in 1990. Researcher at the Electronic and Data Processing Institute. He is a computer scientist.

Blums, Elmars, D. PM. S. Born in 1936. Elected academician in 1992. Scientist at the Physics Institute.

Cebers, Andrejs, D. PM. S. Born in 1947. Elected academician in 1993. Physicist at the Physics Institute.

Ekmanis, Juris, D. PM. S. Born in 1941. Elected academician in 1992. Physicist at the Physical Energetics Institute.

Freivalds, Rusins M., D. PM. S. Born in 1942. Elected academician in 1992. Mathematician at the Latvian University Mathematics and Informatics Institute.

Jakubaitis, Eduards, D. PM. S. Born in 1924. Elected academician in 1963. Computer scientist at the Electronic and Data Processing Institute.

Jansons, Maris, D. PM. S. Born in 1936. Elected academician in 1993. Physics professor at the Latvian University.

Knets, Ivars, D. Tech. S. Born in 1938. Elected academician in 1992. Engineering scientist at the Riga Technical University.

Lavendelis, Egons, D. Tech. S. Born in 1934. Elected academician in 1989. Engineering scientist at the Riga Technical University. Specialist in machine building.

Lielaluis, Olgerts, D. PM. S. Born in 1930. Elected academician in 1992. Physicist at the Physics Institute.

Lielpeters, Janis, D. Tech. S. Born in 1931. Academician since 1987. Specialist in magnetohydrodynamics.

Malmeisters, Aleksandrs, D. Tech. S. Born in 1911. Academician since 1958. Engineering scientist at the Polymer Mechanics Institute.

Matiss, Imants , D. PM. S. Born in 1935. Elected academician in 1992. Specialist in measuring systems. Scientist at the Polymer Mechanics Institute.

Mikhailovs, Jurijs, D. Tech. S. Born 1927. Academician since 1968. Thermophysicist at the Physics Institute.

Prokofjevs, Peteris, D. PM. S. Born in 1925. Elected academician in 1992. Nuclear physicist.

Silins, Andrejs , D. PM. S. Born in 1940. Elected academician in 1992. Physicist.

Silins, Edgars, D. PM. S. Born in 1927. Elected academician in 1992. Physicist at the Physical Energetics Institute.

Skudra, Alberts , D. Tech. S. Born in 1925. Elected academician in 1992. Engineering professor at Riga Technical University.

Svarcs, Kurts , D. PM. S. Born in 1930. Elected academician in 1990. Physicist at the Physics Institute.

Tamuzs, Vitauts , D. Tech. S. Born in 1935. Elected academician in 1992. Engineer at the Polymer Mechanics Institute.

Tarnopolskis, Jurijs , D. Tech. S. Born in 1929. Elected academician in 1990.. Engineer at the Polymer Mechanics Institute.

Teeters, Gundaris , D. Tech. S., Born in 1928. Elected academician in 1992. Engineer at the Polymer Mechanics Institute.

Zakis, Juris , D. PM. S. Born in 1936. Elected academician in 1990. Professor of physics at the Latvian University.

Corresponding Members:

Bersons, Imants, D. PM. S. Born in 1935. Elected CM in 1992. Physicist at the Physics Institute.

Buikis, Andris, D. PM. S. Born in 1939. Elected CM in 1992. Mathematician at the Mathematics Institute.

Francmanis, Juris , D. PM. S. Born in 1939. Elected CM in 1993. Astronomer at the Radioastrophysics Institute.

Jolins, Jevgenijs , D. PM. S. Born in 1937. Elected CM in 1993. Physicist at the Physics Institute.

Kreslins, Andri s, D. Tech. S. Born in 1938. Elected CM in 1992. Power engineering specialist at the Economics Ministry.

Maksimovs, Roberts, D. Tech. S. Born in 1938. CM since 1987. Engineer at the Polymer Mechanics Institute.

Mikelsons, Arnolds , D. PM. S. Born in 1941. Elected CM in 1993. Computer scientist at the Electronics and Data Processing Institute.

Pirogovs, Vladimirs, C. Tech. S. Born in 1932. CM since 1968. Computer scientist at the Electronics and Data Processing Institute.

Rikards, Rolands, D. Tech. S. Born in 1942. Elected CM in 1992. Engineering professor at Riga Technical University.

Tale, Ivars, D. PM. S. Born in 1936. Elected CM in 1993. Physics professor at Latvian University.

Urzumcevs, Jurijs, D. Tech. S. Born in 1929. CM since 1973.

Viba, Janis , D. Tech. S. Born in 1937. Elected CM in 1992. Engineering professor at Riga Technical University.

Videnieks, Peteris, D. Tech. S. Born in 1940. CM since 1987. Computer scientist.

Physical and Technical Sciences Department: Research institutes subordinate to the department in the order of their founding:

Physics Institute in Salaspils. Established in the 1960s. The institute deals mainly with research on radiation in solid-state physics and MHD. Director Mikhailov, Iurii A., D. Tech. S., CPSU, '67; Deputy Directors: Lielpeter, Ianis Ia.,

D. Tech. S., '72; Shvarts, Kurt K., D. PM. S., '65; and Ulmanis, Uldis, C. Tech. S., '67.

Physics and Power Engineering Institute in Riga. Established in 1946. The institute studies physical and technical problems of energy transformation, control optimization of large power engineering systems, and the physical properties of semiconductors. Director Krogeris, Alfons F., D. PM. S., CPSU, '71.

Electronics and Computer Technical Institute in Riga. Founded in 1960. The institute develops new methods and means of technical cybernetics, specializing in electronic devices, integrated circuits, radio equipment, and television facilities. Director Yakubaitis, Eduard A., D. Tech. S., CPSU, '60; Deputy Directors: Baumgart, Vilis F., C. Tech. S., '72; Baums, Aldis K., '70; Bilinskii, Ivar Ia., D. Tech. S., '76; and Rastrigin, Leonard A., '72.

Polymer Mechanics Institute in Riga. Founded in 1963. The institute analyzes the strength, plasticity, creep, fatigue, and structure of composite polymer materials. Subordinate to the Physical and Technical Sciences department of the Latvian Academy. Director Tamuzh, Vitaut P., D. PM. S., CPSU, '81.

Radio Astrophysics Observatory in Riga. Founded in 1968. The institute conducts photometric and spectral observation of the stars and the solar system. Director Balklav, A. E., '76; Deputy Director Daube, Iya A., C. PM. S., '74.

