

and George Spiero).

He wrote introductions to several books, including the 1985 University of Wisconsin edition of *The Significance of the Frontier in American History*, by Frederick Jackson Turner, as well as to the 1974 edition of Francis Parkman's *The Oregon Trail*. He also edited and revised several works on American history.

In addition to his faculty position at Caltech, Ridge was also a senior research associate at the Huntington Library.

Among his honors were the Ray Allen Billington Prize, the Best Book Award from the Pacific Coast Branch of the American Historical Association, the Best Book Award from Phi Alpha Theta, and the Gilberto Espinosa Prize from the *New Mexico Historical Review*. He was a former president of the Western History Association and the Pacific Coast Branch of the American Historical Association, and former editor of the *Journal of American History*.

He is survived by his wife, Sally Ridge, of San Gabriel; and two sons, Wallace and Drew Ridge. A memorial service will be held on Saturday, November 22, at 2:00 p.m. at the University Club of Pasadena. □

## Faculty File

### HONORS AND AWARDS

Jess Adkins, assistant professor of geochemistry and global environmental science, has been awarded the European Association for Geochemistry's 2003 Houtermans medal, which is given to outstanding young scientists for their contribution to geochemistry.

Barry Barish, Linde Professor of Physics and director of the Laser Interferometer Gravitational-Wave Observatory (LIGO) Laboratory, has been chosen to be the Hiroomi Umezawa Distinguished Visitor at the University of Alberta, where he will present a seminar and a public lecture.

Christopher Brennen, professor of mechanical engineering, has been selected by the Japanese Foundation of Fluids Machinery Research to receive the Fluids Science Research Award. The first non-Japanese recipient of this award, Brennen is being recognized for his work on cavitation and multiphase flows, and he will travel to Japan to receive the award in December.

John Brewer has been named the Eli and Edye Broad Professor of Humanities and Social Sciences. He joined Caltech in 2002 as professor of history and literature, a title he retains.

Emmanuel Candès, associate professor of applied and computational mathematics, and his coauthor, former grad

student Franck Guo, have received the 2003 Best Paper Award of the European Association for Signal, Speech and Image Processing (EURASIP). The award—in recognition of “New Multi-scale Transforms, Minimum Total Variation Synthesis: Applications to Edge-Preserving Image Reconstruction,” published in the November 2002 issue of *Signal Processing*—will be presented at the EUSIPCO-2004 conference in Vienna.

André DeHon, assistant professor of computer science, has been named to the 2003 TR100, a list of 100 top young innovators in technology. Chosen from around the world by *Technology Review*, the nominees “are recognized for their contributions in transforming the nature of technology.” DeHon was cited for work toward building practical molecular computers, including figuring out how to arrange nanowires into working circuits, and inventing a reprogrammable architecture based on such circuits.

Kenneth Farley has been named the W. M. Keck Foundation Professor of Geochemistry.

Michael Hoffmann, the Irvine Professor of Environmental Science and the dean of graduate studies, Hui-Ming Hung (PhD '00), and Joon-Wun Kang, a former visiting associate, have been

awarded the Water Environment Federation's (WEF's) Jack Edward McKee Medal. The medal, named for the past WEF president and Caltech professor (1949–1980), was given for their article, “The Sonolytic Destruction of Methyl tert-Butyl Ether Present in Contaminated Groundwater,” published in the December 2002 issue of *Water Environment Research*.

Andrew Ingersoll has been named the Earle C. Anthony Professor of Planetary Science.

Jerrold Marsden has been named the Carl F Braun Professor of Engineering and Control and Dynamical Systems.

David Politzer, professor of theoretical physics, is corecipient of the European Physical Society's 2003 High Energy and Particle Physics Prize, which he shares with David Gross of UC Santa Barbara and Frank Wilczek of MIT. The trio “are best known for their work on QCD—the theory of the strong force. In particular they showed that the force between two particles in certain types of gauge theories is strong when they are far apart and weak when they are close together.” (For more on this subject, see page 25 of this issue.)

Demetri Psaltis, Myers Professor of Electrical Engineering, and colleagues Karsten Buse and Christophe Moser (PhD '01) have received the

Best Application Award at the Ninth International Conference on Photorefractive Effects, Materials, and Devices. The award, presented annually for novel and significant advances in photorefractive systems, recognizes the trio's work on holographic filters.

Axel Scherer, Neches Professor of Electrical Engineering, Applied Physics, and Physics, has been selected to receive a Senior U.S. Scientist Award from the Alexander von Humboldt Foundation.

Peter Schröder, professor of computer science and applied and computational mathematics, has been named this year's winner of the Computer Graphics Achievement Award by the Association for Computing Machinery and the Special Interest Group on Graphics and Interactive Technology (ACM SIGGRAPH) for his contributions to multiresolution modeling and digital geometry processing of curved surfaces.

Brian Stoltz, assistant professor of chemistry, is a recipient of the 2003 Amgen CR&D Young Investigator's Award, which "has been created to recognize the scientific contribution and commitment to academic excellence of rising young investigators" in the field of chemistry.

Ahmed Zewail, Nobel Laureate in chemistry, Linus Pauling Professor of Chemical Physics and professor of physics, has been named a member of the Royal Swedish Academy of Sciences. The Royal Academy awards the Nobel Prize in physics, chemistry, and economics. Besides noting his illustrious research career, the academy cited his active contribution to "promoting research and education in the Third World." □

## CARVER MEAD WINS NATIONAL MEDAL OF TECHNOLOGY

Carver Mead (BS '56, MS '57, PhD '60), the Moore Professor of Engineering and Applied Science, Emeritus, has been named by President George W. Bush as a recipient of the National Medal of Technology. The medals will be awarded at a White House ceremony on November 6.

Mead is known for many contributions in microelectronics and information technology. His major innovations include pioneering work on the very large-scale integration (VLSI) design for complex circuitry at the microscopic level; and an amplifying device known as the high electron mobility transistor (HEMT), which is used in microwave communications and is also an integral component of the Internet. He has also been a pioneer in computer animation, microchip design, neuromorphic electronic systems, and other computer interfaces.

His laboratory led an effort to create silicon models of specific areas of the nervous system, and showed that the elementary operations of the nervous system could be emulated by analog circuits. The devices included a cochlear chip, which is modeled after human hearing, as well as devices modeled after vision and learning.

Mead holds more than 50 U.S. patents, and has written more than 100 scientific publications.

The National Medal of Technology recognizes people and organizations that "embody the spirit of American innovation and have advanced the nation's global competitiveness. Their groundbreaking contributions commercialize technologies, create jobs, improve productivity and stimulate the nation's

by the Department of Commerce. To date, there have been 146 recipients of the honor, 12 medals having gone to Caltech faculty, alumni, and trustees.

And on October 12, Mead received the 2003 Founders Award from the National Academy of Engineering "for visionary contributions in the field of microelectronics, including VLSI technology and computational neural systems." □



**Mead working on a silicon retina design in 1987.**

growth and development."

The award was established by Congress in 1980, and complements the older National Medal of Science. The National Medal of Technology is administered