# Caltech336

The campus community biweekly October 4, 2001, vol. 1, no. 14



# **Ell awarded Medal** of Excellence

Sandra Ell, treasurer and chief investment officer, has been selected as the 2001 Caltech recipient of the Women at Work Medal of Excellence, best personifying the Institute's values of service, passion, and accountability.

Bill Jenkins, executive vice president for administration, said of Ell, "She is without a doubt one of the most service-oriented managers at the Institute, always responding to a customer's request . . . Anyone who has met Sandra can observe the passion she brings to her job-she exudes that quality." He noted that Ell's career has been "meteoric," moving her from an accounting position at JPL to become "one of the Institute's most senior officers," and that she "has demonstrated the highest level of accountability" in overseeing Caltech's \$1.4 billion endowment and other challenging financial transactions.

A certified public accountant, Ell worked for the U.S. General Accounting Office and the Internal Revenue Service before joining Caltech in 1984. She besee Ell, page 6



# O'Rourke named VP

Robert O'Rourke, associate vice president for institute relations, has been named the first Caltech vice president for public relations, effective October 1. He will oversee all of Caltech's public relations, including government and community relations.

In addition, Jerry Nunnally, vice president for institute relations, will become the vice president for development and alumni relations, allowing him to focus exclusively on Caltech fundraising and alumni programs and to concentrate on developing the strategy and organization that will guarantee the success of the Institute's forthcoming campaign. Both of the new positions will report to president David Baltimore.

Baltimore said of O'Rourke, "Bob has been an advisor to me on all questions about public relations. He has been thoughtful in his approach to handling complicated

see O'Rourke, page 6

# **BSI** campaign completed

Caltech has successfully completed a \$111 million fund-raising effort begun in 1998 to expand the biological sciences, exceeding its original \$100 million goal.

Funds raised during the Biological Sciences Initiative (BSI) will make possible a new building on the Pasadena campus, professorships and fellowships, faculty appointments, and a wide range of research programs.

President David Baltimore said, "On behalf of the entire Caltech community, I wish to express my appreciation to the donors to the campaign for enabling this work to move forward and to the dedicated and enthusiastic members of the BSI Gift Committee who guaranteed the success of the Biological Sciences Initiative."

Baltimore noted that although the mapping of the human genome has given researchers an important tool, it doesn't provide them with solutions. "The gifts our donors made to the BSI will provide our talented scientists, engineers, and social scientists with critical resources to move beyond the genomic information to explore the basic questions of life and disease," he said.

The research will result in new drugs and therapies to address diseases such as cancer and AIDS, and will also lead to a deeper understanding of how organisms develop and of the biological basis of higher-level brain functions such as consciousness and cognition.

see BSI, page 6

# Geochemist Samuel **Epstein dies**

Samuel Epstein, 81, Caltech's Leonhard Professor of Geology, Emeritus, passed away on September 17.

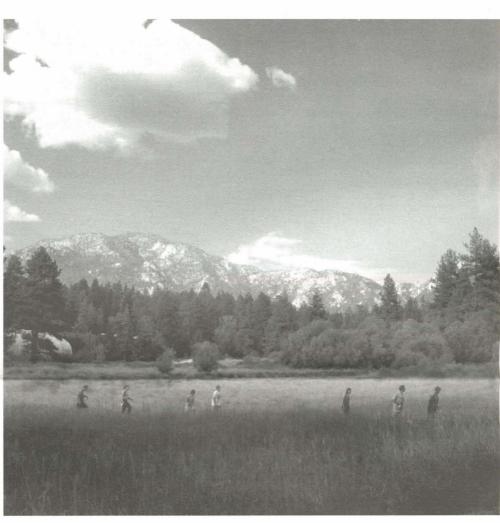
Born in 1919 near Kobrin, Poland (now Belarus), he moved with his family to Winnipeg, Manitoba, Canada. He attended the University of Manitoba, receiving a BSc in geology and chemistry and an MSc in chemistry, and in 1944 earned his PhD in chemistry at McGill University.

Epstein then worked on rare gas fission products for the Canadian Atomic Energy Project in Montreal, where he met his future wife, Diane Vool. The couple moved to Chicago in 1947, when Epstein accepted an offer to work with Nobel Laureate Harold Urey on a project using oxygen isotopes to study temperature.

Within several years, he and his research team had made historic discoveries in stable isotope geochemistry, allowing them to measure oxygen isotope ratios of marine carbonate fossils and thus calculate the ocean temperatures of more than 70 million years ago.

see Epstein, page 2

# A breath of frosh air...



Students from Caltech's incoming class of 2005 take a day hike during this year's Frosh Camp, held at Astro Camp in Idyllwild.

# at Family Night

To kick off this year's United Way campaign. Caltech is once again hosting the highly anticipated Family Night. The event promises to provide an evening's worth of activities, including a screening of the movie Shrek, and, best of all, free food. This year's bash will take place on October 19 on Beckman Mall.

Employees of Caltech and JPL, and their families and friends, are invited to treat themselves to the pasta dinner, which begins at 5 p.m. The movie will be shown in Beckman Auditorium and begins at 6:30 p.m. In addition to displays from the Caltech Y and the Children's Center, roaming face painters, balloon animal artists, and caricaturists will be on hand. For the first time, the Caltech bookstore will set up a stand to sell children's books and learning toys.

"There are a lot of people here who have children and it's something they can bring their kids to," said Diana Alvarez, a customer service rep in Human Resources and an organizer of the event. "We get a lot of people and they have a lot of fun."