Social Sciences and Humanities Division

Membership:

Academician Secretary: Steinbergs, Valentin A., D. Phil. S. Born in 1915. Academician Secretary since 1970. His field is philosophy.

Academicians:

Arajs, Karlis, D. Lit. S. Born in 1929. Elected academician in 1993. Folklorist at the Literature and Folklore Institute.

Blinkena, Aina, D. Phlg. S. Born in 1929. Elected academician in 1992. Linguist.

Bojars, Juris, D. Jur. S. Born in 1938. Elected academician in 1992. On the law faculty at the University.

Cimermanis, Saulvedis, D. Soc. S. Born in 1929. Elected academician in 1992. Specialist in ethnography.

Drizulis, Aleksandr, D. Hist. S. Born in 1920. Academician since 1963.

Hausmanis, Viktors, D. Lit. S. Born in 1932. Academician since 1989. Specialist in Literary Criticism and the Literature and Folklore Institute.

Kalnins, Arnis, D. Econ. S. Born in 1935. Academician since 1987.

Kalnins, Janis, C. Phlg. S. Born in 1922. Academician since 1982. Specialist in Latvian literature.

Mugurevics, Evalds, D. Hist. S. Born in 1931. Elected academician in 1992. Archaeologist.

Ronis, Indulis, D. Hist. S. Born in 1943, Elected academician in 1992. Historian.

Rudzite, Marta, D. Phlg. S. Born in 1924. Elected academician in 1992. Specialist in linguistics at the Latvian University.

Samsons, Vilis, C. Phil. S. Born in 1920. Academician since 1968. Historian and Philosopher.

Shteinbergs, Valentins, D. Phil. S. Born in 1915. Academician since 1978.

Philosopher.

Vavere, Vera, D. Phil. S. Born in 1929. Elected academician in 1992. Specialist in Literary Criticism at the Literature and Folklore Institute.

Vebers, Janis, D. Jur. S. Born in 1930. Elected academician in 1992. Professor on the law faculty at Latvian University.

Zvidrins, Peteris, D. Econ. S. Born in 1943. Elected academician in 1992. Professor of economics at Latvian University.

Corresponding Members:

Apine, Ilga, D. Hist. S. Born in 1928. CM since 1978. Researcher at the Philosophy and Sociology Institute.

Berzins, Valdis, D. Hist. S. Born in 1935. Elected CM in 1992. Historian.

Birons, Anatolijs, D. Hist. S. Born in 1929. CM since 1975. Historian.

Gulans, Peteris, D. Econ. S. Born in 1920. CM. since 1968. Researcher at the Economics Institute.

Janovs, Janis, D. Econ. S. Born in 1936. Elected CM in 1992. Economist.

Kirtovskis, Imants, D. Econ. S. Born in 1930. CM since 1987. Economist.

Klive, Visvaldis, D. Phil. S. Born in 1931. Elected CM in 1993. Theologian at Latvia University.

Krastins, Janis, D. Tech. S. Born in 1943. Elected CM in 1992. Architect at Riga Technical University.

Krastins, Olgerts, D. Econ. S. Born in 1931. Elected CM in 1992. Economist at the Latvian Statistical Institute.

Kule, Maija, D. Phil. S. Born in 1951. Elected CM in 1992. Philosopher on the staff of the Philosophy and Sociology Institute.

Nitina, Daina, D. Phlg. S. Born in 1942. Elected CM in 1990. Linguistics researcher at Latvian University.

Pavulans, Vilnis, D. Hist. S. Born in 1938. Elected CM in 1992. Historian at Latvian University.

Plotnieks, Andris, D. Jur. S. Born in 1938. Elected CM in 1990. On Law faculty at Latvian University.

Spogis, Kazimirs, D. Econ. S. Born in 1927. Elected CM in 1982. Professor of Economics.

Tabuns, Bronislavs, D. Phil. S. Born in 1928. Elected CM in 1992. Specialist in literary criticism at the Literature and Folklore Institute.

Torgans, Kalvis, D. Jur. S. Born in 1939. Elected CM in 1992. Law faculty member at Latvian University.

Vanags, Edvins, D. Econ. S. Born in 1938. Elected CM in 1993. Economist at the Latvian Economics Institute.

Varslavans, Alberts, D. Hist. S. Born in 1929. Elected CM in 1993. Historian at Latvian University.

Zarins, Vilnis, D. Phil. S. Born in 1930. Elected CM in 1992. Philosopher on the staff of the Philosophy and Sociology Institute.

Social Sciences department: Research institute subordinate to the department by order of founding:

Economics Institute in Riga. Established in 1946. The institute is a leader in computer-oriented economic research and supports sociological research. The institute is organized in nine sections: 1. Specialization and Cooperation of Production in Industrial Plants, 2. Problems of Potential Work Strength, 3. Price-Establishment and Economic Accounting, 4. Optimal Planning of Agricultural Production, 5. Automated Systems of Management in Specific Sectors of the Economy, 6. Automated Systems of Management for the Entire National Economy, 7. Automated Calculating Systems, 8. Economic Research-Mathematical Laboratory, and 9. Economic Information. Directors: Kirtovskii, Imant Kh., D. Econ. S., '75; and, Maniashis, Iosif A., D. Econ. S. '85. (See Ruble,

Vol. I, pp. 167-168.)

