

WE HEAR THAT

Scientists, Engineers Honored with National Medals

President Bush bestowed the 2001 National Medal of Science and the 2001 National Medal of Technology on 15 and 5 winners, respectively, in a ceremony last month in the White

House East Room. The medals are the nation's highest science and technology awards.

Including the 15 recipients for 2001, the National Medal of Science, which is administered by NSF, has been presented to 401 scientists and engineers since 1959. Among the recipients of the 2001 award are six winners who were acknowledged for their work in physics-related fields.

Andreas Acrivos received the medal for his "pioneering research in fluid mechanics, leadership in the fluid mechanics and chemical engineering communities, editorial initiative with the *Physics of Fluids*, and mentoring several generations of engineering scientists." He is the Albert Einstein Professor of Science and Engineering, emeritus, at the City College of the City University of New York.

Marvin L. Cohen, University Professor of Physics at the University of California, Berkeley, was recognized for his "creation and application of a quantum theory for explaining and predicting properties of real materials, which formed the basis for semiconductor physics and nanoscience."

Ernest R. Davidson was honored for his "innovative leadership and numerous conceptual algorithmic developments that led to the field of computational quantum chemistry and made possible the accurate modeling of chemical reactions and the response of molecules to radiation." He is a Distinguished Professor and a Robert and Marjorie Mann Chair in Computational Quantum Chemistry at Indiana University.

A medal was bestowed on **Raymond Davis Jr** for "creating the first experiment to measure solar neutrino flux, continuing research on tracking the time dependence of the solar neutrino flux, and creating the new field of neutrino astronomy." In 1984, Davis retired from his post as senior chemist with Brookhaven National Laboratory but continues to serve as a research collaborator at the lab.

Charles D. Keeling was recognized for his "pioneering and fundamental research on atmospheric and oceanic carbon dioxide, the basis for understanding global carbon cycle and global warming." He is a professor of oceanography with

the Scripps Institution of Oceanography at the University of California, San Diego.

Gabor A. Somorjai received a medal for "molecular studies of surfaces through the use of single crystals and the development of new techniques that served as foundations of new surface technologies including heterogeneous catalysis." He is a professor of chemistry at the University of California, Berkeley, and a principal investigator in the materials sciences division of Lawrence Berkeley National Laboratory.

Technology Medal winners

The Department of Commerce administers the National Medal of Technology, which was established in 1980. Including the laureates for 2001, the medal has been presented to 120 individuals and 12 companies. Four individuals and one company won the 2001 medal; of those, two laureates perform physics-related work.

Arun N. Netravali was acknowledged for his "pioneering contributions that transformed [television] from analog to digital, enabling numerous integrated circuits, systems and services" in broadcast, cable, direct broadcast satellite, and high-definition TV, and multimedia over the Internet. He also was cited for "technical expertise and leadership, which have kept Bell Labs at the forefront in communications technology." He is a chief scientist at Lucent Technologies in Murray Hill, New Jersey.

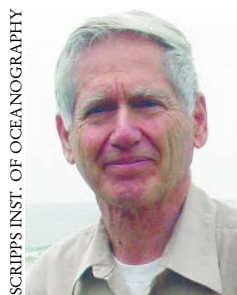
Jerry M. Woodall was cited for "the invention and development of technologically and commercially important compound semiconductor heterojunction materials, processes, and related devices, such as light-emitting diodes, lasers, ultrafast transistors, and solar cells." He is the C. Baldwin Sawyer Professor of Electrical Engineering at Yale University.

AIP Gemant Award Goes to Riordan

The American Institute of Physics has bestowed its 2002 Andrew Gemant Award on **Michael Riordan**, an adjunct professor of physics at the University of California, Santa Cruz, and a lecturer in the history and philosophy of science program at Stanford University.

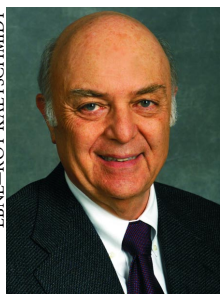


ACRIVOS

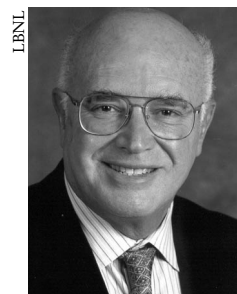


KEELING

SCRIPPS INST. OF OCEANOGRAPHY

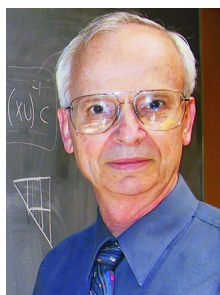


COHEN

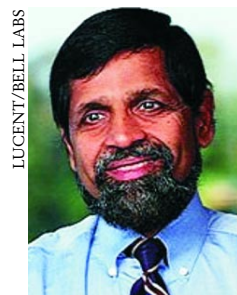


SOMORJAI

LEBN

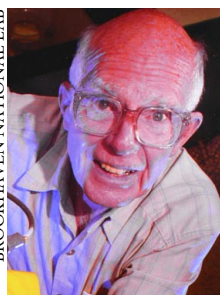


DAVIDSON

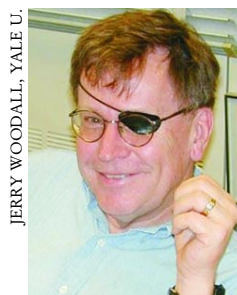


NETRAVALI

LUCENT/BELL LABS



DAVIS



WOODALL

JERRY WOODALL, YALE U.