Last year more than 2,500 showed up, so those planning to attend are encouraged to get their free dinner tickets early at one of several venues. Tickets can be obtained from October 8 through 19 at see Family night, page 6

# Food, fun, and Shrek Caltech celebrates **Nobel Prize's 100th**

The year 1901 marked the first time that the Nobel Prize was awarded for achievements in the fields of physics, chemistry, medicine or physiology, literature, and peace. Named after Alfred Nobel, a Swedish inventor (he created dynamite), industrialist (he manufactured and sold it), and philanthropist, the international award has since been conferred on more than 700 men and women for their efforts. In 1968. the Bank of Sweden instituted a Nobel Memorial Prize in economics.

In his will, Alfred Nobel wrote that he wished the prize to recognize those who had "conferred the greatest benefit on mankind" in the previous year. In the prize's first hundred years, the state of California has been home to the highest concentration of Nobel laureates than any other place in the world.

Caltech, along with the University of California, Stanford, and the University of Southern California, shares the distinction of providing an extraordinary number of recipients of the highly esteemed Nobel Prize. A total of 27 Nobel laureates are associated with Caltech, of whom 14 are alive. To celebrate the Prize's centennial, and to honor the 100 or so California Nobel laureates, the Consulates General of Sweden in Los Angeles and San Francisco are

see Nobel, page 6

Caltech 336, October 4, 2001

# **News**Briefs



Caltech junior Jennifer Caron (third from left) leads a moment of silence with other speakers at the Peaceful Justice rally on September 20. With Caron are, from left, graduate students Tehshik Yoon and Jennifer Johnson, Professor Marianne Bronner-Fraser, Professor Bill Deverell, and graduate student Niki Zacharias. The rally was held in conjunction with MIT to promote a nonviolent response to the September 11 terrorist acts on the East Coast.

# **Personals**

# New positions

**Drew Bahnimtewa** joined Caltech on September 10 as an assistant computer analyst for the Administrative Technology Center.

**Sabrina Boschetti**, a senior administrative secretary in humanities, began work at Caltech on September 10.

**Ben Brantley** has joined Caltech as a computing analyst in engineering/computer science; he began work on September 4.

**Aubree Chavarriga** began work on September 4 as a senior department clerk in geology.

**Leslie Dunipace**, a senior research assistant in biology, joined Caltech on September 4.

**Gustavo Gomez** has joined Caltech as a research aide in biology; he began work on September 10.

Myungshin Im joined Caltech on September 4 as a staff scientist with the Infrared Process and Analysis Center.

Guadalupe Jaquez is a new custodian with Physical Plant, having started work on September

Garrett Katzenstein joined Caltech on September 10 as an assistant engineer in engineering/ aeronautics.

**Soledad Martinez**, a new custodian with Physical Plant, started work on September 4.

**Gerald Matus** began work on September 4 as a senior food server with Caltech's Dining Services.

Vincent Nguyen joined Caltech on September 4 as an electronics engineer in Physics, Mathematics and Astronomy.

Nora Oshima has joined Caltech as an administrative aide in geology; she began work on September 4

**Robert Pancharian** started work on September 4 as a second cook with Caltech's Dining Services.

Maria Rains joined Caltech on September 4 as a custodian with Physical Plant.

**Quetin Sun**, a senior systems engineer with the Infrared Process and Analysis Center, joined Caltech on September 10.

**Ryan Thomson** joined Caltech on September 10 as a research assistant in biology.

Patricia Vacca has joined Caltech as a senior administrative aide in the office of Caltech's general counsel; she began work on September 10.

**Joelle Zavzavadjian** began work on September 10 as a senior research assistant in biology.

# Retirements

**Richard Eastvedt** retired June 1 after nearly 38 years at Caltech. He was a senior mechanic in environmental engineering science.

Nancy Potekian, a senior department assistant in engineering and estimating, retired on June 1. She had worked at Caltech for nearly 23 years.

**Judith Van Raalten** retired on June 1. A supervisor in purchasing services, she had worked at Caltech for 33 years.

**Raymond Yuen**, a manager in purchasing services, retired on June 1. He had worked at Caltech for 36 years.

# Deaths

**Dorothy Eckerman**, who was an administrative aide with the Guggenheim Jet Propulsion Center until she retired at the end of 1999, died on June 27; she was 74. She is survived by a son, Stephen.

**Charles Whitmarsh**, a carpenter for Physical Plant who had retired in 1998, died on August 16; he was 72. He is survived by his wife, Patricia.

# Honors and awards

David Baltimore, president of Caltech, has been named a 6th Annual Eddy Award winner for both his and Caltech's "contributions in bringing the fields of education, research and professional employment together" in the L.A. County area. He will receive the honor on November 14 from the Los Angeles County Economic Development Corporation, at a dinner and awards program at the Beverly Hilton Hotel.

Emmanuel Candes, assistant professor of applied and computational mathematics, has been selected to receive an Alfred P. Sloan Research Fellowship, which carries with it a grant to be used in a flexible and largely unrestricted manner. Sloan recipients are selected on an extraordinarily competitive basis from a group of nominees representing the very best of young scientists.

Judith Cohen, professor of astronomy, has received the Fullam Award from the Dudley Observatory, in Albany, New York. The award provides up to \$10,000 for "encouragement and support for an innovative research project in astronomy or astrophysics."

**Dining Services** at Caltech has won the catering first prize for medium schools, at the National Association of College and University Food Services national conference banquet. The Caltech group went on to win the grand prize, with scores "perfect across the board."

**Steve Gubser**, professor of theoretical physics, has received the Gribov Medal, the highest award given by the European Physical Society to young scientists for theoretical work in the field of highenergy particle physics.

Jason Hickey, assistant professor of computer science, has received an Okawa award from the Okawa Foundation for Information and Telecommunications. Carrying a grant of \$10,000, the award honors young researchers in areas such as communication networks, computer systems, and artificial intelligence, among others.

**Yizhao T. Hou**, professor of and executive officer for applied and computational mathematics, has received the Wilkinson Prize from the Society for Industrial and Applied Mathematics.