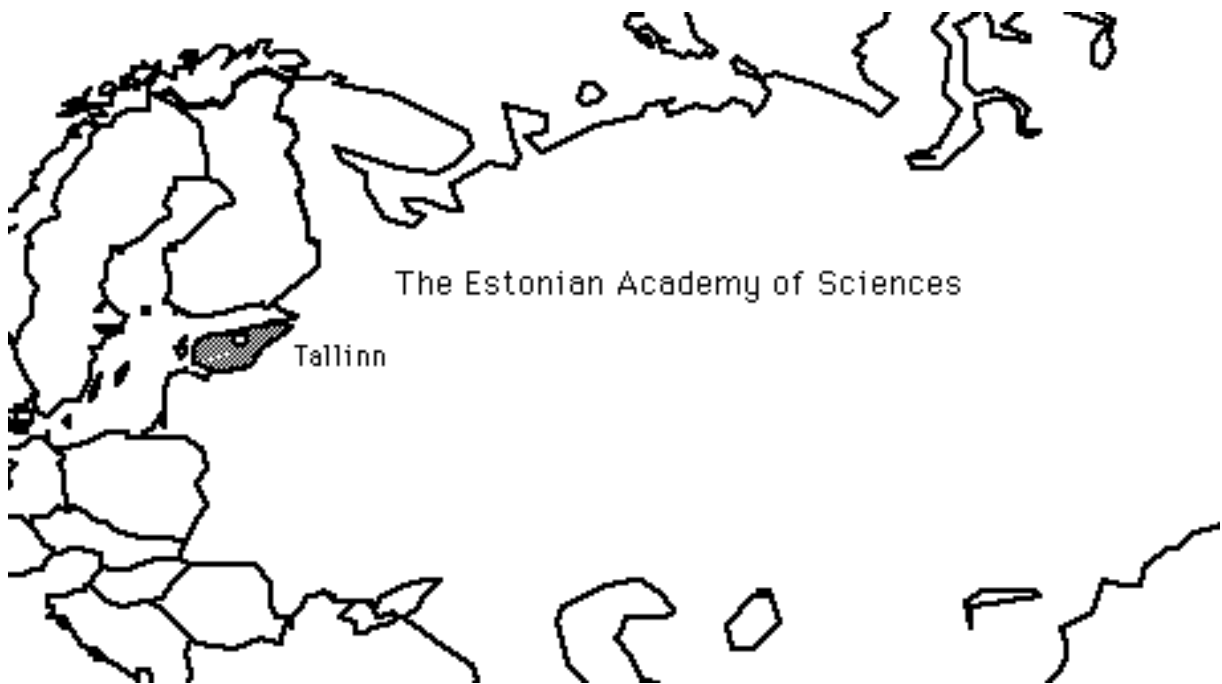
History Institute in Riga. Established in the 1940s and is the republic's leading center of anthropological research. By 1972, the institute had acquired an ethnographic archive of over 120,000 units, including film and photographic records as well as documents. Institute scholars have produced studies of traditional Latvian agriculture, fishing, livestock management, crafts, folk architecture, dress, and family structures. In the 1970s, institute scholars participated in the publication of a historico-ethnographic atlas of the Baltic region. Director: Shteinberg, V. A. (See: Ruble, Vol. III, p. 146.)

Andreia Upita Language and Literature Institute in Riga. No date for founding given. The institute has assisted in the compilation of an ethno-linguistic atlas of the Baltic region. Its scholars have also conducted other ethnographic and linguistic studies. Director: Kalnin, Ia. Ia. (See: Ruble, Vol. III, p. 147 and p. 522.)

Institute of the Lithuanian Language and Literature (ILYaL), Vilnius. Established in 1952 with the merger of the language and the literature institutes into the Institute of the Lithuanian Language and Literature. Its scientists have produced a 15-volume Academic Dictionary of the Lithuanian Language. It has also produced a Dictionary of River and Lake Names in the Lithuanian SSR, a Dictionary of Lithuanian Synonyms, and some 20 bilingual dictionaries. Its scholars are preparing a Lithuanian Linguistic Atlas. The institute offers the Doctor of Science degree with a specialization in the history of philosophy. Since 1947 it has published the philology series of the Lithuanian Academy's Trudy. Director: Korsaka, K. P. (For an extended and well-documented discussion of this institute see: Ruble, Vol. III, pp. 524-526.)



The Estonian Academy of Sciences



Retrospect: The Estonian Academy of Sciences was originally established on October 22, 1938, for the purpose of promoting science in general with special emphasis on national science--as time and national needs required. In 1980, the Estonian Academy had only three Divisions: a division of physics, mathematics and technical sciences; a division of chemistry, geology and biology; and a division of social sciences. In 1985, the academy was reorganized and the Physics, Mathematics and Technical Sciences Division was made into two independent divisions: the Division of Astronomy and Physics and the Division of Informatics and Technical Sciences. The Division of Social Sciences was renamed the Division of the Humanities and the Social Sciences. In 1990, these four divisions had some 16 scientific research institutes under their jurisdiction, five science design and pilot plant organizations and conducted some 22 joint ventures with small enterprises and scientific cooperatives affiliated with the various subdivisions of the academy. Four major new structural units were established in this ten-year period: the Institute of Chemical Physics and Biophysics (1980); the Estonian Biocentre of Gene and Cell Engineering (1986); the Institute of Philosophy, Sociology and Law (1988); and the Institute of Ecology and Marine Research (1990). In 1991, the total number of personnel in institutes of the academy was 3,417 of whom 2517 persons belonged to the staffs of the research institutes, and of this number some 1198 were scientific researchers. The decline of personnel in the institutions of the academy reached some 755 persons in 1991 alone, the main share of this group coming from the separation of the design bureaus and other subsidiary units from the academy. The decline among scientific researchers was only some 87 persons. The new statute of Academic Degrees passed in 1990, meant that in 1991 a new system of granting degrees went into effect, transferring master degrees and doctoral degrees to the University. As a result the number of degrees granted within the Estonian Academy institutes declined drastically. In 1991, after long deliberations, universities and research institutes of the academy moved closer together, following a western

rather than a Russian model or organization, and cooperation between the newly liberated Baltic Republics was initiated in the sciences--represented most directly by the meeting on November 12, 1991 in Vilnius of the Presidia of Lithuania, Latvia, and Estonia. This opened a new era of closer cooperation in scientific research and development for these three former Republics of the Soviet Union. Two major documents came as a result of that meeting one of which established closer cooperation in fields of research of importance to the solution of fundamental problems of the three republics. Teams of scientists were organized to research in the fields of culture, languages and history of the Baltic nations, nature conservation, health care, and agriculture.

Structure of the Academy: The academy is organized into four divisions: the Astronomy and Physics Division, the Informatics and Technical Sciences Division the Biology, Geology and Chemistry Division, and the Humanities and Social Sciences Division.

Presidium

Address: Kohtu 6, Tallinn EE-0001 ESTONIA

President

Arno Kõörna

Phone 372 2 442 129

Fax 372 2 451 805

Scientific-Secretary General

Udo Margna

Phone 372 2 442 013

Fax 372 2 452 742

Vice Presidents:

Veyderma, Mikhel' A. , D. Tech. S. Born in 1929. Academician since 1983. Vice president in 1992.

Jaaksoo, Ulo. Born in 1939. Mechanics. Vice president in 1992.

Vainikko, Gennadi . Born in 1938. Mathematics. Vice president in 1992..

Presidium Members (Officers above plus the following elected members):

Eiasto, Jaan E., D. PM. S. Astronomer and physicist. Born in 1929. Academician Secretary of the Physics and Astronomy Division since 1985.

Tamm, Boris G., D. Tech. S. Born in 1930. Cyberneticist. Academician Secretary of the Informatics and Technical Sciences Division since 1991. Presidium member since 1973.

