

APS BESTOWS HONORS AT APRIL MEETING

At the meeting of the American Physical Society in Crystal City, Virginia, in April, the society honored 17 individuals for their contributions to physics.

The Will Allis Prize went to **Eldon E. Ferguson**, director of the Climate Monitoring and Diagnostics Laboratory, a National Oceanic and Atmospheric Administration facility located in Boulder, Colorado. Ferguson was cited for "his pioneering development and application of the flowing afterglow technique to provide detailed microscopic understanding of low-energy ion-molecule reactions of importance in weakly ionized gases and in ionospheric physics."

The APS presented the Tom W. Bonner Prize to **Ernest K. Warburton** for his "pioneering contributions to our understanding of the structure of light nuclei via the development and exploitation of experimental techniques in nuclear spectroscopy combined with theoretical analyses." The citation noted in particular Warburton's "development of the gamma-gamma directional correlations measurements for extracting multipolarity information for in-beam gamma-ray spectroscopy, his pioneering measurements of nuclear lifetimes with Doppler-shift methods, his development of methods of deducing multipolarities from the correlation of pairs in internal conversion, and his experimental and theoretical studies of first-forbidden beta decay, which show strong evidence for mesonic contributions to the weak axial current." Warburton has been a senior physicist at Brookhaven National Laboratory since 1961.

Carl E. Wieman received the Davisson-Germer Prize for his "pioneering contributions to atomic physics, including the development of both ultraprecise measurements of atomic parity nonconservation as critical tests of the standard model, and remarkable new techniques for trapping neutral atoms." Wieman is a professor of physics at the University of Colorado and chair of the Joint Insti-

tute for Laboratory Astrophysics.

Three men shared this year's Danie Heineman Prize in Mathematical Physics, given jointly by APS and the American Institute of Physics. **Richard L. Arnowitt**, **Stanley Deser** and **Charles W. Misner** were cited for "their joint development of a canonical formalism for general relativity, which clarified important physical issues pertaining to gravity and laid the foundation for modern theoretical advancement in gravity and cosmology." Arnowitt is a professor of physics at Texas A&M University. Deser is the Ansell Professor of Physics at Brandeis University. Misner is a professor of physics and astronomy at the University of Maryland, College Park.

The Julius Edgar Lilienfeld Prize went to **Marvin L. Cohen**, a senior scientist at Lawrence Berkeley Laboratory and a professor of physics at the University of California, Berkeley. APS cited Cohen for "his development and application of new theoretical techniques that have dramatically enriched our understanding of the properties of crystalline solids and provided the impetus for the experimental discovery of new properties and materials." The prize citation also noted Cohen's "outstanding ability to communicate to diverse audiences his deep insights into physical phenomena and his keen enthusiasm for the process of scientific discovery."

The W. K. H. Panofsky Prize was shared by **Thomas J. Devlin** and **Lee G. Pondrom**. The two were cited for "their elegant series of strange-baryon experiments at Fermilab. They discovered that, contrary to expectations, hyperons are produced polarized in hadron collisions. This allowed them to make precise measurements of the hyperon magnetic moments, thus providing important data for understanding the strong interaction in the static limit." Devlin is a professor of physics at Rutgers University. Pondrom is the Robert W. Wood Professor of Physics at the University of Wisconsin, Madison.

This year's J. J. Sakurai Prize was presented to **Yoichiro Nambu** for "his many fundamental contributions to field theory and particle physics, including the understanding of the pion as the signaler of spontaneous breaking of chiral symmetry." Nambu is a professor emeritus of physics at the University of Chicago.

The Robert R. Wilson Prize was shared by **Thomas L. Collins**, a retired staff member of Fermilab, and **Gustav-Adolf Voss**, vice president of the directorate of DESY, in Hamburg, Germany. APS recognized the two for "seminal contributions to the principles of optical design that led to the development of high-luminosity interaction regions for colliding-beam storage rings. The insight to suggest a simple way of introducing straight sections into otherwise periodic lattices was developed first at the Cambridge Electron Accelerator shortly after the invention of the alternating-gradient principle. This important step was followed by the invention of the high-luminosity low-beta scheme."

The Apker Award, which recognizes outstanding achievements in physics by an undergraduate, was presented to **David I. Kaiser**. APS cited him for "his achievements as an undergraduate student at Dartmouth College, particularly his research on 'naturalness' and 'the early universe: induced gravity inflation.'" Kaiser graduated from Dartmouth in 1993 and is now a graduate student at Harvard University.

The Forum Award was given to **Gary Taubes**, a writer based in New York City. Taubes was cited for "outstanding achievement in promoting public awareness of the scientific method as revealed in his book *Bad Science: The Short Life and Weird Times of Cold Fusion* and his numerous contributions to *Science* magazine and other general-interest science journals." *Bad Science* (Random House, New York, 1993) was reviewed in the September 1993 issue of PHYSICS TODAY (page 64).

The biennial Nuclear Physics Dissertation Award went to **Zhiping Zhao** for her thesis "The Astrophysical S-Factor of $^{12}\text{C}(\alpha,\gamma)^{16}\text{O}$ from the β -delayed α -particle emission of ^{16}N ." Zhao received her PhD in 1992 from Yale University, working under Moshe Gai. She now holds a postdoctoral position in the Nuclear Physics Lab at the University of Washington, Seattle.

