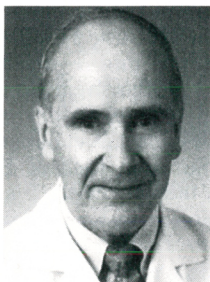


WE HEAR THAT

Contributions to Medical Physics Honored

The American Association of Physicists in Medicine recognized the achievements of several individuals in the field of medical physics at its annual meeting held in Chicago in July.

Lowell Anderson received AAPM's highest honor, the William D. Coolidge Award, given in recognition of a distinguished career and significant contributions to the field of medical physics. Anderson is an emeritus member of the department of medical physics at Memorial Sloan-Kettering Cancer Center in New York.



ANDERSON

William Hanson and **Mary Meurk** each received the Award for Achievement in Medical Physics, which is given for outstanding career achievement in medical physics practice, education, or organizational affairs and professional activities. Hanson is chief of outreach physics and director of the Radiological Physics Center at the University of Texas M. D. Anderson Cancer Center in Houston. Meurk is president of the West Coast Cancer Foundation in San Francisco.

The Farrington Daniels Award, given for the best paper on radiation dosimetry published in *Medical Physics* the previous year, went to authors **John Balog**, chief clinical physicist at TomoTherapy Inc in Middleton, Wisconsin; **Thomas Mackie**, a professor of medical physics at the University of Wisconsin-Madison; **Paul Reckwerdt**, president of TomoTherapy Inc; **Marvin Glass Jr.**, an Air Force staff medical physicist at David Grant Medical Center, Travis Air Force Base in California; and **Lisa Angelos**, a software engineer at GE Medical Systems in Wausheka, Wisconsin. Their paper, "Characterization of the Output for Helical Delivery of Intensity Modulated Slit Beams," appeared in the January 1999 issue.

The Sylvia Sorkin Greenfield Award, given for the best overall

paper published in *Medical Physics* the previous year, went to **Takayuki Ishida**, **Shigehiko Katsuragawa**, **Katsumi Nakamura**, **Herber MacMahon**, and **Kunio Doi** for their paper entitled "Iterative Image Warping Technique for Temporal Subtraction of Sequential Chest Radiographs to Detect Interval Change," which appeared in the July 1999 issue. Ishida is an associate professor in the clinical radiology department at Hiroshima International University, Katsuragawa is a professor at the general research center at Nippon Bunri University in Oita, and Nakamura is a professor in the radiology department at the University of Occupational and Environmental Health in Katsuyushu, all located in Japan. MacMahon is a professor and interim cochair in the department of radiology and Doi is the Ralph Gerard Professor in the division of biological sciences and associate chair for research in the department of radiology at the University of Chicago.

AAPT Prize Winners Announced

At its annual summer meeting held in Guelph, Ontario, Canada, in July, the American Association of Physics Teachers recognized the achievements of four of its members.

The Robert A. Millikan Medal went to **Thomas Rossing**, a professor of physics at Northern Illinois University in DeKalb. According to the medal citation, Rossing was recognized for his "passion for physics, his energetic mentoring of students and colleagues, and his outstanding contributions to the teaching and learning of physics."

The winner of the Paul Klopsteg Memorial Lecture Award was **Terrence Walker**, an associate professor and vice chair for graduate studies in the physics department at Ohio State University in Columbus. Walker, who does research in cosmology, particle physics, and astrophysics, gave his lecture entitled "The Big Bang: Seeing Back to the Beginning" at the meeting.

Dwight Neuenschwander was presented with the Excellence in Undergraduate Physics Teaching Award for his "many and innovative contributions to physics and the teaching of physics." Neuenschwander is a professor of physics at Southern Nazarene University in Bethany, Oklahoma.

The Excellence in Pre-College Teaching Award went to **James Nelson** for his "many and innovative contributions to the teaching of physics and the professional growth of physics teachers." Nelson is a K-12 science specialist in the Seminole County public schools in Sanford, Florida.

IN BRIEF

The University of Newcastle upon Tyne in England awarded its fifth Robinson Prize in Cosmology to **Alan Guth**, Victor F. Weisskopf Professor of Physics at MIT's Center for Theoretical Physics. Guth was honored this month for his work in inflationary cosmology. His introduction of this concept "is considered to be one of the most important contributions to cosmology in the latter half of the 20th century," according to the award citation. Guth also received a £10 000 (about \$14 000) cash prize.

Suzanne Chippindale became the Astronomy education coordinator for the Astronomical Society of the Pacific in September. She previously served as director of the planetarium at Santa Fe Community College in New Mexico.

In October, the Eduard Rhein Foundation, based in Hamburg, Germany, presented its Basic Research Award 2000—together with DM 100 000 (about \$44 000)—to **Ingrid Daubechies**, a professor of mathematics and of applied and computational mathematics at Princeton University and director of the university's program in applied and computational mathematics. The foundation recognized Daubechies for "the invention, the mathematical development, and the application of wavelets, which have found widespread applications as orthogonal functions in signal processing, radar, and image processing." The foundation gave its Technology Award 2000, which carries a cash prize of DM 50 000, to **Norman Abramson**, founder, president, and chief technical officer of ALOHA Networks Inc, a venture-backed start-up based in the Presidio National Park in San Francisco. Abramson was cited for "the invention of the random access protocol ALOHA and the first realization worldwide of a radio network for both local and satellite-based Internet access of uncoordinated data terminals."

