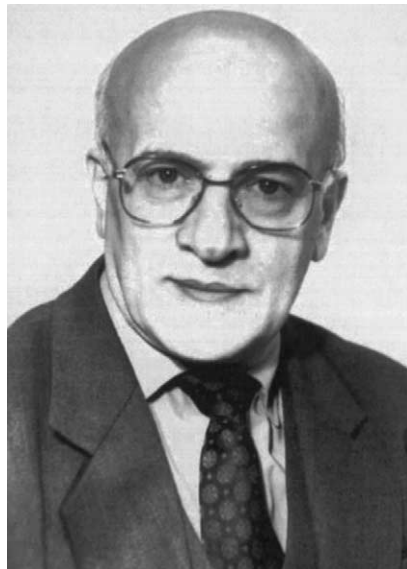


Obituary

Oleg I. Larichev in Memoriam



20.09.1934–19.01.2003

With great sadness we inform you that Professor Oleg I. Larichev passed away on January 19th, 2003.

Oleg I. Larichev graduated with honours from the Department of Automation and Remote Control of the N.E. Bauman Moscow State Technical University, USSR, in 1958 with an M.Sc. degree in Mechanical Engineering. He received his Ph.D. in Technical Cybernetics from the Institute of Control Problems of the USSR Academy of Sciences, Moscow, USSR, in 1965, and his D.Sc. (Habilitation) in Systems Analysis and Decision Making from the same institute in 1975.

In 1960, Oleg I. Larichev joined the Institute of Control Problems of the USSR Academy of Sciences, where he worked as an engineer, researcher and finally as a laboratory head. Since 1976 he was affiliated with the Institute for Systems Studies of the USSR Academy of Sciences, Moscow (currently the Institute for Systems Analysis of the Russian Academy of Sciences), where he was a department head (Theory and Methods of Decision Making) from 1980. Larichev's most prominent research has been associated with these institutes.

Over the last 40 years, the research of Professor Oleg I. Larichev was related to multiple criteria decision making (MCDM), artificial intelligence (AI), and cognitive sciences. He was the author of several books and more than 200 articles both in Russian and in English. Larichev's research attracted the attention of the international scientific community.

The first studies of Oleg I. Larichev dealt with control theory and its applications. During the latter part of the 1960s, Oleg I. Larichev started his research in the MCDM area. Those years are now considered to be the beginning of the intensive development of multiple criteria methods for decision aid. One of the first interactive multi-criteria decision techniques named STEP Method (STEM) was developed by Oleg I. Larichev jointly with his French colleagues in 1971. The underlying decision support procedures in STEM are based on constraints specified by the decision maker. This idea proved to be very practical. It is not a surprise that the STEM became one of the most cited papers in the field of MCDM [1]. Many successful applications of decision support techniques use and further develop the idea underlying the STEM [3,4,6,9,33].

In the 1980–1990s, Oleg I. Larichev, together with his colleagues, developed a number of new decision support methods (ZAPROS [7,19,32], ORCLASS [8], PARC [21], DIFCLASS [22], CYCLE [29,35], and others). These tools allowed the solution of problems of ordering and classifying multi-criteria alternatives, while taking into account decision maker's preferences. New approaches to the analysis of such complex problems as combinatorial models with multiple qualitative criteria, multiple criteria bin packing and assignment problems were proposed by him as well [10,11,15,24].

Later the scope of Larichev's scientific interests extended further within the AI area. He suggested the conceptual model of an intelligent decision support system (IDSS), which includes intellectual components for structuring the problem solved, search for the optimal solution, and explanation of results [12]. While studying processes of knowledge acquisition for solving classification problems, Larichev proposed a new and original approach to the construction of complete and contradiction-free expert knowledge bases. This approach pro-

notes a fast and efficient formulation of decision rules for the diagnostic-type problems [13,16,17].

The success of the STEM and other techniques influenced Oleg I. Larichev to study the psychological aspects of decision making, a subject which attracted his attention for the rest of his life. The most interesting results in this field are related to the investigation of human capabilities in individual decision making in the presence of many criteria, the cognitive validity of decision aiding procedures, and the psychological validity of preference elicitation techniques [5,18,20,36].