John Preskill, professor of theoretical physics, has been named the Andrejewski Lecturer for the fall of 2001, which will involve his traveling to Berlin to deliver a series of three 90-minute lectures on quantum computation.

# A survey of L.A.'s growing up

The University of California Press has published Metropolis in the Making: Los Angeles in the 1920s, a collection of original essays edited by William Deverell, associate professor of history at Caltech, and Tom Sitton, curator of history at the Natural History Museum of Los Angeles County. The volume explores the maturing of Los Angeles during that critical decade, using a variety of historical viewpoints, including social, political, ethnic, and cultural.

# CIT offers flu, meningitis shots

It's difficult now to think of the unpleasantness of fever and aching bodies, but the flu season will be upon us before we know it. In preparation for the annual microbial onslaught, Caltech is once again providing the highly popular flu shots to students

Outbreaks of meningitis, a potentially devastating disease, have occurred recently on college campuses across the nation. Campus health officials have encouraged freshmen living in dorms to get immunized. The meningitis vaccine, which is good for three years, will be available for a fee of \$85. The flu shots are free.

The influenza and meningitis immunization drive is scheduled for Thursday, October 11, from 1 p.m. to 7 p.m. in Winnett lounge. Payment may be made by credit card or billed to a student's account.

### Epstein, from page 1

In 1952, he was invited to move to Caltech to join a newly begun program in geochemistry. Over the succeeding years, Epstein explored a variety of uncharted scientific terrains, applying newly developed techniques and principles of stable isotope chemistry to almost every aspect of natural science, including problems of botany, plant and animal physiology, photosynthesis, biochemistry, meteorology, and ore deposits. He carried out important research on the Antarctic and Greenland ice sheets, isotope geothermometry, modern geothermal systems, and the origin of meteorites, tektites, and lunar rocks.

Widely recognized for his scientific achievements, Epstein over the years received the Goldschmidt Medal of the Geochemical Society (of which he served as president from 1978 to 1979), the Geological Society of America's Day Medal, the Geological Society of London's Wollaston Medal, and the European Association of Geochemistry's Urey Medal. He was elected a member of both the National Academy of Sciences and the American Academy of Arts and Sciences in 1976, and a fellow of the Royal Society of Canada.

Epstein retired from teaching in 1990, but until recently continued to work full-time in his laboratory. He is survived by his wife, Diane; two sons, Reuben and Albert; and three grandchildren.

# Air pollution expert Glen Cass dies

Air pollution expert Glen Cass, Caltech professor of environmental engineering and mechanical engineering, died of cancer July 30 at Duke University Hospital in North Carolina. He was 54. Cass's wife, Jeanie, and son, Rob, were with him at the time of his death.

Cass, who received his PhD from
Caltech in 1978, taught at the Institute for
24 years. In January 2000 he joined the
faculty of the Georgia Institute of Technology as chair and professor of earth and
atmospheric sciences, maintaining a joint
appointment with Caltech.

A prolific scientist with more than 200 published articles, book chapters, and other writings to his credit, Cass focused his research on air pollution, emphasizing improved visibility, photochemical oxidants, and the control of airborne particles. He was instrumental in identifying the complex mix of airborne chemicals that pollute urban areas such as Los Angeles.

In 1999, Cass initiated a global ozone study at 500 sites worldwide that continues today. His research group takes airborne particle measurements in many parts of the world. Seven sites in mainland China were monitored for "Operation Blue Sky," which identified pollution sources in Beijing and other cities, and whose results factored into China's 2008 Olympic bid.

Cass was equally interested in the protection of museum collections and archaeological sites from air pollution damage. His extensive research projects for the Getty Conservation Institute included studies to determine air pollutant intrusion into art facilities such as the new Getty Center in Los Angeles. Cass's work contributed to the design of filtration and ventilation systems for reducing air pollution in the Yungang Grottoes, a collection of fifth-century cave temples in China, as well as to preservation of the world-renowned salt carvings at the Wieliczka mine in Poland.

Cass served on numerous advisory panels, including for the U.S. Environmental Protection Agency, the Center on Environmental Health Sciences at MIT, and the South Coast Air Quality Management District, and on several editorial boards.

http://atcaltech.caltech.edu/calendar/. To publish events online, register as an event planner on the @Caltech calendar. If unable to submit electronically, please call (626) 395-3630. For further information or a schedule of deadlines, call (626) 395-3630, fax (626) 449-2159, write 336 Calendar, 1-71, California Institute of Technology, Pasadena, CA 91125, or e-mail debbieb@caltech.edu.

# October 8-14, 2001

Events in roman type are open to the public Events in italic type are open to the Caltech community only

# Monday, October 8

### **Aeronautics Seminar**

101 Guggenheim Laboratory, Lees-Kubota Lecture Hall, 1 p.m.—"Microscale Combustion and Power Generation," Professor Paul Ronney, department of aerospace and mechanical engineering, USC. Information: www.galcit.caltech.edu/ seminars.shtml.

### Ulric B. and Evelyn L. Bray Seminar

25 Baxter, 4 p.m.—"Towards a Theory of Storable Votes," Alessandra Casella, professor of economics, Columbia University. Refreshments.

### **Geology and Planetary Sciences** Seminar

155 Arms, Robert Sharp Lecture Hall, 4 p.m.—Topic to be announced. Yaron Katzir, Weeks Post Doctoral Fellow, department of geology and geophysics, University of Wisconsin-Madison. Information: www.gps.caltech.edu.

### **Inorganic-Electrochemistry Seminar**

147 Noyes, Sturdivant Lecture Hall, 4 p.m.—Topic to be announced. Mark Lonergan, assistant professor, department of chemistry, University of Oregon.

