

Formation and Activities of the AAPM

PERIOD 1 (1958–1968)

1958	.....	Gail Adams, <i>Chair</i>
1959	.....	Gail Adams, <i>Chair</i>
1960	.....	Gail Adams, <i>Chair, President</i>
1961	.....	Warren Sinclair
1962	.....	John Hale
1963	.....	Marvin Williams
1964	.....	Edward Webster
1965	.....	John Laughlin
1966	.....	Robert Shalek
1967	.....	Lawrence Lanzl
1968	.....	John Cameron

Formation and Activities of the AAPM

The formation and successive activities of the AAPM are summarized in this portion of this report. For some considerations of convenience, the activities of the AAPM have been grouped in periods approximately of decade length: Period 1, 1958–1968; Period 2, 1969–1978; Period 3, 1979–1988; and Period 4, 1989–1998.

PERIOD 1 (1958–1968)

The American Association of Physicists in Medicine was founded on 17 November 1958 in Chicago by physicists prior to the annual meeting of the RSNA. A description of many of the details of the founding events has been given by Gail Adams.²¹ The initial event, of several, was an evening discussion held by Gail Adams, Warren K. Sinclair, and John S. Laughlin, who had been attending a National Cancer Institute (NCI) sponsored conference at the National Institutes of Health (NIH). As expressed by Gail Adams in recent correspondence: “It really all started in May, 1958 during the first attempt to promote clinical cancer trials in Radiation Therapy at a meeting called by the NCI and held at the Stone House on the NIH grounds. Among those present were Warren Sinclair and you and I. After a day of meeting, the three of us went for the famous walk. The consequential topic was that physicists in medicine had no cohesiveness, and no organized way in which to express the needs and aspirations of our field broadly. My recollec-

tion is that we determined that night to make an attempt to provide a national forum... .”

As commented by Warren Sinclair: “I remember that in discussions between Gail Adams, John Laughlin and I in the *pro tem* years (and probably also with others) we had thought of the AAPM as primarily a professional body serving the professional interests of its members in the now distinct role of medical physics in a hospital environment. Initially we believed that there were already enough other scientific and medical societies providing scientific meeting programs and journals [Radiation Research, Health Physics, the physics program of the Radiological Society of North America (RSNA), the Society of Nuclear Medicine, and others]. Therefore, AAPM did not need to serve this role by adding a new scientific program and journal... .”

There followed a series of meetings in different parts of the country as well as substantial correspondence, with increasing interest by physicists. A Steering Committee of 16 members was identified, and undertook arrangements for a meeting of the Committee and for a General Organizational Meeting in Chicago, mid-November 1958. Robert K. Clark arranged for both meetings in the Downtown Branch of the University of Chicago. At the Committee meeting on 16 November 1958, Gail Adams was elected chairman and a Temporary Constitution was adopted. The 12 members of the Board of Directors were: G. Adams, R. Yalow, L. Preuss, C. Braestrup, M.



FIG. 1. Gail Adams, 1959.

Greenfield, J. Hale, J. Krohmer, R. Loevinger, J. Marvin, W. Moos, W. Sinclair, and E. W. Webster. The suggestion by Carl B. Braestrup that the name of the new organization be “The American Association of Physicists in Medicine” was tentatively adopted.

About 50 physicists were present the next day, 17 November 1958, at the General Organization meeting and voted unanimously to proceed with formation of the AAPM. The Temporary Constitution provided for a Board of 12 Directors with wide area representation, and that the chairman and other officers would be elected by the Board from the membership of the Board. Gail Adams was confirmed as the elected chairman and was asked to represent the new Association at the forthcoming meeting in Munich of an International Committee meeting of hospital physicists called by the HPA (Fig. 1).

The *ad hoc* International Committee meeting was to be held following the Ninth International Congress of Radiology meet-

ing in Munich the following July 1959. At this meeting in Munich, hosted by the Hospital Physicists’ Association (HPA) of the United Kingdom, the delegates voted to form an International Committee of Medical Physics. This led eventually to the formation of the International Organization for Medical Physics (IOMP), whose membership consists of national medical physics societies.

At this point, with the definitely positive conclusion of the General Organization Meeting, and evidence of increasing recognition of its presence, the new Association was clearly organized for primarily professional purposes and these were further defined in the adopted Temporary Constitution as:

- (A) To promote the application of physics to medicine and biology.
- (B) To secure and to maintain high professional standards for physicists in medicine and biology.
- (C) To encourage interest and training in medical physics and related fields.
- (D) To prepare and disseminate technical information in medical physics and related fields.
- (E) To serve and to represent the professional interests of physicists in medicine and biology.

Second Annual Meeting. The second annual meeting of the Association took place in Chicago on 16 November 1959. Between the first and second annual meetings of the Association, the Board had six meetings.

Actions of the Association included:

Elections. Confirmed that Officers should be elected by and from the Directors.

TABLE I. Charter membership of the AAPM as recorded on 4 December 1959.

G. D. Adams	W. C. Dewey	J. M. Heslin	R. T. Mooney	W. K. Sinclair
R. M. Adams	J. E. Durlacher	F. G. Hickey	V. C. Moore	W. E. Siri
J. H. Anson	L. A. Du Sault	G. J. Hine	J. M. Morgan	L. Stanton
S. Aronow	E. A. Edelsack	M. Hodara	W. S. Moos	R. E. Steele
N. A. Baily	W. H. Ellett	A. Jacobson	C. J. Mott, Jr.	E. E. Stickley
L. M. Bates	E. W. Engelman	L. E. Jacobson	I. T. Myers	L. A. Strait
H. A. Bevis	R. D. Evans	M. F. Jahns	C. E. Newton, Jr.	R. W. Swain
J. N. Bierly	S. Feitelberg	R. A. Jalbert	D. G. Oldfield	O. Tamuzs
H. Blatz	A. Feldman	C. D. Janney	A. L. Orvis	M. S. Tausig
J. Blizard	T. Fields	W. R. Konneker	J. Ovadia	E. R. Testa
C. B. Braestrup	E. F. Focht	J. S. Krohmer	L. Pape	J. W. Thomas
G. L. Brownell	T. R. Folsom	D. B. Kusner	W. T. Powers	E. Tochilin
G. W. Callendine, Jr.	A. L. Forsaith	H. C. Lanz	L. E. Preuss	J. C. Trump
G. H. Cameron	M. Fried	L. H. Lanzl	R. S. Quick	K-C. Tsien
J. R. Cameron	R. Garrett	H. V. Larson	E. H. Quimby	S. J. Vacirca
J. C. Carlson	R. Golden	J. S. Laughlin	J. Rivera	J. L. Weatherwax
V. G. Castro	P. N. Goodwin	R. Loevinger	C. V. Robinson	E. W. Webster
L. Chandler	R. O. Gorson	M. K. Loken	W. C. Roesch	K. D. Williams
R. K. Clark	M. A. Greenfield	W. J. MacIntyre	H. H. Rossi	M. M. D. Williams
A. Cole	E. N. Grisewood	S. J. Malsky	R. J. Schulz	E. D. Witherell
C. J. Collica	A. W. Hackney	F. X. Masse	N. E. Scofield	P. Wootton
K. R. Corey	J. Hale	W. Mauderli	R. J. Shalek	K. A. Wright
K. E. Corrigan	A. A. Halko	J. K. Mayer	G. Shapiro	A. A. Yalow
R. F. Cowing	H. S. Hayden	A. L. McCrea	K. Shivanandan	R. S. Yalow
M. Dauer	H. R. Haymond	M. L. Melton	E. Siegel	V. E. Yoder
F. B. deFriess	R. H. Haynes	M. L. Meurk	W. Siler	
W. D. DeVore	J. F. Herrick	T. G. Mitchell	C. S. Simons	

Constitution. A Constitution Committee was selected and instructed to provide that the Board of Directors be renamed the Executive Board and elected for one-year terms, and the chairman be renamed as president and limited to one term. The Board also added J. S. Laughlin to assist in writing the Constitution and L. H. Lanzl for adequate representation of the Chicago area.

ACR Teaching Committee. A committee was formed to investigate collaboration with the American College of Radiology (ACR) on educational activities relating to radiological physics.

Examination of the New Constitution was the primary concern at the Annual Meeting, and it was subsequently mailed out to members for approval. The mail ballot returns were 72 “aye” and 2 “no.”

Third Annual Meeting. The third annual meeting of the Board and Association required three sessions (4–7 December 1960). Actions included:

Election. The members had retained the same Board and the same officers were retained by the Board.

Professional. Warren Sinclair had prepared a “Questionnaire on Professional Activities” and analyzed and distributed the results.

Placement Service. Jack Krohmer agreed to undertake the establishment of the Placement Service.

HPA Contact. Bob Loevinger established a communication link with the HPA.

IAEA Panel. Ted Webster and Gail Adams participated in a panel convened by the IAEA on Isodose measurement and

publication of appropriate charts and illustrations.

ACR–AAPM Panel. The first result of the collaboration with the ACR on education was the jointly sponsored ‘‘Panel Discussion of Physics Training Programs for

Residents in Radiology’’ held on 5 December 1960.

Membership. The Secretary recorded the Charter Membership roll of 132 names on 4 December 1959. This list appears in Table I.



Gail Adams

The terms of Gail Adams as chairman lasted from November 1958 into November 1960, and as president lasted about 44 hours, ending with the commencement of the presidential term of Warren Sinclair to which he had been elected by the Board on 7 December 1960. With strong collegial support, Gail had been the prime mover in successfully launching the AAPM.

At the time of his leadership of the new Association, Gail was Research Physicist and Associate Director of the Radiology Laboratory of the Medical School of the University of California at San Francisco (UCSF). Gail originally came from Ohio where he had graduated from the Case School of Engineering before entering the graduate school of the physics department

of the University of Illinois in 1940. His thesis research was on the determination of the cross sections for pair production. He had earned the Ph.D. degree by late 1943, and had attained the rank of Assistant Professor of Physics on the Faculty. Throughout his career at Illinois, Gail had worked closely with Kerst, creator of the betatron, on problems in nuclear physics and on the further development of the 20-MeV betatron, and on the design and construction of the 300-MeV betatron. This unit was successfully completed and launched on meson research in 1950.

In 1948 Gail had a major role in the design and development of the procedures and equipment necessary for treatment of a patient with a glioblastoma. This treatment was carried out under the clinical guidance of Henry Quastler. Some details are included in the description of contributions of Kerst and his laboratory to medical physics in the Specific Topics section of this paper.

In 1951 Gail accepted the position working with Robert S. Stone, Chair of Radiation Therapy at UCSF, to develop the 70-MeV G.E. synchrotron for radiation treatment (Fig. 2). Gail dealt successfully with the dosimetry of 70-MeV (peak energy) x rays and the design of ancillary apparatus to control such high-energy x rays for effectively planned treatment. He had also developed a strong teaching program. In 1965 he accepted the position of Clinical Professor of Physics and Radiation Physics and of Vice-Chairman of the Department of Radiological Science, Health Sciences Center, University of Oklahoma. Here he developed a graduate program in radiation

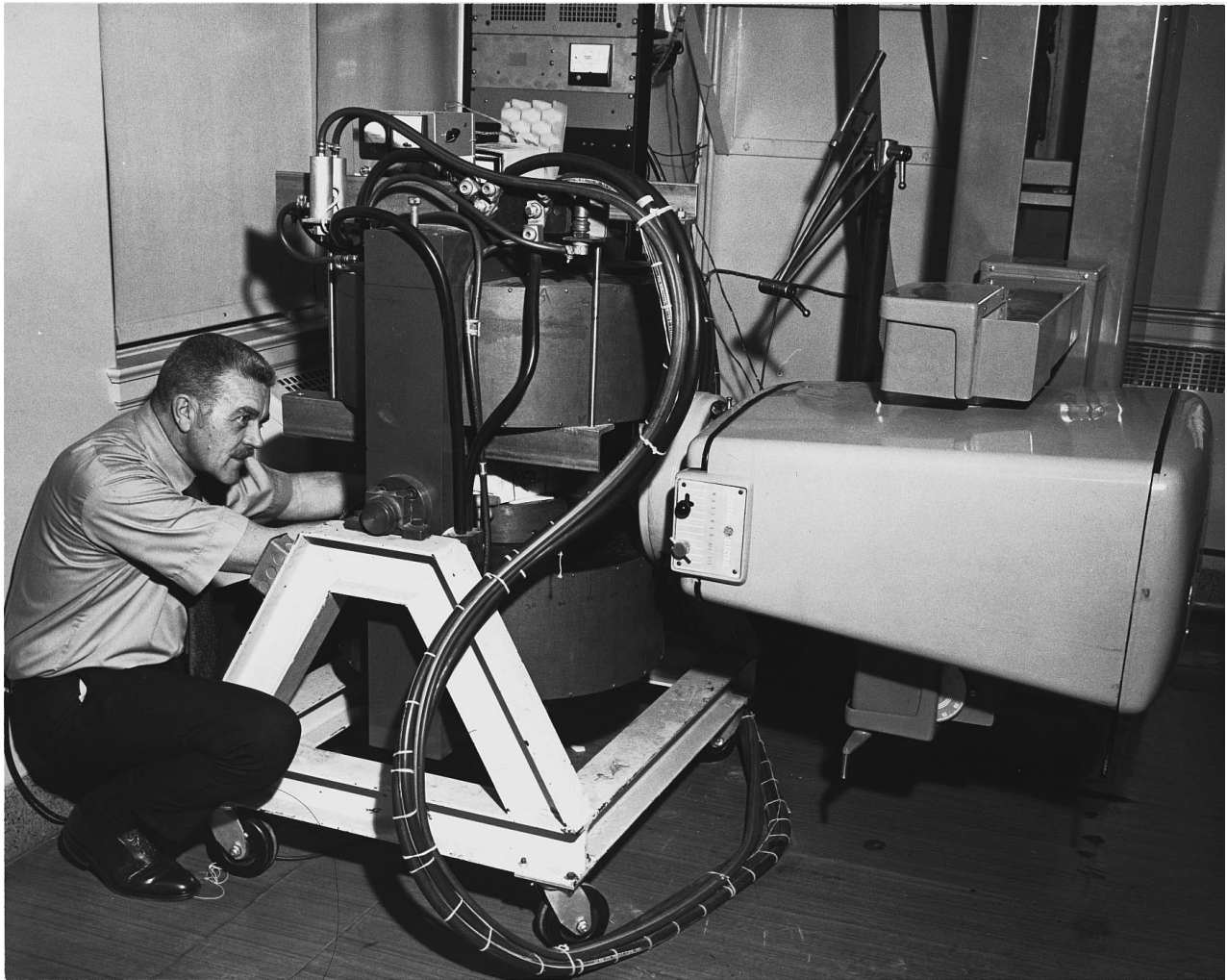


FIG. 2. Adams shown with apparatus at University of Oklahoma in 1969 designed for irradiation of biological systems in a constant magnetic field.

physics in addition to his other responsibilities, before retiring as Professor Emeritus in 1984.

Adams is shown in Fig. 2 with an elec-

tromagnet and pole faces designed to provide a constant magnetic field throughout a specified volume for irradiation of biological systems.



Warren Sinclair

Warren Sinclair, the incoming second AAPM president, was uniquely qualified in his own experience in medical physics to lead the newly created organization. Warren had his undergraduate education in science at the University of New Zealand in Dunedin. He then held a research position in a Government laboratory where, in one of his projects, he had developed the instrumentation necessary to assay the quantity of uranium in different ores. Next, he emigrated to London to accept a position in the Department of Medical Physics with W. V. Mayneord, Chairman of the Department. Warren was, therefore, experienced not only in an active medical physics scientific and service program in a leading British medical center, but was also familiar with the functioning of the HPA, which had

been established by British medical physicists in 1943 to serve their professional and scientific interests. Warren had emigrated to the U.S.A., where he was in charge of the M. D. Anderson Physics Department.

The original motivation of the organizers had been to establish a professional society not in competition with the scientific societies in which they were active and in whose journals they published. However, during his term, Warren had come to the conclusion that the AAPM, in order to have full credibility for its professional role, and also to remain relevant to the scientific interests of its members, would have to have a strong scientific program. The Board of Directors agreed with Warren and with the advisability of planning for strong scientific programs. Sinclair also realized that Association members would need a publication outlet for their medical physics papers and proposed joining up with the existing journal of the HPA in the United Kingdom, *Physics in Medicine and Biology*, and using it as our official journal. With the approval of the AAPM Board and the blessing of Ted Webster in his presidency, Warren worked out an arrangement with J. Rotblat, then editor of PMB, to have PMB become also the official journal of the AAPM in 1964, and Warren agreed to serve initially as American Editor. The Canadians later joined too and PMB became their official journal. In 1969 after five years as American Editor, Sinclair's research obligations caused him to step down. He asked John Hale to assume the American editorship. AAPM sponsorship of PMB ceased in 1974 with the launching of *Medical Physics*. The title page of PMB for 1968 is shown in Fig. 3 and illustrates this collaborative arrangement.

Another significant achievement at this

time was the creation of a ten-page pamphlet entitled ‘‘The Medical Physicist’’ written by Ted Webster, assisted by Gail Adams. This document was written to acquaint graduate students in physics, as well as our medical and scientific colleagues, with what medical physics is, what the

medical physicist does, how they are trained, and a resume of various treatment and diagnostic applications. The document commences appropriately with a citation to an early medical physicist, Leonardo da Vinci. Revisions of this historic document have kept it current.

PHYSICS IN MEDICINE AND BIOLOGY

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FIG. 3. Title page for the 1968 volume of *Physics in Medicine and Biology*.



John Hale

John Hale was the third president of the AAPM, serving for the year 1962. John had been an active member of the Board, and was already familiar with the problems of the new Association and had been a participant in dealing with them.

John had been a student at Duke University, earning his A.B. degree in 1943. After graduation he spent five years in the United States Navy. When he was discharged, he spent a year working as an engineer for Motorola. Then he entered the graduate program at the University of Pennsylvania's Moore School of Electrical Engineering, where he earned an M.S. degree in 1949. With the encouragement of S. Reid Warren, Jr. in the Moore School, John

became the University's first part-time radiation safety officer and later joined Richard H. Chamberlain, a world-renowned radiologist, as the first full-time radiological physicist in the Department of Radiology. John pursued graduate studies on a part-time basis, and was the first student to enter a new interscience program created by Warren combining Moore School graduate engineering courses with Medical School courses in basic medical sciences. John earned his interscience Ph.D. degree under Warren (a pioneering radiological physicist) in 1957. His thesis research was the measurement of W for low-energy x rays.

John, together with the help of Bob Gerson, who joined him in 1951 for a period of eight years, developed a comprehensive radiological physics program in radiation therapy and nuclear medicine, and later in diagnostic radiology. John initiated a graduate degree training program for medical physicists, which included Peter Bloch, David George, Robert Gould, Charles Metz, and Margit Lassen.

RSNA Collaboration. John worked closely with officials of the RSNA on instituting and accommodating our scientific program in their schedule, and was able to gain their cooperation in the growing needs of the AAPM.

NAS. During his term he established an affiliation of the AAPM with the U.S. National Committee on Medical Physics, under the auspices of the National Academy of Sciences.

Science Committee. John promoted authorization of a Scientific Committee on Radiation Dosimetry.

Program. John encouraged development of a scientific program for the annual meeting.



Marvin Williams

Marvin Martin Dixon Williams, a pioneer in medical physics, head of physics at the Mayo Clinic, was elected to be the fourth President of the AAPM and served throughout 1963 (Fig. 4).

Marvin was born and raised in Walla Walla, Washington. He majored in physics and mathematics at Whitman College in Walla Walla and earned his B.S. in science in 1925. He probably first heard of the field of radiation physics when his physics professor read a detailed letter from Edith Quimby, class of 1912, describing her work and activities. Marvin entered the graduate school of the University of Pennsylvania where he earned the M.S. in physiology in

1929. At the same time he worked at the Philadelphia General Hospital under the direction of James Weatherwax and assisted on graphs and drawings for his textbook. He also enjoyed a close association with the Memorial Hospital physics group (G. Failla, E. Quimby, L. Marinelli, and J. Rose). In 1931, shortly before he left for China, he was instructed by them on the assembly and installation of a radon plant. In 1929 he entered the Mayo Graduate School of the University of Minnesota, earning the Ph.D. in biophysics in 1931.

In May 1931, he and Orpha Stewart were married and they left for Peiping, China for their honeymoon, where he had accepted the position of Radiation Physicist and Assistant Professor at the Peiping Union Medical College. He undertook the construction and installation of a radon plant with a half gram of radium in solution in it, and supervised its operation; repaired and calibrated the x-ray equipment; and taught radiation physics to the residents and technicians. In 1935, Marvin and Orpha returned to Rochester, Minnesota where he had accepted appointment from Bryl Kirk-



FIG. 4. Marvin Williams (*left*, president) and Raymond Tanner.

lin of a staff position in the Mayo Clinic Biophysics Section, with subsequent promotion to the rank of Professor.

Marvin was an early examiner for the American Board of Radiology and was certified by them in 1947 in the first group of physicists so recognized. He was on the ABR “physics credentializing committee” from 1951 to 1973, and participated in the examination of about 3,000 radiologists and 250 physicists. For 15 years, on the invitation of the Board, he attended and

participated fully in their meetings. Marvin also worked closely with the NCRP and was active in the the American Radium Society. In 1963, he received the Gold Medal of the RSNA. Later, the ACMP honored his memory by naming their highest annual award of merit: the “Marvin M. D. Williams Award.”

Marvin had worked closely with radiologists in the RSNA and was influential in achieving full acceptance of physicists as members of the RSNA.



Edward Webster

Edward “Ted” Webster was elected as the fifth AAPM president at the annual meeting in November 1963 and served until the next annual meeting in 1964. His first day as president (22 November 1963) is memorable because President John F. Kennedy was assassinated in Dallas, Texas on that day and the first decision of the new AAPM president was to continue the scientific program planned for that afternoon.

Ted was from England, where he received his early training at the University of London in electrical engineering, receiving his B.Sc. in 1943. Following graduate studies in applied physics, also at the University of London, he gained his Ph.D. in 1946. His thesis research concerned the measurement of ultrashort ionization times

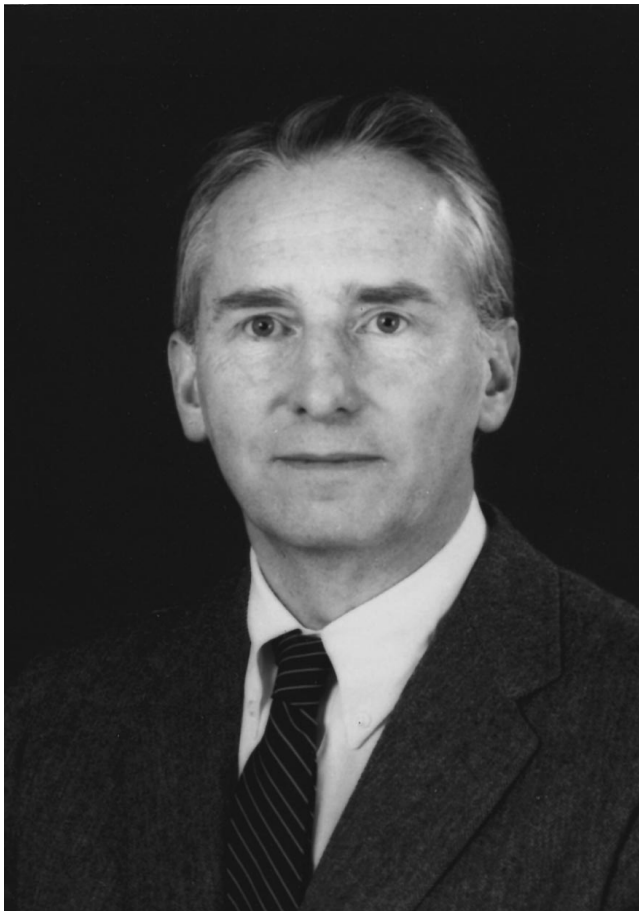
in gas discharge devices, which involved the construction and use of a novel cathode-ray oscillograph for recording high-speed electrical transient phenomena. Subsequently, he joined the staff of the English Electric Company in its newly completed High Voltage Research Laboratory. During 1947 and 1948 he led a small team which built and tested two pressurized Van de Graaff generators: a 2-MV unit for the British Atomic Energy Research Establishment at Harwell and a 5-MV unit for the Cavendish Laboratory at Cambridge University, both based on Massachusetts Institute of Technology designs. This experience led to the award in early 1949 of an international traveling fellowship which brought him the opportunity for three years of postdoctoral study at MIT primarily in nuclear physics, nuclear engineering, and instrumentation with Robley Evans, Clark Goodman, and Harold Edgerton. During that period he was a member of the pioneering team organized by John Trump at MIT jointly with radiologists from the Lahey Clinic in Boston in a cancer treatment program using 2-MV x rays and rotational therapy. This experience was his apprenticeship in medical physics. Ted returned to London University for the years 1952 and 1953 as a Lecturer primarily on reactor design and radiation measurements.

In November 1953 he returned to Boston to the newly created post of Physicist in the Department of Radiology at the Massachusetts General Hospital. From 1958 onwards he was invited to join the other physicists (Otto Glasser, Marvin Williams, and Edith Quimby) as a co-examiner in radiological physics for the ABR.

Ted had already been active on several projects for the new AAPM, as described

above, including on the constitution, and composition of “The Medical Physicist.” During the year he appointed the membership of the Scientific Committee on Radiation Dosimetry, which brought out its first

report in 1966. Ted was also chairman of the committee that designed the AAPM membership certificates and also supported strongly AAPM sponsorship of PMB as our official journal.



John Laughlin

John Laughlin was elected to serve as the sixth president of the AAPM, for the year 1965.