Kaljo, Dimitrii L. , D. GM. S. Director of the Geology Institute in Tallinn from 1969 until replaced by Rein Vaikmäe in the 1990s. The institute was founded in 1947, and studies the geology and mineral resources of the Baltic region and the adjoining coastal zone.

Park, Andrus , D. Hist. S. Humanities and Social Sciences. Member of the Presidium in 1992.

Lippmaa, Endel T. , D. PM. S. Born in 1930. Director of the Chemical and Biological Physics Institute in Tallinn since its founding in 1980. The institute conducts research in molecular biology, chemical physics, and biological physics.

Ratsep, Huno , D. Phlg. S. Born in 1927. Estonian language specialist. Elected in 1981. Member of the Presidium in 1992.

Saari, Peeter, D. PM. S. Born in 1945. Non-linear optics and holography. Elected Academician in 1986. Member of the Presidium in 1992.

Tyugu, Enn Kh., D. Tech. S. Born in 1935. Academician Secretary of the Division of Informatics and technical Sciences from June 1985 to 1991

Villems, Richard, D. Bio. S. Born in 1944. Biophysicist in human genetics. Elected academician in 1987. Member of the Presidium in 1992.

Foreign Relations Department Chief: Trofimov, Aleksey A. Born (n.d.) Chief of department since 1983.

The Division of Biology, Geology and Chemistry

Retrospect: In 1991, this division had under its jurisdiction six research institutes, a pilot plant--abolished in September 1991--the Arboretum of the Tallinn Botanical Garden, and a number of smaller enterprises. In February of 1991, a new entity was established by the Presidium: The International Plant and Pollution Research Laboratory and located at the Tallinn Botanical Garden. The "general assembly" of the division--a new body established after separation from the Soviet Academy--met nine times during 1991. Discussion led to the realization that the role of the division was to be that of an interdisciplinary body coordinating research among universities and research institutes which would involve the reorganizing of Estonian Science. Divisional institutes conducted 29 conferences of which 12 were international in nature.

Membership of the Division:

Academician Secretary: Raukas, Anton V. , D. GM. S. Born in 1935. Geologist. Corresponding member of the Division of Biology, Geology and Chemistry since 1977. Member of the Presidium of the Academy since 1981. Academician secretary of the Division from 1983 to 1991.

Academicians:

Parmasto, Erast Kh., D. Bio. S. Born in 1928. Botanist and mycologist. Academician since 1972.

Pung, Aarne I. , Born in 1909. Specialist in cattle breeding and selection of dairy cattle. retired. Academician since 1954.

Veiderma, Mihkel A. , D. Tech. S. Born in 1929. Inorganic chemist. Academician since 1975.

Corresponding Members:

Pal'm (Palm), Viktor A. , C. Chem. S. Born in 1926. Organic chemist. CM since 1978.

Raukas, Anto V. , D. GM. S. Born in 1935. Geologist. Corresponding member of the Division of Biology, Geology and Chemistry since 1977. Member of the Presidium of the Academy since 1981. Academician secretary of the Division from 1983 to 1991.

Trass, Hans-Voldemar , D. Bio. S. Born in 1928. Botanist and ecologist. CM since 1975.

The Division of Biology, Geology and Chemistry: Research institutes subordinate to the department in the order of their founding:

Geology Institute in Tallinn.

Founded in 1947, the institute is organized in two divisions: the division of **bedrock geology** --palaeontology, stratigraphy and facies analysis,

petrography and mineralogy, structural geology, geology of mineral resources, hydrogeology, and geophysics; and the division of **quaternary geology** --quaternary stratigraphy, glacial geology, geomorphology, marine and lacustrine geology, environmental geology, isotopic studies and palaeodosimetry, and palaeoclimatology. The institute studies the geology and mineral resources of the Baltic region and the adjoining coastal zone. In 1992 the staff of the institute numbered some 169 persons of whom 87 were research geologists. In 1993, Rein Vaikmäe was director of the Institute. Address: Estonia pst.7, Tallinn EE-0100 ESTONIA; Phone 372 2 454 120; Fax 372 6 312 074

Chemistry Institute in Tallinn.

Founded in 1947, the institute does research in organic synthesis, development of methods of studying organic compounds, and integrated exploitation of natural resources. (GSE 28, p. 116.) In 1992, the institute had a staff complement of 260 persons of whom 118 were research scientists. The institute was organized in five departments: **bioorganic chemistry** --polyenic acid metabolites and related compounds, Estonian curative muds, and investigation of photosensitive compounds for laser photodynamic therapy; **physico-chemical investigations** --unsaturated hydrocarbons and aroma compounds, red algae galactans and sorbents on their basis, protonation of weak organic bases in aqueous strong acids, and computerized chromatographic analysis of nonstationary substance flows; **oil shale chemistry** --chemistry and geochemistry of oil shales, chemical technology of oil shale processing, and technology of kukersite oil shale based resorcinols; **organic synthesis and technology** -- new ecologically safe plant protection means, surfactants, and asymmetric chemical synthesis; and **environmental chemistry** --kinetics and mechanism of interaction between technogenic pollutants and natural compounds, studies of dictyonema argillites, and ion chromatographic technique for evaluation of environment pollution. [1993] **Institute of Chemistry** ; Address: Akadeemia tee 15, Tallinn EE-0026 ESTONIA; **Director Jüri Kann** Phone 372 2 536 450; Fax 372 2 536 371 [Source, Copyright © Annual Report of the Estonian Academy of Sciences, 1993. Toomas Mölder webmaster@sun.nlib.ee]

Zoology and Botany Institute in Tartu.

Founded in 1957. The institute conducts general surveys of flora and fauna of the republic, studies lake and bog ecosystems and assesses the aquatic bird population. (See: Ruble, Vol. I., p. 312.) (GSE 3, p. 309.)

Botanical Garden in Tallinn.

No date for establishment given in source. Scientists at the Garden study the influence of man upon the flora of the republic. (See: Ruble, Vol. I., p. 312.)

Experimental Biology Institute in Kharku.

Established in 1957. The institute is involved in solving fundamental problems related to the search for methods of controlling the activities of organisms and the development of practical and theoretical bases for increasing the productivity of agricultural plants and animals. Director: Priilinn, Oskar Ia., C. Agr. S., 1961. (GSE 3, p. 309.)

Chemical and Biological Physics Institute in Tallinn.