Simultaneously with theoretical studies in MCDM and AI, Oleg I. Larichev paid a lot of attention to practical applications. Many IDSS and knowledge-based computer systems were developed for solving various applied problems such as R&D planning and forecasting [2,14,31], medical diagnostics [13,17,34], tutorials based on expert knowledge [26,27], and strategic planning [25,30].

The research of Oleg I. Larichev in the fields of MCDM, AI and cognitive psychology culminated in the new scientific approach—Verbal Decision Analysis. In the framework of this approach, abilities and skills of a human being are combined with the possibilities of modern computers in solving ill-structured problems, while taking into account subjective preferences as well as models based on both qualitative and quantitative information [21,23,28,37].

Professor Oleg I. Larichev was not only a talented researcher but also a highly qualified practitioner. For a long time he served as a consultant and expert for the USSR Academy of Sciences, the USSR State Committee for Science and Technology, the USSR State Planning Committee, and different governmental agencies and companies.

Professor Oleg I. Larichev was also a brilliant teacher and mentor. He taught several courses at the Moscow Institute of Physics and Technology, Moscow Institute of Economics, Policy and Law. He was a visiting professor in various universities in the USA, Germany, France, Great Britain, and Italy. His textbook [28], which discussed both educative fairy tales and the science of decision making, was warmly received by students, professionals and the general public. The second revised edition followed soon after [37]. Professor Larichev supervised many

masters and doctoral theses. Two of his post-graduated students, Naryzhny (1999) and Asanov (2002) were awarded the Gold medal of the Russian Academy of Sciences for young researchers.

Appointments to high positions in Russian and international scientific organizations recognized the work of Oleg I. Larichev and his contribution to science. In 1990 Professor Oleg I. Larichev was elected as a Corresponding Member of the USSR Academy of Sciences, and in 1997 as a Full Member of the Russian Academy of Sciences. In appreciation for his excellent research, Oleg I. Larichev received the Order of “Friendship” of the Russian Federation (1998) as well as medals “In Memoriam of the 850th Anniversary of Moscow” and “Veteran of Labor”. In 1994 Oleg I. Larichev was awarded the Gold Medal of the International Society on Multiple Criteria Decision Making.

Professor Oleg I. Larichev was a member of the Executive Committee of the International MCDM Society, a member of the International Federation of Information Processing, the International Society for Judgment and Decision Making, the European Working Group “Multi-criteria Aid for Decisions”, and the European Association of Decision Making.

Oleg I. Larichev served as the Chairman of numerous Research Councils of the Russian Academy of Sciences and the Ministry of Industry and Science of the Russian Federation, as the Vice-President of the Russian Society on Operations Research, and as a member of the Executive Council of the Russian Association on Artificial Intelligence.

Professor Larichev was the Deputy Chief Editor of the journal “Information Technologies and Computer Systems”, a member of the Editorial Boards of “Doklady Akademii Nauk” (Proceedings of the Russian Academy of Sciences), “*Avtomatika i Telemekhanika*” (Automation and Remote Control), and the Yearbook “System Studies” of the Russian Academy of Sciences, a member of the Editorial Boards of “International Journal of Multi-Criteria Decision Analysis”, “International Journal of Information Technology and Decision Making”, and the “Operational Research Journal of HELORS”.

From this short review one can see that Larichev’s contributions have been impressive in many

fields. Without him, the science of decision making, artificial intelligence, and cognitive psychology would not be the same as they are today. Undoubtedly, the international scientific community has lost an outstanding member. For all of us, friends of Professor Oleg I. Larichev, his colleagues and close collaborators, it is still very difficult to accept his untimely death.

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Emilia Brouk

*Academy of Postdiploma Education  
S.P. Botkin Moscow Clinical Hospital  
Moscow, Russia*

Eugenia Furems

*Institute for Systems Analysis  
Russian Academy of Sciences  
Moscow, Russia*

Alexander Lotov

*A.A. Dorodnitsin Computer Center  
Russian Academy of Sciences  
Moscow, Russia*

A.B. Petrovsky

*Institute for Systems Analysis  
Russian Academy of Sciences  
Prospect 60-letiya Oktyabrya 9  
Moscow 117312, Russia  
E-mail address: pab@isa.ru*