John attended schools in Salem, Oregon and majored in physics at Willamette University and at Haverford College. He then became immersed in nuclear physics at the University of Illinois and earned the Ph.D. in 1947 with research on the exchange forces between neutrons and protons carried out with a high-pressure cloud chamber and a cyclotron operated in a pulsed mode. He also carried out a research and development program on the betatron. The photodisintegration thresholds determined by the betatron staff were useful in calibration of the energies of both photon and electron beams from the betatron and also

later with linear accelerators. In 1948 he became Assistant Professor in the Department of Radiology of the University of Illinois School of Medicine, Chicago. John designed advanced instrumentation for the dosimetry of both photon and electron beams, including miniature parallel-plate chambers and absorbed dose calorimetry, and investigated the magnitude of the polarization density effect, of vital importance to the use of electrons. Treatment planning procedures for the betatron photons and electrons were developed and clinical application commenced. John was promoted

ARTICLES OF INCORPORATION

OF

AMERICAN ASSOCIATION OF PHYSICISTS IN MEDICINE

To: The Recorder of Deeds, D. C.
Washington, D. C.

We, the undersigned natural persons of the age of twenty-one years or more, acting as incorporators of a corporation adopt the following Articles of Incorporation for such corporation pursuant to the District of Columbia Non-profit Corporation Act:

FIRST: The name of the corporation is AMERICAN ASSOCIATION OF PHYSICISTS IN MEDICINE.

SECOND: The period of duration is perpetual.

THIRD: The purpose or purposes for which the corporation is organized are:

- A. To promote the application of physics to medicine and biology.
- B. To secure and to maintain high professional standards for physicists in medicine and biology.
- C. To encourage interest and training in medical physics and related fields.
- D. To prepare and to disseminate technical information in medical physics and related fields.
- E. To serve and to represent the professional interests of physicists in medicine and biology.

All the assets and earnings shall be used exclusively for the purposes hereinabove set out, including the payment of expenses incidental thereto, and no part of the net earnings shall inure to the benefit of any private member or individual, and no substantial part of the activities of the corporation shall be for the carrying on of propaganda or otherwise attempting to influence legislation.

FIG. 5. Some text from the initial incorporation of the AAPM.

to Associate Professor and to the Graduate Faculty.

In 1952 John accepted the position of Attending Physicist and Chair of the Department of Medical Physics at the Memorial Sloan–Kettering Cancer Center (MSKCC), and was able to carry on a therapy physics program, to develop a diagnostic dose measurement program, and also to establish a nuclear medicine counting and scanning laboratory. In 1953 the physics treatment planning group, working directly with the residents and attendings in Radiation Therapy, was able to initiate automatic computer methods in planning. Similar techniques were introduced in quantitative patient scanning apparatus for both local activity determination and for total body activity measurement. The installation of an isochronous cyclotron in 1967 facilitated the variety of labels for metabolic studies. Innovations in the teaching program commencing in the mid-fifties included the addition by the Hospital of two

clinical physics positions on the House Staff (residents). In 1989, John stepped down as Chairman to Acting Chairman during the search for a new Chair.

Items during the 1965 term:

NCRP. The AAPM became a Collaborating Organization of the NCRP.

RSNA. Due primarily to the efforts of Williams and Hale, physicists became eligible for membership in the RSNA.

Incorporation. The necessity for incorporation of the new Association was recognized and, in the latter part of John's term, was carried out by Ted Webster through his initiative with the Prentice–Hall Corporation. Some of the text of this initial incorporation is shown in Fig. 5 and defines the five original objectives of the new Association.

First ICMP, Harrogate. A significant event in the world of medical physics occurred this year with the first International Conference on Medical Physics held at Harrogate, United Kingdom.



Robert Shalek

Robert “Bob” Shalek was elected to serve as the seventh president of the AAPM for the year 1966 (Fig. 6).

In his early years Bob resided in Oak Park, Illinois. Later, he became a student at the University of Illinois in Champaign, Illinois. He graduated and then served three and a half years in the U.S. Army. He returned and entered the graduate program at Rice University, Houston, in physics, mathematics, and biophysics, receiving the Ph.D. in 1953. He then had a postdoctoral year in London at the Royal Cancer Hospital (now Royal Marsden Hospital) with W. V. Mayneord, Head of their Physics Department.

He returned to the M. D. Anderson Hospital and, among other activities, worked with Leonard Grimmett on his newly de-

signed cobalt irradiator, the first in the U.S.A. His major interest was in the development of brachytherapy, and he had a substantial role in its resurgence at M. D. Anderson in the two decades after 1950. As chairman of the Physics Department at M. D. Anderson from 1961 to 1984, he was responsible for the development of their major training program in medical physics.

From 1968 to 1984, Bob served as the first Director of the AAPM Radiological Physics Center (RPC). The RPC has been superbly conducted, and is discussed in detail in the section on Specific Items.

Later, Bob completed Law School and in retirement has lectured and written on legal matters affecting medical physicists. Bob has also been the recipient of the AAPM Coolidge Award, the ACMP Williams Award, and the ASTRO Gold Medal.

Other AAPM activities in 1966:

First Midyear Topical Scientific Meeting. This first AAPM midyear topical meeting was held in Madison. This was an important and successful venture and contributed to the eventual transfer of our annual meeting to its present midyear location.

AIP Affiliate. An achievement of major significance for the AAPM was its acceptance by the American Institute of Physics as an “AIP Affiliated Society.” This relation became stronger with the years and the AAPM achieved full membership in 1973.

Scientific Committee on Radiation Dosimetry (SCRAD). SCRAD completed its report, “Protocol for the Dosimetry of High Energy Electrons,” published in *Physics in Medicine and Biology*.



FIG. 6. Board Meeting, December 1966, Chicago. Seated, left to right: Clarence Karzmark, Rosalyn Yalow, Paul Goodwin, Wayne Meyers, Robert Gorson, Arnold Feldman, Robert Shalek (president), Lawrence Lanzi, Moses Greenfield, James Keriakes, Walter Mauderli, Kenneth Wright, Leonard Stanton, and Charles Simons. Standing, left to right: Past presidents John Laughlin, Warren Sinclair, and Marvin Williams.



Lawrence Lanzl

Lawrence “Larry” Lanzl was elected by the Board to serve as the eighth AAPM president for the year 1967.

Larry had carried out his undergraduate studies in physics at Northwestern University, had served on the Manhattan Project, and pursued his graduate studies in physics at the University of Illinois. Larry had participated in the first use of the high-energy x-ray beams from the betatron for patient treatment at Urbana, Illinois. He and his wife, Elisabeth, carried out pioneer radiobiological studies with Henry Quastler, who directed the clinical aspects of this initial medical application of the betatron.

Larry had also worked with Lester Skaggs on the initial extraction of the electron beam from the betatron, and also with

Al Hanson on studies of electron scattering and bremsstrahlung formation.

Larry later accepted a position on the faculty of the University of Chicago, where he and Lester Skaggs continued their collaboration. Larry designed a unique telecobalt unit which accommodated a compact source of small size and high specific activity to produce dose distributions with minimum penumbra. He and Skaggs also designed a novel linear accelerator with a “scanning electron beam” so as to produce specifically shaped incident beam fields. Larry later accepted a faculty position in the Radiation Therapy Division at Rush–Presbyterian Hospital, where he was Head of the Medical Physics Department. He was involved in the development of graduate degree programs at the University of Chicago and at Rush University. In 1992, the Lawrence H. Lanzl Medical Physics Research Institute was founded in Seattle in his honor.

Some activities during his term:

Quarterly Bulletin. Lanzl was responsible for initiation of the *Quarterly Bulletin*, as the Association newsletter was first entitled, with James Kereiakes as Editor. Subsequently, Shirley Vickers became its Editor. The *Quarterly Bulletin* served the cohesiveness of the AAPM well and was eventually absorbed in the new journal, *Medical Physics*, in 1974 until 1976, when it reappeared as the *AAPM Newsletter* with Andy Bukovitz as Editor.

High Energy Radiation Therapy Dosimetry. The AAPM sponsored a Symposium on High Energy Radiation Dosimetry, co-chaired by John Laughlin and Larry Lanzl, and held at the New York Academy of Sciences, 15–17 June 1967 (Fig. 7). This Symposium attracted senior radiation scientists from Canada, Great Britain, France, Germany, and Finland, as



FIG. 7. Relaxing between scientific sessions at the 1967 Midyear Symposium were, *left to right*: Lawrence Lanzl (president, symposium co-chair), John Laughlin (symposium co-chair), Lester Skaggs (symposium discussant), and Eric J. Hall from the United Kingdom (symposium discussant).

well as from the U.S. Abstracts of the papers presented at this international symposium were published in the *Quarterly Bulletin* (Vol. 1, No. 1, September 1967).

Radiation Physics Center. Larry had been called on to assist the Committee on Radiation Therapy Studies and the NCI, who desired to have complete and uniformly accurate dosimetry among the different institutions carrying out multi-institutional therapy studies in specified sites. Larry drew up an outline of the responsibilities of such a Center with the as-

sumption that the AAPM would have the responsibility for its initial establishment and for its oversight. The scientific committee recommended that the RPC be established at the M. D. Anderson Hospital with Robert Shalek as Director. A Steering Committee with John Laughlin as chairman was asked to provide oversight for the AAPM. The RPC has supplied a vital service to achieve a uniform physical basis for the ensuing clinical studies, and is discussed in detail in the section on Specific Topics.



John Cameron

John R. Cameron was elected to serve as the ninth AAPM president for the year 1968.

John was born and raised in northern Wisconsin and attended local schools. After serving in the U.S. Army Signal Corps he matriculated at the University of Chicago, majoring in mathematics for a B.S. in 1947. He proceeded through graduate school at the University of Wisconsin in physics for the M.S. and Ph.D. degrees, completed in 1952. For the next six years he studied nuclear physics and taught as an Assistant Professor at the University of São Paulo, Brazil, and at the University of Pittsburgh. John then returned to the University of Wisconsin, accepting appointment in a newly created faculty position for a physicist in the Department of Radiology, as

well as a faculty position in the Physics Department. John established a radioactive isotope research laboratory, which collaborated on metabolic research projects with the clinical laboratories. Another phenomenon he studied was that of radiation induced thermoluminescence. This effect had been initially identified by a retired Professor of Chemistry, Farrington Daniels. John proceeded to develop the science of thermoluminescent dosimetry, which has had many applications in the monitoring of both treatment and diagnostic uses of radiation. John was also a pioneer in developing the instrumentation to measure bone density using iodine-125 as an external source.

As a consequence of the increasing interest in a number of important applications of physics to clinical problems, and the utility of training programs which had been established, the University of Wisconsin authorized the Department of Medical Physics in 1981, with John as its first chairman.

Some activities of the Association during 1968 included (Fig. 8):

Constitution Modification. The AIP advised the AAPM, an affiliate member of the AIP, that the IRS was reviewing the tax classification of the AIP and other organizations, and advised that some of the emphasis on professional activities in our Constitution could jeopardize the tax-free status of the AIP and of the AAPM as charitable organizations under Section 501(c)(3) of the Internal Revenue Code. Cameron appointed an *ad hoc* committee chaired by Bob Gorson to consider this problem. In compliance with the AIP advice, the Committee recommended that items “B” and “E” (see Fig. 5) be removed and other changes made. Their report, and the Board action of approval, ap-



FIG. 8. Herb Attix (left) and Greta Ehrlich.

pear in the *Quarterly Bulletin* of September 1968 (Vol. 2, pp. 12–13) and on pp. 1267–1268 of this paper. This problem, though later resolved, contributed to concerns as to the ability of the AAPM to meet its professional responsibilities to its members.

Radiological Physics Center. During his term as president, the Radiological Physics Center was established at the M. D. Anderson Center Physics Department with Bob Shalek as its Director. It is still operating effectively today.

Annual Meeting. It was agreed with

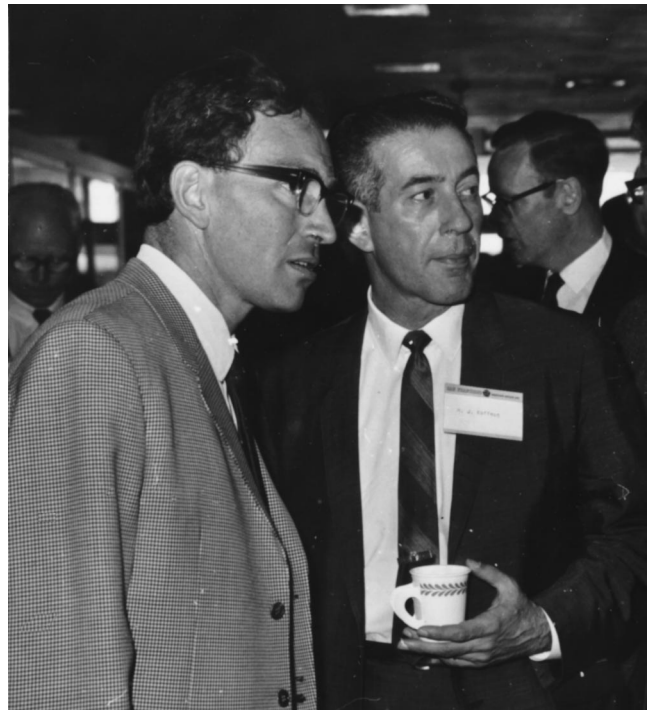


FIG. 9. Ralph Worsnop and H. J. Koffman at UCSF diagnostic physics symposium. (Edward R. Epp in background.)

the RSNA that our annual meetings would still be held at the same time in Chicago, but that they would be operated separately.

Midyear Symposium. A midyear AAPM symposium on the Physics of Diagnostic Radiology was held at the UCSF in 1968 (Fig. 9).

Summer School. The first AAPM Summer School, on the subject of radiation dosimetry, was planned for 4–9 August 1969 in Burlington, Vermont. Peter Almond was in charge of the school, which was very successful with 64 in attendance.

REPORT OF THE AD HOC CONSTITUTION COMMITTEE
R.O Gorson

President Cameron appointed a special committee of five to recommend changes in the Articles of Incorporation and the by-laws with the advice of legal counsel in order for the AAPM to qualify as a tax exempt scientific organization under section 501 (C)(3) of the Internal Revenue Code. The proposed amendments, summarized below, and the supporting statements were accepted in principle by the Board of Directors at its meeting on June 12, 1968. The proposed amendments will be voted upon by members attending the annual business meeting on December 6, 1968. It is important, therefore, for all members of the AAPM to carefully study the proposed changes and to be prepared to raise any questions that may be necessary for clarification before the vote at the annual meeting.

Copies of the complete statement of the committee's report is obtainable from the chairman. A summary of the proposed changes is as follows:

PROPOSED AMENDMENTS
(Summary)

The committee proposes:

FIRST: That the first paragraph of Article Third of the Articles of Incorporation be amended by striking out the purposes lettered "B" and "E" so that the said paragraph shall read as follows:

The purpose or purposes for which the corporation is organized are:

- A. To promote the application of physics to medicine and biology
- B. To encourage interest and training in medical physics and related fields.
- C. To prepare and to disseminate technical information in medical physics and related fields.

SECOND: That Section 2 (entitled STANDING COMMITTEES) of Article IV (entitled COMMITTEES) of said By-Laws, be amended by deleting the words "D. A Professional Ethics Committee", and relettering subsequent committees.

THIRD: That Section 6 (entitled PROFESSIONAL ETHICS COMMITTEE) of said Article IV of said ;By-Laws be deleted in its entirety.

FOURTH: That Article VII (entitled DISCIPLINE) of the By-Laws be deleted in its entirety.

“SUPPORTING STATEMENT”
(Summary)

We, the undersigned five (5) members of American Association of Physicists in Medicine, constituting all the members of a Special Committee appointed by the President to consider amendments to the corporation’s Articles of Incorporation and to its By-Laws proposed by us in document of this date herewith:

The corporation applied to the Internal Revenue Service for a ruling that it qualified as a tax-exempt charitable, scientific and educational organization under Section 501 (C) (3) of the Internal Revenue Code. The effect of such qualification would be that any net receipts over disbursements of the corporation would ordinarily be exempt from Income Tax, and further that contributions to the corporation would be income-tax free by the donors as charitable contributions. We have been advised by the Internal Revenue Service that no such ruling will be issued because it appeared from documents submitted in support of the application that the corporation was organized for the purpose, among others, of promoting the individual and professional interests of its members. The Internal Revenue Service took particular exception to the following purpose of the association as stated in its Articles of Incorporation:

“To secure and maintain high professional standards for physicists in medicine and biology.”

We believe that the essential purposes of the association may be furthered without including such purpose among the corporation’s purposes. Though in all probability the corporation could, without changing its Articles of Incorporation and By-Laws, obtain an Internal Revenue Service ruling that it was exempt from income tax as a “business league” or professional association under Section 501 (C) (6) of the Internal Revenue Code, contributions to the corporation would not be deductible by the donors as charitable contributions. Such deductibility is desirable; it should have the effect of increasing contributions to the corporation both in number and size.

The Association was from the time of its organization intended to be an educational, scientific and, in a broad sense, charitable organization similar to the American Institute of Physics and other organizations affiliated with the Institute. The proposed amendments will clarify and make more obvious such intention and objective.

Submitted by: R.O. Gorson (chairman), B. M. Galkin, L. Stanton, J.G.Holt, R. Schulz.

PERIOD 2 (1969–1978)

1969	.....	Robert Gorson
1970	.....	James Kereiakes
1971	.....	Peter Almond
1972	.....	Fearghus O’Foghludha
1973	.....	Clarence Karzmark
1974	.....	Raymond Tanner
1975	.....	Jack Krohmer
1976	.....	Jacques Ovidia
1977	.....	William Hendee
1978	.....	Peter Wootton



Robert Gorson

Robert O. Gorson (Bob) was our tenth president and served the AAPM in this capacity in 1969 (Figs. 10–12).

Bob was early interested in science, particularly astronomy, which is still a hobby of his today. After high school he enrolled in the University of Pennsylvania (Penn) as a part-time student while working as a machinist at the Philadelphia Navy Yard. After serving in the Navy as an aviation electronics technician for two and a half years, he returned to Penn in 1946 on a full-time basis, majoring in physics. He continued on to a masters in physics on a part-time basis while working as the University's part-time Health Physicist, replacing John Hale. It was S. Reid Warren, Jr. of the Moore School of Electrical Engineering who

steered him into that position, which soon brought him to the attention of Richard H. Chamberlain and Eugene P. Pendergrass of the Department of Radiology, who invited him to join John Hale in radiological physics. John and Bob worked together at Penn for eight years during which both of them were active in the Philadelphia radiological community including Jim Weatherwax, Leonard Stanton, Ted Sopp, Wayne Myers, Jim Bierly, Jean Mesaros, and S. Reid Warren, Jr., working on problems of mutual interest such as the "Philadelphia millicurie" analogous to the "New York millicurie."

In 1959, Bob conducted a comprehensive study of the needs in radiological physics at Thomas Jefferson for Philip J. Hodes (who had left Penn to resurrect Radiology at Jefferson). Bob was then invited to develop a radiological physics program at Jefferson. The new Radiological Physics



FIG. 10. Robert Gorson (president).



FIG. 11. Second International Conference, 1969. *Left to right:* Robert Gorson (president), Lois Gorson, Shirley Quimby, and Edith Quimby.

Division grew to over 24 persons (including Ben Galkin, Bob Curley, Jack Wallace, Dorothy Driscoll, and later Margit Lassen), providing services to Diagnostic Radiology, Radiation Therapy, and Radiation Safety for the University and physics support for the Stein Research Center. Bob worked closely with Simon Kramer, Chief of Radiation Therapy, and with Robert Brent, Chief of Radiation Biology. Among the many physics trainees were N. Suntharalingam (who returned later to head radiation therapy physics after obtaining his Ph.D under Cameron), Cari Borrás, Farideh Bagne, Raymond Wu, Joe Ting, and Gerry Kutcher.

Bob and John Hale both were active in the formation of the AAPM. Bob was a charter member of the NCRP and served on its Board of Directors and on many committees for over 23 years, as well as Committee 3 of the ICRP for eight years. He also served on numerous committees of the ACR, RSNA, AAPM, ACMP, NCI and USPHS. He served as chairman and examiner for the American Board of Health



FIG. 12. Second International Conference, 1969. Outdoor entertainment at Castle Hill, Ipswich, MA. *Left to right:* Edward Webster (past president), Dorothea Webster, and Robert Shalek (past president).

Physics, examiner for the American Board of Radiology, and treasurer for the American Board of Medical Physics. He became a fellow of the ACR, AAPM, and ACMP and received career achievement awards from the AAPM and the ACMP.

Bob was the first president to obtain some outside administrative assistance for routine service needs (collecting dues, mailing notices, publishing the *Quarterly Bulletin*, etc.), which he negotiated with the AIP to start providing the AAPM in 1969.

As first chairman of the AAPM History Committee, Bob initiated a long-term project to retrieve AAPM documents of historical value and to conduct videotaped interviews of senior medical physicists and scientists to be stored in the AAPM/AIP archives at the American Center for Physics in College Park, Maryland. Over 90 persons have been interviewed to date.



James Kereiakes

James G. Kereiakes was the eleventh AAPM president with his abbreviated term from 1 January 1970 to July 1970. Abbreviation of his term was due to AAPM calendar change of the annual meeting from December to July (Figs. 13–16).

Jim Kereiakes matriculated at Western Kentucky State College, receiving the B.S. degree in physics, and studied at the University of Cincinnati for both the M.S. and Ph.D. degrees in physics. His major research project was on “X-Ray Diffraction of Compressed Crystals.” He joined the faculty of the University and at the time of his election as president, was serving as Professor of Radiology (Radiologic Physics) in the Department of Radiology of the University of Cincinnati College of Medicine.



FIG. 13. Left to right: Edward Sternick, Mary Lou Meurk, and John Cunningham.

He was responsible for substantial contributions in teaching, training, research, clinical service, and in professional affairs. He initiated training programs in radiological physics and in nuclear medicine. Jim was very active in the American Board of Radiology certification program over a period of 27 years and was responsible for important aspects of this program.

He has had a highly productive research career with over 200 publications on con-



FIG. 14. Garrett Holt (left) and John Cunningham.



FIG. 15. Left to right: Garrett Holt, Gus Bahr, and James Kereiakes (president).

tributions in nuclear medicine and in physical aspects of diagnostic radiology and of radiation oncology. His developments in nuclear medicine included pediatric radiopharmaceutical dosimetry, and he was early in development of techniques for studies of dynamic function with gamma cameras. He is also the author of several textbooks including co-authorship, with Bob Waggener and Bob Shalek, of the three-volume *Handbook on Medical Physics*. At their annual meeting in 1984, the RSNA awarded their Gold Medal to Jim Kereiakes.

Quarterly Bulletin. Jim was the initial Editor of the *Quarterly Bulletin* and successfully launched this publication, which has proved vital to communication within our membership and to the stability and growth of the AAPM. In its continuing service to the members it has appeared in later years as the *Newsletter*.

First Solo Annual Meeting. A major innovation for the AAPM was the successful planning of the first AAPM annual meeting independent of the RSNA in Washington, 13–15 July 1970. This achievement of an independent annual meeting has been followed ever since, and marked the maturity of the AAPM.

Presidential Election. Kereiakes was the last AAPM president to be elected by the Board of Directors. The new By-Laws provided for elections by the membership.

ACR. Jim also encouraged collaboration with the American College of Radiology and was a member of the initial joint AAPM–ACR committee.



FIG. 16. Standing, left to right: Dale Trout, Shirley Vickers, Colin Orton, Stewart Bushong, John Wright, Marty Rozenfeld, Mary Lou Merck, Ken Williams, N. Suntharalingam, Bengt Bjarngard. Seated, left to right: Fearghus O'Foghluha, Ben Galkin, Peter Almond, Jim Kereiakes, and Leonard Stanton.



Peter Almond

Peter R. Almond was our twelfth president serving his term from July 1970 to July 1971.

Peter studied for his B.Sc. at Nottingham University before immigrating to the U.S.A. He continued his education at Rice University, Texas, completing his work for the M.A. and for the Ph.D. in medical physics. He was on the staff of the M.D. Anderson Hospital and Tumor Institute of the University of Texas as physicist (later as head of radiation physics), and also as Professor of Biophysics. His research activities included: the dosimetry and use of beams in radiotherapy, the evaluation of neutrons for clinical radiotherapy and basic radiation measurements and dosimetry protocols.

While president of the AAPM, in addition to the many and varied responsibilities in its stewardship, he found time for other projects:

Summer School. During the year before his presidency, Peter organized the first midyear summer school on a scientific topic, which was held at Burlington, Vermont as described in the preceding term. Its success has helped to make the scientific summer school become an AAPM tradition.

Separate Annual Meeting. He supported the concept of an independent annual meeting, initiated the year before in our annual meeting in Washington, D.C., and supported the work of Stewart Bushong in organizing the AAPM annual meeting to be held in Houston, 13–15 July 1970, which marked the closing of Keriakes' term and the beginning of Almond's term as president.

Journal. Peter supported the future establishment of our own journal, *Medical Physics*, and was involved in the negotiations. PMB had rejected the request by the AAPM to participate in the operation of their journal and in its profits. There was considerable doubt, and consequent opposition to this venture. However, sufficient support developed and the Journal was eventually authorized with Adams as Editor.

Dosimetry Task Groups. Peter was active on Task Groups concerned with dosimetry of high-energy electrons and x rays on both a national and international basis.

Service Organizations. Peter has been invited to serve on many specific organizations related to the interests of the AAPM. These have included service on the NCRP, ICRU, NRC, Chair of the ACMP, the ABMP, and NCI grant study sections.



Fearghus O'Foghludha

Fearghus T. O'Foghludha was the thirteenth AAPM president, serving from the annual meeting in July 1971 to that in July 1972.