Established in 1980. The institute conducts research in molecular biology, chemical physics, and biological physics. Director Lippmaa, Endel T., D. PM. S., '80; Deputy Director Saluvere, Tit A., '81. Scientific secretary of the institute in 1992 was Juri Siigur. [1993] **Institute of Chemical Physics and**

Biophysics; Address: Rävåla 10, Tallinn EE-0001 ESTONIA Phone 372 2 441 304; Fax 372 2 440 640; (Biophysics) Akadeemia tee 23, Tallinn EE-0026 ESTONIA; **Director Endel Lippmaa** Phone 372 6 398 320; Fax 372 6 398 337. In 1992, the staff of the institute totalled some 167 persons of whom 92 were research scientists. The institute was divided into three laboratories: the laboratory of chemical physics, the laboratory of bioorganic chemistry, and the laboratory of molecular genetics.

Estonian Biocentre in Tartu.

The center was established in 1986 and by 1992 had a total of 37 persons on its staff of whom 22 were research scientists. Its scientists research in molecular biology, cell biology, microbial genetics, and biotechnology. It is comprised of three laboratories at the Institute of Molecular and Cell Biology located at Tartu University--the laboratory of gene expression, the laboratory of oncogenesis, and the laboratory of plasmid biology; and the Institute of Chemical Physics and Biophysics located at the center itself with a laboratory of molecular genetics. Address: Tähetorn, Toomemägi, Tartu EE-2400 ESTONIA. **Director Richard Villems** Phone 372 34 31 980; Fax 372 34 35 430

Institute of Ecology and Marine Research

Established in Tallinn in 1990, the institute is organized into six departments and maintains three branches. The departments are: **marine physics**; **marine chemistry**; **marine biology**; **modelling of marine ecosystems**; **ecophysiology**; and **geocology**. Research carried on in these departments includes: long-term changes in the Baltic Sea ecosystems; physical, chemical and biological processes in the Baltic Sea; temporal and spatial distribution and biogeochemical cycling of heavy metals and some organic substances in the Baltic Sea; reconstruction of palaeoenvironmental changes during the Holocene; characteristics of matter cycling in wetland and lakes; physiological and biochemical aspects of plant resistance to the changes in environmental conditions; and applied studies of terrestrial and marine ecosystems. Address: Kevade 2, Tallinn EE-0001 ESTONIA. **Director Jaan-Mati Punning**. In 1992, deputy director of the institute was Evald Ojaveer, and the scientific secretary was Edgar Karofeld. Phone 372 2 451 634; Fax 372 2 453 748

Estonian Marine Institute

Address: Lai 32, Tallinn EE-0001 ESTONIA

Director Ahto Järvi

Phone 372 6 313 005

Fax 372 6 313 004

Institute of Experimental Biology in Harku

Established in 1957, by 1992, the staff of the institute numbered 165 persons of whom 60 were research scientists. The institute is organized in nine departments: molecular biology; molecular genetics; plant genetics; plant physiology and biochemistry; animal physiology and genetics; virology; microbiology; protozoology; and preparative biology. Research and studies in these departments concentrate on the interaction of nucleic acids and proteins with bioactive compounds; elementary processes in recombination and mutagenesis; distant hybridization and chemical mutagenesis of cereals; kinetics of photosynthetic carbon metabolism *in vivo*; relationship between flavonoid biosynthesis and primary metabolism in plants; hormonal regulation of lymph formation and circulation; inheritance and selection of quantitative characters of dairy cattle; resistance and susceptibility in virus-plant relations; stability of microbial systems in soil; intracellular host-parasite interactions; and isolation and characterization of bioactive substances from natural sources. Address: Instituudi 11, Harku, Harju mk. EE-

Institute of Zoology and Botany in Tartu

Established in 1947, the institute counted some 154 persons on its staff in 1992, of whom 75 were scientific researchers. The institute is organized into three major departments, and has the K. E. von Baer Museum under its administration, as well as a group of biometricians. Two of the three departments have field stations under their supervision. The departments are: **botany and mycology** ; **zoology** --the Puutu Ornithological Station; **hydrobiology** --Vortsjarve Limnological Station. The research areas of the departments of the institute include: population ecology of plants, dynamics and structure of plant populations; plant systematics and microevolution; flora and evolution of fungi; animal systematics, biology and evolution; hydrobiology, management and protection of water bodies; environment protection; and evolution theory and the history of science. Address: Vanemuise 21, Tartu EE-2400 ESTONIA. Director **Andres Koppel** . Phone 372 34 32 828; Fax 372 34 33 472

Tallinn Botanical Garden in Tallinn

The Botanical garden was established in 1961 to study the acclimatization of exotic plants, to improve the disease resistance of plants, to do ecological monitoring and develop bioindication; and to study island landscape ecology. It is comprised of two departments and two laboratories: ornamental gardening and dendrology; tropical and subtropical flora; and the three laboratories are: landscape ecology; environmental research and urban ecology; and the International Plant and Pollution Research Laboratory--see below. Address: Kloostrimetsa tee 52, Tallinn EE-0019 ESTONIA. Director **Heiki Tamm** Phone 372 2 238 081; Fax 372 2 238 468

International Plant & Pollution Research Laboratory

Address: Kloostrimetsa tee 44, Tallinn EE-0019 ESTONIA. Director **Jüri Martin** Phone 372 2 239 001; Fax 372 2 238 684 There is a **Tree Nursery** which is part of the three units making up this complex of institutions. The nursery is directed by Teet Ruben.

The Division of Informatics and Technical Sciences

(Created in 1985 from the division of the Physical, Technical, and Mathematical Sciences Department):

Retrospect: In the ten years from 1980 to 1990, four new institutes were established: the Institute of Chemical Physics and Biophysics--from the Institute of Cybernetics and the Institute of Physics in 1980; the Estonian Biocentre of Gene and Cell Engineering in 1986; the Institute of Philosophy, Sociology and Law--from the Institute of Economics and the Institute of History in 1988; and the Institute of Ecology and Marine Research--from the Institute of Thermal Physics and Electrophysics in 1990. In 1990, the Estonian Academy had a total of 15 scientific research units administratively located under its four Divisions. This total excludes pilot plants, design offices, libraries, and other support units subordinate to research units of the academy. (Source: *Academy of Sciences of Estonia, 1980-1990*, p. 8.)

Academician Secretary: **Tyugu, Enn Kh.**, D. Tech. S. Born in 1935. Academician Secretary of the Division of Informatics and technical Sciences from June 1985 to 1991. **Yaksoo, Yu.** Born (n.d.) was its first Corresponding Member in 1986. In 1991, **Boris Tamm** was Academician Secretary of the Division.