### **Applied and Computational Mathematics**

101 Guggenheim Laboratory, Lees-Kubota Lecture Hall, 4:15 p.m.—"Mathematics and Physics of Antarctic Sea Ice," Kenneth Golden, professor of mathematics, University of Utah. Refreshments, 3:45

# **Tuesday, October 9**

### **Caltech Library System Presents: Quick Review of Information** Resources

Sherman Fairchild Library, multimedia conference room, noon to 1 p.m.—Learn the most effective ways to use library services and resources. Information: 395 6713 or http://library.caltech.edu/learning/ default.htm.

# **Chemical Physics Seminar**

147 Noyes, Sturdivant Lecture Hall, 4 p.m.—"Time-Resolved Macromolecular Crystallography: Molecular Movies?", Professor Keith Moffat, department of biochemistry and molecular biology, University of Chicago.

# Wednesday, October 10 Thursday, October 11

### **Caltech Library System Presents: Quick Review of Information** Resources

Sherman Fairchild Library, multimedia conference room, noon to 1 p.m.—Learn the most effective ways to use library services and resources. Information: 395-6713 or http://library.caltech.edu/learning/ default.htm.

### **Institute for Quantum Information** Seminar

102 Steele, 3 to 4:30 p.m.—"Adiabatic Quantum Algorithms," Umesh Vazirani, associate professor, computer science division, UC Berkeley.

### **Astronomy Colloquium**

155 Arms, Robert Sharp Lecture Hall, 4 p.m.—"FUSE Studies of the Interstellar and Intergalactic Medium," Mike Shull, professor of astrophysics, University of Colorado. Information: http://astro.caltech. edu/~jlc/colloquia.html.

### **Environmental Science and Engineering Seminar**

142 Keck, 4 p.m.—"The Groundwater-Arsenic Crisis in Bangladesh and West Bengal, India: Constraints and Opportunities for Remediation," Alexander van Geen, associate research scientist, Lamont-Doherty Earth Observatory, Columbia University. Refreshments, Keck lobby, 3:40 p.m.

# **Organic Chemistry Seminar**

147 Noyes, Sturdivant Lecture Hall, 4 p.m.—"Supramolecular Polymer Chemistry," Steven C. Zimmerman, professor of chemistry, University of Illinois at Urbana-Champaign.

# Wiersma Lecture

24 Beckman Labs, 4 p.m.—Topic to be announced. Professor Jeffrey Lichtman, department of anatomy and neurobiology, School of Medicine, Washington University in St. Louis.

### **Caltech Library System Presents: Quick Review of Information** Resources

Sherman Fairchild Library, multimedia conference room, noon to 1 p.m.—Learn the most effective ways to use library services and resources. Information: 395-6713 or http://library.caltech.edu/learning/ default.htm.

### **Biochemistry Seminar**

147 Noyes, Sturdivant Lecture Hall, 4 p.m.—"Subverting the Ribosome: Mechanism of Translation Initiation by Hepatitis C Virus," Jennifer Doudna, Henry Ford II Professor, department of molecular biophysics and biochemistry, Yale, and associate investigator, HHMI.

### **Geology Club Seminar**

151 Arms, Buwalda Room, 4 p.m.— "Breaking into Science Writing," Michael Taylor, associate professor of mass media, Henderson State University. Refreshments, 3:45 p.m. Information: www.gps.caltech.edu/seminars/geoclub/.

# **Physics Research Conference**

201 E. Bridge, 4 p.m.—"Trillions of Quantum Dots, Fingerprints, Nanolithography with Diblock Copolymers, and the Formation of Striped Patterns," Paul Chaikin, department of physics, Princeton University. Refreshments, 108 East Bridge, 3:45 p.m. Information: www.pma.caltech.edu/ ~physcoll/PhysColl.html.

# Friday, October 12

### **Caltech Library System Presents: Quick Review of Information** Resources

Sherman Fairchild Library, multimedia conference room, noon to 1 p.m.—Learn the most effective ways to use library services and resources. Information: 395-6713 or http://library.caltech.edu/learning/

# Fluid Mechanics Seminar

101 Guggenheim Laboratory, Lees-Kubota Lecture Hall, 3 p.m.—Topic to be announced. Thomas Bewley, assistant professor, mechanical and aerospace engineering, UC San Diego. Information: www.galcit.caltech.edu/Seminars/Fluids/ CurrentFluids/index.html.

# Kellogg Seminar

Lauritsen Library, 4 p.m.—"Double Excitation of the Giant Dipole Resonance in Nuclei," Professor Hans Wiedenmüller, Max Planck Institute for Nuclear Physics, Heidelberg, Germany.

# **LIGO Seminar**

155 Arms, Robert Sharp Lecture Hall, 4 p.m.—"Optimal Burst Detection in Gravitation Waves," Andrea Viceré, member of the professional staff, LIGO laboratory, Caltech.

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# October 15-21, 2001

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Events in italic type are open to the Caltech community only

# Monday, October 15

### **Aeronautics Seminar**

101 Guggenheim Laboratory, Lees-Kubota Lecture Hall, 1 p.m.—"NASA's Ultra-Efficient Engine Technology Program: Technologies for 21st-Century Green Engines," Robert Shaw, NASA Glenn Research Center. Information: www.galcit.caltech.edu/seminars.shtml.

### **Thesis Seminar**

24 Beckman Labs, 2 p.m.—Topic to be announced. Ben Arthur, graduate student in computation and neural systems, Caltech.

### Applied and Computational Mathematics Seminar

101 Guggenheim Laboratory, Lees-Kubota Lecture Hall, 4 p.m.—"Nonlinear N-Term Approximation," Peter Oswald, Bell Laboratories, Lucent Technologies. Refreshments, 3:45 p.m.

### Ulric B. and Evelyn L. Bray Seminar

25 Baxter, 4 p.m.—"Experimental Evidence on Rationing and Common Values," Vesna Prasnikar, visiting professor of economics, Graduate School of Industrial Administration, Carnegie Mellon University. Refreshments.