Fearghus had been a student at the National University of Ireland, for the B.Sc., M.Sc., and Ph.D. (1961) degrees with a major in physics. His interests were in radiation and nuclear physics. While a student, Fearghus served as Assistant Physicist at University College, Dublin, and later as Senior Physicist at St. Luke's Hospital. He immigrated to the U.S.A. and became Associate Professor of Radiation Physics at the Medical College of Virginia in Richmond, VA, where he rose to Professor and

Chairman of the physics division. He later transferred to Duke University Medical Center as Professor and Director of the physics division, 1970 to 1988, where he was located at the time of his presidency. He is now Emeritus Professor of Radiation Physics and has held teaching positions in other colleges. He has also served as a Visiting Scientist at the University of Lund, as Editor of *Medical Physics* (1985–87), and as North American Editor of *Physics in Medicine and Biology* (1976–79). His research interests have been in ionizing radiation dosimetry and in gamma ray spectroscopy.

Events in 1972:

Coolidge Award. An important relationship arranged for the AAPM by Fearghus was with William D. Coolidge, retired Director of the General Electric Research Laboratory. Coolidge accepted Honorary Membership in the AAPM and also expressed his appreciation on having the proposed major annual award of the AAPM bear his name. Coolidge was already 100 years old and, in consideration of his health, Fearghus arranged for an officer of General Electric, Vincent D. Manti, to present the first AAPM Coolidge Award Plaque to Coolidge (Figs. 17 and 18).

Coolidge's scientific achievements were particularly significant in the field of radiation physics. Coolidge had studied electrical engineering at the Massachusetts Institute of Technology, graduating in 1898. He continued his studies in Germany, earning his Ph.D. at the University of Leipzig (summa cum laude). He returned to teach at MIT and in 1905 joined the General Electric Research Laboratory. In 1910, General Electric announced his invention of ductile tungsten, which proved vital in the produc-



FIG. 17. In July 1972 the Coolidge Award was formally presented to Dr. William D. Coolidge at Schenectady, NY. The presentation, which formalized the award made by the AAPM, is being made by Mr. Vincent D. Manti of the General Electric Research and Development Center.

tion of viable incandescent light tubes in many different forms and power levels. In 1913, his achievement of his unique x-ray tube was announced. With its high vacuum and heated cathode, it completely revolutionized the production of x rays, and placed their use and the field of radiology on a controlled and reproducible basis. Coolidge was awarded 83 patents for his pioneering inventions. His pioneer achievements in our field make this award for meritorious work particularly appropriate for the AAPM.

AIP Membership. First formal negotiations for American Institute of Physics membership status of the AAPM in the AIP were pursued.

Joint APS Symposium. First joint

scientific symposium with an AIP “sister” society, The American Physical Society, was held on 27–30 March 1972, at Atlantic City.

Proposed Journal. Progress was made in clarifying the nature of the proposal for our own journal.

Professional Interests. In several editorials, Fearghus addressed questions concerning the professional and scientific roles of the AAPM, with his concern that further delay in fine-tuning our course of action was detrimental to the future of the AAPM, always eloquently expressed: “It seems inevitable then, that the ‘professional’ interests of our members, now totally uncatered for, must be served by a separate body (preferably a wholly con-

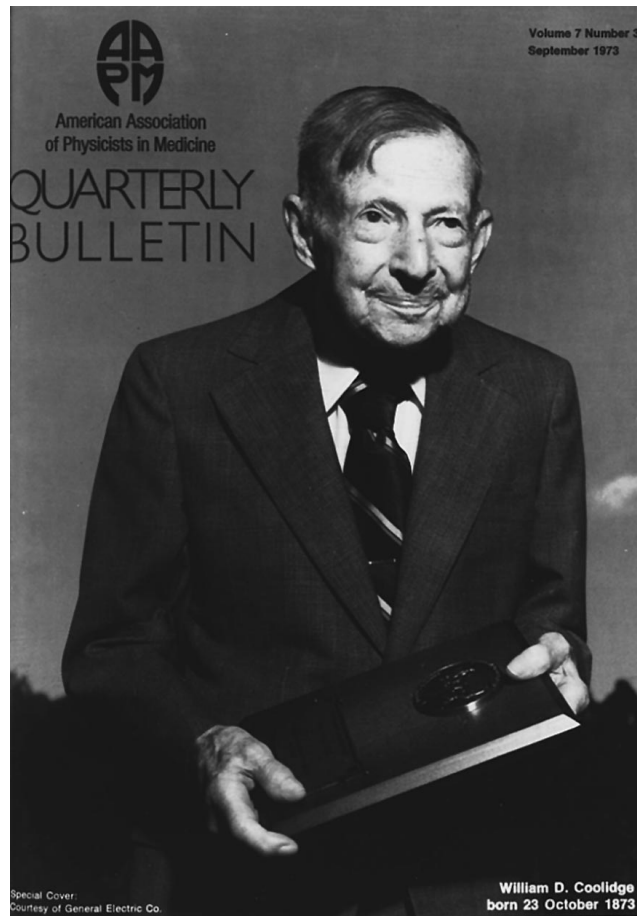


FIG. 18. William D. Coolidge on the cover of September 1973 issue of the *AAPM Quarterly Bulletin*.

trolled subsidiary of AAPM, along the general lines of the College of Medical Physics which former President Cameron has advocated).’ The Scientific Committee’s de-

tailed report included their favorable evaluation as the Steering Committee for the Center for Radiological Physics at Houston.



Clarence Karzmark

Clarence J. Karzmark, “Karz,” was the fourteenth AAPM president, commencing his term during the annual meeting in June 1972 and serving until the annual meeting in July 1973 (Figs. 19–22).

Karzmark studied at the University of North Dakota, majoring in electrical engineering for two years. After a period with the Air Force, Karz returned and completed his studies in physics at North Dakota. He continued in physics at the University of Indiana graduate school earning his Ph.D. in 1955. In addition to his studies in physics, he had acquired considerable experience in radar and electronic communication. Earlier experience in radio servicing, amateur radio, and broadcast radio engineering served him in good stead.

He accepted the physics responsibility in radiation therapy at Stanford University and remained there until his retirement in

1988. During the early sixties he spent a year in London at Hammersmith and at St. Bartholomew’s becoming familiar with their training programs. He was impressed with the British system of hospital physics and medical physics departments in medical schools. In addition to publications on dosimetry and treatment planning with linear accelerators, together with Craig Nunan and microwave engineer Eiji Tanabe, he wrote and published a very useful text on linear accelerators. An earlier linac primer, written with Robert Morton, is intended for technologists and oncologists.

Science Council. Karzmark served at a time of rapid expansion of medical physics in the U.S. resulting in new problems and opportunities for scientific and professional growth, often resulting in contributions to medical procedures. Such advances were facilitated by the formation of a Science Council, responsible for coordinating and directing the work of six categorical Science Committees. Similar Educational and Professional Councils were soon established.

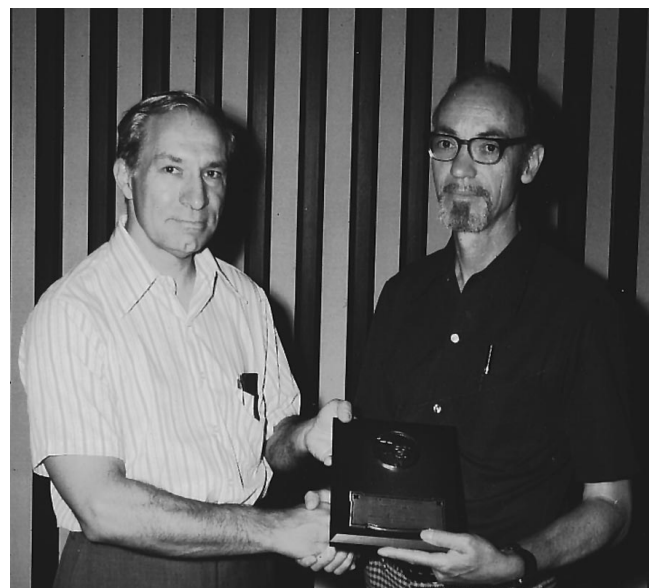


FIG. 19. Robert Shalek (*left*, past president) receiving the 1973 Coolidge Award from Gene Robinson.

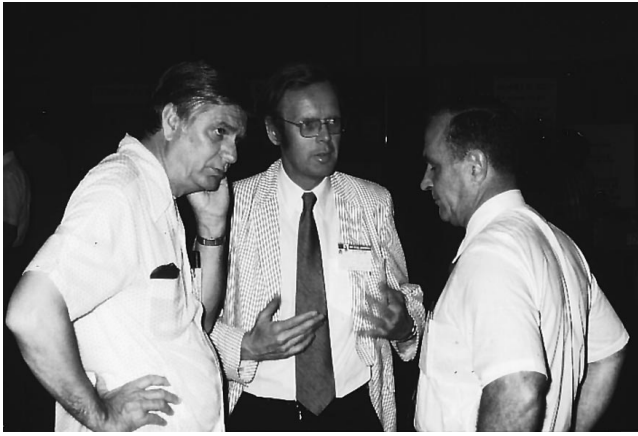


FIG. 20. Left to right: Clarence Karzmark (president), Edward Epp, and Jack Krohmer.

AIP Membership. It was announced that the AAPM had been accepted as a full member of the AIP.

Journal. There was a growing sentiment among members to inaugurate an AAPM journal. Alternatively, if it could be arranged, AAPM might assume a larger role in the publication of PMB with the HPA. In a joint editorial with HPA president John Mallard, in the *AAPM Bulletin* of December 1972 (Vol. 6, No. 4), Karzmark and Mallard invited exploration of joint op-



FIG. 21. Jacques (left) and Florence Ovadia.

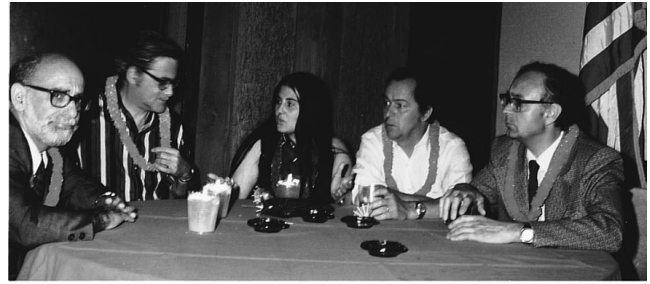


FIG. 22. San Diego, 1973. Left to right: Robert Loevinger, Alex Turner, Caridad Borrás, John Cunningham, and Lawrence Lanzl (past president).

eration of PMB by both the AAPM and HPA. Earlier the AAPM Board had voted to publish our own journal subject to monetary constraints. The strong support and enthusiasm for an independent AAPM journal became increasingly apparent. Volume 1 of the new AAPM journal, *Medical Physics*, was dated 1974.

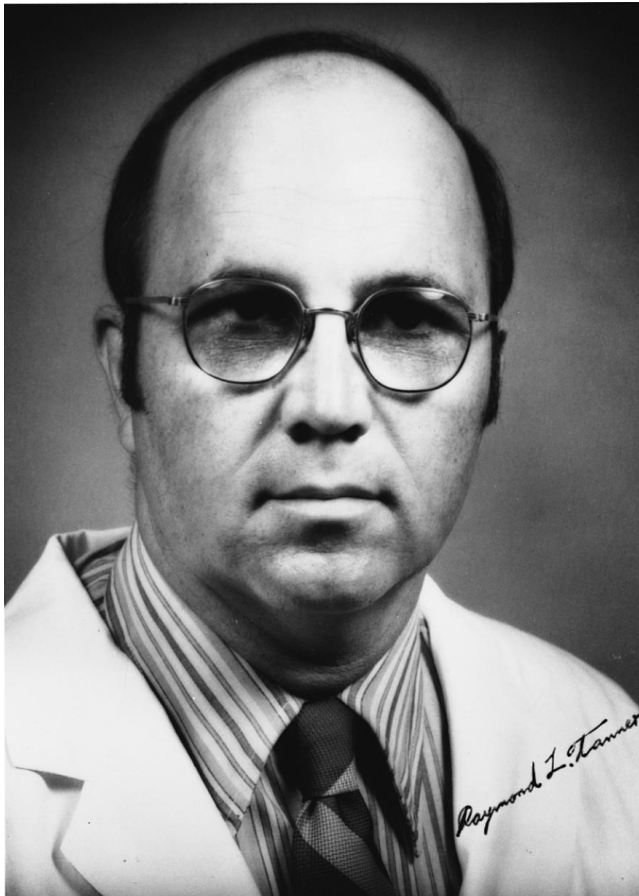
Professional Society. Results of a questionnaire by the *ad hoc* “American Committee for Medical Physics,” created in June 1972 and chaired by Bob Gorson, on a proposed new professional society were that, with 304 responding out of 717 mailed forms (42%), 69% were in favor, 12% opposed, 14% in doubt, and 5% undecided. A subsequent meeting was held by Ray Tanner, AAPM president-elect, and John Laughlin, AAPM representative to the AIP Board, with AIP Director, H. W. Koch and Wallace Waterfall, Secretary of the AIP, and a representative of the American Acoustical Society (who had similar questions) on 25 and 26 June 1973, to review 13 proposed activities of the new society as supplied by Bob Gorson. It developed that the AIP had no problem with most of the items with the possible exception of professional certification, some types of lobbying, and negotiations for remuneration of a “union type” of activity. Since these ac-

tivities were not considered important at that time, the *ad hoc* committee put into abeyance their plans. Please see subsequent actions and report of the *ad hoc* committee on p. 1283.

AAPM Accredited Dosimetry Labs.

The Scientific Committee formed a subcommittee, Task Group 3 with John Cameron as Chairman, to work with the National Bureau of Standards on the

development of policies for regional calibration facilities, and to assist the establishment of Regional Calibration Laboratories (RCL). At the December meeting of the Scientific Committee provisional status was recommended for RCL's at Memorial Hospital, NY, and at M. D. Anderson Hospital, Houston, Texas. Final authorization was given both labs the following year.



Raymond Tanner

Raymond “Ray” L. Tanner was our fifteenth president, serving from 1 July 1973 to 30 June 1974 (Figs. 23–27).

Ray Tanner earned his B.S. degree in Physical Science and Mathematics at Memphis State University. He then had a teaching assistantship at Memphis State and was strongly influenced by Carl Nurnberger’s experience in radiological physics. In 1956 Ray was accepted in the graduate physics training program at Memorial–Sloan Kettering and Cornell Medical. He completed his first year very successfully and decided to return to Memphis where he and Margaret were married in 1957. Ray had a teaching position at Memphis State and remained there until 1962 when he entered the medical physics program at the University of California at Los Angeles (UCLA)

led by Moses Greenfield. He completed his graduate work and received his Ph.D. in 1967, and returned to a faculty position at Memphis State. Ray was serving as Professor of Medical Physics at Memphis State when he was elected president of the AAPM.

Presidential Newsletter. In order to assist communication during his term, Ray initiated a monthly newsletter which he wrote personally and circulated to all Committee Chairpersons, officers, and the Board of Directors. This procedure proved useful for information and coordination purposes.

Journal. Formation of our own scientific journal had been advocated by Gail Adams and a membership vote strongly supported it. The Board authorized its establishment to commence publication on a bimonthly basis by January 1974, with Gail as editor and Ben Galkin as business manager. This team launched it successfully, and it has published continuously since. The first issue contained an Editorial by Gail, a warm introduction by president Tanner, and a “Bulletin” section devoted to AAPM affairs, Committee reports, and Chapter notes. This section was a continu-



FIG. 23. “The Mutants.” Left to right: Barbara Heller, Saul Harris, Shirley Vickers, and Mortimer Heller.



FIG. 24. Nagalingam (left) and Siva Suntharalingam.

ation, or replacement, of the *Quarterly Bulletin*. A brief description and history of the journal is given in the section on Specific Topics.

Councils. Tanner proposed establishment of Education and Professional Coun-



FIG. 25. Early June 1974. Left to right: Jack Krohmer (president-elect), Raymond Tanner (president), and Peter Wootton.



FIG. 26. Raymond (left, president) and Margaret Tanner.

cils, both of which were adopted and written into new Rules, which were approved by the membership at this time (1973–74), having been started in the preceding Karzmark administration in connection with formation of the Science Council. It was significant that, after a year of investigation and controversy, the Board at the San Diego meeting decided to deal more extensively with professional matters within the AAPM. Three of the committees of the new Professional Council were existing Committees: the Committee on Professional Information, the Committee on Insurance, and the Committee on Legislation and Regulation. A new Committee on Clinical Relations was formed and the long-dormant Committee on Ethics was reformed. Jack Krohmer and Bob Gorson agreed to serve as chairman and vice-chairman, respectively, of the new Council, and pledged to work diligently in devising methods of providing for the professional needs of the entire AAPM membership.

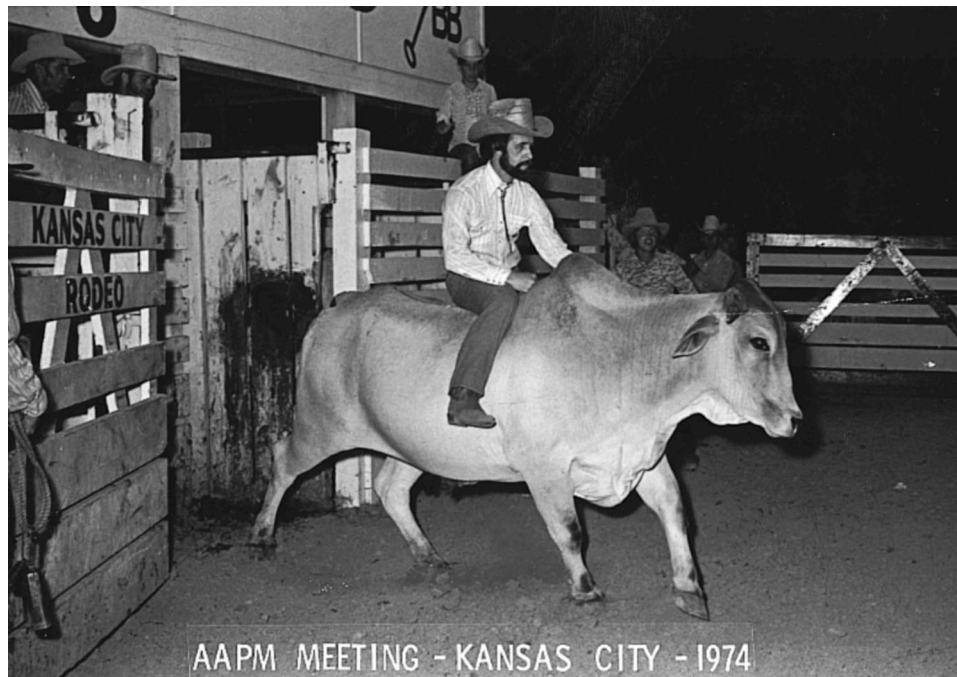


FIG. 27. Richard Riley, University of Kansas.

Proposal for Centers for Radiological Physics. Ray asked Bob Shalek and John Laughlin to visit the NCI in Washington to express our interest in the possible establishment for several Centers of Radiological Physics to meet an evident technological need. Subsequently, Ray encouraged the writing of an appropriate grant proposal, which resulted in the contract for the AAPM Coordinating Committee and for formation of six CRP's on a competitive basis. The CRP's were intended to transfer the advanced technology of radiation measurement and calibration; of specific radiological procedures, such as for mammography; and for treatment planning. A ten-year provision for this technology transfer project had been envisaged. See pp. 1366–1367 for more detailed discussion.

RSNA. President Tanner was invited to speak at a meeting of the RSNA Board and proposed joint sponsorship of the Winter meeting. This arrangement was ac-

cepted and implemented the following year, and is still an important feature of AAPM membership.

ACMP. A significant letter appeared in the *AAPM Quarterly Bulletin* for September 1973 from the members of The American Committee on Medical Physics (R. O. Gorson, M. L. Meurk, A. Wright, J. Cameron, F. O'Foghludha, S. Vickers). The detailed letter announced a decision reached by the members to suspend plans to create The American Academy of Medical Physics in view of two recent developments: "when it became apparent that the AIP would no longer object to the AAPM engaging in most of the professional matters included in a possible list of activities for the AAMP, the principal reason for creating a professional group outside of the AAPM appeared to vanish"; and also referred to the recent action of the AAPM Board to create the Professional Council rather than rely on an outside group.



Jack Krohmer

Jack S. Krohmer was the sixteenth AAPM president from the time of the annual meeting in 1974 to that in 1975. Jack commenced service as president-elect in 1973 at the annual meeting in Kansas City (Figs. 28–30).

Jack Krohmer was born in Cleveland and matriculated at the Western Reserve University, receiving his B.A. in 1943 with majors in chemistry and mathematics. He then entered the army, in which he served until the end of World War II. Jack returned to Western Reserve, receiving the M.A. in physics in 1947. At the University of Texas Southwestern Medical School, where he had joined Fred Bonte, he earned the Ph.D. in biophysics in 1961. From 1957 to 1963 Jack had been on the faculty of the

University of Texas, leaving to accept the position of Research Professor at the Roswell Park Memorial Institute for three years. He joined the staff of the Geisinger Medical Center and the Radiology Associates of Erie during the period 1966 to 1979. His research activities have included the design of the Sr-90 ophthalmic applicator, imaging with radioactive labels and radiobiological studies.

From 1979 to 1984 he was Professor of Radiology and Radiation Oncology at Wayne State University School of Medicine, retiring in 1985. He has been very active in retirement and formed his own consulting firm, has served as “locum tenens” for many radiology departments, and has carried out shielding designs for radiological facilities extensively. For the AAPM he was responsible for the Placement Service from its inception in 1958 to 1972.

Jack also served on the Board of Trustees of the ABR from 1972 to 1993, following the term of Marvin M. D. Williams. In 1992, Jack was honored with the award of the RSNA Gold Medal, and the ACR presented him with the recognition of their Gold Medal in 1994.

AAPM Activities:

Publications Committee. An impor-



FIG. 28. Presentation of 1975 Coolidge Award to Marvin M. D. Williams. *Left to right:* Marvin Williams (past president), Arnold Feldman, and Jack Krohmer (president).



FIG. 29. Doris (*left*) and Jack Krohmer (1992 RSNA Gold Medalist).

tant innovation by Jack for the AAPM was his appointment of a Publications Committee, with E. W. Webster as chairman, and G. D. Adams, D. W. Glenn, W. R. Hendee, J. G. Kereiakes, F. M. Kahn, C. A. Kelsey, S. D. Vickers, and A. E. Wright as members. Its need was made evident by the birth of the Journal and also by the anticipation of other publications. Its mandate was for supervision of all AAPM publications. The first publications authorized in 1974 were a new edition of the *Membership Directory* and a revised third edition of the popular booklet, “The Medical Physicist.” In 1975, the Committee approved two new types of publications which have proved important:

- (1) ***The AAPM Monograph Series***, with the first approved being “Biophysical Aspects of the Medical Use of Technetium-99m,” by J. G. Kereiakes and K. R. Korey.



FIG. 30. *Left to right:* John Hale (past president), Robert Loevinger, Adele Hale, and Warren Sinclair (past president).

- (2) ***The AAPM Report Series***. The first of these reports was “Phantoms for Performance Evaluation and Quality Assurance of CT Scanners” prepared by a task force chaired by P. F. Judy.
- (3) ***The Newsletter Series***. This bi-monthly series was authorized in 1975 by the Committee with Andrew G. Buckowitz as Editor.

(Summarized from a report by E. W. Webster.)

Placement Service. Jack was the first director of the Placement Service, and handled it very effectively for 14 years.

RSNA. Jack was chair of the Physics section of the RSNA Program Committee and had a major role, with Marvin Williams, John Hale, Ed Epp *et al.*, in establishing the confidence of the RSNA in the AAPM.

Clinical Committees. Another instance of Jack’s leadership was his encouragement of AAPM participation in RSNA and ACR committees. In 1972 there were 36 AAPM members on these committees, increasing to 58 in 1974, and to 72 in 1975, where it has remained.



Jacques Ovadia

Jacques Ovadia was the seventeenth AAPM president with responsibility during the nominal year 1976: from the annual meeting in July 1975 to that in July 1976 (Figs. 31–36).

Jacques was born in Vienna, Austria



FIG. 31. Florence (*left*) and Jacques Ovadia (president).



FIG. 32. 1976 Coolidge Award recipient, Harold Johns.

and attended local schools. His family immigrated to the U.S., and Jacques matriculated in Brooklyn College, where he received the B.A. in 1974 with majors in physics and mathematics. He entered the University of Illinois graduate school in 1947 with a major in nuclear physics and received the Ph.D. in 1951. He then became an Instructor in Radiology in the University of Illinois College of Medicine and worked on the radiation physics program



FIG. 33. John Cameron (past president) speaking at the Ottawa meeting.



FIG. 34. Edwin McCullough viewed at work.

with the high-energy x rays and electrons from their medical betatron. He became a Research Associate in the Biophysics Division of the Sloan–Kettering Institute from 1952 to 1956 and worked primarily on high-energy electron beam dosimetry and treatment planning. He also carried out a precise determination of the specific ionization in air by collimated beams of monoenergetic electrons. In 1956 he was appointed Chief of Radiation Physics at the Michael



FIG. 35. 1976 Summer School. *Left to right:* John Cunningham, Andrée Dutreix, and Jacques Ovadia (president).



FIG. 36. Jacques Ovadia (president).

Reese Hospital working with the successive Chairs of Radiation Oncology (Eric Uhlman and Lionel Cohen), until his retirement in 1991.

Events in 1975–76:

Newsletter. The *Quarterly Bulletin* had continued within *Medical Physics* in the years 1974–75, and then terminated. It was replaced by the *Newsletter*, a separate publication with Andrew Bukovitz as Editor on a six issues/year basis. Its first issue appeared January 1976.

Executive Office. Smith, Bucklin and Associates, Inc., were chosen to serve as AAPM's Executive Office. They had been visited and reviewed by J. Ovadia (president), W. Hendee (president-elect), and J. Krohmer (past president), and their recommendation was approved by the Board. Sharon Pierce became the AAPM Executive Director.