Academician Secretary:

Tamm, Boris. Born in 1930. Cyberneticist. Academician Secretary of the Informatics and Technical Sciences Division since 1991. Academician since 1972.

Members of the Division:

Aarna, Olav . Born in 1942. Informatics and control systems specialist. Elected academician in 1990.

Aben, Hillar . Born in 1929. Experimental Mechanics. Elected in 1977.

Engelbrecht, Jurii. Born in 1939. Mechanics. Elected in 1990.

Jaaksoo, Ulo. Born in 1939. Information and control systems. Elected in 1986.

Krumm, Lembit. Born in 1928. Energetics and electric power systems. Elected in 1987.

Kulbach, Valdek. Born in 1927. Structural mechanics, spin-walled and spatial structures. Elected in 1986.

Ots, Arvo. Born in 1931. Energetics and thermal engineering, environmental problems in energetics. Elected in 1983.

Tyugu, Enn. Born in 1935. Informatics and theoretical computer science. Elected in 1981.

Vainikko, Gennadi . Born in 1938. Mathematics--numerical methods). Elected in 1986.

Institutes under the Division of Informatics and Technical Sciences:

Institute of Cybernetics in Tallinn.

Established in 1960, it had a staff of 138 persons in 1992, of whom 55 were research scientists. It was organized into five departments: **mathematics** -- mathematical logic, automated programme synthesis, numerical methods, stochastic optimization, and optimization of multidecision; **mechanics** - - nonlinear wave motion, geofiltration, scattering of acoustic waves on elastic bodies, and integrated photoelasticity; **software**-- artificial intelligence and expert systems, specification and implementation of programming languages, computer aided software engineering tools, computer aided design software, and software protection; **information systems and control systems** - - control systems theory, conceptual analysis of production systems, control systems software, and speech technology.

Address: Akadeemia tee 21, Tallinn EE-0026 ESTONIA. **Director Ülo Jaaksoo.**

Deputy directors were Juri Engelbrecht and Ants Work in 1992. Scientific secretary of the institute was Mati Kutser. Phone 372 2 525 435; Fax 372 2 527 901

Computer R&D Division "Ekta"

The Computer Research and Design office was established in 1976 in Tallinn. Its director in 1992 was Kalju Leppik. At that time it had a staff of 150 persons. It is comprised of five departments and one "sector"--the department of software; the department of com-puter systems; the department of signal processing; the department of analog-digital equipment; the department of computer aided design, the department of terminal equipment, and the sector of test systems. Address: Akadeemia tee 21/1, Tallinn EE-0026 ESTONIA The present Director is Harry Tani Phone 372 6 397 902; Fax 372 6 397 901

The Physics and Astronomy Division

Retrospect: In 1991, when Estonia reclaimed its independence as an independent state, all financial links with the Soviet Academy of Science were

also severed with the result that all projects within the division which had been financed by the Russian academy were stopped, and those scientists and personnel who had been involved in those projects were expelled or found employment elsewhere. The division and the academy turned to the Estonian Universities and reforms were instituted which follow more closely the western rather than the former Soviet model of organization, with universities taking a larger share of the degree-granting work. However, that has also meant Estonian research personnel in the research institutes shouldering a heavier burden of teaching in the universities as well--from this division particularly in the fields of laser optics, biophysics, and molecular biology. Academy institutes, under the new reorganization of science in Estonia, are virtually independent entities, which has lessened the role of the Division administrative authority. (Source: *Annual Report of the Academy of Sciences of Estonia, 1991*, pp. 10-11.)

Membership:

Academician Secretary: Eiasto, Jaan E., D. PM. S. Astrophysics--large scale structure of the universe. Born in 1929. Elected in 1981. Academician Secretary of the Physics and Astronomy Division since 1985.

Academicians:

Einasto, Jaan E., (See above.)

Keres, Harald , D. PM. S. Born in 1912. Theoretical physicist. Academician since 1961.

Lippmaa, Endel, D. PM. S. Born in 1930. Chemical physics--nuclear magnetic resonance. Academician since 1972.

Naan, Gustav I ., D. Phil S. Born in 1919. Elected in 1951.

Rebane, Karl K., D. PM. S. Born in 1926. Theoretical physics--spectroscopy of solids, optical information). Elected in 1961.

Tamm, Boris G ., D. Tech. S. Born in 1930. Cyberneticist. Academician Secretary of the Informatics and Technical Sciences Division since 1991. Elected in 1972.

Corresponding Members :

Aben, Hillar , D. Tech. S. Born in 1929. Experimental mechanics. Elected in 1977.

Kulbakh, Valdek . Born in 1927. Mechanics--spin-walled and spatial structures). Elected in 1986.

Lushchik, Cheslav , D. PM S. Born in 1928. Solid state physicist. Elected in 1964.

Saari, Petr M. , D. PM. S. Born in 1945. Physicist--non-linear optics and holography). Elected in 1986.

Tyugu, Enn , D. Tech. S. Born in 1935. Informatics--theoretical computer science. Elected in 1981.

Vainikko, G. Born in 1938. Mathematician--numerical methods. Elected in 1986.

Institutes under the Physics and Astronomy Division: Research institutes subordinate to the department in the order of their founding:

V. Ia. Struve Astrophysics and Atmospheric Physics Institute in Tartu.

Founded in Toravere, near Tartu, in 1964 and built on the base of the Dorpat and Iurev Astronomical Observatory which was founded in 1805. The institute conducts extensive research into the physical properties of celestial bodies including luminosity, size, mass, density, temperature, and chemical composition. The institute maintains Latitude stations in Gorki and

Blagoveshchensk and conducts research at the Institute of Terrestrial Magnetism and Radio Wave Propagation in Vatutenki near Moscow, at the Siberian Institute of Terrestrial Magnetism and Radio Wave Propagation in the most ochnyi Saian Mountains, and at the Latvian Radio Astrophysics Observatory at Baldone near Riga which was completed in the 1960s. Director Unt, Viaino A., D. PM. S., '78; Deputy Director Luud, Lauri S., C. PM. S., '79. (GSE 2, p. 437). [1993]

Institute of Astrophysics and Atmospheric Physics

Address: Tõravere, Tartu mk. EE-2444 ESTONIA; **Director Tõnu Viik** Phone 372 34 10 265; Fax 372 34 10 205. Deputy directors: Rein Room and Enn Saar. The staff of the institute totalled 146 in 1992, of whom 69 were scientists. The 1992 Annual Report of the Academy gives 1947 as the founding date of this institute. The institute is comprised of two departments: astrophysics and atmospheric physics, and maintains an observatory in Tartu and in Tallinn. It also maintains an International Cosmology Center.

