

chemistry combined with a deep and broad understanding of unresolved questions concerning the composition, structure and evolution of the Earth." Stixrude is an assistant professor in the geological sciences department at the University of Michigan.

The 1998 Walter Bucher Medal went to **Norman H. Sleep**, a professor of geophysics at Stanford University. He was recognized for using "simple physical ideas to understand processes at work within the Earth, particularly those affecting the crust and lithosphere" and for his "important contributions to most of the recent advances in our understanding of geodynamics."

The 1998 Maurice Ewing Medal, given jointly by AGU and the US Navy, was garnered by **Richard P. Von Herzen**, a senior scientist emeritus at the Woods Hole Oceanographic Institution, for his "many great contributions to the understanding of Earth's thermal structure and to the technology needed for doing heat flow research."

The 1998 Waldo E. Smith Medal, given for extraordinary service to geophysics, went to **Margaret A. Shea**. According to the citation, she was "recognized as an expert in geomagnetic cutoff rigidities for cosmic radiation." Her cutoff rigidity tables are the international standard and have been adopted by the Federal Aviation Administration and NASA for determining radiation dosages to aircrews and astronauts. Shea was also cited for her role in the international geophysics community and her contributions to the geophysics literature. Shea is a research physicist emerita at the Air Force Research Laboratory and an adjunct professor at the University of Alabama in Huntsville.

Harold S. Johnston, a professor emeritus of chemistry at the University of California, Berkeley, was awarded the 1998 Roger Revelle Medal. The citation stated that his "research on atmospheric chemistry and chemical kinetics is a model for elegance, creativity and accuracy; his recognition of the potential for human activities to contribute to global change stands as a landmark in the history of atmospheric science; and his tireless dedication to educating the public and policymakers about careful scientific analysis of the impact of aviation on the stratosphere has been extraordinary."

The Edward A. Flinn II Award was presented to **Robert W. Corell**, assistant director for geosciences at the National Science Foundation. Corell was cited for leading the "conception, formulation and implementation of the US Global Change Research Program, which involves 20 US departments, agencies and offices, to study the

Earth's system and to ascertain the influence of humans on the system." He also has developed "international programs on global environmental issues and new partnerships and arrangements, such as the Inter-American Institute for Global Change Research, to encourage data sharing and joint science programs among developing and developed nations."

The faculty members of the Summer of Applied Geophysical Experience (SAGE), which operates in northern New Mexico, received the 1998 Excellence in Geophysical Education Award. The award citation stated that "the persistence and commitment of this group has provided the geophysical community with a superb educational program for over 16 years" and noted that the program offers an "intensive field and research experience that is simply not available at any individual institution, large or small." The awardees are **Scott Baldrige**, a research scientist at Los Alamos National Laboratory, **Shawn Biehler**, a professor of geophysics at the University of California, Riverside, **Larry Braile**, a professor of geophysics at Purdue University, **John Ferguson**, an associate professor of geophysics and seismology at the University of Texas at Dallas, **Bernard Gilpin**, a professor of physics and geology at Golden West College in Huntington Beach, California, and

George Jiracek, a professor of geological sciences at San Diego State University.

IN BRIEF

The 1998 Great Gold Medal of the French Academy of Sciences was awarded to **Leo Kadanoff**, the John D. and Catherine T. MacArthur Professor of Physics and Mathematics at the University of Chicago. Described by the citation as a "major pioneer of theoretical physics in our times," Kadanoff was recognized for his contributions to critical phenomena and his "profound influence on a number of fields. . . . The use of scaling laws, based on Kadanoff's ideas, has become a major tool of scientific investigations."

Jeffrey Bub, a professor of philosophy at the University of Maryland, College Park, and **Deborah Mayo**, a professor of philosophy at Virginia Polytechnic Institute and State University, are the joint winners of the 1998 Lakatos Award, a £10 000 prize given by the London School of Economics and Political Science for outstanding contributions to the philosophy of science. Bub was honored for his book, *Interpreting the Quantum World* (Cambridge U. P., New York, 1997), and Mayo for her book, *Error and the Growth of Experimental Knowledge* (U. Chicago P., Chicago, 1996).

OBITUARIES

Isadore Rudnick

On 22 August 1997, the community of physical acousticians suffered a great loss with the death in Los Angeles of Isadore Rudnick. His passing followed a brutal, decade-long fight against a progressive form of dementia.

Izzy was born on 8 May 1917 in New York City and received his university education at UCLA, where he earned BA, MA and PhD degrees in physics in 1938, 1940 and 1944, respectively.

After doing postdoctoral work at Duke University and holding a faculty position at Pennsylvania State University, he returned in 1948 to UCLA, where he served as a professor of physics for 39 years.

Before his return to UCLA, Izzy significantly advanced our understanding of several areas of classical acoustics—namely, atmospheric sound propagation, attenuation of sound in soil and nonlinear distortion and attenuation of shockwaves in ducts and horns. While at Penn State, he and Clayton Allen developed a special type

of siren, which was then the most powerful man-made sound source. The siren's variety of uses included the study of the biological effects of intense airborne sound and an acoustical technique for cleaning clothes.

Izzy's research in classical acoustics continued at UCLA, with studies of acoustically induced streaming, modes of vibration of elastic bodies and attenuation of sound in seawater.

In 1956, having recognized the increasing importance of quantum mechanics in graduate education, Izzy went on sabbatical to the Technical University of Denmark to study low-temperature physics. On his return to UCLA, he obtained funds to buy a helium liquefier and began a series of ultrasonic investigations of electron-phonon interactions in metals and superconductivity.

In the mid-1960s, Izzy turned his attention to the superfluid hydrodynamics of liquid helium and began a 20-year series of experiments, which produced some of the most subtle and precise measurements of the dynamics of this quantum fluid. Superfluid he-