ICMP. The Fourth International Conference of Medical Physics met jointly with the AAPM at the Eighteenth Annual Meeting held 25–30 July in Ottawa, Canada.

Regional Calibration Labs. AAPM added the Victoreen Co. Calibration Laboratory to its list of AAPM approved Regional Calibration Laboratories (previously approved Regional Calibration Laborato-

ries at Memorial Hospital and M. D. Anderson Hospital).

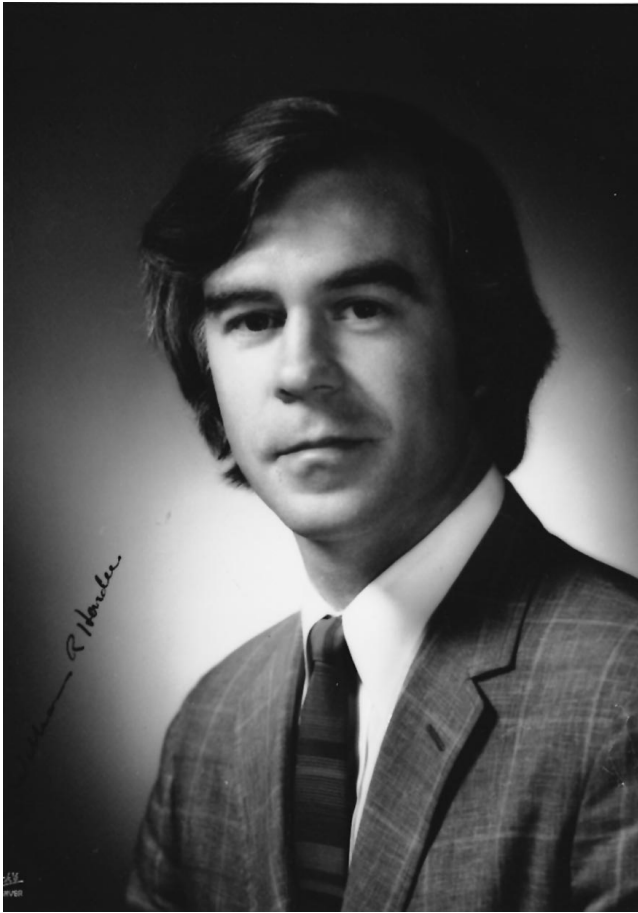
Summer School. The 1976 AAPM Summer school was held at Trinity College, Burlington, Vermont, site of the original school in 1969, and was also on dosimetry.

Placement. Edward Sternick, chair of the Placement Service operating under the auspices of the Professional Council, re-

ported increasing activity in listings and inquiries.

Membership. William Carlton, chair of the Membership Committee, reported a strong growth in membership with 72 new members accepted during the first half of 1976, and 80 applications pending review.

Publications. Ted Webster, chair of the Publications Committee, announced the third edition of “The Medical Physicist.”



William Hendee

William R. Hendee was the eighteenth AAPM president with responsibility as president for the 18 months from July 1976 to 31 December 1977 (Fig. 37). This unusually long term was due to the decision of the AAPM, approved by the membership, to have the administrative calendar of the AAPM agree with its fiscal calendar, which was the calendar year.

Details of Bill Hendee's academic career not only do credit to his scholarship, but also reveal his conflicting loves of football and of physics. He played football at Tulane University until his Junior year when he decided that physics was his priority, and he transferred to Millsaps College, where he earned his B.S. degree in 1959, followed by his Ph.D. in physics

from the University of Texas in 1962. After three years as Associate Professor and Chairman of Physics and Astronomy at Millsaps College, he joined the faculty of the University of Colorado Health Sciences Center, where he spent several years in radiological research and in teaching of residents and of physicists. He established M.S., Ph.D., and Postdoctoral programs in medical physics at the University of Colorado. From 1977 to 1985 he served as Professor and Chairman of the Department of Radiology. The only other instance of a non-M.D. physicist serving as chairman of a clinical department is that of Karl W. Stenstrom, earlier a Fellow with William Duane at Harvard University, and who served as Director of Radiation Therapy at the University of Minnesota until his retirement in 1956.

Bill was elected president of the AAPM during the first part of his service as Radiology Department Chairman. In 1985, Bill joined the staff of the American Medical Association as Vice-President of Science and Technology, and in 1991 he joined the faculty of the Medical College of Wisconsin, Milwaukee, WI, where he is the Senior Associate Dean of Research and Vice President of Technology, and Professor of



FIG. 37. Left to right: Peter Wootton (president-elect), Marvin Williams (past president), Helen Kereiakes, and William Hendee (president).

Radiology, Biophysics, and Radiation Oncology. His research interests have included: development of back projection computations from multiple projections for determination of attenuation coefficients for inhomogeneity corrections in radiation treatment; optimization of pulse sequences for soft tissue visualization in magnetic resonance imaging; and quality optimization of x-ray imaging parameters. He has produced over 300 peer-reviewed publications, and a number of books.

Some AAPM activities:

Bill devoted his first Presidential Column to a detailed distinction between the physics topics and concepts relevant to education of diagnostic residents and those needed by residents in radiation oncology.

Definition of Year. At the nineteenth annual Board meeting, secretary John Wright reported overwhelming approval by the membership to a proposed by-laws revision mailed to each member, changing AAPM's administrative year to agree with its fiscal year, the calendar year.

Strategic Planning Task Group (SPTG). In his second Column, Bill commented that, with the growth of the AAPM, the officers became increasingly enmeshed in responding to somewhat routine needs of committees, concerns of members, administrative matters with Headquarters, and review of the society's budget, with the consequence that too little time was given to the long-range direction of the Society and avoidance of future problems. Accordingly, Bill proposed that every few years, a group of a few individuals should concentrate on how well the Society is serving various responsibilities to the members. Accordingly, he established a President's Committee with the acronym SPTG comprised of five individuals to ad-

dress broad questions dealing with: nature of the desired AAPM educational program; how to address the professional interests of members; enhancement of research programs of members; how to increase the AAPM impact on influencing federal and state legislation; how to attract the brightest and best physicists to the AAPM? The composition of the SPTG was the president, president-elect (Wootton), both candidates for president-elect (Bjarngard and Wright); and J. Hilbert, with Wootton serving as chairman.

NCRP Election. As a result of the 1977 NCRP election, Warren K. Sinclair became its new president, occupying the vacancy left by the retirement of Lauriston Taylor; Edward Webster was re-elected to the Council, and Herb Attix was elected to the Council.

Nobel Prize to R. Yalow. Rosalyn S. Yalow received the Nobel Prize in Physiology or Medicine on 10 December 1977, "for the development of radioimmunoassays for the peptide hormones." Yalow was one of the founders of the AAPM, vice-chairman under the temporary constitution (1958–59) and a board member-at-large (1962–65). She carried out her graduate studies and earned the Ph.D. in nuclear physics in the physics department of the University of Illinois, and spent most of her career at the Veterans Administration Hospital in the Bronx, New York. There she first developed their radioisotope service, then turned her talents to research in endocrinology, with Solomon Berson, as her collaborator until his death in 1972. Yalow's Nobel lecture was entitled "Radioimmunoassay: A Probe for the Fine Structure of Biologic Systems."



Peter Wootton

Peter Wootton was the nineteenth AAPM president serving for the year 1978 (Figs. 38–48).

Peter, who was born in England, was



FIG. 38. Rosalyn Yalow (*left*) and Peter Wootton (president).



FIG. 39. Rosalyn Yalow.

educated in English schools and at the University of Birmingham in physics (B.Sc., 1944), accepted the position of Physicist in the research and development laboratories of a private firm for four years. He was then appointed Radiation Physicist of the



FIG. 40. *Left to right:* Shirley Vickers, Lillian Chaney, and Edward Chaney.



FIG. 41. “At the Banquet.” *Left to right:* Orpha Williams, Aaron Yalow, and Rosalyn Yalow.

Royal Infirmary, Glasgow. In 1951 he immigrated to the U.S. and became Instructor in Radiological Physics at the University of Texas M. D. Anderson Hospital until 1953. He then accepted the position of Radiation Physicist of the Tumor Institute, Swedish Hospital, in Seattle, Washington (where Herb Parker was originally employed) until his retirement in 1996. His research interests covered different applications of radiation physics in medicine, especially dosimetry of all types of ionizing radiations; and



FIG. 42. Robert Shalek (past president).



FIG. 43. Norman (*left*) and Rose Baily.

the effects of such physical factors as high-pressure oxygen and pulsed radiation in radiobiology; and fast neutron treatment. Peter’s contributions in these areas led to his work for the NCRP and to his membership on the NCI Committee on Radiation Oncology Studies.

AAPM events during 1978:

JCAHO. Peter, Bill Hendee, and other colleagues arranged a meeting with

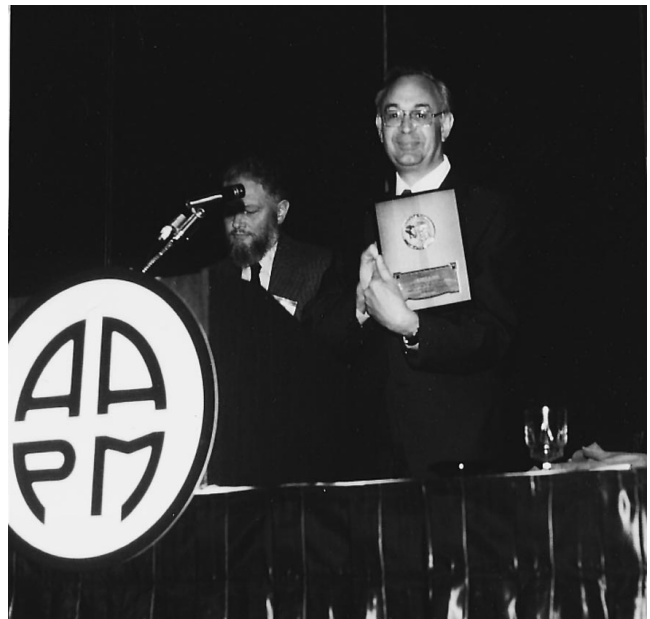


FIG. 44. 1978 Coolidge Award recipient, Lawrence Lanzl (past president).



FIG. 45. Peter Wootton (president).

the JCAHO in their Chicago Office with the objective of providing information on the essential and scientific role of medical physicists in hospitals such that their positions on the medical staff were recognized as appropriate.

Kerst. “A Symposium on High Energy Radiation Therapy” was sponsored by



FIG. 46. Rosalyn Yalow (*left*) and Arnold Feldman.



FIG. 47. Rosalyn (*left*) and Aaron Yalow.

the North Central and Midwest Chapters of the AAPM held at the University of Wisconsin, 2 June 1978, and arranged by J. R. Cameron and L. A. DeWerd in honor of Donald W. Kerst. This symposium included papers on dosimetry and treatment planning with high-energy radiations, neutron radiotherapy, and pi-meson radiotherapy.

1978 Annual Meeting. San Francisco, 31 July–4 August 1978, drew a record attendance of over 1,100 members. Rosalyn Yalow, Nobel Laureate, spoke on



FIG. 48. *Left to right*: Robert Barish, John Laughlin (past president), and Hal Anger.

“Radioimmunoassay: A Role of a Physicist in Biomedical Investigation.”

Mammography. A conference on “Reduced Dose Mammography—A Clinical and Scientific Evaluation,” organized by Wende Logan and E. Phillip Muntz, was held at Roswell Park Memorial Institute, 4–6 October 1978.

“Essentials of Education and Experience for Radiological Physicists.” This report presented by Jack Krohmer and

approved by the AAPM Education Council and by the ABR was a comprehensive guideline identifying the areas of experience and education necessary in the training of physicists for certification.

Report on Ultrasound Test Objects and Test Methods. A comprehensive identification by the AAPM Ultrasound Task Group and the AIUM Standards Committee of developments needed for quantification of ultrasound methodology.

PERIOD 3 (1979–1988)

1979	.....	Bengt Bjarngard
1980	.....	Robert Waggener
1981	.....	Colin Orton
1982	.....	Ann Wright
1983	.....	Nagalingam Suntharalingam
1984	.....	Edward Sternick
1985	.....	James Purdy
1986	.....	Edwin McCullough
1987	.....	Paul Carson
1988	.....	Gary Barnes



Bengt Bjarngard

Bengt E. Bjarngard was the twentieth member to serve as AAPM president with his term as the year 1979 (Figs. 49–55).

Bengt Eric Bjarngard matriculated in Swedish schools followed by study in the Gymnasium for three years in the science track with emphasis on physics and mathematics. He was then admitted to the University of Lund for advanced study. He studied and worked with Kurt Liden, whom he also assisted as a Teaching Assistant for other students in radiation physics. Research studies initiated by Bjarngard included: developments in solid-state radiation dosimetry, spectral analysis of scattered radiation, and measurement of patient radiation exposure during dental radiography. In 1962 he submitted his com-



FIG. 49. Gordon Brownell.

pleted studies on the above projects to Kurt Liden and received the Ph.D degree, having already received the M.S. in 1958 from the University of Lund. From 1961 to 1965 Bengt had the position of Research Physicist with the Atomic Energy Company at



FIG. 50. Jerome (left) and Betty Dare.



FIG. 51. Robert Gorson (past president) with Coolidge Awardee, Herbert Parker (*right*).

Nyköping, which supported his research and development on thermoluminescent dosimetry (TLD). In 1965 Bengt accepted the position of Research Physicist at Controls for Radiation, Inc., in Cambridge, Massachusetts and immigrated to the U.S.A. In this position, Bengt carried out



FIG. 52. Bengt Bjarngard (president).



FIG. 53. *Left to right*: Ralph Worsnop, William Powers, John Laughlin (past president), and Harold Johns.

development of TLD dosimeters for specific purposes until 1968.

In 1968 the Joint Center for Radiation Therapy (JCRT) was established to provide radiation therapy services to four of the Harvard Medical School teaching hospitals, and Bengt joined them with the responsibility for physics. Bengt recruited and built up a talented physics staff including Jim Galvin, George Chen, Wendell Lutz, and others, with well-designed facilities. Bengt has contributed significantly on aspects of radiation dosimetry, automatic conformal radiation treatment, treatment planning factors and measurement of nuclear contamination. At the time of his election as

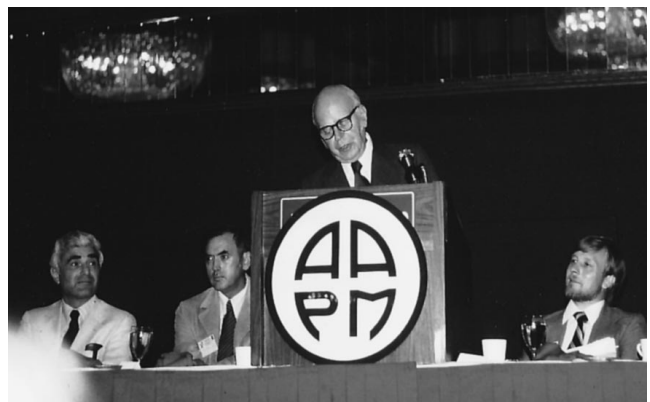


FIG. 54. *Left to right*: Arnold Feldman, Robert Waggener (president-elect), Herbert Parker, and Bengt Bjarngard (president).



FIG. 55. Left to right: Arnold Feldman, Robert Waggener (president-elect), John Cameron (past president), Bengt Bjarngard (president), and Ulla Bjarngard.

AAPM president, Bengt was Associate Professor of Radiology at Harvard Medical School and Director of Physics and Engineering of the JCRT.

Education of Physicists. Bengt has emphasized the importance of a thorough command of physics and mathematical fundamentals, prior to clinical residency training. The scope of the application of different areas of physics in the major current advances in imaging and treatment illustrate this need.

Some events during 1979:

The Professional Council reported that the Joint Commission on Accreditation of Hospitals (JCAH) had taken two important actions of great interest:

- (1) A helpful and positive “Definition of Qualified Medical Radiation Physicist,” as corrected in a later *Newsletter*.
- (2) Physicists may now be included as members of the medical staffs of hospitals if the hospitals so desire.

The Professional Council was also preparing sample by-laws statements for possible use in discussing medical staff membership with clinical colleagues.

First Winter Institute of Medical Physics (WIMP 1). Gary Fullerton and

Ned Sternick reported that 50 medical physicists had met in Dillon, CO, 4–8 February to discuss “Fiscal Responsibility in Medical Physics.” Contractual arrangements, liability, budgeting, billing, and collection of professional fees for services were discussed in detail. The Institute planned annual meetings.

Travel Awards. The International Affairs Committee announced that Radiation Measurements Incorporated (RMI), John Cameron, President, offered to establish two travel awards of \$500 each to assist attendance at the Fifth ICMP in Israel in August.

Tax Status. The AIP informed the AAPM the IRS no longer questioned AIP’s tax-exempt status (*Newsletter*, Vol. 4, No. 3, 1979). A chronological summary of the events in the status of our incorporation is provided in the section on Specific Topics.

Guidelines on Ethical Practice. At the December 1978 Meeting of the Board, an eight-point ethical guideline proposed by the Professional Council, was approved. Details were given in the report by George Callendine, Council chair.

Conference on Practice of Radiological Physics. The ACR Committee on Physics and the AAPM co-sponsored a conference on the professional aspects of the practice of medical physics held 21–22 October, in New Orleans.

The 21st Annual AAPM Meeting was held in Atlanta, GA and drew 1,000 members and guests. The meeting opened with the President’s Symposium on “Nuclear Medicine in the CT Era.” Following the introduction by president Bengt Bjarngard, speakers included Gordon Brownell, Thomas Budinger, Barbara Croft, and Paul Lauterbur.



Robert Waggener

Robert Waggener was the twenty-first president, serving in 1980 (Figs. 56–58). Bob received an M.A. in Physics from the University of Texas in Austin while working as a Radiation Specialist for the Texas Department of Health. He received his Ph.D. in Biophysics from the University of Texas in Houston, followed by a year of postdoctoral training at the M. D. Anderson Tumor Institute in Houston. He then joined the Radiology Department, University of Texas Health Science Center at San Antonio, and at the time of his election was chief physicist and Professor of Radiology there.

As president he was concerned with the professional role of the Society, and urged the members to do more to take control of



FIG. 56. John Cameron (*left*, past president) receiving the 1980 Coolidge Award from Nagalingam Suntharalingam.

their profession, such as forming their own certification board, and developing accreditation procedures for training programs.

New AAPM Headquarters. The Finance Committee, headed by treasurer Ann Forsaith, was concerned about the increasing charges being submitted by the management firm of P. M. Haeger. Thus it was decided to write a document describing the management needs of the AAPM and to use this to seek proposals from other management firms, as well as from Haeger.



FIG. 57. *Left to right:* Morris Hodara, Bengt Bjarngard (past president), and Sal Vacirca.



FIG. 58. *Left to right:* Edward Siegel (editor), Bengt Bjarngard (past president), and Jean St. Germain.

Colin Orton took the lead in writing such a document. The resulting proposals were

presented to the Board at the annual meeting in Minneapolis. The Board instructed EXCOM to negotiate a contract with the American Institute of Physics (AIP). This contract was accepted by the Board at its October meeting in Dallas, and a transition team headed by Colin Orton and including Ann Forsaith, Joe Blinick, Arnold Feldman, and Ann Wright transferred the headquarters operations to the AIP offices in New York. There the AAPM affairs were handled by the new executive secretary, Anke Junge, who was formerly with the publications division of AIP.



Colin Orton

Colin Orton was the twenty-second president, serving in 1981 (Figs. 59–66). Colin was born in London, England. He received a BSc. in Physics at Bristol University, and MSc. and Ph.D. in Radiation



FIG. 59. Robert Shalek (at the podium, past president) presenting the 1981 Coolidge Award to James Keriakes (past president).



FIG. 60. Arnold Feldman (*left*) and Ann Wright (president-elect).

Physics while at St. Bartholomews' Hospital Medical College, under the mentorship of Joseph Rotblat. In 1966 he came to the U.S.A. as Chief Physicist and Assistant Professor at the New York University Medical Center. In 1975 he transferred to the Rhode Island Hospital with the rank of Associate Professor in Brown University. During 1981 he accepted a position as Chief of the Physics Division, Radiation Oncology Center, Harper–Grace Hospitals in Detroit, and Professor of Radiation Oncology and Radiology, Wayne State University School of Medicine.

International Affairs. Under Colin



FIG. 61. Board at work.



FIG. 62. 1981 Coolidge Awardee, James Kereiakes (past president).



FIG. 64. Publications Committee: John Cameron (chair, past president).

Orton's leadership the AAPM became more involved in international affairs. A proposal prepared by a committee headed by Caridad Borrás was submitted to the International Organization for Medical Physics (IOMP) for the AAPM to host an Inter-American Conference on Medical Physics in conjunction with the 1984 AAPM meeting in Chicago. Gary Fullerton chaired a committee that prepared a proposal for the AAPM to host the 1988 International Conference on Medical Physics (ICMP) in the United States. This proposal was approved by the AAPM Board at the Boston meeting, and submitted to the IOMP for their consideration at the 1982 meeting in Hamburg.

Origins of the ACMP. For several

years there had been debates among AAPM members as to the role of the Society in meeting the professional needs of its members. Originally formed as a professional society, the AAPM had been gradually transformed into a primarily scientific society. Although the Professional Council had been formed to answer these concerns, a questionnaire sent to the membership in 1980 showed that most respondents wanted more professional representation. Many members felt that there was need for an additional organization, modeled after that of the radiologists, who had the American College of Radiology (ACR) for professional matters, while the Radiological Society of North America (RSNA) served scientific ones. While it was true that board-certified physicists could be members of the ACR, not all medical physicists were



FIG. 63. Left to right: Herb Attix, Shirley Attix, and Peter Wootton (past president).

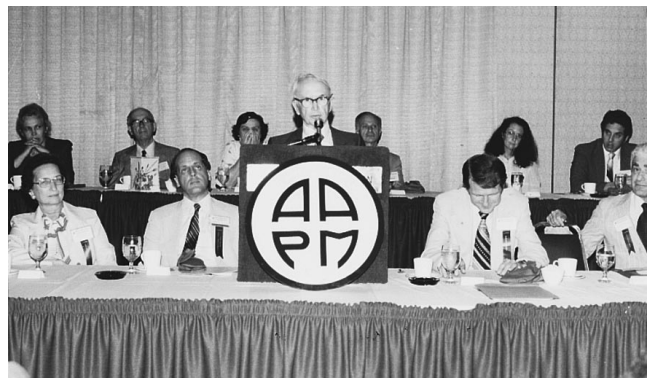


FIG. 65. Honorary Member Juan del Regato speaking.



FIG. 66. Colin Orton (president).

certified, and those who were constituted a very small fraction of the ACR membership; thus the ACR could not be expected to pay much attention to their needs. A ballot sent to the AAPM membership showed a majority in favor of the formation of a separate organization.

To resolve this long-standing debate, president Orton appointed a committee consisting of Ann Wright (president-elect), Bob Waggener (past-president), Jack Morgan (chairman of the Professional Council), and Alex Turner (chairman of the Professional Information and Clinical Relations Committee). They were asked to study the ways in which the professional interests of the members could best be served and to submit definite proposals to the Board at the Boston meeting. They recommended that the Board should sponsor the establishment of an American College of Medical Physics. The following is the text of the motion approved by the Board:

- (1) The Board agrees to the formation of an American College of Medical Physics Constituting Panel, whose first task will be to determine the desirability of an ACMP, outline specific functions of the College, formally contact the ACR to evaluate the impact of an ACMP on the activities of the ACR, and strive for a strong association between the two Colleges. Following this, they will be entrusted with drafting a set of goals with a schedule for their attainment, including guidelines and philosophy for the operation of the College. These, together with proposed membership requirements, will be presented to the Board for approval.
- (2) It is proposed that the Constituting Panel consist of ten persons, elected by the membership. Members should be asked to nominate potential candidates; ten signatures should be required for each nominee.

Subsequently, a ballot containing some 20 names, mostly senior members, was sent to the AAPM membership, together with brief biographies of the nominees. The following were elected: Gail D. Adams, Peter Almond, Stewart Bushong, Arnold Feldman, Jack Krohmer, Colin Orton, Nagalingam Suntharalingam, Robert Waggener, Peter Wootton, and Ann Wright. At a meeting of the Panel at the RSNA in Chicago, Gail D. Adams was chosen chairman. He called for suggestions and comments from the AAPM membership, with the aim of formulating the basic structure of the ACMP for presentation at the AAPM meeting in New Orleans in August 1982.



Ann Wright

Ann Wright was the twenty-third president, serving in 1982 (Figs. 67–69). Before becoming a medical physicist, she had a successful 18-year career with an international business organization. In 1967 she was awarded a National Cancer Institute Fellowship to study at the M. D. Anderson Hospital and Tumor Institute, University of Texas, Houston. There she obtained an M.S. in Medical Physics, and a Ph.D. in Radiological Physics in 1970. She then went to Galveston where she rose to the rank of Chief Physicist and Professor of Radiology, University of Texas Medical Branch at Galveston. She was very active in the Southwest Chapter and a former treasurer of the AAPM. As president, Wright's goal was to enhance the professional status



FIG. 67. Robert Shalek (*left*, past president) presenting the 1982 Coolidge Award to Gail Adams (past president).

of the medical physicist; specifically, to determine what the AAPM should do to change the stature of the medical physicist in the hospital administrator's eye. Later she was a leader in the efforts of the South-

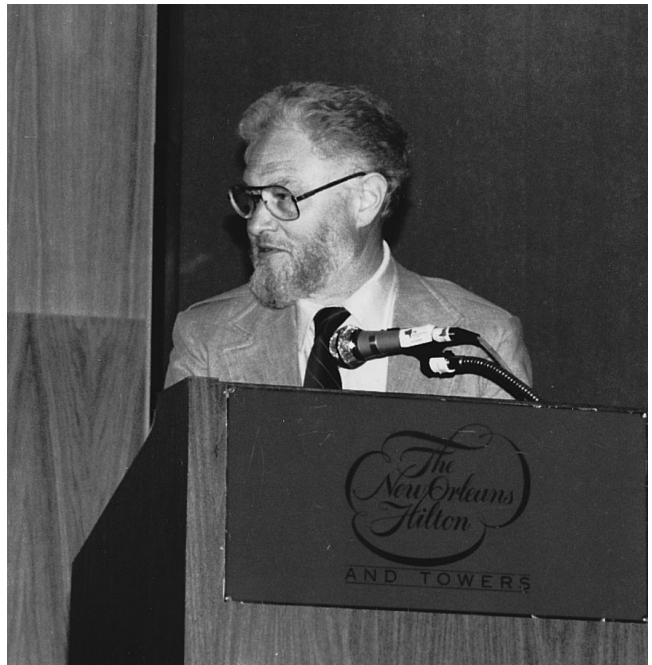


FIG. 68. Peter Wootton (past president).