Physics Institute in Tartu.

Founded in 1947, and located under the Physical, Technical and Mathematical Sciences Division of the Academy. In 1985, a series of works of collaboration with the Institute of Spectroscopy of the USSR Academy of Sciences on "The Photochemical Branding of Stable Spectral Valleys and the Selective Spectroscopy of Complex Molecules," was nominated for the Lenin and USSR State Prizes in Science and Technology. Director Saari, Petr M., D. PM. S., from 1982 to 1991; Deputy Directors: Kirs, Yaak Ia., C. PM. S., '80; and Kyaembre, Kh., C. PM. S., '78. [1993] **Institute of Physics** ; Address: Riia 142, Tartu EE-2400 ESTONIA; **Kristjan Haller has replaced as director Arvi Freiberg who was director in 1992.** Phone 372 34 79 077; Fax 372 34 72 227 The institute had some 247 persons on its staff in 1992 of whom 114 were research scientists. The work in the institute is divided among solid state physics, theoretical physics and applied physics. In 1992, the institute had nine laboratories, a group studying thin film technology, and two departments as follows: the laboratory of theoretical physics; the laboratory of solid state theory; the laboratory of spectroscopy of crystals; the laboratory of laser spectroscopy; the laboratory of laser techniques; the laboratory of low temperatures; the laboratory of nuclear spectroscopy; the laboratory of physics of ionic crystals; the laboratory of X-ray spectroscopy; a group of thin film technology; a department of equipment development; and a department of laser optics.

Thermal Physics and Electrophysics Institute in Tallinn.

Founded in 1937 and located under the Physical, Technical and Mathematical Sciences department of the Academy. The institute researches electrophysics--the theoretical aspects and main principles in the construction of semiconductor power converters; thermal and electrophysical processes in low temperature plasma and plasma technology; and surface processes in semiconductor structures and methods of optical diagnostics. Its scientists also study the controlling principles of regional fuel power economy and the complex optimizing and controlling methods of power systems. In thermophysics, institute researchers study the transfer and mixing processes in turbulent gas and gas-solid flows and the application of laser diagnostics for such research and the combustion in the fluidized bed of low grade solid fuels. In 1992, the staff of the institute numbered 162 persons of whom 75 were research scientists. It was organized into three divisions: **electrophysics** -- with departments of electrophysics, power conversion processes, power conversion devices, and semiconductor studies; **energetics**-- with departments of system research in energetics, power system control, and oil shale energy research; and **thermal physics and aeromechanics**-- with

departments of aeromechanics and combustion processes. Director: Tamkivi, Paul I., C. Tech. S., since 1987; he was deputy director from 1981 to 1987. In 1992 the scientific secretary of the institute was Ahto Vallikivi.

Cybernetics Institute in Tallinn.

Founded in 1960 and under the control of the Physical, Technical and Mathematical Sciences department of the academy. There are four main areas of research and development in this institute: **mathematics** --comprising mathematical logic, automated program synthesis, numerical methods, stochastic optimization, and optimization of multidecisions--**mechanics** --including nonlinear wave motion, geofiltration, scattering of acoustic waves on elastic bodies, and integrated photoelasticity--**software** --encompassing artificial intelligence and expert systems, specification and implementation of programming languages, computer aided software engineering tools development, computer aided design (CAD) software, and software protection--and control systems--involving control systems theory, conceptual analysis of production systems, control systems software, and speech technology. The Director of the institute was Kihlar K. Aben, D. Tech. S. ; Deputy Directors: Petersen, Ivan F., C. Tech. S., from 1969; and Virk, Ants Kh., from 1981. [1993] **Institute of Cybernetics** ; Address: Akadeemia tee 21, Tallinn EE-0026 ESTONIA Director **Ülo Jaaksoo** Phone 372 2 525 435; Fax 372 2 527 901

Institute of Energy Research

(Formerly the Institute of thermal Physics and Electrophysics.

Established in Tallinn in 1937, this institute in 1992 had 162 persons on its staff of whom 75 were research engineer scientists. It was organized in three divisions: the division of electrophysics--with departments of electrophysics, power conversion, power conversion devices, semiconductor studies; the division of energetics--with departments of system research in energetics, power system control, and oil shale energy research; and the division of thermal physics and aeromechanics--with departments of aeromechanics and combustion processes. Studies are conducted on the theoretical aspects and main principles for constructing of semiconductor power converters; on thermal and electrophysical processes in low temperature plasma and plasma technology; on surface processes in semiconductor structures and methods of optical diagnostics; on controlling principles of regional fuel power economy; on complex optimizing and controlling methods of power systems; on the transfer and mixing processes in turbulent gas and gas-solid flows and the application of laser diagnostics for research; on the combustion of low grade solid fuels in the fluidized bed. AddressL Paldiski mnt.1, Tallinn EE-0001 ESTONIA. Director **Paul Tamkivi**. Phone 372 2 450 631; Fax 372 2 452 435

Design Office in Tallinn

Founded in 1963, the design office had a complement of 250 persons in 1992. It was structured in four departments and a work shop. The departments were: the laser department; the laser system department; the chromatography department; and the electronics department. The center designs and makes instruments of various kinds for the research institutes. Address: Akadeemia. tee 19, Tallinn EE-0026 ESTONIA. Director **Karl Saar** Phone 372 2 538 150; Fax 372 2 527 204

The Humanities and Social Sciences Division

Acting Academician Secretary: Juhan Kahk.

Retrospect: In 1991, a number of radical changes in the division were made, particularly in dealing with revising the editorial work of the series in the Humanities and Social Sciences of the Proceedings of the Academy of Sciences. Membership of the editorial board for the publication was expanded to include a number of prominent scientists of Estonian nationality who are resident in other countries. The division acted as a mediator in a meeting of the Baltic scientists of the Humanities and Social Sciences with the Association for the Advancement of Baltic Studies (AABS) in an abortive attempt in finding ways to use American scientists in reforming Estonian science along the Western model--putting degree-granting programs back in the Universities and developing new methods of cooperation between the Academy institutes and the University faculties. However, division historians joined a conference of Baltic historians, organized by the Lithuanian Institute of History, resulting in the adoption of a resolution to join the International Committee for History Science. (Source: *Annual Report of the Academy of Sciences of Estonia, 1991*, pp. 17-18.)