# **Civil Engineering Seminar**

206 Thomas, 4 p.m.—"Wavelet Application to Stochastic Seismic Response," Vinay Gupta, department of civil engineering, Indian Institute of Technology. Refreshments, 210 Thomas, 3:45 p.m.

### Computation and Neural Systems Seminar

24 Beckman Labs, 4 p.m.—Topic to be announced. Gero Miesenbock, assistant professor in the programs of cell biology and genetics and in neuroscience at Cornell University and assistant member in cellular biochemistry and biophysics at the Sloan Kettering Institute.

### Geology and Planetary Sciences Seminar

155 Arms, Robert Sharp Lecture Hall, 4 p.m.—"Biochemical Fractionation of Hydrogen Isotopes in Microbial Lipids," Alex Sessions, postdoctoral investigator, Woods Hole Oceanographic Institution. Information: www.gps.caltech.edu.

# Inorganic-Electrochemistry Seminar

147 Noyes, Sturdivant Lecture Hall, 4 p.m.—"High-Efficiency Organic LEDs: Using Inorganic Chemistry to Color-Tune and Enhance Efficiencies," Mark E. Thompson, professor of chemistry, department of chemistry, USC.

# **Tuesday, October 16**

# Caltech Library System Presents: Patents

Sherman Fairchild Library, multimedia conference room, noon to 1 p.m.—A quick review of the patenting process, searching for patents and patent equivalents, legal status issues, and current awareness techniques. Registration: http://library.caltech.edu/learning/form.htm.

### **Special Chemistry-Biology Seminar**

22 Gates Annex, 4 p.m.—"Exploring RNA and Protein Sequence Space with Directed Evolution," Jack W. Szostak, professor of genetics, Harvard Medical School, and the Alex Rich Distinguished Investigator, Massachusetts General Hospital.

### **Caltech/MIT Enterprise Forum**

Registration and dinner, Chandler Dining Hall, 5 to 7 p.m.; program, Baxter Lecture Hall, 7 to 9 p.m.—"Venturing in Broadband Entertainment Technology." This program is designed to help entrepreneurs develop their strategy for launching a new venture in broadband entertainment technology. Registration and information: 395-3916 or www.entforum. caltech.edu.

# Wednesday, October 17

# **Astronomy Colloquium**

155 Arms, Robert Sharp Lecture Hall, 4 p.m.— "Accretion Disks and the Origin of Stellar Rotation," Marc Pinsonneault, assistant professor of astronomy, Ohio State University. Information: http://astro.caltech.edu/~jlc/colloquia.html.

# Environmental Science and Engineering Seminar

142 Keck, 4 p.m.—"Is Earth's Climate Quantized? Abrupt Mode-Switching Inferred from Ice Core Data," Jeff Severinghaus, professor of geosciences, Scripps Institution of Oceanography. Refreshments, Keck lobby, 3:40 p.m.

### Silvio Conte Research Center for Neuroscience Seminar

24 Beckman Labs, 4 p.m.—"Effects of Estrogen on Hippocampal Circuitry," Catherine Wooley, assistant professor, department of neurobiology, Northwestern University Medical School.

# **Thursday, October 18**

### **Geology Club Seminar**

151 Arms, Buwalda Room, 4 p.m.—Topic to be announced. Jess Adkins, assistant professor of geochemistry and global environmental science, Caltech. Refreshments, 3:45 p.m. Information: www.gps. caltech.edu/seminars/geoclub/.

### **Physics Research Conference**

201 E. Bridge, 4 p.m.—"Atom Optics, from Atomic Mirrors to Quantum Atom Optics," Alain Aspect, director of research, Centre Nationale de la Recherche Scientifique, Institut d'Optique, and professor, Ecole Polytechnique, Orsay, France. Refreshments, 108 East Bridge, 3:45 p.m. Information: www.pma.caltech.edu/~physcoll/PhysColl.html.

### **Von Karman Lecture Series**

von Karman Auditorium, JPL, 7 p.m.—
"The Earth as Seen from Space," Robert
Parker, director, NASA Management Office, JPL. Admission is free. Information:
www.jpl.nasa.gov/events/lectures.html.

# Friday, October 19

### Institute for Quantum Information Seminar

102 Steele, 2 to 3:30 p.m.—Topic to be announced. Carlton Caves, professor of physics and astronomy, University of New Mexico, Albuquerque.

# Fluid Mechanics Seminar

101 Guggenheim Laboratory, Lees-Kubota Lecture Hall, 3 p.m.—"Injection of Highly Supersaturated Oxygen Solutions without Nucleation," Christopher Brennen, professor of mechanical engineering, Caltech. Information: www.galcit.caltech.edu/ Seminars/Fluids/CurrentFluids/index.html.

### Caltech/JPL Association for Gravitational-Wave Research Seminar Series

155 Arms, Robert Sharp Lecture Hall, 4 p.m.—"Disturbance Reduction System: A Proposed Space Demonstration of Drag-Free Technology," William Folkner, Robert Spero, and Andreas Kuhnert, JPL.

# Inorganic-Organometallics Seminar

151 Crellin, 4 p.m.—"Triphos versus Tris(phosphino)borate: A Co(II) Comparative Study," David Jenkins, graduate student in chemistry, Caltech.

# **Von Karman Lecture Series**

Pasadena City College, 1570 E. Colorado, the Forum (south of Colorado on Bonnie), 7 p.m.—"The Earth as Seen from Space," Robert Parker, director, NASA Management Office, JPL. Admission is free. Information: www.jpl.nasa.gov/events/lectures.html.

# Going beyond the moon

Caltech's Ed Stone and Bruce Murray are among the "armchair astronauts" whose work will be featured in *Beyond the Moon*, a study of robotic space exploration narrated by Walter Cronkite. The documentary will air on KCET, channel 28, on Wednesday, October 17, at 9 p.m. and again on Sunday, October 21, at 6 p.m.