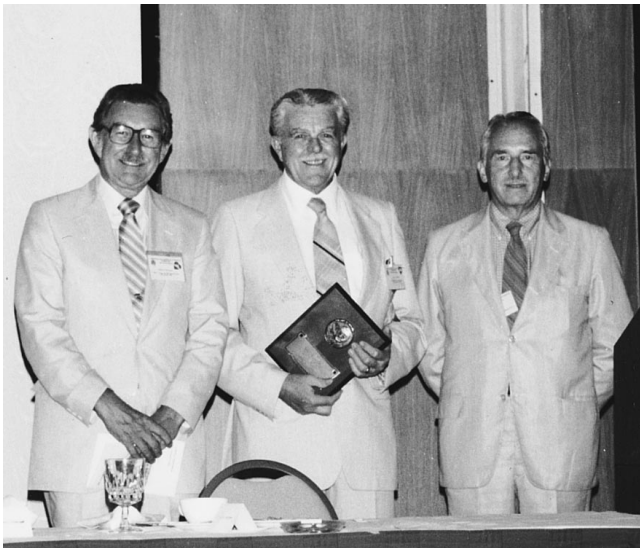


FIG. 69. Left to right: Past presidents Warren Sinclair, Gail Adams (Coolidge Awardee), and John Laughlin.

west Chapter to obtain State licensure in Texas, a long struggle supported by the AAPM and the ACMP.

American College of Radiology Commission on Physics. In what was perceived by some as a reaction to the pending formation of the ACMP, the ACR announced that their Board of Chancellors had voted to establish a Commission on Physics, which would mean that the chairman of that Commission would have a seat on the ACR board, and thus could plead the physics cause first hand. At the ACR meeting in September, Ray Tanner was appointed by the ACR as the first chairman of the new Commission on Physics.

AAPM Newsletter. At the August

meeting in New Orleans, the Publication Committee chose Robert Zamenhof to be the Editor of the *AAPM Newsletter*, replacing Andrew Bukovitz, who had served more than six years. Bruce Curran was selected as Associate Editor. Zamenhof and Curran were both physicists at Tufts–New England Medical Center in Boston.

NMR Committee. Also at the August meeting the Board recognized the emerging role of NMR imaging by approving the establishment of a committee on Nuclear Magnetic Resonance. Stephen Thomas was appointed chairman, charged with forming task groups to work on the problems likely to confront physicists whose institutions planned to acquire an NMR unit.

New Executive Secretary. In September the Executive Secretary, Anke Junge, announced her desire to return to the Publications Division of AIP. A search committee consisting of N. Suntharalingam, Joe Blinick, Ned Sternick, and president Wright interviewed a number of candidates and selected Elaine Osterman, who had an extensive background in organizational management. She began her duties in October, and remained as AAPM executive secretary (later titled “executive director”) until the AAPM headquarters were moved to the new AIP building in Maryland in 1996.



Nagalingam Suntharalingam

Nagalingam Suntharalingam was the twenty-fourth president, serving in 1983 (Figs. 70 and 71). “Suntha” was born in Ceylon (now Sri Lanka) and received a BSc. in Physics from the University of Ceylon in 1955. In 1958 he came to the U.S.A., and, while working at the Thomas Jefferson Hospital in Philadelphia, it was recommended that his ability was such that he should continue his education as a medical physicist. He was accepted at the University of Wisconsin, where he worked with John Cameron on thermoluminescent dosimetry, and obtained a Ph.D. in Radiological Science in 1967. At the time of his election he headed the Medical Physics division in the Radiation Therapy Department, Thomas Jefferson University Hospi-

tal, Philadelphia, and was Professor of Radiology and Radiation Therapy in Jefferson Medical College.

AAPM as a Sponsor of the ABR. As president, Suntha initiated and presented the first request to the American Board of Radiology for acceptance of the AAPM as one of the sponsoring organizations. Suntha, Ned Sternick, and Ann Wright met in May with the Trustees of the ABR. But this was only the beginning of a long process, which did not become completed until 1995!

25th Anniversary. The highlight of 1983 was the Twenty-Fifth Anniversary Meeting of the AAPM held at the Waldorf–Astoria Hotel in New York City. The Local Arrangements Committee chaired by Jean St. Germain worked hard to make this a memorable occasion. The anniversary banquet, held in the Grand Ballroom of the hotel was attended by more than 1,000 persons and included the Awards Ceremony for 1983. (A copy of the Program is shown on p. 1308.) New to the Awards Ceremony was the Sylvia Sorkin Greenfield Award, to be presented annually to the authors of the best paper published in *Medical Physics* during the preceding



FIG. 70. Edward Webster (past president), 1983 Coolidge Awardee.



FIG. 71. Nagalingam Suntharalingam (*left*, president) and Ann Wright (past president).

year. Speakers at the banquet included Gail Adams on the history of the AAPM, John Laughlin on the current status of the Society and its programs, and Jack Fowler on the future of physics in medicine. As historian, John was asked to provide an historical review of the AAPM and its antecedents and perspectives, which was published at this time.²²

Also new to the annual meeting was the first “Young Investigators’ Symposium” with prizes for the best presentations. As of

1996, the Young Investigators Award is named after John R. Cameron.

As part of the anniversary celebration, a special *Quarter Century Bulletin* was prepared by Chris Marshall, Alan Schoenfeld, and Shirley Vickers following suggestions by Jean St. Germain. It contained pictures of all the past presidents, highlights in the history, and articles on the origin of the AAPM as well as other aspects.

Task Group 21 Report. 1983 saw the publication of the report of Task Group 21 of the Radiation Therapy Committee of the AAPM. This subcommittee was formed “for the purpose of reviewing both the concepts and the data employed for high energy dosimetry and to make revisions as required.” The committee, supported by a contract with the Bureau of Radiological Health, was chaired by Robert J. Schultz and included Peter Almond, John R. Cunningham, J. Garrett Holt, Robert Loevinger, N. Suntharalingam, Kenneth Wright, and Ravinder Nath. Their report, “Protocol for the determination of absorbed dose from high energy photon and electron beams,” known simply as “TG-21,” with subsequent modifications became the accepted method for the calibration of Cobalt teletherapy units and linear accelerators.

**AMERICAN ASSOCIATION OF PHYSICISTS IN MEDICINE
SILVER ANNIVERSARY BANQUET
AUGUST 2, 1983**

PROGRAM

Greetings and IntroductionsN. Suntharalingham

DINNER

Introduction of Local Arrangements CommitteeJean St. Germain

REFLECTIONS

U.S. Medical Physics – Where were we?Gail Adams

U.S. Medical Physics – Where are we?John Laughlin

International Medical Physics – Then and nowJack Fowler

AWARDS CEREMONY

Delaware Valley Chapter Award (Presented by Raymond Wu)

Farrington Daniels Award (Presented by Farrington Daniels, Jr.)

Sylvia Sorkin Greenfield

Memorial Award (Presented by Moses Greenfield)

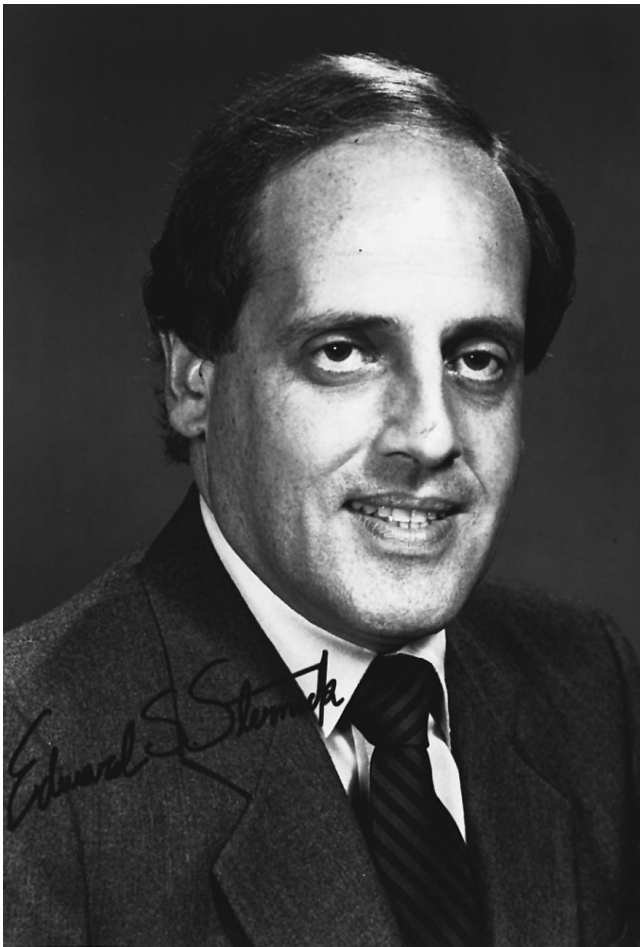
COOLIDGE AWARD (Presented by Kenneth Wright)

PRESIDENT'S MESSAGE

“Change is the only constant”N. Suntharalingham

DANCING

to “Music for Occasions”



Edward Sternick

Edward Sternick was the twenty-fifth president, serving in 1984. “Ned” received a Ph.D. in Medical Physics from UCLA in 1968 and then joined the Therapeutic Radiology Department at Dartmouth–Hitchcock Medical Center in Hanover, NH, where he became a pioneer in the application of computers to radiology. In 1978 he went to the Tufts–New England Medical Center in Boston as Director of the Medical Physics Division.

Topical Symposium. In March the AAPM sponsored a Mid-Year Topical Symposium in Mobile, AL, on “Multiple Regression Analysis: Applications in the Health Sciences.” Although a midyear symposium did not become an automatic annual event, the AAPM, through the Con-

tinuing Education Committee, did co-sponsor many topical symposia in cooperation with local chapters.

First Inter-American Meeting. The 1984 Annual Meeting of the AAPM in Chicago (Fig. 72) was combined with the first Inter-American Meeting of Medical Physics. The success of the meeting was due to the efforts of many individuals, particularly the members of the International Affairs Committee of the AAPM, under the direction of Cari Borrás. Local arrangements were handled by the Chicago chapter, with the committee chaired by Larry Lanzl. The International Affairs Committee established a fund to enable deserving Latin-American physicists to attend the meeting. Contributions were received from individuals, AAPM Chapters, and Corporate Members. From this fund 16 travel grants were awarded, as well as 10 scholarships to attend the AAPM summer school the following week.

Trilateral Summit. In his column in the November *AAPM Newsletter*, president Sternick proposed to establish regular trilateral “summit” meetings among the leaders of the AAPM, ACMP, and Physics

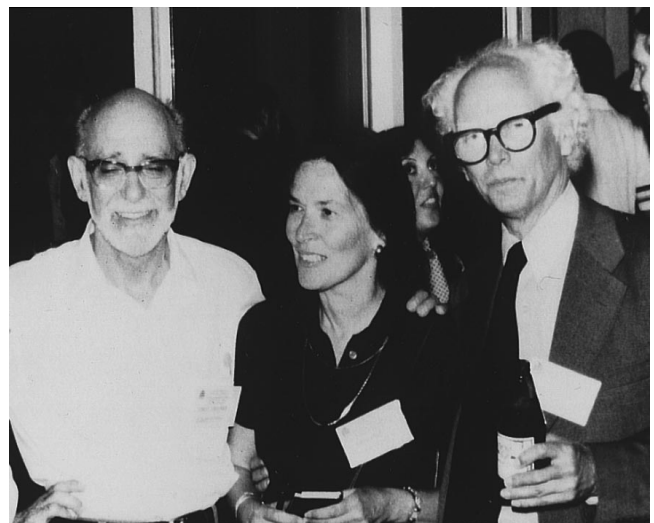


FIG. 72. Left to right: Robert Loevinger, Adele Hale, and John Hale (past president).

Commission of the ACR to share information, develop a strategy of continued dynamic growth, and create unifying, nondivisive policies within the respective memberships. The first of these meetings occurred the following spring in Chicago, and they have continued periodically since then.



James Purdy

James A. Purdy was the twenty-sixth president, serving in 1985 (Figs. 73–76). Jim received his Ph.D. degree in Nuclear Physics from the University of Texas at Austin in 1971, and then received postdoc-



FIG. 73. Jack Krohmer (past president), 1985 Coolidge Awardee.

toral training in medical physics at the M. D. Anderson Hospital in Houston. In 1973 he joined the Radiology Department of the Washington University School of Medicine in St. Louis, becoming Chief of Radiation Therapy Physics and Associate Director of the Mallinckrodt Institute of Radiology's Radiation Oncology Center.

Purdy was well known for his research and innovative contributions to radiation therapy physics, particularly the development of conformal therapy. He has remained very active in the AAPM, having served as chairman of the Science Council, participated in numerous task groups, and lectured in several AAPM International Workshops on radiation oncology physics. He has also been very active in other organizations, particularly the American Society of Therapeutic Radiology and Oncology (ASTRO) and the American College of Medical Physics (ACMP).

As president, Purdy appointed a number of *ad hoc* committees, including one to study the role of the AAPM in diagnostic imaging and to suggest programs to vitalize the association in that area. Another committee was given the task of developing a



FIG. 74. James Purdy (*left*, president) presenting the 1985 Coolidge Award to Jack Krohmer (past president).



FIG. 75. Left to right: Vernon Smith, Bruce Curran, Colin Orton (past president), and Arnold Cohen.

document to define the roles, responsibilities, and status of the clinical medical physicist. The resulting document proved to be useful to AAPM members in dealing with hospital administrators. Upon the recommendation of an *ad hoc* committee to review the need to preserve the archives of the AAPM, he approved a new committee, the AAPM History Committee, chaired by Bob Gorson, to receive and preserve the records of the AAPM.

Purdy also proposed the formation of an American Board of Medical Physics (ABMP) to be sponsored by the AAPM, ACMP, and other appropriate organizations. A survey, which he circulated to the membership, showed about a 50–50 split of the respondents for and against the formation of an ABMP. However, the previous year Purdy had proposed to the ACMP that they should take a role in the certification of medical physicists. Thus in 1985 the ACMP decided to sponsor an ABMP and invited the AAPM, along with other orga-



FIG. 76. Left to right: Edwin McCullough (president-elect), Elaine Osterman, James Purdy (president), and Edward Sternick (past president).

nizations, to help in the initial formation process. The AAPM board voted to accept the ACMP's invitation, and an ABMP Constituting Panel was formed, chaired by Ned Sternick, with physicists representing nine organizations, including the AAPM.

International Affairs. President Purdy appointed an *ad hoc* committee on Foreign Medical Physicists Membership/Publication Assistance to develop recommendations by which AAPM resources could be used to disseminate scientific and technical information to medical physicists in countries where salaries are too low to maintain membership in the AAPM or purchase AAPM publications. Purdy was also very active in promoting international relations in medical physics, visiting both China and Japan, where he participated in the Twenty-Fifth Anniversary of the founding of the Japan Association of Radiological Physicists (JARP). As a gesture of goodwill, the AAPM presented the JARP with a complete set of AAPM Reports, Monographs, and Symposium Proceedings. In response, JARP established two AAPM libraries, at Kyushu University and at the National Institute of Radiological Sciences.



Edwin McCullough

Edwin McCullough was the twenty-seventh president of the AAPM, serving in 1986 (Figs. 77 and 78). Ed received an M.Sc. in Nuclear Physics from the University of Maryland in 1967, and his Ph.D. in Radiological Physics from the University of Wisconsin, Madison, in 1971. He was then appointed a Postdoctoral Research Associate at Madison, and was, for a brief time, a Visiting Scientist at the MRC Cyclotron Unit at Hammersmith Hospital, London. In 1973 he joined the staff of the Mayo Clinic, Rochester, MN, as head of the Radiation Physics section, division of Radiation Oncology. He published widely in radiation therapy, and also some in diagnostic physics, such as the evaluation of CT scanners. He served on numerous AAPM



FIG. 77. Leonard Stanton (*left*) and Edwin McCullough (president).

committees and task groups, including chairman of the 1980 Annual Meeting Program Committee. As president he appointed several *ad hoc* committees, including one to provide liaison to the Constituting Panel of the ABMP, and one to provide guidelines for AAPM publications.

Special Interest Groups. At the 1985 annual meeting in Seattle Don Ragan requested that the Science Council consider

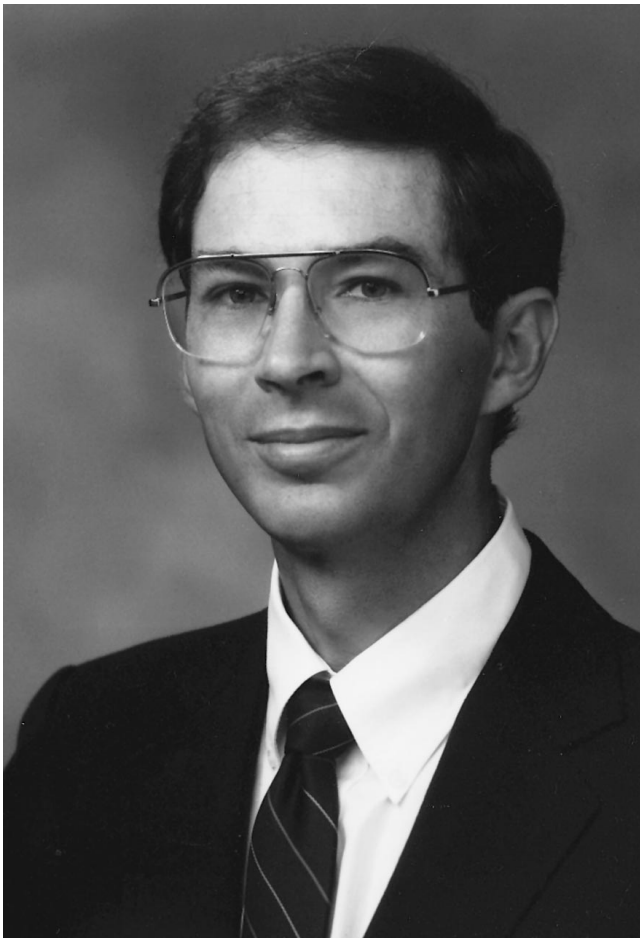


FIG. 78. Committee meeting.

a mechanism whereby members interested in a topic, such as computers, which cut across several committees, could form a “special interest group (SIG).” A report prepared by Anthony Benedetto suggested that SIG’s could be organized as semi-independent, after the manner of the “Councils” of the Society of Nuclear Medicine. However, this would have required changes in the by-laws; instead, it was proposed at the August meeting to es-

tablish a Science Council Computer Committee. This was subsequently approved by the Board.

Centers for Radiological Physics. In February the National Cancer Institute announced the termination of the ten-year Technology Transfer Demonstration Project carried out by the six Centers for Radiological Physics and the Coordination Office run by the AAPM. These were all phased out by April 1986.



Paul Carson

Paul L. Carson was the twenty-eighth president of the AAPM, serving in 1987 (Figs. 79–85). Paul received his PhD. from the University of Arizona. In 1971 he joined the Radiology Department at the University of Colorado in Denver. He had published widely in diagnostic radiology, particularly in ultrasound, and was well known for his writings and courses on the quality assurance of ultrasound equipment. He was a Fellow of the American Institute of Ultrasound, and Vice President of that group (1978–79). In 1981 he went to the Radiology Department of the University of Michigan in Ann Arbor as head of diagnostic physics and Professor of Radiology. He was the first entirely diagnostic physicist to be elected president of the AAPM.



FIG. 79. *Left to right:* Edward Webster (past president), Gordon Brownell (Coolidge Award recipient), and Paul Carson (president).

American Board of Radiology Sponsorship. At its February meeting the Board of the ABR agreed to support AAPM sponsorship of the ABR with one trustee, instead of the usual three. Leaders of the American Roentgen Ray Society, which had opposed AAPM sponsorship, thought that the ARRS would accept that compromise. The AAPM Executive Committee voted 3 to 2 to request ARRS approval with one trustee. However, in view of strong feelings by many members, it was



FIG. 80. *Left to right:* Edwin McCullough (past president), Paul Carson (president), Joseph Sayeg, and Gary Barnes (president-elect).



FIG. 81. Board Meeting. *Left to right:* Elaine Osterman (executive director), Paul Carson (president), Edwin McCullough (past president, board chair), and Jean St. Germain (secretary).

decided to postpone a decision until the Board meeting in July. At that meeting the Board rejected the plan to seek sponsorship with just one trustee, and agreed to continue to seek sponsorship with the normal three trustees.

Special Interest Groups (SIG's).

Following the recommendation of the *Ad Hoc* Committee on Diversification, the Board directed the Rules Committee to create an administrative committee to facilitate and coordinate the activities of



FIG. 82. Paul (*left*, president) and Pat Carson.



FIG. 83. *Left to right:* Edwin McCullough (past president), Paul Carson (president), and Gary Barnes (president-elect).

SIG's. Prakash Shrivastava was appointed chairman, and at the November Board meeting the committee plan was approved. SIG's could be formed by members interested in new or rapidly growing areas. The members would not write reports, but might suggest ideas for reports to the appropriate scientific committees. Subsequently two SIG's were formed, Computers and Medical Physics (CAMPSIG) and Nuclear Medicine Physics (NUCSIG).



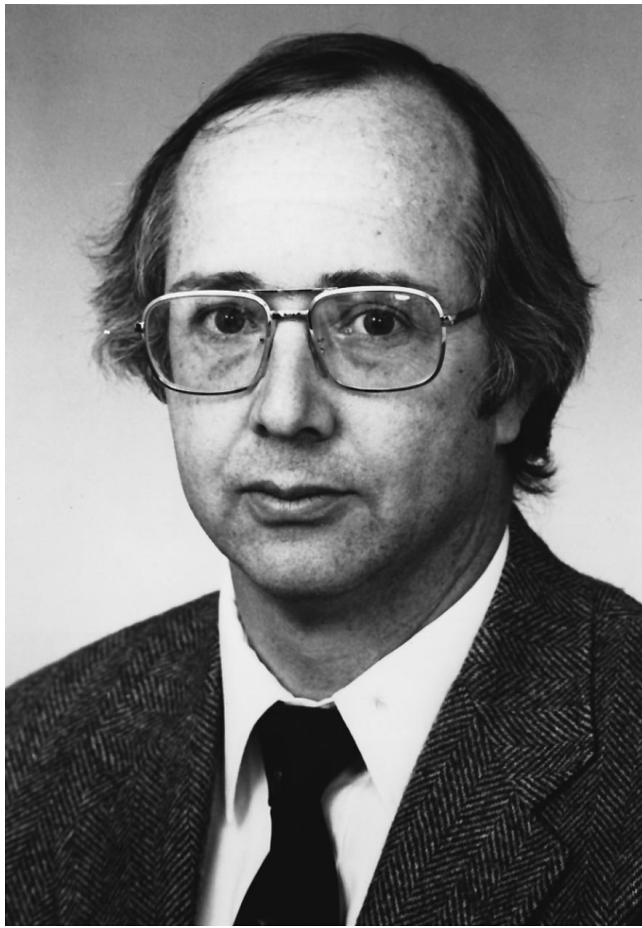
FIG. 84. *Left to right:* John McAfee, Jean St. Germain, and Paul Goodwin.



FIG. 85. *Left to right:* Charles Lescrenier, Margaret Lescrenier, Helen Kereiakes, and James Kereiakes (past president).

AAPM Fellows. The Board requested the Membership Committee to develop a category of Fellow, to honor those members who had made distinguished contributions to research, teaching, practice, or service to the AAPM.

American Board of Medical Physics. The *Ad Hoc* Committee on the ABMP recommended to the board that the AAPM accept the invitation of the ACMP to co-sponsor the ABMP. The Board declined to vote until position papers could be developed on both sides of the issue. It was later decided to poll the membership on this issue, with a questionnaire included with the 1988 ballot.



Gary Barnes

Gary Barnes was the twenty-ninth president of the AAPM, serving in 1988 (Figs. 86–91). Gary received a Ph.D. in Physics from Wayne State University, Detroit, in 1970, after which he spent two years as a postdoctoral trainee in medical physics at the University of Wisconsin, Madison. In 1972 he joined the Radiology Department of the University of Alabama School of Medicine at Birmingham, and at the time of his election he was Director of the Physics Division and Professor of Radiology. His speciality was diagnostic physics, particularly the physics of mammography, and he had served on many committees of the AAPM, ARC, ABR, and RSNA. He had been chairman of the AAPM Diagnostic

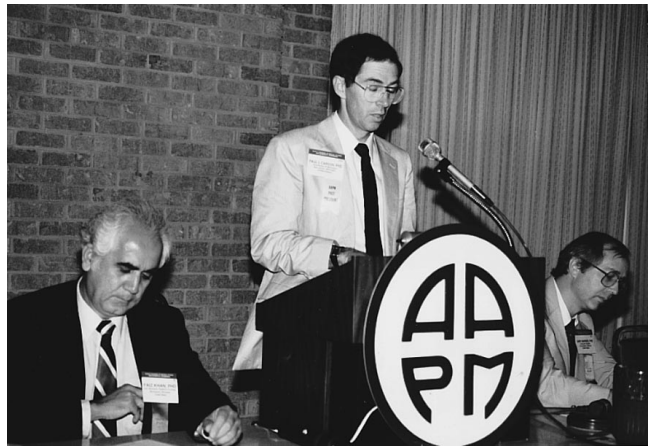


FIG. 86. *Left to right:* Faiz Khan (president-elect), Paul Carson (past president, board chair), and Gary Barnes (president).