Membership:

Academician Secretary: Kakhk, Juhan Yu., D. Hist. S. Born in 1928. Historian--history of Estonia and Nordic countries. Elected in 1969. Academician Secretary of the division since 1973.

Academicians:

Bronshtein, Mihhail , D. Econ. S. Born in 1923. Agricultural economist. Elected in 1975.

Kakhk, Juhan, D. Hist. S. Born in 1928. Historian. Elected in 1969.

Maamagi, Viktor , D. Hist. S. Born in 1917. Historian of Estonia. Elected in 1961.

Corresponding Members:

Kask, Arnold. Born in 1902. Specialist in the Estonian language. Elected in 1961.

Peegel, Juhan , D. Phlg. S. Born in 1919. Philologist. CM since 1977.

Rebane, Jaan, D. Phil. S. Born in 1924. Philosophy. CM since 1975.

Ratsep, Kh., D. Phil. S. Born in 1927. CM since 1981.

Siilivask, Karl., D. Hist. S. Born in 1927. Historian of Estonia. CM since 1977.

Humanities and Social Sciences Division: Research institutes subordinate to the department in the order of their founding:

Economics Institute in Tallinn.

Founded in 1946 as the Institute of Law and Economics. It took its present name in 1947. It has become a major training center for Estonian economists. The institute specializes in research forecasting, optimal planning methods, material incentives, and agricultural economics. Scientists in the institute work in five main areas of research: on the long term prognoses of the Estonian economy; on the improvement of the theory and methods of optimal planning of the national economy; on the socio-economic development of Estonia and its local territorial subsystems; on theoretical and applied problems of economics; and on the scientific foundations for the rational utilization of the nation's natural resources. In the early 1970s over 150 persons worked in the institute of whom 72 were research scholars. Forty seven of these held graduate degrees. From 1980 to 1990, total workers in the institute dropped from 247 of whom 61 held the candidate degree and 7 the

doctorate to 180 total in 1990 of whom 48 held the candidate degree and 8 held the doctorate. The institute has published *Voprosy selskogo khoziaistava* since 1968. Director Tarmisto, Vello Iu., D. Econ. S., from 1974 to 1991 (See: Ruble, Vol. I., p. 153 and p. 466.) [1993] **Institute of Economics** ; Address: Estonia pst.7, Tallinn EE-0100 ESTONIA; Director Olev Lugus Phone 372 2 444 570; Fax 372 2 442 835

History Institute in Tallinn.

Founded in 1947. There are eleven main areas of research pursued by historians in the institute: the prehistoric times of Estonia; the possibilities of using methods of the natural sciences in archaeological studies; the history of Estonian Agriculture and peasantry; the history of Estonian industry and economic relations; the history of the Estonian population and of its towns; history of the war of independence and of the Republic of Estonia; Estonian ways of life, customs, traditions, clothing, and nutrition through the ages; history of Estonian Culture; history of Estonian Philosophy; sociology of Estonia; and the history of Nordic countries. The Institute is an active center for the study of historical demography and has hosted national conferences on the subject. The institute scholars are particularly active in physical anthropology and sociology. In 1992, the institute had 129 persons on its staff of whom 82 were researchers. (See: Ruble, Vol. II, p. 42 and Vol. III, p. 131.) [1993] **Institute of History** ; Address: R  tli 6, Tallinn EE-0001 ESTONIA; Director Teet Veispak Phone 372 2 446 594; Fax 372 2 443 714

Museum of Ethnography in Tartu.

Probably dates to 1945 with the founding of the academy. In addition to housing one of the largest collections of material on the Estonian ethnic group (500,000 items), the museum is a research center with emphasis on contemporary ethnography. It publishes an annual, *Etnograafiamuseumi Aastaraamat*. Director: Peterson, A. Iu. (See: Ruble, Vol. III, pp. 132-133.)

Institute of the Estonian Language (Formerly the Language and Literature Institute) in Tallinn.

Established in 1947 and originally located in Tartu. In 1970, the institute had six research sectors: language research, dictionaries, Finno-Ugric Languages, History of Literature, Theory of Literature, and Folklore. In 1977, a mathematical linguistics sector was added. In 1992, the staff numbers 167 persons of whom 95 were research scientists. The institute was organized into five departments, two divisions, and one working group as follows: the department of dialectology; the department of lexicology; the department of grammar; the department of Finno-Ugric studies; the department of computer linguistics; the working group of Estonian-Russian dictionary; the division of folklore studies, the division of literary studies, and the Fr. Tuglas Museum, now the **Under & Tuglas Literature Center** --Address: Roosikrants 6, Tallinn EE-0100 ESTONIA. Director Piret Kruuspere . (For an extended and well-documented discussion of this institute see: Ruble, Vol. III, pp. 500-503.) [1993] **Institute of Estonian Language** ; Address: Roosikrantsi 6, Tallinn EE-0100 ESTONIA; Director Asta   im Phone 372 2 449 843; Fax 372 2 442 076

Fr.R.Kreutzwald Literature Museum in Tartu

Established in 1940, the museum is organized in 1) archive library, 2) a department of bibliography; 3) a department of manuscripts; 4) and a department of folklore. Address: Vanemuise 42, Tartu EE-2400 ESTONIA; Director Rutt Hinrikus Phone 372 34 30 035 Fax 372 34 30 051

The Library of the Academy in Tallinn.

Established in 1947, a relatively late date, the library houses some 3.5 million

publications in all fields of learning. The history of its collections go back to the library of St. Olai's Church which was founded in 1552. Address: Rävåla 10, Tallinn EE-0100 ESTONIA Director Maive Triipan Phone 372 2 440 649; Fax 372 2 454 049

Institute of Philosophy, Sociology and Law in Tallinn

Founded in 1988, by 1992, the institute had 68 persons on its staff of whom 42 were researchers. The institute was organized into four departments: the philosophy department; the sociology department; the law department; and the international relations and politology department. Its studies include: interdisciplinary methods of research in social studies; studies of nationality problems; longitudinal study of youth, covering various regions from 1983-1996; panel study of family relations, the way of life and social activity of the population; legal regulation of the reform in property relations; and international relations, the development of democracy in the CIS and Estonia. Address: Estonia pst.7, Tallinn EE-0100 ESTONIA Director Priit Järve Phone 372 2 443 078 Fax 372 2 446 608. [Source, Copyright © Annual Report of the Estonian Academy of Sciences, 1993]



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