

tation. "These toroidal currents," the citation adds, "enable tokamak reactors to operate continuously, which is necessary for an economical and practical fusion reactor." Fisch is a professor of astrophysical sciences at Princeton University.

The award for physics went to **Claire E. Max**, professor and astronomer with the Center for Adaptive Optics at the University of California, Santa Cruz, and a physicist with the Institute of Geophysics and Planetary Physics at Lawrence Livermore National Laboratory. The citation recognized Max for her "contributions to the theory of laser guide star adaptive optics and its application in ground-based astronomy to correct the blurring of telescopic images caused by light passing through the atmosphere."

Fred N. Mortensen won the award in the national security category for his "outstanding technical contributions in nuclear weapons design and for his leadership and expert judgment that have enabled the continued certification of the safety and reliability of nuclear weapons in an era without nuclear testing." He is a laboratory fellow in the thermonuclear applications group at Los Alamos National Laboratory (LANL).

Richard J. Saykally, professor of chemistry at the University of California, Berkeley, received the chemistry award for his "invention of new, powerful methods such as velocity modulation spectroscopy to study the structure of molecular ions," according to the citation.

In the materials research category, DOE presented the award to **Ivan K. Schuller**, professor of physics at the University of California, San Diego, for "creating the field of metallic superlattices and recognizing the impact of these materials on magnetism and superconductivity."

Greg Swift, who received the environmental science and technology award, was cited for "developing the theory of thermoacoustic heat engines and for designing and building these engines and refrigerators that use the power of sound to operate at high efficiency with no moving parts." He is a fellow in LANL's condensed matter and thermal physics group.

APS Names Prizewinners

Each year, the American Physical Society presents several awards to individuals to honor their contributions to the field. The recipients for

2004 are as follows.

The Will Allis Prize was awarded to **J. William McConkey**, professor emeritus and university professor of physics at the University of Windsor in Ontario. He was honored by the society for his "innovative experimental studies of electron collisions with atoms and molecules, which have significantly advanced our understanding of collisional and radiative processes in ionized gases at the microscopic level."

Federico Capasso was the recipient of this year's Arthur L. Schawlow Prize. He was selected for his "seminal contributions to the invention and demonstration of the quantum cascade laser and the elucidation of its physics, which bridges quantum electronics, solid-state physics, and materials science." Capasso is the Robert L. Wallace Professor of Applied Physics and Vinton Hayes Senior Research Fellow in Electrical Engineering at Harvard University.

The Fluid Dynamics Prize went to **George M. Homsy**, professor of mechanical and environmental engineering at the University of California, Santa Barbara. He is being recognized for his "many important contributions in multiphase flows, interfacial phenomena, polymeric flows, and convection including the stability of fluidized beds, viscous fingering in porous media, and thin film behavior."

Joel Lebowitz garnered the Nicholson Medal for Humanitarian Service for his "tireless personal activism, throughout his superb career as a theoretical physicist, to help scientists and defend their human rights in countries around the globe." Lebowitz is the G. W. Hill Professor of Mathematics and Physics and directs the Center for Mathematical Sciences Research at Rutgers University in Piscataway, New Jersey.

The two winners of the James Clerk Maxwell Prize were **Noah Hershkowitz**, Irving Langmuir Professor of Engineering Physics at the University of Wisconsin-Madison, and **Valery Godyak**, corporate scientist at OSRAM SYLVANIA in Beverly, Massachusetts. They were honored for "fundamental contributions to the physics of low-temperature plasmas, including radio frequency wave heating, sheath physics, potential profiles, diagnostic probes, and the industrial applications of plasmas."

Also honored were the five winners of the Award for Excellence in Plasma Physics Research. **William Heidbrink**, **Chio Z. Cheng**, **Liu Chen**, **Edward Strait**, and **King-Lap Wong** were cited for the "theoretical

discovery and experimental identification of toroidicity induced Alfvén eigenmodes." Heidbrink and Chen are professors in the physics and astronomy department at the University of California, Irvine. Cheng is a distinguished research fellow and heads the energetic particle physics and space plasma physics groups in the theory department at Princeton Plasma Physics Laboratory. Wong is a principal research physicist with PPPL. Strait manages the stability and physics operation group for the DIII-D tokamak experiment at General Atomics in San Diego, California.

Ki-Yong Kim received the Marshall N. Rosenbluth Outstanding Doctoral Thesis Award for his "development and application of ultrafast optical diagnostics to understanding the interaction dynamics of intense laser pulses with novel plasmas, including those produced in nanoscale clusters." His thesis work was performed at the University of Maryland, College Park, under the guidance of Howard Milchberg.

ASA Presents Awards at California Meeting

The Acoustical Society of America assembled for its 148th meeting in November in San Diego, California. The following awards were presented at a plenary session at that gathering.

The Rossing Prize in Acoustics Education, given to recognize significant contributions to acoustics education through teaching, creation of educational materials, textbook writing, and other activities, was presented for the first time. The prize went to **Allan D. Pierce**, professor of aerospace and mechanical engineering at Boston University.

D. Vance Holliday received the Silver Medal in Acoustical Oceanography for his "contributions to the study of marine life, from plankton to whales." He is the director of analysis and applied research at BAE Systems, Applied Technologies Inc in San Diego.

The Silver Medal in Engineering Acoustics was presented to **John V. Bouyoucos**, president and chief scientist at Hydroacoustics Inc in Rochester, New York. He was recognized for the "invention and development of hydraulically powered acoustic amplifiers for underwater use."