Imaging Committee, and at the time of his election was chairman of the Science Council.

World Congress on Medical Physics and Biomedical Engineering. The highlight of 1988 was the meeting held in San Antonio, TX, 6–13 August, co-hosted by the AAPM. The Thirtieth Annual Meeting of the AAPM was held in conjunction with the Congress. Other participating organizations were the International Organization for Medical Physics (IOMP), Canadian Association of Physics, Canadian College of Physicists in Medicine (CCMP), International Union of Physical and Engineering



FIG. 87. Norman Bailly (*left*) and Palmer Steward.

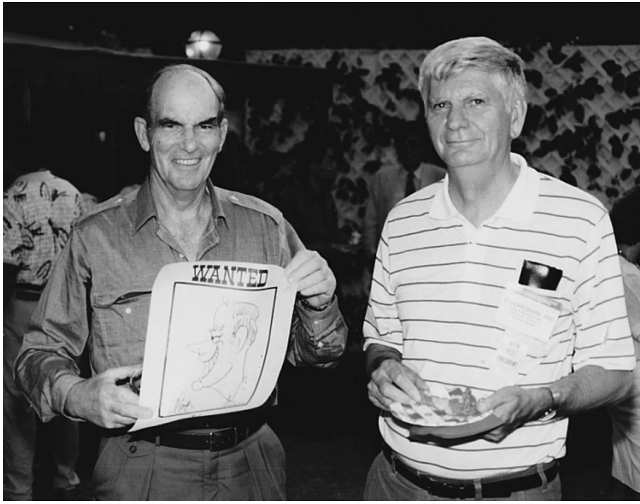


FIG. 88. Craig Nunan (*left*) and Clarence Kartzmark (past president).



FIG. 90. *Left to right:* Paul Carson (past president), Pat Carson, Gary Barnes (president), Lolly Barnes, Faiz Khan (president-elect), and Kathy Khan.

Sciences in Medicine (IUPESM), the Society for Biomaterials (SFB), and the International Federation for Medical and Biological Engineering (IFMBE). Gary Fullerton was co-president of the Congress, Al Smith was co-director of the Scientific Program, and the Local Arrangements Committee was chaired by David Kopp. It was a record for medical physics and medical engineering meetings, with more than 1,500 papers and posters presented. Total attendance was 3,595: 2,557 physicists, engi-

neers, or scientists: 511 exhibitors: and 527 companions and children.

ABR and ABMP Sponsorship. At the November 1987 AAPM Board meeting a motion was passed to poll the membership on these two issues, with a ballot to be included with the 1988 election ballot. The questions were:

- (1) If ABR sponsorship with one trustee were offered at this time, would you be in favor of accepting it?



FIG. 89. John Cunningham (*left*) receiving the 1988 Coolidge Award from Gary Barnes (president).



FIG. 91. *Left to right:* Elaine Osterman, Jean St. Germain, Gary Barnes (president), and Faiz Khan (president-elect).

Result: 421 in favor, 253 opposed.

- (2) Do you support AAPM sponsorship of the ABMP at this time?

Result: 212 in favor, 478 opposed.

At the San Antonio board meeting in August a motion was passed to postpone AAPM sponsorship of the ABMP indefinitely.

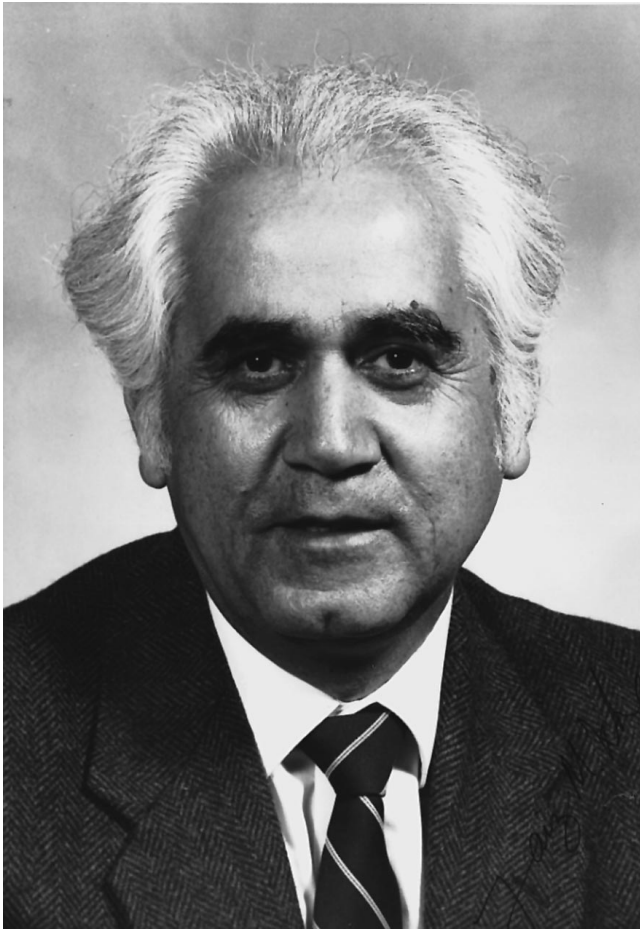
Scholarships. A task group of the Awards and Honors Committee established a scholarship program for medical physics trainees, with the first awards to be made in the spring of 1989. The Awards Committee also set up a scholarship program to enable junior physicists to attend the Summer School, with the first awards to be for the 1989 session.

State Licensure of Medical Physicists.

At the San Antonio meeting a professional symposium was held on the topic, “Should not licensure be required for medical physicists as well as for our physician colleagues?” Speakers included Ralph Worsnop, William Hendee, Robert Gorson, and Tom Payne, all of whom strongly supported the case for licensure. Earlier that year the ACMP had requested its Region VIII (the state of Texas) to be the bellweather state of the attempt to obtain licensure, and had appropriated \$10,000 toward the support of that effort. At the annual meeting in San Antonio the AAPM voted to support licensure, and appropriated \$7,500 toward the Texas effort.

PERIOD 4 (1989–1998)

1989	.....	Faiz Khan
1990	.....	Alfred Smith
1991	.....	Gary Fullerton
1992	.....	Robert Dixon
1993	.....	Richard Morin
1994	.....	Ravinder Nath
1995	.....	Guy Simmons
1996	.....	Bhudatt Paliwal
1997	.....	Stephen Thomas
1998	.....	Lawrence Rothenberg



Faiz Khan

Faiz M. Khan was the thirtieth AAPM president with his term in the year 1989, and also served on EXCOM on the preceding and following years (Figs. 92–105).

Faiz was born in Multan, Pakistan. He matriculated at Emerson College, Multan, earning the B.Sc. with majors in physics, math, chemistry, and English in 1957; and at the Government College, Lahore, Pakistan, for the M.Sc in 1959. He was employed as Health Physicist, Radiotherapy Institute, in the Mayo Hospital at Lahore, for three years. Faiz immigrated to the U.S.A. and entered the University of Minnesota, earning the Ph.D. in biophysics in 1969. He was initially on the staff as Instructor in Radiology, rising over the years to Director of the Section on Radiation



FIG. 92. Left to right: William Hendee (1989 Coolidge Award recipient), Faiz Khan (president), and Kenneth Wright.

Physics and to Professor of Therapeutic Radiology. He has carried out extensive research on radiation dosimetry of electron

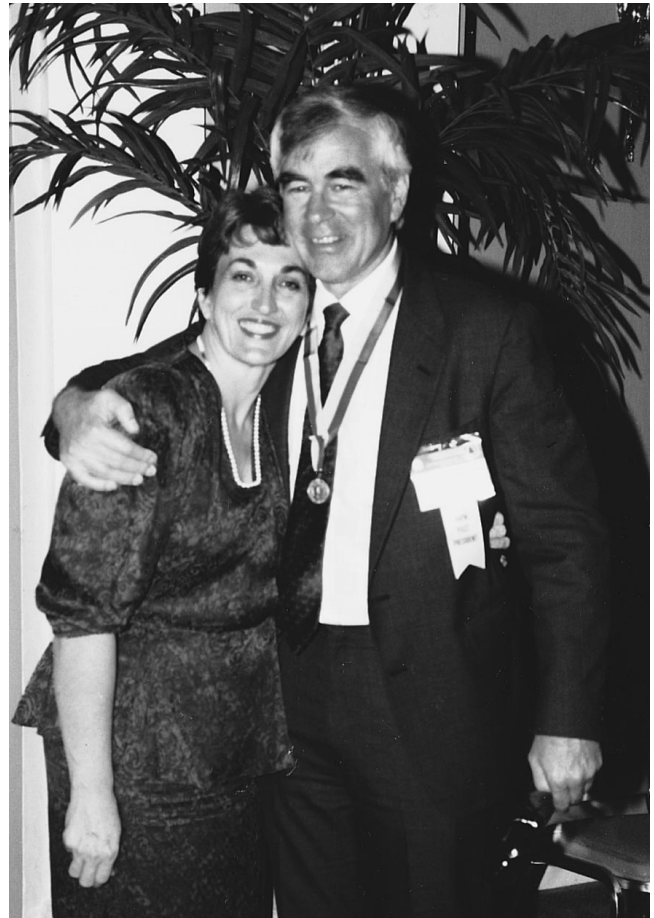


FIG. 93. Jeanne (left) and William Hendee.



FIG. 94. Coolidge Awardee William Hende.



FIG. 97. Barbara (left) and Colin Orton (past president) after the “Phun Run.”



FIG. 95. Registration booth.



FIG. 98. Left to right: Steve Balter, Geoff Ibbott, Rick Morin, Mark Edwards, Ann Wright, Paul DeLuca, and Ray Tanner.



FIG. 96. Cake celebrating the twentieth anniversary of the Phun Run.



FIG. 99. 1989 Officers and Board. Seated (from left to right): Alfred Smith (president-elect), Elaine Osterman, Faiz Khan (president), Gary Barnes (past president), Kenneth Kase, and Guy Simmons.



FIG. 100. Norman (*left*) and Rose Baily.

and photon beams, treatment planning algorithms, electron beam modeling, applications of computers in radiology, and bone-tissue interface dosimetry. At Minnesota, Khan developed an educational program for resident physicists in clinical radiation physics. Also, he authored a widely used textbook on the physics of radiation



FIG. 101. *Left to right*: Sylvia Smathers, James Smathers, June Almond, and Peter Almond (past president).



FIG. 102. *Left to right*: Jack Krohmer (past president), William Hendee, and Edward Chaney.

therapy. At the time of his presidency, Khan was Professor and Director, and still holds these responsibilities. Faiz was an active participant in the 1989 AAPM Summer School and has emphasized the importance of this feature of the AAPM ever since.

Some events during 1989:

Residency Training. A major contribution by Faiz was his championship of residency-type training programs for physicists. Although isolated instances of this concept existed on a hospital supported ba-



FIG. 103. AAPM booth.



FIG. 104. Faiz Khan (*left*, president) and Gary Barnes (past president, board chair).

sis, the AAPM had nothing in place to emphasize this concept. Faiz supported the sequence of following a strong education in the basics of physics and mathematics with such residency programs to introduce clinical applications and educate physicists on their objectives and details. He established an *ad hoc* committee chaired by Ned Sternick to address all issues concerned with hospital based clinical training programs, with representation from the ACR, ACMP and AAPM. The report of this *ad hoc* committee, entitled “Essentials and guidelines for hospital-based medical physics residency training programs,” is available as AAPM Report No. 36 (AAPM, New York, 1990). An invited editorial by Faiz Khan on this subject was published in *Medical Physics* **18**(3), 1991.



FIG. 105. Elaine Osterman and Faiz Khan.

ABR Sponsorship. Faiz re-addressed (31 July 1989) the ABR asking for sponsorship status for the AAPM, with strong initial support from all but two of the other sponsoring organizations. An official response from the ABR (31 March 1991) was received by Khan accepting the AAPM as a sponsoring organization with one Trustee.

Development. Faiz established a Development Committee chaired by Jean St. Germain. The Committee was charged with the responsibility of raising an Endowment Fund for the purpose of funding academic degree fellowships and clinical residency physics fellowships, and directing implementation.

COMP Relationship. Faiz appointed a committee chaired by Colin Orton to study enhancement of the relationship between the AAPM and COMP.



Alfred Smith

Alfred R. Smith was the thirty-first president of the AAPM, serving throughout 1990 (Figs. 106–114). “Al” Smith also served as president-elect in 1989 and as chairman of the AAPM Board during 1991.

Smith had studied for his B.A. degree at Eastern New Mexico University with a major in mathematics, and earned his M.S. and Ph.D. degrees at Texas Tech University with a major in Physics. His research field was in solid-state physics. He then spent a year as a Postdoctoral Fellow at the M.D. Anderson Cancer Center, and served on their staff from 1972 to 1978. During this period he worked on developing neutron treatment beams and systems for neutron treatment, planning, and dosimetry. From 1975 to 1982 he was at the Los Ala-



FIG. 106. Alfred Smith (president).

mos National Laboratory in New Mexico conducting clinical research with negative pi mesons. He was director of clinical physics and technology for the pion project. From 1982 to 1985 he was on the staff of the NCI in Bethesda where he implemented national working groups to evaluate treatment planning for heavy charged particles, high-energy photons and electrons, brachytherapy, and radiolabelled antibodies. In 1985 Smith joined the staff of the Hospital of the University of Penn-



FIG. 107. Peter Almond (left, past president) receiving the 1990 Coolidge Award from Ann Wright (past president).



FIG. 108. *Left to right:* Martin Rozenfeld, Geoffrey Ibott, and Herb Attix.



FIG. 109. Joseph Sayeg receiving award for preserving the history of the AAPM through photos.



FIG. 110. *Left to right:* Jacques Ovadia (past president), Peg Wright, Kenneth Wright, and Florence Ovadia.



FIG. 111. *Left to right:* Edward Sternick (past president), Jean St. Germain, Robert Gorson (past president), Stephen Balter, and Lawrence Lanzl (past president).

sylvania as Physicist and as Professor of Radiation Physics. There he worked with Varian on development of the multileaf collimator, and also on the first Varian liquid ionization chamber electronic imaging system for portal imaging. From 1989 to 1991 Smith also devoted his innovative capabilities to his AAPM presidential responsibilities. In 1992 he joined the staff of the

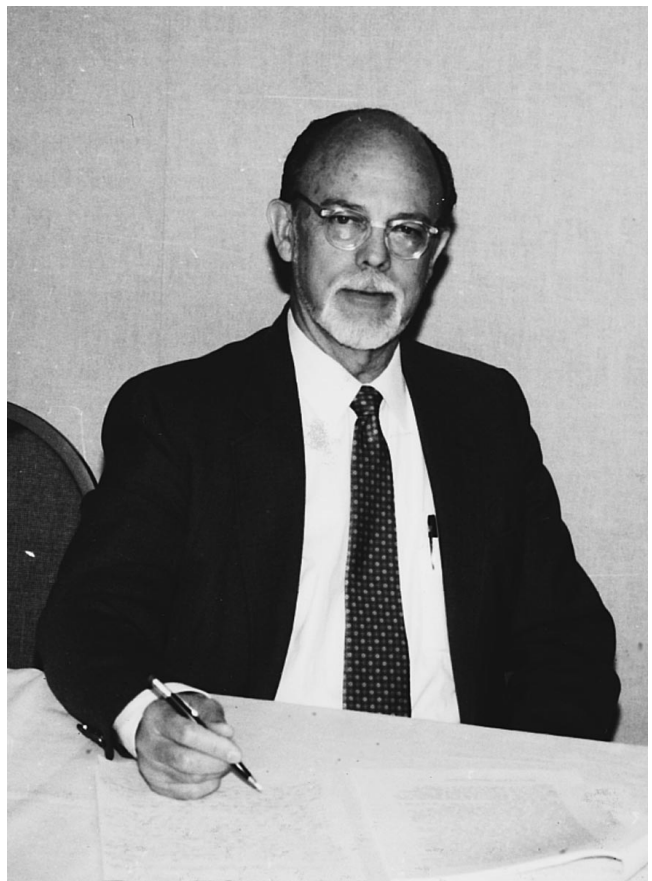


FIG. 112. Herb Attix.



FIG. 113. Left to right: Kenneth Kase, Gary Fullerton (president-elect), Elaine Osterman, Guy Simmons, and Alfred Smith (president).

Massachusetts General Hospital (MGH) to work on proton therapy and serve as Director of the Proton Clinical Physics Group and as Associate Director of the Northeast Proton Treatment Center.

AAPM activities and accomplishments during 1990 included:

Clarification of the Incorporation Status of the AAPM. An excerpt from the *Newsletter* article written by Smith in 1990 on this important topic in the *Newsletter* is given on pp. 1329–1330.

Physics Residencies. Obtained support by the ACR of the concept of clinically oriented Medical Radiation Physics Residency Programs, which was also supported by the ACMP. Also, the AAPM Board endorsed the document on the guidelines of such residency training programs. This document was produced by a committee chaired by Ned Sternick.

ABR Sponsorship. A consequence of continued support of the initiative by Khan to achieve an official role for the AAPM with respect to the ABR resulted in their amending their by-laws to accommodate the AAPM as a sponsor with one Trustee.

Trilateral Committee. Smith sup-

ported the potentially important Trilateral Committee giving it official status by listing it in the *Membership Directory*, and holding the first official meetings of this Committee. A Trilateral Task Group was formed to write Practice Standards for radiation therapy physics, with the ACR–COP designated to be the point group for this activity.

Headquarters Office Review. Appointment of an *ad hoc* committee chaired by Chris Marshall to undertake a study of the functions of our Headquarters Office, to survey options for the AAPM, and to recommend a relocation choice. This action became necessary with the decision of the AIP to move their headquarters to Maryland.

ACR Support. At their annual meeting the ACR approved a resolution strongly supporting state licensure for medical radiological physicists.

Newsletter Editorship. With appreciation for Bruce Curran as retiring editor of the *Newsletter* after several years of hard work, David Kopp and Jack Lancaster were appointed as *Newsletter* co-editors.



FIG. 114. History Committee. Left to right: Stephen Balter, John Cameron (past president), Robert Gorson (past president), Joseph Sayeg, and John Laughlin (past president).

Beijing ICRMP. The importance of the planned “Beijing International Congress on Medical Radiation Physics” for 27–30 May was emphasized in the *Newsletter*.

Residency Accreditation. The AAPM Board endorsed the previously described document on medical physics residency training to establish the criteria to be used by our accreditation commission.

Clarification of the Incorporation Status of the AAPM [excerpt from the “President’s Column” in the May/June 1990 (*Newsletter*, Vol. 15, No. 3):

AAPM Articles of Incorporation

The original articles of incorporation of AAPM (filed in the District of Columbia, November 1965) stated five purposes for which the organization was organized.

- A. To promote the application of physics to medicine and biology.
- B. To secure and to maintain high professional standards for physicists in medicine and biology.
- C. To encourage interest and training in medical physics and related fields.
- D. To prepare and to disseminate technical information in medical physics and related fields.
- E. To secure and to represent the professional interests of physicists in medicine and biology.

In 1968, the AAPM sought to affiliate with the AIP. The AIP required that affiliate organizations have a 501(c)(3) federal tax status. The corporation applied to the Internal Revenue Service for a ruling that it qualified as a tax exempt, charitable, scientific, and educational organization under Section 501(c)(3) of the Internal Revenue Code. The IRS refused to issue such a ruling on the basis

that the corporation was organized for the purpose among others, of promoting the individual and professional interests of its members. In order to secure the 501(c)(3) status the AAPM Board of Directors voted in June 1968 to amend the Articles of Incorporation by eliminating the two purposes (B & E) relating to professional activities and to amend the By-Laws by eliminating a sentence of a section entitled, “Duties of the President,” which read, “He shall call to the attention of the Corporation any matter which affects its professional interests.” They also amended the section entitled, “Standing Committees,” by eliminating the Professional Ethics Committee and deleted an article on Discipline which contained sections on Ethical Principles and Violation of Ethical Principles. The Board of Directors recommended these actions for approval by the AAPM members at the 1968 Annual Business Meeting and this action was taken.

For reasons unknown to us now, the Articles of Incorporation filed in the District of Columbia were never amended to reflect these 1968 decisions. However, the articles as printed in the AAPM membership directory were amended and the two purposes relating to professional activities were omitted (see page 31 of the *1998 Membership Directory*).

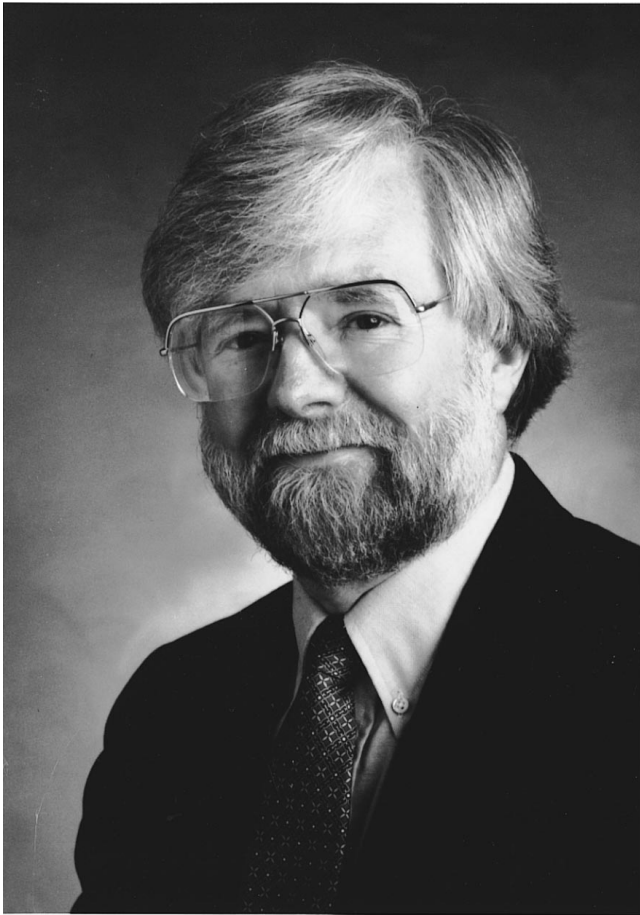
In order to enact the 1968 decision and to insure our tax exempt status, legal counsel has recommended that we change the Articles of Incorporation as filed in the District of Columbia and we have initiated this action.

In 1973, the AAPM obtained full membership with AIP, based on the requirement, among others, of a continuing 501(c)(3) IRS status. That same year, after discussion with AIP legal counsel, it was determined that the AAPM could engage in limited professional activities under a Professional Council organized as a standing committee. This was considered and approved at the Winter 1973 Board meeting.

It seems that under current interpretation of the tax code relating to 501(c)(3) organization, the AAPM can carry out a rather broad range of professional activities—indeed other

organizations such as the ACR and ACMP have 501(c)(3) status and engage in professional activities. Accordingly, there is little or no reason to consider a reinstatement of purposes related to professional activities in the Articles of Incorporation. In fact, our AIP le-

gal counsel advises against such action on the basis that it may endanger our coveted 501(c)(3) status. When the Articles of Incorporation have been changed to reflect the 1968 decisions of the Board of Directors and membership, everything will be in order.



Gary Fullerton

Gary D. Fullerton was the thirty-second AAPM president and served during the



FIG. 115. Gary Fullerton (president).



FIG. 116. At the reception. *Left to right:* Edward Webster (past president), Dorothea Webster, Eunice Laughlin, Peg Wright, John Laughlin (past president), Kenneth Wright, and Alfred Smith (past president).

year of 1991 (Figs. 115–130). As usual, he served three years on EXCOM during the preceding year of 1990 as president-elect and the following year of 1992 as chairman of the Board.

Gary matriculated as an undergraduate at the University of California, receiving his B.A. with a major in physics in 1963. He, and his wife, Nancy, then undertook teaching assignments in Vienna, Austria. By chance, their apartment for one year had been the previous home, much earlier, of Ludwig Boltzman. When they returned to the U.S.A., Gary entered graduate school at



FIG. 117. 1991 EXCOM. *Left to right:* Robert Dixon (president-elect), Bruce Curran, Alfred Smith (past president), Elaine Osterman, Gary Fullerton (president), and Kenneth Kase.



FIG. 118. James (*left*, past president) and Helen Keriakes.

the University of Wisconsin where he carried out a research study on the relation between osteoporosis and bone density. This study made use of the original development at Wisconsin of the concept and apparatus for quantitative scanning measurement of bone density at specific sites.

Gary was also involved in the Wisconsin Center for Radiological Physics for one



FIG. 119. Richard (*left*) and Carol Morin.



FIG. 120. C. Clifton Ling reporting.

and a half years. Much of his survey work was on mammography, which was of particular concern to the NCI and to each of the six CRP's. The dose measurements by each of the six CRP's demonstrated a large variation in the exposure received by the patients undergoing mammography in different hospitals with different staff and different x-ray units. Advice on equipment, filtration, voltage, wave form, film, and



FIG. 121. RSNA presents AAPM with \$50,000 for education.

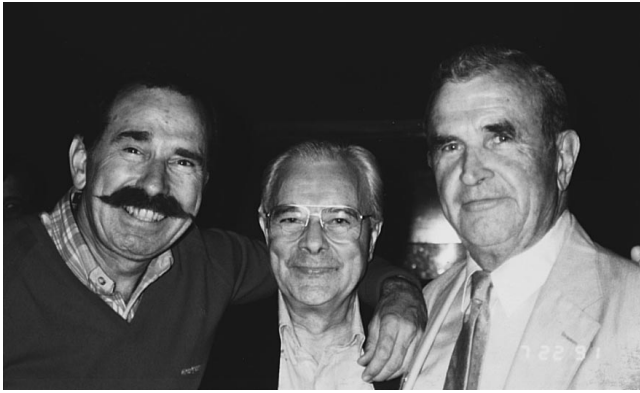


FIG. 122. *Left to right:* Stewart Bushong, Edward Webster (past president), and Jack Krohmer (past president).

measurement procedures by the CRP staff in the different regions served a vital public purpose in reducing markedly the exposure in mammography.