Herbert F. York garnered the Leo Szilard Award. APS cited York for "his outstanding leadership in efforts to control nuclear weapons and to create rational science policy, exemplified by his contributions to the President's Science Advisory Committee, the arms control movement, the University of California's Institute on Global Conflict and Cooperation, and his service as US ambassador to the Comprehensive Test Ban Treaty negotiations." York is a professor emeritus and director emeritus of the Institute on Global Conflict and Cooperation at the University of California, San Diego.

The winner of the Visiting Minority Lectureship Award is **Sylvester James Gates Jr.**, a professor of physics at the University of Maryland. APS praised Gates for "his contributions to theoretical high-energy physics," in particular, for research on superstrings and supersymmetry, and for "his skill at communicating the ideas at the frontier of particle physics to a general audience. . . . As an African-American, he has done much to help attract and retain greater numbers of qualified minorities in science and engineering careers."

NATIONAL ACADEMY OF ENGINEERING NAMES NEW MEMBERS

In March the US National Academy of Engineering announced the names of its 79 new members. The recently elected members include:

John D. Bredehoeft, a research geologist with the US Geological Survey in Menlo Park, California

Wilfried H. Brutsaert, a professor of civil and environmental engineering at Cornell University

John J. Cassidy, manager of hydraulics and hydrology for the Bechtel Corporation in San Francisco

Stephen H. Davis, Walter P. Murphy Professor of Engineering Sciences, Applied Mathematics and Mechanical Engineering at Northwestern University

Lewis S. Edelheit, senior vice president at the General Electric Research and Development Center,

Schenectady, New York

Bruce A. Finlayson, Rhenberg Professor of Chemical Engineering and Applied Mathematics and chair of the department of chemical engineering at the University of Washington, Seattle

Lambert Ben Freund, a professor of engineering at Brown University

John H. Gibbons, the director of the Office of Science and Technology Policy in the White House

George I. Haddad, chairman of the department of electrical engineering and computer science at the University of Michigan, Ann Arbor

Mark H. Kryder, a professor and director of the Data Storage Systems Center at Carnegie Mellon University

Doris Kuhlmann-Wilsdorf, University Professor of Applied Science at the University of Virginia, Charlottesville

James D. Livingston, a senior lecturer in the department of materials science at MIT

Paul L. Penfield Jr., head of the department of electrical engineering and computer science at MIT

Ronald W. Schafer, Institute Professor and John O. McCarty Chair Professor at the Georgia Institute of Technology

Lanny D. Schmidt, a professor of chemical engineering and materials science at the University of Minnesota, Minneapolis.

Ronald V. Schmidt, a senior vice president and chief technical officer of SynOptics Communications Inc, Santa Clara, California

Lyle H. Schwartz, the director of the materials science and engineering laboratory at the National Institute of Standards and Technology, Gaithersburg, Maryland

Maurice M. Sevik, head of the signatures directorate at the David Taylor Model Basin, Carderock Division, Naval Surface Warfare Center, Bethesda, Maryland

Joel S. Spira, chairman and director of research at Lutron Electronics Company, Coopersburg, Pennsylvania

George S. Springer, a professor and chairman of the department of aeronautics and astronautics at Stanford University

Robert Stratton, who recently retired from his positions as vice president, corporate staff, and director of the central research laboratories at Texas Instruments, Dallas

Richard M. White, a professor and codirector of the sensor and actuator center at the University of California, Berkeley.

Among the eight foreign members elected to the NAE are the following:

Gianni Astarita, a professor of chemical engineering at the University of Naples, Italy

Alec N. Broers, a professor of electrical engineering at the University of Cambridge, England

Valerian I. Tatarskii, a senior research associate at the Cooperative Institute for Research in Environmental Sciences of the University of Colorado, Boulder.

IN BRIEF

The Department of Energy has given its 1993 Sadi Carnot Award in Energy Conservation to **Arthur H. Rosenfeld**, a professor of physics at the University of California, Berkeley, and the director of the Center for Building Science in the applied science division at Lawrence Berkeley Laboratory. Rosenfeld was cited in part for "his critical role in spawning the development of energy-efficient technologies for buildings, including breakthroughs in lighting technology, low-heat-loss windows and codes for calculating the cost-effectiveness of efficiency improvements in buildings."

The Kaul Foundation has presented its 1993 Award for Excellence to **Ronald Davidson**, director of the Princeton University Plasma Physics Laboratory. The award, which is accompanied by a \$100 000 check, is given annually to reward endeavors in science, health and safety, literature, fine arts or education. Davidson was cited for his "outstanding achievements as a scientist, educator and author in the field of physics."

Shoucheng Zhang has become an associate professor in the physics department at Stanford University. Zhang had been a research staff member at the IBM Almaden Research Center, in San Jose, California.

Matthew P. A. Fisher has become a permanent member of the Institute for Theoretical Physics at the University of California, Santa Barbara. Fisher had previously been a research staff member at IBM's T. J. Watson Research Center, in Yorktown Heights, New York.

Stephan von Molnár has become a professor of physics and director of the Center for Materials Research and Technology at Florida State University, in Tallahassee. He had been a senior manager in the physical sciences department at IBM's T. J. Watson Research Center, in Yorktown Heights, New York.