James G. Miller garnered the Silver Medal in Biomedical Ultrasound/ Bioresponse to Vibration for his "contributions to ultrasonic tissue characterization and quantitative

echocardiography." Miller is a professor of physics, of medicine, and of biomedical engineering at Washington University in St. Louis, Missouri, where he also holds the Albert Gordon Hill Endowed Chair in the Faculty of Arts and Sciences.

An ASA Honorary Fellowship was conferred on **Walter Munk**, research professor with the Institute of Geophysics and Planetary Physics at the Scripps Institution of Oceanography, part of the University of California, San Diego. He was cited by the society for the "invention of ocean acoustic tomography."

The Science Writing Award for Professionals in Acoustics was presented to **Stephen C. Thompson** for his article "Tutorial on Microphone Technologies for Directional Hearing Aids," which appeared in the November 2003 issue of the *Hearing Journal*. He is affiliated with Knowles Electronics Inc in Itasca, Illinois.

Ian Sample, science correspondent for the *Guardian* (London), received the Science Writing Award for Journalists for his article "The Sound of Sunshine," which appeared in the newspaper's 24 July 2003 edition.

Medical Physicists Honored by AAPM

At a ceremony held during the annual meeting of the American Association of Physicists in Medicine, in Pittsburgh, Pennsylvania, in July, the following individuals were recognized for their achievements in medical physics.

C. Clifton Ling was acknowledged for his distinguished career in medical physics with the presentation



Ling

of the association's highest honor, the William D. Coolidge Award. Ling is the Enid A. Haupt Professor and chairman of the department of medical physics at Memorial Sloan-Kettering Cancer Center and professor of radiology in the Weill Medical College of Cornell

University, both in New York City.

Outstanding career accomplishments earned **Donald E. Herbert** the Award for Achievement in Medical Physics. He is a professor of radiology and director of the Biostatistics and Epidemiology Core Unit at the University of South Alabama College of Medicine in Mobile.

A Special Award for Outstanding Contributions to Medical Physics was granted posthumously to radiologist and medical physicist **Carl J. Vyborny**, who contributed to the understanding of the physical aspects of image quality and to the clinical use of computer-aided diagnosis.

The John R. Cameron Young Investigator Award was presented to **Amit Sawant** for his paper entitled "Empirical Investigation of a New Generation of High QE Detectors for Active Matrix Flat-Panel Imager EPIDs." He is a graduate student in biomedical engineering at the University of Michigan, Ann Arbor.

Alex Trofimov, an instructor in the radiation oncology department at Massachusetts General Hospital and Harvard Medical School in Boston, was the inaugural recipient of the Jack Fowler Junior Investigator Award, given to the top-scoring junior

investigator abstract submission.

The Farrington Daniels Award, given for the best paper on dosimetry that appeared in *Medical Physics* the previous year, went to **Brad Warkentin**, **Stephen Steciw**, **Satyapal Rathee**, and **B. Gino Fal-lone**. They were honored for their article entitled "Dosimetric IMRT Verification with a Flat-Panel EPID."

The Sylvia Sorkin Greenfield Award, for the best nondosimetry paper to appear in *Medical Physics* the previous year, was given to **Tao Wu**, **Alexander Stewart**, **Martin Stanton**, **Thomas McCauley**, **Walter Phillips**, **Daniel Kopans**, **Richard Moore**, **Jeffrey Eberhard**, **Beale Opshal-Ong**, **Loren Niklason**, and **Mark Williams**. Their winning article was entitled "Tomographic Mammography Using a Limited Number of Low-Dose Cone-Beam Projection Images."

In Brief

Lawrence Livermore National Laboratory has made two senior management appointments. **Jane C. S. Long** began her assignment in November as associate director for energy and environment. She had been a professor in the geological sciences department at the University of Nevada, Reno. **Cherry A. Murray** became deputy director for science and technology at the beginning of this month. She recently retired from Lucent Technologies' Bell Labs as physical sciences research senior vice president.

On 1 October, **Wolfgang M. Heckl** took the reins of one of the largest museums of science and technology worldwide, the Deutsches Museum in Munich. The new general director most recently headed an interdisciplinary team in the field of nanoscience at the University of Munich and will continue to do research, at a reduced level, with that team.

Julia King became principal of the faculty of engineering at Imperial College London in September. Formerly chief executive of the Institute of Physics in the UK, she succeeded **Frank Leppington**, who was acting principal from March to September 2004 and has now retired.

Deborah Jin, a physicist at NIST and an adjunct associate professor at the University of Colorado at Boul-

der, received a 2004 Service to America Medal in science and technology from the Partnership for Public Service at a ceremony in Washington, DC, in September. She was recognized for creating "a new form of matter that researchers hope will help unravel the mysteries of conductivity," according to the PPS.

The Association for Women in Science, based in Washington, DC, appointed **Susan L. Ganter** this past July as its new executive director. On leave from her position as an associate professor of mathematical sciences at Clemson University, Ganter, whose prior work includes a research fellowship at NSF and a program directorship with the American Association for Higher Education, succeeds **Catherine Didion**, who served for 14 years. Didion is now CEO of the new Washington office of the International Network of Women in Science and Engineering, based in Ottawa, Ontario.

Chris G. Van de Walle joined the materials department of the University of California, Santa Barbara, in July as a professor of computational materials. He also will be associated with the California NanoSystems Institute, a multidisciplinary facility jointly operated by UCLA and UCSB. Van de Walle previously was a principal scientist at the Palo Alto Research Center (formerly Xerox PARC) in California.