In 1978, Gary accepted a position in San Antonio as chief physicist, Radiation Sciences Division, Radiology Department of the University of Texas Health Sciences Center, with responsibility for graduate school teaching and also with time for clinical operations and studies. He was asked to serve temporarily as the acting director of clinical physics. When they obtained a director, Gary was able to devote time to his interests in diagnostic imaging,



FIG. 123. *Left to right:* Gary Fullerton (president), Nancy Fullerton, Robert Dixon (president-elect), and Marsha Dixon.

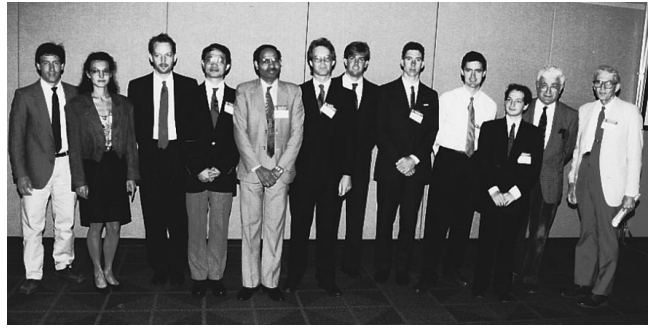


FIG. 124. Ten Young Investigators with Arnold Feldman (*second from right*) and Kenneth Wright (*far right*).

including the new field of magnetic resonance imaging and spectroscopy studies. In 1985, the University was able to reestablish the graduate program with Gary as division chief. He had competent colleagues to assist on the different clinical physics programs.

An opportunity existed to consider a major expansion of imaging equipment and program and for planning the establishment of a Research Imaging Center, with a staff of research oriented physicians and physicists. The equipment envisaged included multiple magnetic resonance units to permit both imaging and spectroscopy studies, a cyclotron for production of positron-



FIG. 125. Gary Fullerton (*left*, president) and Kenneth Kase.



FIG. 126. Left to right: Robert Shalek (past president), Jacques Ovadia (past president), Rose Baily, Bella Greenfield, Moses Greenfield, and Norman Baily.

emitting nuclides as labels for compounds of physiological significance, positronemitter tomography scanning apparatus, and animal maintenance facilities. The program received substantial support and has attracted both staff and graduate students.

Gary was elected AAPM president at about the same time as he became the editor of a new journal for magnetic resonance imaging. His position at the time of his presidency was: Professor and Chief, Radiation Sciences Division of the Radiology Department of the University of Texas Health Sciences Center, San Antonio.

Events and actions in 1991:



FIG. 127. Left to right: Gary Fullerton (president), Kenneth Wright, and Moses Greenfield (1991 Coolidge Award recipient).



FIG. 128. Christodoulos Constantinou and family.

Major Issues. In his first “President’s Column,” Gary identified five subjects to be dealt with in 1991, including: headquarters relocation, the Centennial of radiology and radiation physics, the professional role of the AAPM, and evaluation of our liaison programs.

Relocation. As president, Gary reappointed the *ad hoc* committee appointed by Al Smith to investigate and advise on the relocation of our headquarters. Before the end of 1991 this committee recommended



FIG. 129. Left to right: Gary Luxton, Phil and Lillian Heinz, Bengt Bjarngard, and Ben Mijnheer.



FIG. 130. Krishnadas Banerjee and daughter Rini.

relocating to the “American Center for Physics” to be located at College Park, MD.

Radiology Scope Expansion. Gary called attention to the period of unprecedented change due to the introduction of new technologies such as MRI, MRS, SPECT, PET, digital angiography, and other devices using computer imaging concepts. Guy Simmons agreed to chair a presidential *ad hoc* committee on “The Future of Medical Imaging” to be formed to develop an analysis of these changes and to develop any changes the AAPM and its members should consider to improve AAPM interactions with radiology.

Professional Role of the AAPM. Gary emphasized that, in recent years, the formation of the ACMP and of the ACR–COP had considerably influenced the evolution of the professional role of the AAPM. He believed that the predominant view was that the AAPM plays a vital and continuing role in the professional development of medical physicists, and

that this requires close coordination of these groups, which would be achieved through strong support of the Trilateral Committee.

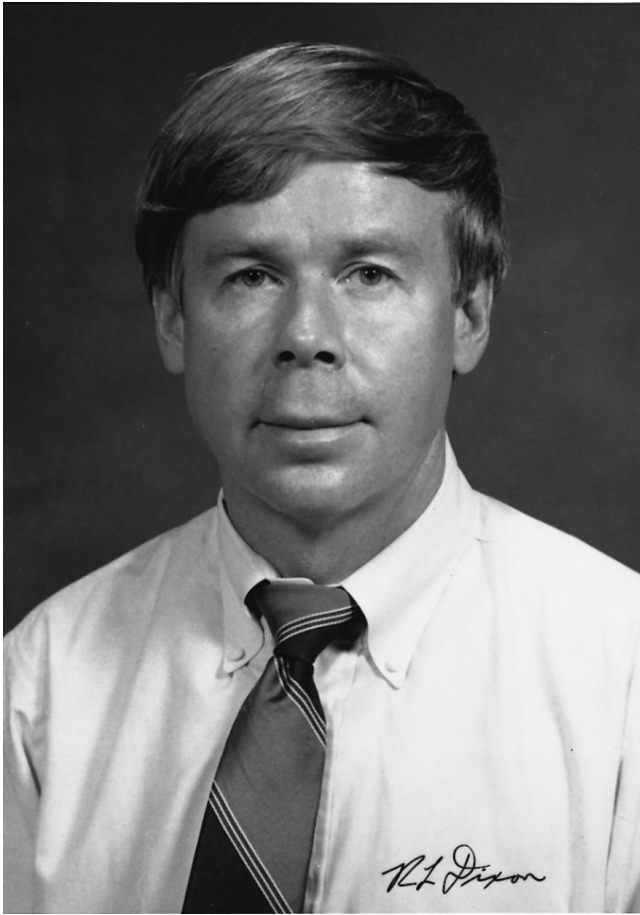
Liaison Programs. President-elect Bob Dixon agreed to form an *ad hoc* committee to evaluate these relationships and recommend any actions.

ABR Sponsorship. An official letter (13 March 1991) was received from the ABR advising that, in response to the earlier request by former president Khan for AAPM sponsorship of the ABR, the ABR approved of AAPM sponsorship with one trustee on its Board of Trustees. Subsequently, EXCOM and the AAPM Board accepted this offer by the ABR, and three nominees were designated for selection of one trustee by the ABR.

Accreditation of Medical Physics Residency Programs. In accordance with discussions with the Trilateral Committee, Gary appointed a presidential *ad hoc* committee composed of representatives of all three professional groups with Rick Morin as chairman.

AAPM Development Program. The importance of this project, which had a goal of two million dollars for an endowed fund for the education of medical physicists, was emphasized in an announcement in the *Newsletter* by Jean St. Germain, chair of the Development Committee.

World Congress on Medical Physics and Biomedical Engineering. Kyoto was the venue for this Congress which was also the ninth IOMP Conference. Over 2,000 physicists and engineers attended with about 200 from the U.S.



Robert Dixon

Robert “Bob” L. Dixon was the thirty-third president of the AAPM during 1992



FIG. 131. John Cameron (*left*, past president) presenting the 1992 Coolidge Award to Nagalingam Suntharalingam (past president).



FIG. 132. Nagalingam Suntharalingam (past president) and family.

(Figs. 131–140). He served on EXCOM for three years, including the years preceding and following 1992, and also had the Board chairman responsibilities in the following year.

Bob was early interested in radio technology, had his own transmitter, and was also a Morse code expert. With the aid of an ROTC scholarship, Bob attended the University of South Carolina, earning his B.S. in physics in 1963. From 1964–68 he was an Instructor in reactor physics in the U.S. Naval Nuclear Power School, and also studied graduate school physics evenings at Johns Hopkins University. At the Naval Power School he worked with Hyman Rickover. After his discharge from the Navy he resumed graduate study at the University of South Carolina earning his Ph.D. in nuclear physics in 1970. Bob’s research interests have been in applications



FIG. 133. Officers at board meeting.



FIG. 134. Accreditation Committee. *Left to right:* Carolyn Kimme-Smith, Joseph Blinick, George Callendine, and John Kent.

of magnetic resonance in biophysics, thermoluminescence phosphor research in dosimetry, and computer applications in medicine.

Bob became Professor of Radiological Physics in the Department of Radiology of the Bowman Gray School of Medicine, Wake Forest University, SC, where he was located at the time he became AAPM president. Bob is also a pilot, flying his own single-engine trainer.

Some events during 1992:

Trilateral Committee. President Dixon reported on the first all-day meeting



FIG. 135. Frances Harshaw (*left*) and John Andrew.



FIG. 136. C. Clifton Ling.

of the leaders from the three professional medical physics organizations. He reported effective discussion and analysis of problems, and corrective actions to be taken concerning: retention of physicists in the new JCAHO standards; existence of a requirement in the ACR practice accreditation for equipment quality control by a physicist, or for a physicist's role in the



FIG. 137. Clarence Karzmark (*left*, past president) and Shirley Vickers.



FIG. 138. Robert Dixon (president) and family.



FIG. 139. Jerome Dare.



FIG. 140. Headquarters location, American Center for Physics, College Park, Maryland.

review process; and encouragement of physicists to be active in the local ACR chapters; and the desirability of a consistent definition of “Qualified Physicist” by all three societies.

Education Endowment Fund Pledges.

Details of substantial donations by physicists to this fund are given in a table in Volume 17, No. 2, of the *Newsletter*.

Membership Growth. The total membership of the AAPM had grown to 3,382 by June 1992!

Relocation. The Board of Directors, after a comparison of the bids and services proposed by the ACR and the AIP, and after a report by the Relocation Committee, decided to accept the AIP proposal. (See Fig. 140.)

Accreditation. The AAPM Board of Directors approved the by-laws for the independent accreditation commission for educational programs. This commission was to be independent of AAPM and to be co-sponsored by the AAPM, ACMP, and ACR.



Richard Morin

Richard “Rick” L. Morin was the thirty-fourth AAPM president with responsibility during the year 1993 (Figs. 141–148). Rick also served on EXCOM for three years (1992–1994) and was Board chairman for 1994.

Rick attended schools in Miami and matriculated in Emory University, receiving his B.A. with a major in chemistry. He was greatly influenced by a course he had with John Palms, chair of physics, and also studied with Robert Rohrer. He studied at the University of Florida with Walter Mauderli earning the M.S. with a major in Radiation Biophysics in 1973. He then entered the graduate school in medical physics at the University of Wisconsin, where he was a Graduate Assistant, and worked with Nick-

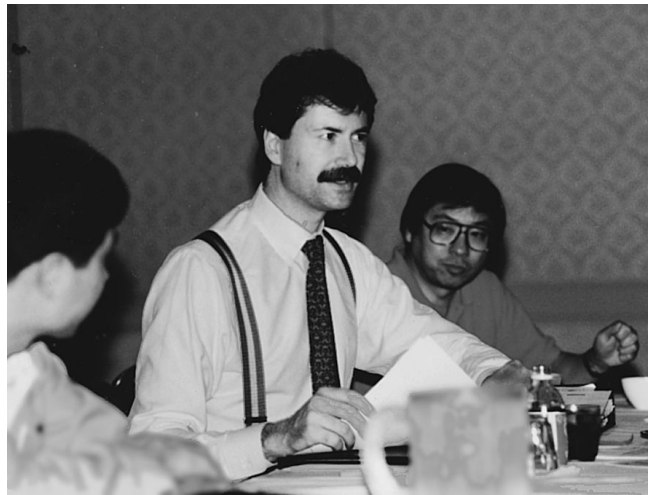


FIG. 141. Geoffrey Ibbott at a meeting of the Professional Council.

les, Holden, Kelsey, and others. He also worked with radioactive gases for use in nuclear medicine. At this point he transferred to the graduate school at the University of Oklahoma working in radiological sciences with Raeside and Adams. With his research dissertation, “Monte Carlo Simulation and Pattern Recognition in Computed Tomography,” he completed his Ph.D. requirement in 1980.

Following his doctorate he accepted the position of Assistant Professor at the University of Minnesota in Radiation Physics



FIG. 142. Lawrence Lanzl (*left*, past president) and Nan-Zhu Xie.



FIG. 143. “The Mutants.” Performing at the night out. *Left to right:* Mortimer Heller, Joseph Blinick, Frances Harshaw, Shirley Vickers, and Penny Butler.

(Nuclear Medicine), where he worked with Merle Loken. He became Director of Physics in Diagnostic Radiology, responsible for clinical, teaching, and research activities and was promoted to Associate Professor with Tenure. In 1987, he accepted appointment at Mayo Clinic Rochester as Senior Associate Consultant, reaching the position of Consultant in 1990 and re-



FIG. 145. Mortimer Heller.

cated to Mayo Clinic Jacksonville. He was appointed Professor in 1994. During his presidential term he was a member of the Consulting Staff at Mayo Clinic Jacksonville in Diagnostic Radiology and Radia-



FIG. 144. Joseph Blinick.



FIG. 146. “The Mutants.” Frances Harshaw, Shirley Vickers, and Penny Butler.



FIG. 147. Awards and Honors Committee.



FIG. 148. Officers at Board meeting.

tion Safety Officer for Mayo Clinic Jacksonville and for St. Lukes Hospital. His early and continuing research interests have included computer applications in radiological practice, with particular emphasis on the electronic practice of radiology.

In addition to its other problems, the AAPM faced the necessity of relocation at this time. In this connection, Rick Morin, in his President's Column of May 1993, paid special tribute to Elaine Osterman for her service as executive director during the past decade: "she has presided over a steady increase in our membership and a significant increase in attendance and sponsorship of our Annual Meetings." He went on to thank her for her assistance on many trying and important decisions and for her guidance, and wished her all the best in her new position directing the Society of Women Engineers in New York.

Some of the accomplishments during his term were listed in the *Newsletter* and in personal communication:

Transition. Successful transition of AAPM Headquarters from New York City to College Park.

New Staff. Recruitment and employment of new executive director and all office staff.

Electronic Media. The *Ad Hoc* Com-

mittee on Electronic Communications was a forerunner of the AAPM website and the Electronic Media Coordinating Committee.

Journal. The doubling of the publication schedule of our Journal, *Medical Physics*, to a monthly schedule commencing January 1994, was noted.

Professional. Successful trilateral effort to avoid the loss of the CPT codes for Physics Services. Effective communications with FDA, NRC, HCFA, JCAHO, and Congressional and Cabinet offices.

Administration. Initiating a plan for periodic strategic reassessment.

Closing thoughts by Rick Morin on the AAPM following his presidential service:

I shall always be grateful to my colleagues on EXCOM for tolerating the inconvenience and many accommodations to change necessary during my year: I continue to believe that AAPM has an important role for members (from students to Emeritus) in all three areas of Medical Physics. To change focus would be to leave important membership areas behind and shirk important responsibilities. Finally, I'm sure I join other Past Presidents in stating that I shall always remember the tremendous generosity of AAPM members—we are unique not only in talents and gifts, but in our ability to help others. Whether by background or discipline, AAPM members are a good lot. No matter the time, to lead the AAPM is truly an honor. Thank you.



Ravinder Nath

Ravinder Nath was the thirty-fifth AAPM president, serving in 1994 (Figs. 149–157). “Ravi” was born in India and attended the University of Delhi, receiving a B.S. in 1963 and an M.S. in 1965. He came to Yale as a graduate student, receiving his Ph.D. in Physics in 1971. He spent two years as a post-doc in the Physics Department, and then joined the Department of Therapeutic Radiology as a research physicist. At the time of his election he was Professor of Therapeutic Radiology, Yale University, and chief of Radiological Physics, Yale–New Haven Hospital. He had served on many AAPM radiation therapy committees and task groups, and had been Chairman of the AAPM Radiation Therapy Committee. As president he was very active in seeking AAPM participation in de-



FIG. 149. Phun runner Peggy Lescrenier.

cisions by government agencies, such as NRC regulatory revisions, and NIH priorities for diagnostic imaging research.

AAPM Sponsorship of the ABR. In January the Board of Trustees of the American Board of Radiology voted to increase the number of physics trustees from one to three, thus making the AAPM a full

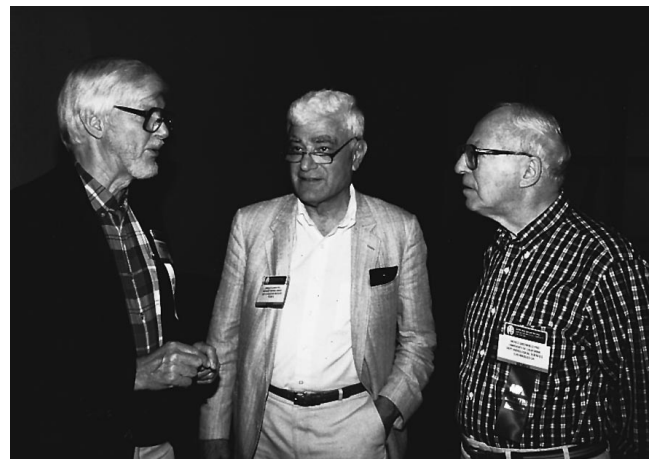


FIG. 150. Left to right: John Cameron (past president), Arnold Feldman, and Moses Greenfield.



FIG. 151. Left to right: Guy Simmons (president-elect), Ravinder Nath (president), and Richard Morin (past president).

sponsor. Their action was later approved by all the other sponsoring societies, thus successfully ending a 12-year quest. The Board of Trustees also passed a resolution stating that it would be a conflict of interest for societies that sponsor the ABR to also sponsor boards which offer certification in any of the same specialties as the ABR. This meant that the AAPM could no longer consider becoming a sponsor of the American Board of Medical Physics.

New Headquarters Opened. On 22 April the American Center for Physics (ACP), in College Park, MD, was formally dedicated. The new AAPM headquarters occupy space leased from the ACP. At the dedication M. R. C. Greenwood, Associate Director for Science, White House Office



FIG. 152. A light moment at the Board meeting.



FIG. 153. Jerome Dare and his camera.

of Science and Technology Policy, expressed the commitment of the Clinton administration to physics education and research.

AAPM International Workshop. In May the AAPM and the International Or-



FIG. 154. Hans Swenson.



FIG. 155. At the Board meeting.

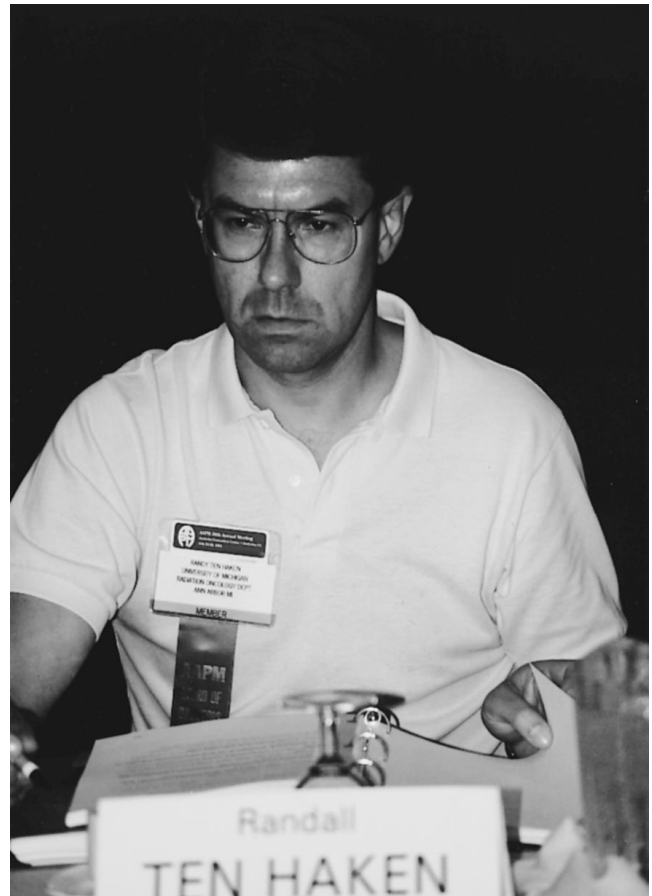


FIG. 156. At the Board meeting.

organization for Medical Physics (IOMP) co-sponsored a course/workshop on radiation oncology physics in Tehran, Iran. The course/workshop was organized by Azam Niroomand-Rad of the AAPM International Affairs Committee and Azim Arbabi, president of the Iran Association of Medical Physics. AAPM faculty members included Leroy Humpries, Faiz Khan, Azam Niroomand-Rad, Bhudatt Paliwal, and James Purdy.



FIG. 157. Paul Carson at Disneyland.



Guy Simmons

Guy Held Simmons, Jr. was the thirty-sixth AAPM president with responsibility for the year 1995 (Figs. 158–169). Guy served three years on EXCOM including Board chairman in 1996.



FIG. 158. Joint AAPM–HPS Symposium. *Left to right:* Ronald Kathren, Gail Adams, and Paul Frame.

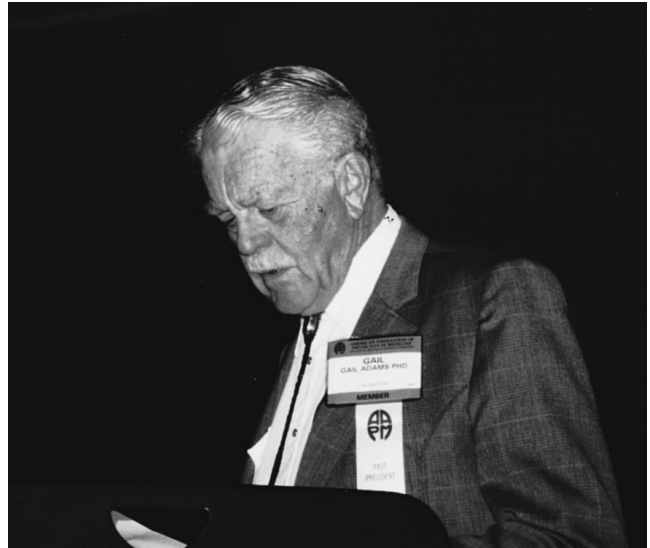


FIG. 159. Gail Adams (past president) presenting the Hartman Radiology Lecture.

Guy matriculated in the Western Kentucky University earning his B.A. in 1961, acquired the M.S. at the University of North Carolina in 1964, and achieved the Ph.D. in nuclear engineering at the University of Cincinnati in 1972. He also served on the faculty of the Western Kentucky University. He joined the USPHS (1961–72), and then joined the staff of the Veterans Administration Medical Center, Lexington, KY (1972–93). In 1991 he accepted his present faculty position of Professor of

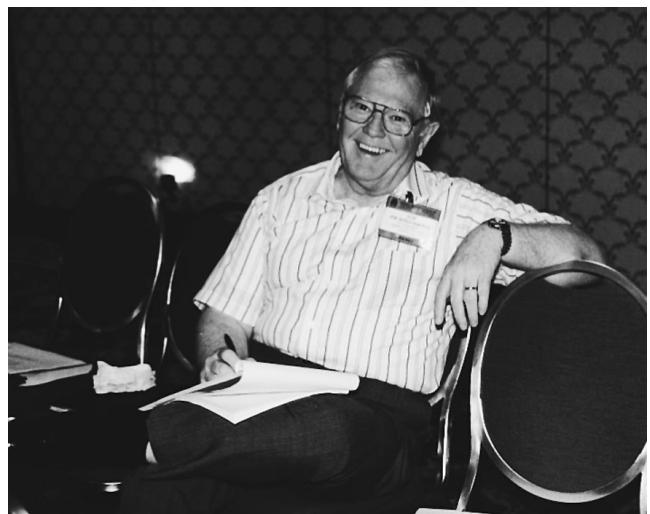


FIG. 160. Joe Windham.



FIG. 161. *Left to right:* Ravinder Nath (past president), Charles Coffey, and Sal Trofi.

Radiology at the Medical Center of the University of Kentucky, his position when elected AAPM president.

In addition to dealing with the various items seen by EXCOM, Guy was interested in identifying long-range problems confronting medical physicists, as well as possible solutions. These concerns included:

Managed Health Care. In 1994, the medical professions were concerned with the significant changes on the horizon in the delivery of health care in the U.S. Despite the demise of the Administration's health care proposals, the threat of governmental action had caused the industry to begin to reorganize itself. The main topic of the Radiology Summit in the summer of



FIG. 163. Guy Simmons (president) and Arthur Boyer (*right*).

1994 was the effect of managed care on radiology. Bengt Bjarngard had agreed to represent the AAPM at the Summit and Guy asked him particularly to identify possible impacts on the medical physics profession. Bengt's report included estimated effects on manpower supply and demand; on medical physics educational programs; on quality of service to patients; alterations in staffing patterns; and overall implications of a health care industry run by managers dedicated to maximizing financial



FIG. 162. *Left to right:* John Cunningham, Sophia van de Geijn, Johannes van de Geijn, and Margaret Lescrenier.



FIG. 164. Guy Simmons (president) and William Hanson (*right*).



FIG. 165. Guy Simmons (president) presenting the 1995 Coolidge Award to Robert Loevinger (right).

gain. Bengt's report provided the basis for several initiatives during Guy's presidential term.

Mammography Quality Assurance. Subsequent to the enactment of the FDA MQSA law, hearings were held to establish interim rules. The AAPM argued for requirement that individuals meet the qualifications set forth in the prior AAPM definition of a qualified medical physicist. Because of the efforts of Keith Strauss, Penny Butler, and others, the requirements for entering after a limited grandparenting period are more acceptable to our standards.