Stone, the Morrisroe Professor of Physics, and Murray, professor of planetary science and geology, emeritus, are both former directors of JPL, a number of whose scientists are featured in the documentary. Cronkite interviews Stone and other JPL investigators, including Claudia Alexander, Ken Nealson, Marc Rayman, and Barbara Wilson, about the history of deep space exploration—"examining both the remarkable technology and the extraordinary vision of the men and women who created the space probes."

The program covers the launch of the Voyager missions in the early 1970s and the Mars Pathfinder and twin Surveyor missions of the late 1990s, and also looks toward the future of unmanned space flight, discussing both the challenges of exploring the universe and the strong motivations behind it—in particular, the potential of discovering extraterrestrial life.

As Ken Nealson, a JPL senior research scientist in astrobiology and a Caltech faculty associate, describes that motivation: "If we find that life really originated and thrived for a while anyplace else other than Earth, each of us will have some sort of reaction to that that's almost indescribable, I think. It'll be certainly the most exciting thing that almost any of us could imagine in terms of how we feel about ourselves, and especially about the possibility of life elsewhere in the universe."

# **Campus** Events

# Monday, October 8

Recruiters from Rohm and Haas Company

Center for Student Services, 3rd floor, CDC conference room, 9 a.m.—The Career Development Center will offer an information meeting about Rohm and Haas. Recruiters will talk about their company and the opportunities for employment. This meeting is important to those who have signed up for interviews with the Career Center's Recruiting Program. Anyone interested in finding out more about Rohm and Haas is welcome.

### Baby Furniture and Household Equipment Pool

234 S. Catalina, 10 a.m. to 1 p.m.—Loans of kitchen and household necessities and baby furniture are made to members of the Caltech community. Information: 584-9773.

### Men's Soccer

Hope International University, at Cal State Fullerton, 3 p.m.

### **Ballroom Dance Club**

Winnett lounge, 7:30 to 9 p.m.—Lindy hop for beginners, the first of a four-week series taught by a professional instructor. \$6 a lesson for Caltech students, \$8 for others. No partner required. Refreshments and a half-hour practice period will follow each class. Information: 229-7508 or www.its.caltech.edu/~ballroom/index.html.

### **Ballroom Dance Mini Party**

Winnett lounge, 9:30 to 11 p.m.—Open dancing; make requests or bring your own music. No partner required. Refreshments. Information: 229-7508 or www.its.caltech.edu/~ballroom/index.html. Open to the public.

# **Tuesday, October 9**

### **Preschool Playgroup**

Tournament Park, 10 a.m. to noon—Song and storytime, crafts and free play for toddlers and preschoolers (from walking to age 4). A field trip is planned for the third Tuesday of every month. Information: Jennifer Pearson, (323) 550-8075 or jmph-p@pacbell.net.

# Recruiters for Dow Chemical Company

Center for Student Services, 3rd floor, CDC conference room, 3:30 to 5 p.m.—The Career Development Center will offer an information meeting about Dow Chemical Company. Recruiters will talk about their company and the opportunities for employment. This meeting is important to those who have signed up for interviews with the Career Center's Recruiting Program. Anyone interested in finding out more about Dow Chemical is welcome.

# Caltech Management Association

Athenaeum, 6 to 9:30 p.m.—"Managing the JPL Vision," Charles Elachi, director, Jet Propulsion Laboratory. Open to CMA members and guests only. Membership dues may be paid with your dinner reservation. Information and registration: (818) 354-7702, Alice.G.Tangney@jpl.nasa.gov, or jshort@srl.caltech.edu.

# Water Polo

vs. BYU-Hawaii, 7 p.m.

# Caltech Folk-Dancing Club

Call 797-5157 for location. 7:30 p.m. to midnight— Meets every Tuesday. Drop-ins are welcome. Donations accepted.

# Women's Volleyball

vs. University of La Verne, 7:30 p.m.

# Wednesday, October 10

# Baby Furniture and Household Equipment Pool

234 S. Catalina, 10 a.m. to 1 p.m.—Loans of kitchen and household necessities and baby furniture are made to members of the Caltech community. Information: 584-9773.

# Wednesdays in the Park

Tournament Park, 10 a.m. to noon—Conversation and coffee for parents and caregivers, and playtime for children. Information: 744-9919 or cdd@its.caltech.edu.

### Women's Club Fall Gathering

Garden of the president's residence, 11:30 a.m. to 1:30 p.m.—Renew friendships, make new friends, and learn about the activity groups of the Caltech Women's Club. Lunch reservations are due by October 5. Information: Mary Ann Jenkins, 396-8233 or maryannjenkins@caltech.edu.

### **Water Polo**

vs. Biola University, 4:30 p.m.

### **Ballroom Dance Club**

Winnett lounge, 7:30 to 9 p.m.—Cha-cha for beginners, the first of a four-week series taught by a volunteer instructor. \$1 per lesson. No partner required. Refreshments and a half-hour practice period will follow each class. Information: 229-7508 or www.its.caltech.edu/~ballroom/index.html.

### Women's Volleyball

vs. LIFE Bible College, 7:30 p.m.

# **Thursday, October 11**

### Resumania

Olive Walk, 11 a.m. to 2 p.m.—Caltech alumni and counselors from the Career Development Center will be available to review your résumé. A great chance to prepare for on-campus interviews (October through March in the Career Development Center) and the Fall Career Fair (October 18 at Beckman Mall). Information: 395-6361 or career@caltech.edu.

# Friday, October 12

### **Cross-Country**

SCIAC multi duals, at La Mirada Park, 4 p.m.

### Women's Volleyball

at Claremont-Mudd-Scripps, 7:30 p.m.

