

Honors and Awards

Charles Barnes, professor of physics, Andrew Cameron, senior research associate in biology, and Mary Kennedy, associate professor of biology, have been elected Fellows of the American Association for the Advancement of Science. Fellows, chosen annually from the organization's 132,000 membership, are AAAS members "whose efforts on behalf of the advancement of science or its applications are scientifically or socially distinguished."

Slobodan Cuk (PhD '77), associate professor of electrical engineering, and David Middlebrook, professor of electrical engineering, have been awarded the Edward Longstreth Medal, presented annually by the Franklin Institute "to honor individuals whose work has made a significant contribution to the way we understand our world, or who have pioneered new technologies in scientific research or engineering."

Professor of Chemical Engineering Richard Flagan has received the 1990 Smoluchowski Award, presented annually by the Gesellschaft für Aerosol-

forschung (Society for Aerosol Research), in recognition of his "outstanding theoretical and experimental work in the field of aerosol nucleation and reaction chemistry."

Lee Hood (BS '60, PhD '68), Bowles Professor of Biology, has been awarded the Franz Groedel Medal by the American College of Cardiology for his work on genetic research.

George Housner (MS '34, PhD '41), Braun Professor of Engineering, Emeritus, has received the 1991 Alfred E. Alquist Award for Achievement in Earthquake Safety, presented annually by the California Earthquake Safety Foundation to "individuals who have made outstanding contributions or a major impact, past or present, in seismic safety in California."

Gilles Laurent, assistant professor of biology and computation and neural systems, is one of 89 outstanding young scholars to be awarded a 1991 Sloan Research Fellowship by the Alfred P. Sloan Foundation. The Fellowships are presented each year to "highly qualified young scientists on the basis of their exceptional promise to contribute to the advancement of knowledge."

Professor of Chemistry Nathan Lewis (BS and MS '77) has received the American Chemical Society's Award in Pure Chemistry, one of the most prestigious honors in the field, for his work in

the development and analysis of a new, highly efficient class of solar cell—a device that produces electrical or chemical energy when exposed to sunlight.

Professor of Biology Elliot Meyerowitz is one of 32 scientists to be awarded a Human Frontier Science Program (HFSP) research grant, established last year by the Economic Summit nations and the European Community to promote "frontier research in brain functions and molecular-level approaches to biological functions." The program supports interdisciplinary research that transcends national boundaries.

Edward Stone, vice president, professor of physics, and director of JPL, has received the 1991 ARCS Foundation Science Man of the Year Award in recognition of his "longstanding contributions to science as project scientist of the Voyager mission to explore the outer planets of the solar system."

Amnon Yariv, Myers Professor of Electrical Engineering and professor of applied physics, was elected late last month to the National Academy of Sciences, one of the highest honors that can be bestowed on an American scientist or engineer. The election of Yariv, who is internationally known for his contributions to both laser technology and integrated optics, brings to 63 the total number of Caltech faculty who are NAS members.

Distinguished Alumni

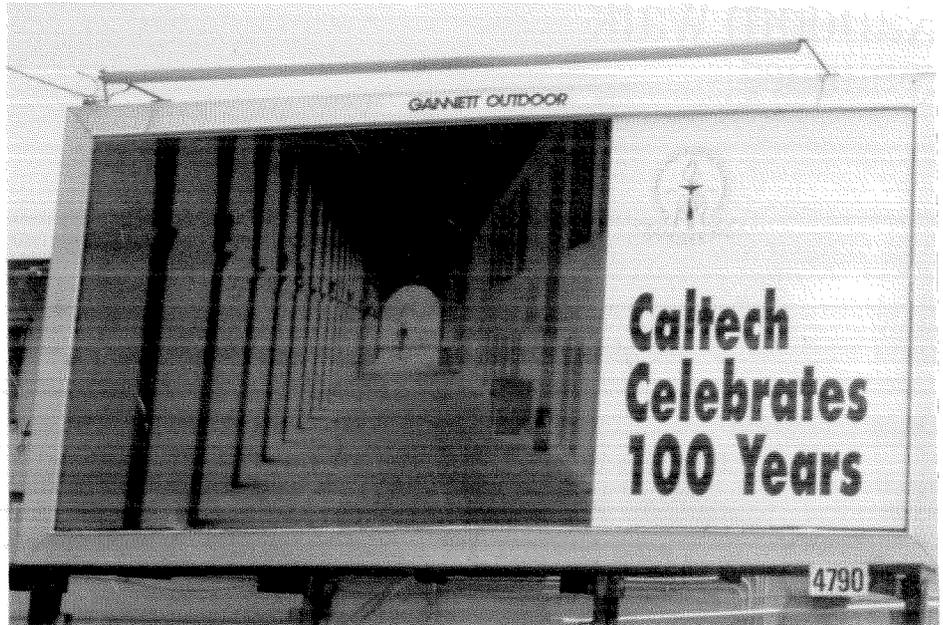
Four alumni received Caltech's highest honor, the Distinguished Alumni Award, during the Centennial Seminar Day on Saturday, May 18. Distinguished Alumni Awards are presented annually in recognition of former undergraduates or graduate students who have gone on to "high achievement in science, engineering, business, industry, or public service." This year's honorees are John P. Andelin, Jr., assistant director for science, information, and natural resources of the Congressional Office of Technology Assessment; Arthur E. Bryson, Jr., Pigott Professor of Engineering at Stanford University; Navin C. Nigam, director of the Indian Institute of Technology in Delhi, India; and George F. Smith, retired senior vice president and director of Hughes Research Laboratories.