FIG. 166. Stephen and Shelley Balter and their sons, Peter and James.



FIG. 167. Runners, Boston, 1995.

Medical Physics. Guy regarded the Journal as a major support of the scientific credibility of the AAPM, and believed that it now was recognized as the premier journal in our field. In order to conserve and advance this situation, Guy established an *ad hoc* committee chaired by Chris Marshall, which recommended continuation of AIP as the publisher and also recommended the creation of a "Business Management Committee for Medical Physics" to allow it to operate more independently and with more support in the future.

Strategic Planning Committee. Guy appointed a further *ad hoc* committee chaired by Rick Morin and consisting of



FIG. 168. "Up & Atom," Boston, 1995.



FIG. 169. Runners, Boston, 1995.

the Council Chairs and members at large, distributed by discipline and location. A survey questionnaire was designed to elicit detailed responses specific to many different facets of the perception of the AAPM by its members, and transmitted to the membership. Over 300 detailed responses were received. A copy of the report appears in the July/August 1996 *Newsletter* with 52 summaries of responses, and was extremely well received by the membership. Recommendations produced in this report have been largely adopted by the Board.

Financial Status. The AAPM fared well financially during this period, primarily because of the most successful Annual Meetings of 1994, 1995, and 1996. The officers were able to return to reserve funds monies that had been spent to cover expenditures necessary for the relocation of Headquarters to College Park. The Annual Meeting Coordination Committee, chaired by Ken Vanek, adopted policies to insure financially successful meetings in the future.

Certification Boards. At the first Trilateral meeting during his term, Guy expressed his conviction that the situation of

competing boards was detrimental to medical physics. As a result of ensuing discussions, a meeting of the three ABR physics trustees with three members of the ABMP board was arranged in January 1996. A document resulted that suggested possible options for resolving the competing board situation. In the following months the AAPM board passed a resolution at the 1996 Annual Meeting calling for the AAPM president to appoint an *ad hoc* committee to determine the structure of a Council with trilateral membership to interface between the medical physics community and the ABR.

ABR Trustees. It was announced in the *Newsletter* (Vol. 20, No. 1, 1995), that the ABR Trustees had reviewed the nominations submitted by the AAPM and had elected William Hendee and Guy Simmons to the two new positions created on the ABR Board.

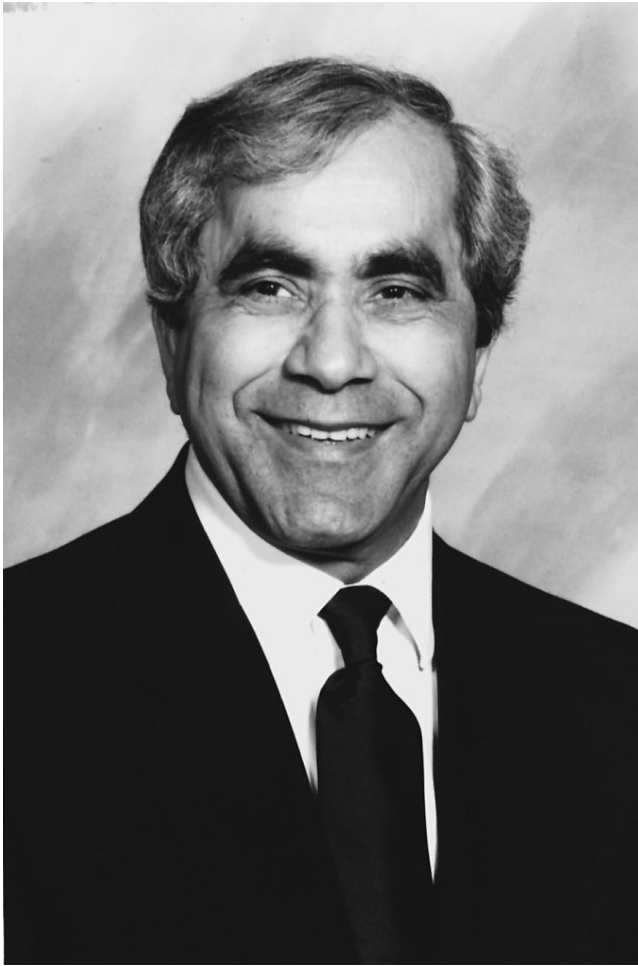
Commission on Accreditation of Medical Physics Educational Programs. The CAMPEP board of directors modified its by-laws to obtain the support of the AAPM, ACMP, and ACR. Incorporation occurred in February 1995. Two review panels were established initially to enable CAMPEP to carry out the guidelines for accreditation reviews as previously developed by the AAPM Commission.

Radiology Centennial. The radiology community celebrated 1995 as the 100th year anniversary of the discovery of x rays by Roentgen. The AAPM participated, and an issue of *Medical Physics* was devoted to the commemoration of the origins of radiation science and of the field of radiology. The table of contents of this centennial issue, which was published in November 1995, is provided on p. 1349.

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Bhudatt Paliwal

Bhudatt Paliwal was the thirty-seventh AAPM president, serving in 1996 (Figs. 170–189). He also served in 1995 on EX-COM as president-elect, and also in 1997 as chairman of the Board.

He was born in India and earned his B.Sc. and M.Sc. there. After working as a medical physicist in India, in 1969 he immigrated to work as a physicist at the Hahnemann University Hospital in Philadelphia. In 1970 he received an IAEA Fellowship to the University of Texas M. D. Anderson Hospital in Houston, where he received a Ph.D. in Biomedical Physics in 1973. He then joined the Radiation Oncology Department in the University of Wisconsin in Madison, where by 1983 he was



FIG. 170. Arnold Feldman with 1996 Achievement in Medical Physics Award.

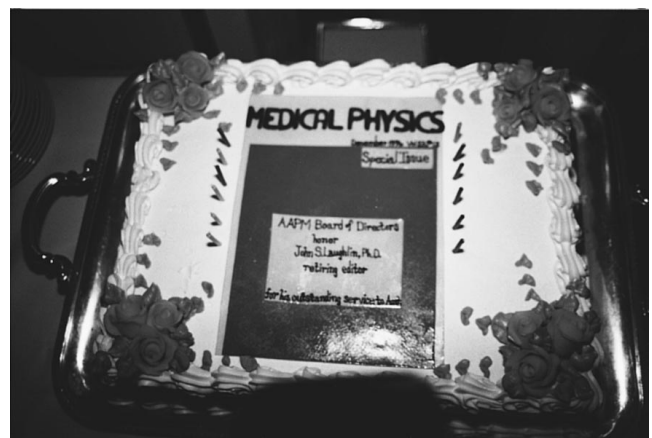


FIG. 171. AAPM Board of Directors honors retiring editor John Laughlin (past president).



FIG. 172. Leonard Stanton and family.

Professor in the Departments of Medical Physics and of Human Oncology, and Director of Radiation Oncology Physics.

His research interests included the development and implementation of new and improved techniques for hyperthermia and radiation dosimetry, treatment planning and delivery, as applicable to clinical radiation treatment. This effort also includes the integration of computational technology, data acquisition, and analysis on problems of tumor imaging. Recent areas of publication have been: brachytherapy and basic dosimetry, 3-D dose compensation for external beams, dosimetry of large dynamically generated fields, and evaluation of 3-D



FIG. 174. Left to right: Stephen Thomas (president-elect), James Galvin, Pat Windham, and Guy Simmons (past president).

prostate protocol dosimetry using a solid water anthropomorphic phantom.

Electronic Communication. One of his first activities was undertaken in order to address utilization of the explosion in communication technology. A committee was formed under the leadership of J. Daniel Bourland with representatives from each of the councils and services. In order to give greater visibility to the Association through the electronic communication media, EXCOM authorized the recruitment of a full-time webmaster, Mike Woodward. His efforts have resulted in the availability of large amounts of scientific, educational,



FIG. 173. Melvin Siedband (left) and Hy Glasser.

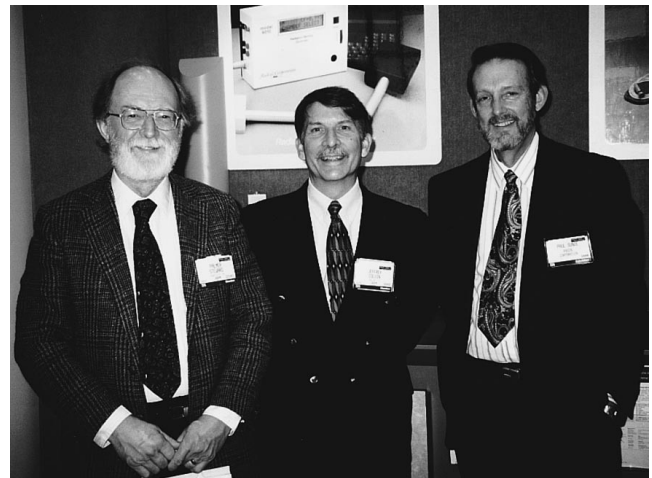


FIG. 175. Left to right: Palmer Steward, Jeffrey Colvin, and Paul Sunde.



FIG. 176. Sal Trofi.

professional, and administrative information on the AAPM website (www.aapm.org).

Certification Boards. The medical physics community is now served by two excellent certifying boards, but which have



FIG. 177. Pat (left) and Guy Simmons (past president).



FIG. 178. Jean St. Germain.

overlapping purviews and which are competitive. Neither of these two Boards reports to the AAPM. This situation illustrates a major division in the medical physics community, which can only lessen its professional significance generally, and that of the AAPM, in particular, to an increasing extent in the future. In order to analyze this complex problem and to devise possible bases for attainment of a single certifying board with general support, an



FIG. 179. Elizabeth (left) and John Spokas.



FIG. 180. James Smathers.

ad hoc committee consisting of senior physicists capable of representing the interests of the AAPM, ABR, ABMP, ACR–COP, and ACMP was formed: B. Paliwal (chair), J. Laughlin, A. Smith, E. Chaney, F. Khan, D. Tolbert, and W. Grant. They held a few all-day meetings on a frank and friendly basis, interspersed with considerable electronic communication. The result of their analysis was a concept expressed in



FIG. 181. Left to right: Laura Rothenberg, Heinz Barschall, and Lawrence Rothenberg.

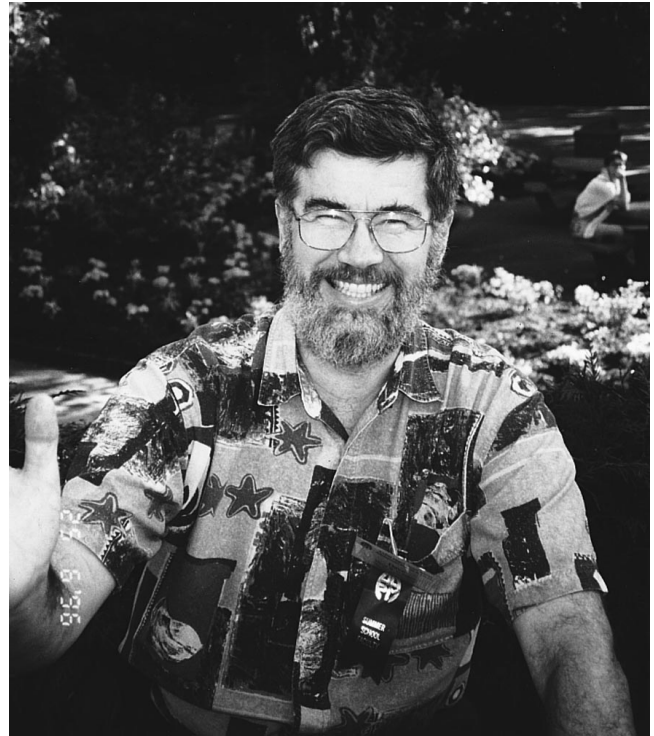


FIG. 182. David Rogers at 1996 Summer School.

seven recommendations for constituting the Medical Physics Certification Council, a single certifying Board. Although the concept provided a basis for negotiation, this was not agreed to by either the ABR or the



FIG. 183. Board Meeting.



FIG. 184. Pat (left) and Shlomo Shalev.

ABMP. Hopefully, this subject can be revisited in the future so that the professional interests of medical physicists will not always be limited by this wasteful competition.



FIG. 185. Bengt Bjarngard (past president) presenting paper.



FIG. 186. Karen (left) and Palmer Steward.

Medical Physics. During the past several years, sustained attention and effort and several innovations had brought the Journal to a position of scientific leadership and increased readership on a national and international basis. Throughout its existence it had always operated with its expenses well below its income. It was felt by EXCOM that future opportunities and challenges would require the more sophisticated attention of a Journal Business Management Committee and president Paliwal appointed such a committee to focus on all business related aspects of the Journal. The

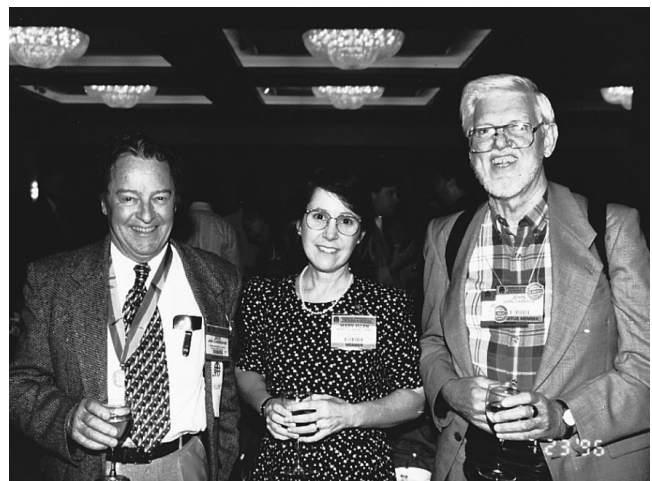


FIG. 187. Left to right: Jack Cunningham, Mary Ellen Masterson-McGary, and John Cameron (past president).



FIG. 188. Bhudatt (*left*, president) and Michelle Paliwal.

initial members were: J. Boone, C. Marshall, J. Laughlin (*ex officio*), J. Cameron, H. Barschall, J. Smathers, Sal Trofi, and B. Paliwal. On the recommendation of EX-COM and of the newly formed Business Committee, the manuscript managing function was transferred to the AAPM Headquarters, and support for the editor and his office was provided in his institution. The Association leased additional space from the ACP and the move was completed by the end of 1996. For selection of the new editor, president Paliwal appointed a selection committee consisting of A. Smith, J. Smathers, and B. Paliwal, who selected Colin Orton, who had excellent credentials, for this responsibility.

CAMPEP. In 1995, then president Nath appointed Paliwal to CAMPEP as the AAPM representative. CAMPEP had two representatives from AAPM (Paliwal and Tanner), from ACMP (Rothenberg, Sternick), and from ACR (Trueblood, Frye). This group further enhanced the objectives

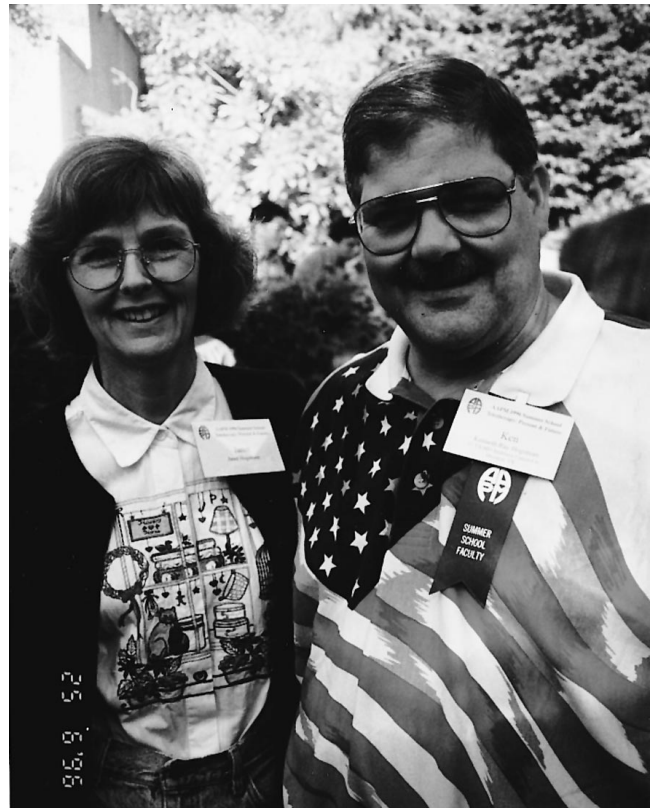


FIG. 189. Janet (*left*) and Kenneth Hogstrom.

of CAMPEP by establishing an independent Accreditation Board. An Educational Program Review Committee was formed with Barnes as chair and the Residency Training Program Review Committee with Hogstrom as chair. Additionally, the Continuing Education Review Committee was formed with Sprawls as chair. Eleven Graduate Training Programs and one Resident Training Program have been accredited.

NIST. President Paliwal testified at the Oversight Review of Research Laboratory Programs hearings. His testimony was given to a Subcommittee of the House of Representatives. The result was a significant increase in the NIST budget to support their calibration program, which assists our profession.



Stephen Thomas

Stephen Thomas was the thirty-eighth president of the AAPM, serving in 1997 (Figs. 190–204). Steve received his Ph.D. in Solid State Physics from Purdue University in 1973. He taught college physics for a year, and then took a postdoctoral fellowship in Medical Physics at the University of Cincinnati. He remained at Cincinnati and is currently Professor and Director of Medical Physics, Department of Radiology. His research and publications have been in the fields of nuclear medicine physics and magnetic resonance imaging. His AAPM activities included the chairmanship of the first Nuclear Magnetic Resonance Committee (1983–87), co-director of the summer school on NMR in Medicine (1985), and



FIG. 190. Stephen Thomas (president).

chairman of the Program Committee (1988–92). He was a founding board member of the journal MRI, and is also on the board of JMRI. He is a long-time member, and now vice-chairman, of the MIRD Committee of the Society of Nuclear Medicine

The Physics Certification Process. As reported under Paliwal's term, an *ad*



FIG. 191. AAPM Night Out.



FIG. 192. *Left to right:* Dulcie Wu, Raymond Wu, and Rene Smith.



FIG. 195. *Left to right:* Ingrid Thomas, Stephen Thomas (president), and Donald Herbert.



FIG. 193. Eunice (*left*) and John Laughlin (past president) during Night Out at the Milwaukee Public Museum (with butterflies).



FIG. 196. *Left to right:* Prakash Shrivastava, Bhudatt Paliwal (past president), and Michelle Paliwal.

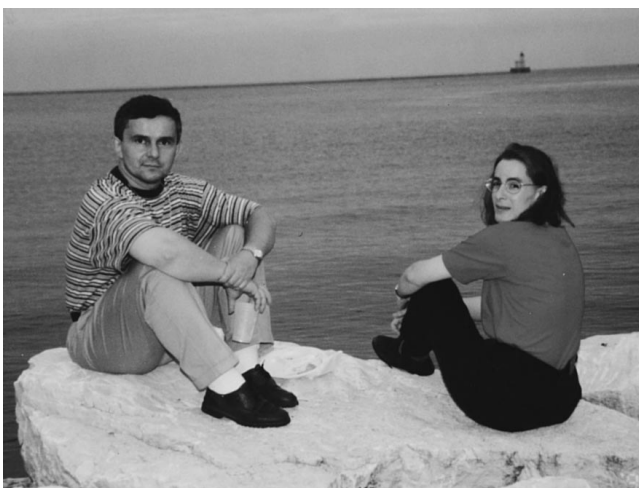


FIG. 194. At the Icebreaker.



FIG. 197. Nagalingam Suntharalingam (*left*, past president) and Nan-Zhu Xie.



FIG. 198. *Left to right:* Judy Kelsey, James Lucas, and Charles Kelsey.

hoc committee of senior members was appointed representing the ABR, ACR–COM, ACMP, and AAPM. After extensive review the committee formulated

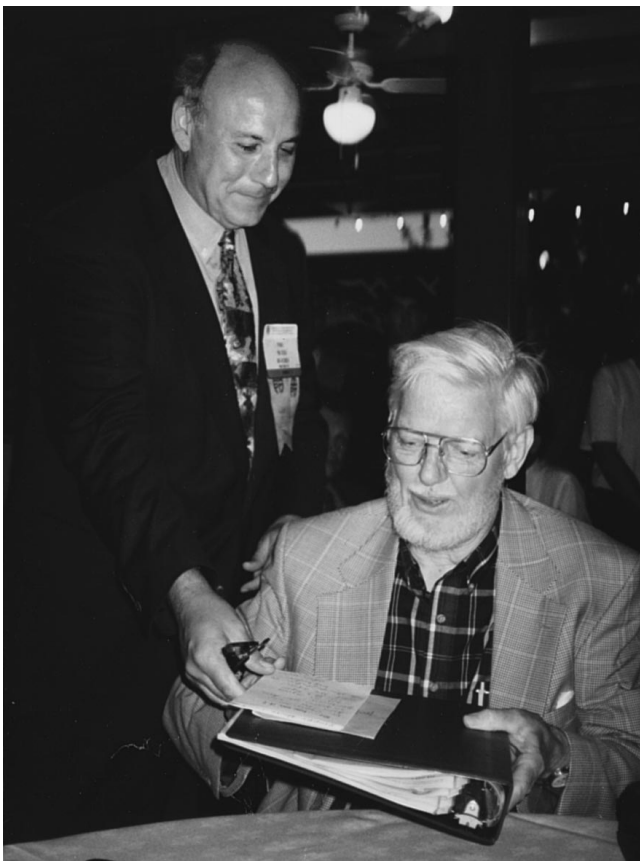


FIG. 199. Paul DeLuca (*left*) and John Cameron (past president).

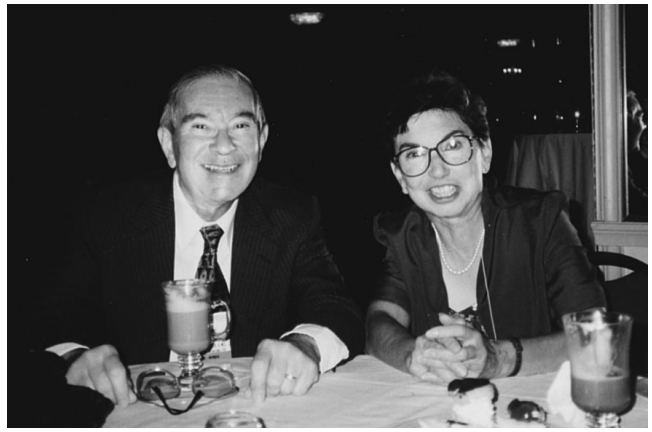


FIG. 200. Rene (*left*) and Maria Smith.



FIG. 201. Ulf Rosenow (*left*) and Peggy Lescrenier.



FIG. 202. Sophia van de Geijn (*left*) and Johannes van de Geijn.



FIG. 203. Left to right: Charles Mistretta, Darlene Mistretta, and Paul DeLuca.

a proposal for a functioning Medical Physics Certification Council within the framework of the ABR as mandated by the Board. However, the responses by both the ABR and the ABMP for negotiation toward support of a single certifying council were negative. To remove any ambiguity, the AAPM Board of Directors at its July meeting passed the following resolution: “The AAPM reaffirms its sponsorship of the American Board of Radiology, and does not sponsor any competing board.” At the invitation of the ABR, president Thomas appointed three AAPM members to work with the ABR physics trustees and the chairs of the physics written examinations to restructure the ABR physics examination to heighten its rel-



FIG. 204. Benedict Fraass (left) and Alfonso Buffa.

evance to the practice of medical physics.

Structure of the AAPM Board. The present board has 37 members: 12 elected at large, 20 representatives from regional chapters, and 5 officers. Many AAPM presidents have felt that this was a size that makes it unwieldy, and that too much meeting time was devoted to educating uninformed chapter representatives. Past-president Paliwal had appointed an *Ad Hoc* Committee on the Composition of the Board. This committee submitted its report to the Board at its July meeting. Their recommendation was for a 15-member board, with five officers, six Members at Large, and four chairs of Councils. President Thomas referred the report to another committee for further study.



Lawrence Rothenberg

Lawrence Rothenberg is the thirty-ninth president of the AAPM, serving in 1998. Larry majored in physics at the University of Pennsylvania, earning the B.S., and then matriculated in physics at the University of Wisconsin in Madison, WI, where he received the Ph.D. in Nuclear Physics in 1970. After a year in the Physics Department there, he received a Postdoctoral Fellowship in Medical Physics at Memorial Sloan–Kettering Cancer Center in New York. He remained at Memorial Hospital, and is currently Associate Attending Physicist, Department of Medical Physics, and Associate Professor of Radiology, Cornell University Medical College. His research and publications have been mainly in the

field of diagnostic radiology, particularly mammography. He has served on many AAPM committees, and has been chairman of the Committee on Diagnostic Radiology. He has also been very active in other organizations, including the ACMP, ACR, and as an examiner for the ABR. He is a member of the NCRP, currently on their Board of Directors, and has served on numerous task groups for the NCRP, ICRU, and ACR.

Future Goals for the AAPM. In his columns in the *AAPM Newsletter*, president Rothenberg has discussed the need for physicists to become more involved in the medical use of radiation outside of the departments of Radiology and Radiation Oncology. This includes magnetic resonance imaging and ultrasound imaging, where most facilities receive little input from physicists regarding quality assurance and equipment evaluation. Of even greater concern is the increasing use of radiation by cardiologists and other physicians who often have had little or no training in the safe and efficient use of radiation imaging equipment. He urged physicists to get involved with these people by contacting their departments and societies, developing in-service training programs for nonradiology departments using radiation, and contacting federal and state legislators and regulators about the importance of physicist involvement in new radiological techniques. The recent involvement of physicists in mammography has resulted in programs to ensure safe and high-quality imaging in this field; there is need for appropriate credentialing and quality assurance programs in other fields as well.