# Armchair Adventure Series Reckman Auditorium 8 n.m.—

Beckman Auditorium, 8 p.m.—*The Best of Portugal*, narrated by Grant Foster. Tickets and information: 395-4652, 1 (888) 2CALTECH, or events@caltech.edu. Individuals with a disability: 395-4688 (voice) or 395-3700 (TDD). Visit Public Events at www.events.caltech.edu.

# Caltech Y Social Activism Speaker Series

Ramo Auditorium, 8 to 10 p.m.—José Ramos-Horta, winner of the 1996 Nobel Peace Prize, will address the Caltech student body and the local community. Information: 395-6163 or gregf@caltech.edu.

# Saturday, October 13

# Men's Soccer

at Cal Lutheran, 11 a.m.

# Women's Volleyball

vs. San Jose Christian, 3 p.m.

# Monday, October 15

# Baby Furniture and Household Equipment Pool

234 S. Catalina, 10 a.m. to 1 p.m.—Loans of kitchen and household necessities and baby furniture are made to members of the Caltech community. Information: 584-9773.

# **Ballroom Dance Club**

Winnett lounge, 7:30 to 9 p.m.—Lindy hop for beginners, the second of a four-week series taught by a professional instructor. If you missed the first class, come anyway. \$6 a lesson for Caltech students, \$8 for others. No partner required. Refreshments and a half-hour practice period will follow each class. Information: 229-7508 or www.its.caltech.edu/~ballroom/index.html.

# Women's Volleyball

at Pomona-Pitzer College, 7:30 p.m.

# **Ballroom Dance Mini Party**

Winnett lounge, 9:30 to 11 p.m.—Open dancing; make requests or bring your own music. No partner required. Refreshments. Information: 229-7508 or www.its.caltech.edu/~ballroom/index.html.

# **Tuesday, October 16**

### **Preschool Playgroup**

Tournament Park, 10 a.m. to noon—Song and storytime, crafts and free play for toddlers and preschoolers (from walking to age 4). A field trip is planned for the third Tuesday of every month. Information: Jennifer Pearson, (323) 550-8075 or jmph-p@pacbell.net.

### Caltech Folk-Dancing Club

Call 797-5157 for location. 7:30 to midnight— Meets every Tuesday. Drop-ins are welcome. Donations accepted.

# Wednesday, October 17

### Baby Furniture and Household Equipment Pool

234 S. Catalina, 10 a.m. to 1 p.m.—Loans of kitchen and household necessities and baby furniture are made to members of the Caltech community. Information: 584-9773.

### Wednesdays in the Park

Tournament Park, 10 a.m. to noon—Conversation and coffee for parents and caregivers, and playtime for children. Information: 744-9919 or cdd@its.caltech.edu.

### Men's Soccer

vs. University of La Verne, 4 p.m.

### **Water Polo**

vs. Pomona-Pitzer College, 4 p.m.

### **Ballroom Dance Club**

Winnett lounge, 7:30 to 9 p.m.—Cha-cha for beginners, the second of a four-week series taught by a volunteer instructor. If you missed the first class, come anyway. \$1 per lesson. No partner required. Refreshments and a half-hour practice period will follow each class. Information: 229-7508 or www.its.caltech.edu/~ballroom/index.html.

# Women's Volleyball

vs. LIFE Bible College, 7:30 p.m.

# Beyond the Moon Television broadcast

KCET, Channel 28, 9 p.m—Featuring the work of investigators at Caltech and JPL, this documentary presents a look at the future of robotic space exploration and the technological developments necessary to make such travel successful. Narrated by Walter Cronkite. Repeats on Sunday at 6 p.m.

# **Thursday, October 18**

# Fall Career Fair

Beckman Mall, 10:30 a.m. to 2:30 p.m.—An opportunity for students and postdocs to gather company information, speak with company representatives, and drop off their résumés in an informal arena. Freshman and sophomores are encouraged to attend. Information: 395-6361 or www.career.caltech.edu/students/cday.htm.

# Friday, October 19

# Caltech Wired Vendor Fair

Winnett quad, 11 a.m. to 2 p.m.—At the computer store's third annual vendor fair, meet vendor representatives and find out what new products and promotions they are offering this fall.

# Women's Volleyball

at Cal Lutheran University, 7:30 p.m.

# Saturday, October 20

### **SURF Seminar Day**

Winnett quad, 9 a.m. to 5:30 p.m.—SURF students give oral or poster presentations of their summer research projects. Registration, 9 a.m. Student presentations from 10 to 11:45 a.m. and from 1 to 4 p.m. Reception and poster session at 4 p.m., announcements of the semifinalists in the Doris S. Perpall SURF speaking competition at 5 p.m. Fee of \$15 covers materials, presentations, lunch, and refreshments. For a schedule of presentation times and locations, see http://www.its.caltech.edu/~surf/.

### Men's Soccer

at Pomona-Pitzer, 11 a.m.

### Water Polo

at University of Redlands, 11 a.m.

### **LUMA: Theatre of Light**

Beckman Auditorium, 2 p.m.—LUMA plunges you into a darkened theater where three-dimensional illuminated images paint a surreal world of light, color, and motion. Tickets and information: 395-4652, 1 (888) 2CALTECH, or events@caltech.edu. Individuals with a disability: 395-4688 (voice) or 395-3700 (TDD). Visit Public Events at www.events. caltech.edu.

### Caltech Y Community Service— Union Station

6 to 9 p.m.—Caltech Y volunteers will help to prepare and serve meals for homeless men, women, and children at the Union Station shelter in Pasadena. Information: 395-6163, gregf@caltech.edu,or www.caltechy.org.

### Women's Volleyball

vs. Occidental College, 7:30 p.m.

### Folk Music Society Presents William Jackson

Dabney Lounge, 8 to 10:30 p.m.—Jackson is a traditional Scottish harper and a composer of original music. Tickets and information: 395-4652, 1 (888) 2CALTECH, or events@caltech.edu. Individuals with a disability: 395-4688 (voice) or 395-3700 (TDD). Visit Public Events at www.events. caltech.edu.