Antonio J. Busalacchi became the director of the Earth System Science Interdisciplinary Center at the University of Maryland, College Park, in September. He previously was chief of the Laboratory for Hydrospheric Processes at NASA's Goddard Space Flight Center in Greenbelt, Maryland.

At its 15th annual conference in Barcelona, Spain, this past September, the International Mass Spectrometry Society presented Thomson Medals to **John Fenn**, **Donald F. Hunt**, and **Alan G. Marshall** for "achievement in and service to international mass spectrometry," according to the awards citation. Fenn is a research professor of chemistry at the University of Virginia, Hunt is a research professor of chemistry at Virginia Commonwealth University, and Marshall is Kasha Professor of Chemistry at Florida State University and director of the ion cyclotron resonance program at the National High Magnetic Field Laboratory in Tallahassee. The Thomson Medal is named for J. J. Thomson, who discovered the electron in 1897.

This past August, the Combustion Institute presented the Ya. B. Zel-

dovich Gold Medal to the first woman to be awarded this medal since its inception in 1990—**Elaine S. Oran**, a senior scientist for reactive flow physics with the Naval Research Laboratory. The citation acknowledged Oran for her "outstanding contributions to the theory of combustion and detonation." The medal, prepared by the Russian Academy of Sciences, was given at an international symposium on combustion in Edinburgh, Scotland.

With the May/June issue of *The Bulletin of the Atomic Scientists*, **Mike Moore** retired as editor, a position he's held since 1991. Moore will continue with the magazine part time as senior editor; however, his main activity will be to write books on topics in atomic science. His successor is **Linda Rothstein**, who previously served as the magazine's managing editor.

Peter Böni joined the Technical University of Munich this past June as a chair in experimental physics with the physics department. He was formerly deputy director of the Laboratory for Neutron Scattering at the Paul Scherrer Institute in Villigen, Switzerland.

ble by direct reactions has truly revolutionized our knowledge of nuclear structure.

After a year working with Jerome Percus on many-megaton shockwaves, Austern returned to nuclear physics, joining the University of Pittsburgh as an assistant professor in 1956. He organized the 1957 Pittsburgh Conference on Nuclear Physics, whose speakers included Hans Bethe, Victor Weisskopf, Rudolph Peierls, and Keith Brueckner.

Austern spent 1957–58 in Australia preparing a review article on direct nuclear reactions, which converted him—despite his misgivings about their computational complexity and the use of ill-justified cutoffs at the time—into a proponent of distorted-wave Born approximation (DWBA). He developed finite range corrections to DWBA in collaboration with Ray Satchler, Richard Drisko, and Edith Halbert. With his student Ernest Rost, Austern showed that, contrary to the then-current thinking, DWBA was applicable to reactions involving strong surface absorption.

From 1961 to 1962, Austern lived in Copenhagen. There, he wrote a paper with John Blair on elastic and inelastic scattering with strong absorption. In 1962, Austern presented a series of lectures on direct reactions at a summer school in Czechoslovakia; he later (in 1970) produced a book on that subject. In 1963, he was a co-initiator of the series of Gordon research conferences on nuclear structure.

From 1970 on, Austern focused on three-body corrections to DWBA, and also made frequent excursions into medium-energy physics. His studies of knockout (with Stuart Pittel) and pion-nucleus scattering (with Mike Silver and Korshed Kabir) used three-body models to estimate corrections to the impulse approximations. Three-body models of deuteron breakup yielded corrections to DWBA for deuteron stripping. Austern liked to devise elegant approximate methods, simple enough to yield insight into underlying mechanisms and facilitate routine applications. His "quasiadiabatic" treatment of deuteron breakup contributions to stripping reduced a complicated calculation to the solution of a simple inhomogeneous Schrödinger radial equation.

Austern was impatient with needlessly abstract mathematics. His last paper, written in 1996 with M. Kawai and M. Yahiro, insightfully related the Bencze-Birse-Redish distorted-wave connected-kernel three-body method

OBITUARIES

Norman Austern

Norman Austern, a major contributor to the theory of direct reactions, died on 15 May in Pittsburgh, Pennsylvania, after a long struggle with complications from Parkinson's disease.

Born on 23 February 1926 in New York City, Austern graduated from Cooper Union College in 1946 with a BS in electrical engineering. He completed his PhD in physics at the University of Wisconsin in 1951.

Austern's first paper, published in 1947 while he was at Wisconsin, was with Julian Mack on Lamb shift spectroscopy experiments, but his interest soon shifted to theoretical nuclear physics. He worked with Robert Sachs on the effects of meson currents to explain neutron-proton and neutron-deuteron capture cross sections and angular distributions in deuteron photodisintegration. As a postdoctoral appointee at Cornell University from 1951 to 1954, he investigated the effects of the 3,3 pion nucleon resonance in deuteron photodisintegration and helped design the first synchrotron using strong focusing. He



NORMAN AUSTERN

began a long-lasting collaboration with Stuart Butler, first on deuteron stripping and later generalized to other direct reactions in collaboration with Hugh McManus. Since Austern's work at that time, the explosion of spectroscopic information made possi-