Andelin (BS '55, PhD '67) provides direction for national energy policy and has testified to Congress on such wide-ranging issues as air pollution; municipal, toxic, and radioactive wastes; education policy; and new communications technology.

Bryson (MS '49, PhD '51), by his interdisciplinary work in aeronautical and astronautical systems control and optimization, has helped to define a field that didn't even exist when he was a graduate student. He is a former chairman of the National Research Council's Aeronautics and Space Engineering Board, and has been on the faculty of Harvard, MIT, and Stanford.

Nigam (PhD '67) has played a seminal role in fostering engineering education and research at universities in India. His work on random vibration is internationally known, and he has been a key figure in the design of earthquake-resistant structures in India.

Smith (BS '44, MS '48, PhD '52) served as co-director or director of Hughes Research for 25 years, until 1987. His own work included developing the first laser range finder, and research on the first Q-switched laser.



Electronic Materials to Get Moore Lab Space

Intel Corporation cofounder Gordon E. Moore and his wife, Betty, have pledged \$16.8 million for an electronic materials and structures laboratory. The five-story building, which will contain classrooms, laboratories, and offices, will be erected north of Watson. The new building will house materials scientists, applied physicists, electrical engineers, and researchers in related disciplines, working in such areas as computer chips, electro-optical devices that may one day allow computers to "think" with light instead of electrons, micro-machines, and new high-performance materials that will lead to improved high-performance information systems.

Moore (PhD '54) cofounded Fairchild Semiconductor Corporation in the late 1950s, and directed Fairchild's research and development during the period when it produced the first commercial integrated circuit. He cofounded Intel, now a multinational computer manufacturer, in 1968. He is a recipient of the Distinguished Alumni Award, and has been a member of the Institute's Board of Trustees since 1983.

Gannett Outdoor Co. Inc. of Southern California has donated billboard space for a poster commemorating Caltech's Centennial. The billboard currently adorns the north side of Colorado Boulevard just west of Daisy Avenue, and will appear in three other locations over the course of the Centennial year. The poster was designed by Denton Design Associates of Pasadena, and produced by TM Poster Productions of Montrose, CA.

Random Walk continued

Supercomputer Dedicated

On Friday, May 31, the world's fastest, most powerful computer was dedicated at a ceremony in Dabney Gardens. (The computer itself will take up residence in the Booth Computing Center.) The computer, known as Touchstone Delta, was built by Intel Corporation's Supercomputer Systems Division.

Although housed at Caltech, the Touchstone Delta will be operated by the Concurrent Supercomputing Consortium, an organization of more than a dozen prominent research institutions and government agencies. The consortium's members will use the machine's massive computational power to tackle such computation-intensive problems as simulating global climate change, modeling a wide variety of biological and chemical processes on the molecular level, performing complex quantum-dynamic calculations, searching through voluminous radio-telescope data for the faint signatures of binary pulsars, and creating three-dimensional videos from image data returned by the Magellan and Galileo spacecraft (see page 26.)

The Touchstone Delta contains 528 numeric processors working in parallel, coordinated by a custom mesh routing chip developed by Professor of Computer Science Charles Seitz's research group. The computer can perform up to 32 billion floating-point operations per second.

Bush to Speak at Commencement

Commencement will be a little bit different this year. Some 9,000 spectators are expected, and the event has been moved from the Court of Man to the athletic field to accommodate them. The big draw won't be the sight of President Everhart handing out the diplomas, but of that other President—George Bush—giving the Centennial commencement speech. Caltech is one of five universities to be so honored this year. Bush was invited to speak a year in advance, but final approval was not obtained from the White House until this past April. (Bush, of course, retains

the option to cancel at the last minute, should affairs of state require his presence elsewhere. If so, D. Allan Bromley, assistant to the President and director of the Office of Science and Technology Policy, will probably speak instead.)

The President, of course, never travels alone. He will be accompanied by his usual retinue of White House staff, press corps, and Secret Service agents. It remains to be seen how the blue-suit-and-reflective-sunglasses crowd, who are not noted for their sense of humor, will get along with Caltech's high-spirited undergrads.

The Biggest Durn Binoculars You Ever Saw

The 10-meter Keck Telescope now nearing completion on Mauna Kea, Hawaii, is the biggest optical and infrared telescope in the world. (See *E&S*, Winter 1991.) It won't stand alone in that distinction for long—but then again, it was never meant to. An identical copy of the telescope (known officially as Keck II, but already dubbed "Bride of Keck" by campus wags) will be built by the same team, starting next year. Keck II is scheduled to be com-

pleted in 1996. Like Keck I, Keck II is being financed largely by the W. M. Keck Foundation, with the University of California covering the operating costs. Caltech and UC will share the bulk of the two telescopes' observing time. The two together, sited 85 yards apart and connected by tunnel to a common set of observing instruments, will act as an optical interferometer—in effect, forming a single telescope with an 85-meter-diameter (about 280 feet) mirror.