BROOKHAVEN NATIONAL LAB



RIORDAN

AIP is honoring Riordan for “skillfully conveying the excitement and drama of science and for clarifying important scientific ideas through his many books, articles, and television programs.” According to the citation, his work

has “enhanced the public’s appreciation of physics as a source of beneficial applications and as an integral part of our intellectual life.”

ASA Bestows Medals and Awards

The Acoustical Society of America presented a number of awards and medals at the 143rd meeting of the society, held last month in Pittsburgh, Pennsylvania.

Two individuals each were awarded the Gold Medal, the highest honor of ASA. **Robert E. Apfel** received a gold medal for his “fundamental contributions to physical acoustics and biomedical ultrasound, and innovative leadership in electronic publishing.” Apfel is the Robert Higgin Professor of Mechanical Engineering at Yale University and a visiting professor of architecture at Harvard University. The other Gold Medal recipient was **Tony F. W. Embleton**, who was recognized for his “fundamental contributions to understanding outdoor

sound propagation and noise control and for leadership in the Society.” Embleton is retired from the National Research Council of Canada.

The R. Bruce Lindsay Award was also presented to two individuals this year. **James J. Finneran**, an engineer in the biosciences division of the US Navy’s Space and Naval Warfare Systems Center in San Diego, California, was honored for “contributions to the

understanding of auditory mechanics and transduction to teleost fish and of hearing by dolphins.” **Thomas J. Royston** garnered the award for his “contributions to the nonlinear characterization and control of vibration and acoustical outreach to inner city youth.” Royston is an associate professor and associate head of the mechanical and industrial engineering department at the University of Illinois in Chicago.

The Silver Medal in Psychological and Physiological Acoustics went to **Neal F. Viemeister**, a professor of psychology at the University of Minnesota, Twin Cities, for his “contributions to the understanding of temporal and intensive aspects of hearing.”

ASA presented its Silver Medal in Engineering Acoustics to **Ilene J. Busch-Vishniac** at the society’s 142nd meeting, which was held in Ft. Lauderdale, Florida, last January. Busch-Vishniac, a professor of mechanical engineering at the University of Texas at Austin, was recognized for her “development of novel electret microphones and of precision microelectromechanical sensors and positioners.”

Scientists Recognized for Geophysics Work

In April, at its 27th general assembly in Nice, France, the European Geophysical Society (EGS) presented several awards.

Bengt Hultqvist, director emeritus of the Swedish Institute of Space Physics, received the Hannes Alfvén Medal for his “important contributions to auroral and magnetospheric physics and his leading role in initiating and supporting space research projects both nationally and internationally.” He currently is the secretary general of the International Association of Geomagnetism and Aeronomy.

The David Robert Bates Medal was given to **Dominique Bockelée-Morvan** for her “exceptional observations and interpretations of the composition of comets.” She is a director of research with the National Center for Scientific Research (CNRS) and is an astronomer with the Paris Observatory’s laboratory of spatial studies and instrumentation in astrophysics (LESIA).

Klaus Hasselmann received the Vilhelm Bjerknes Medal for his “pioneering contributions to the theory and modeling of ocean-atmosphere interaction and climate variability, which have improved our ability to predict ocean waves and detect cli-

mate change.” He retired in 2000 as a director of the Max Planck Institute for Meteorology in Hamburg, Germany, and as a professor of geophysics at the University of Hamburg.

The John Dalton Medal was presented to **Efi Foufoula-Georgiou**, professor of engineering and director of the St. Anthony Falls Laboratory of the University of Minnesota, Twin Cities. She was acknowledged for her “outstanding contributions to the understanding of space-time precipitation variability.”

Wolfgang Kinzelbach received the Henry Darcy Medal for his “outstanding contributions to the sustainable management of groundwater systems.” He directs the Institute of Hydromechanics and Water Resources Management at ETH Zürich.

The EGS presented its Beno Gutenberg Medal to **Tatiana B. Yanovskaya**, professor of geophysics at St. Petersburg State University’s V. A. Fock Institute of Physics in Russia. She was recognized for her “major theoretical achievement in the modeling of surface waves and tsunami propagation in laterally inhomogeneous media.”

The joint winners of the Vening Meinesz Medal were **Georges Balmino** and **Christoph Reiger**, who were cited for their “outstanding contributions in the field of satellite geodesy and the study of the Earth’s gravity field.” Balmino is the director of the research group in satellite geodesy (GRGS), a federation of several groups in France that work in this domain, and head of the division of satellite geodesy at the Centre National d’Etudes Spatiales in Toulouse, France. Reiger is the director of the kinematics and dynamics of the Earth division at the Geo-Research Center in Potsdam (GFZ Potsdam) and a professor of geophysics at Potsdam University.

The EGS bestowed its Milutin Milankovic Medal on **I. Colin Prentice** in honor of his “outstanding contributions in modeling the terrestrial biosphere as an interactive component of our Earth system.” He is a director of the Max Planck Institute for Biogeochemistry in Jena, Germany.

Peter D. Killworth received the Fridtjof Nansen Medal in recognition of his “many far-reaching contributions to theoretical oceanography which have significantly enlarged our understanding of the processes determining ocean circulation.” Killworth is an Individual Merit Scientist and a professor of oceanography at the Southampton Oceanography Centre in the UK.



APFEL



EMBLETON