# Sunday, October 21

# Men's Soccer

vs. St. Thomas University, 11 a.m.

# Admissions Open House

Beckman Auditorium, noon to 5 p.m.—Sponsored by the Undergraduate Admissions Office to help prospective students and their families learn about admissions requirements, financial aid, and research opportunities at Caltech. Families are also invited to take a tour of the campus and visit the bookstore. Information: 395-6341 or ugadmissions@caltech.edu.

# Get your career in gear

Caltech's annual Fall Career Fair will take place on October 18 from 10:30 a.m. to 2:30 p.m. on the Beckman Mall, in front of Beckman Auditorium.

This year's event is open to all degree levels, as well as the general Caltech community, says Jonie Watanabe Tsuji of the Career Development Center. "For the past two years, our fall event had been reserved for PhDs and postdocs," she said. "This year, we've decided to open the event to all degree levels.

"Besides those seeking full-time employment, we especially encourage frosh and sophomores to attend to become familiar with the companies and explore summer internship opportunities," she says, and urges all potential job seekers to bring their "résumés and questions."

Caltech's career fairs in the fall and spring typically attract 60 to 100-plus employers. As of press time, some of the companies confirmed to attend are Adobe Systems, Boeing Satellite Systems, Microsoft, MIT Lincoln Laboratory, Los Alamos National Laboratory, and Raytheon.

For more information, contact Watanabe
Tsuji at joniew@caltech.edu.

# Family night, from page 1

Human Resources, the Caltech Bookstore, the Children's Center at Caltech, the JPL Child Educational Center, the Women's Center, the Caltech Y, or the JPL United Way Campaign Office.

This year's campaign runs from October 22 to November 2, 2001. Information packets will be sent to the campus community during the week of October 15.

The United Way of Greater Los Angeles serves as an umbrella for more than 250 area organizations that can be designated as donation recipients. Employees may earmark their contributions toward any of three Caltech organizations: the Children's Center, the Caltech Y, or the JPL Child Educational Center. Donations to the two child-care centers will provide tuition assistance for Caltech/JPL community members. For more information, contact Diana Alvarez at ext. 6001 or at diana.alvarez@caltech.edu.

# Nobel, from page 1

planning a series of events at Caltech and

In addition, the California Science Center will host a lunch on October 25 and another academic symposium will take place at the Exploratorium in San Francisco on October 26. A gala dinner banquet will take place at City Hall in San Francisco on October 27.

Caltech and UCLA will team up on October 24 to present a daylong academic symposium titled "21st Century Pioneers of Science." The symposium's afternoon session will take place in Beckman Auditorium from 2:30 to 5 p.m.

The Nobel laureates participating in the symposium are President David Baltimore (Physiology or Medicine, 1975); Professor Edward Lewis (Physiology or Medicine, 1995); Professor Rudolph Marcus (Chemistry, 1992); and Professor George Olah (Chemistry, 1994).

In the spirit of progress and knowledge, the Nobel laureates will introduce leading Southern California scholars who will share their engaging and innovative research. The speakers include Richard Andersen, Boswell Professor of Neuroscience and Director of the Sloan-Swartz Center for Theoretical Neurobiology at Caltech, who will present "The Neurobiology of Intention"; Andrew Lange, Goldberger Professor of Physics, Caltech, who will present "Imagining the Embryonic Universe"; and K. C. Nicolaou, Skaggs Professor of Chemical Biology and the Darlene Shiley Chair in Chemistry, Scripps Research Institute, who will present "The Impact of Total Synthesis on Biology and Medicine." Admission is free. For information, visit www.events.caltech.edu/nobel.

In addition, a scholarship program in honor of the centennial will be established to offer tuition support to some of the 350 students who each year attend the California State Summer School for Mathematics and Science, called COSMOS.

### Ell from page 1

Caltech 336, October 4, 2001

came assistant treasurer in 1990, and was appointed treasurer and chief investment officer in 1999. Ell graduated from UC Berkeley with honors and won a fellowship with the Stanford overseas program in Rome. A longtime Pasadena resident, she serves on the city of Pasadena's Utility Advisory Commission and the mayor's citizen advisory committee, is a member of the Tournament of Roses Association, and was inducted into the hall of fame at her alma mater, John Muir High School.

Other finalists for the Medal of Excellence were Aleen Boladian, senior financial analyst in geological and planetary sciences; Silva Stepanian, systems administrator in chemistry and chemical engineering; and Nagarajan Vaidehi, director of biosimulations at the Materials and Process Simulation Center (MSC), Beckman Institute.

A 10-year employee of Caltech, Boladian has worked her way from the cashier's office, to secretary for two professors in GPS, to her current position. Along the way, she earned her bachelor's and master's degrees, and is now pursuing a certificate in Certified Financial Management. She is the resident Oracle expert in GPS and represents the division on a number of campus committees. Fluent in five languages, Boladian often serves as a translator for faculty and students, and has become a mentor to many staff members. "She tackles every project that comes her way with enthusiasm and a spirit of collegiality," said colleague Cathy Fontenette.

Stepanian emigrated to the United States at age 18 with limited English and worked fulltime to put her younger brother and herself through college. She began at Caltech as a mail clerk in CCE and also worked as an assistant in human resources. After receiving her BS in computer science she returned to CCE in systems administration, and she has since earned an MBA. "She is relied upon as an expert in computers by the CCE staff and faculty," said division administrator Paul Carroad, who also praised Stepanian's willingness to go beyond the call of duty to help her colleagues. Stepanian is active in community organizations, including her church and the Opera League, and as a volunteer with the Pasadena Library.

Vaidehi received her doctorate in theoretical chemistry from the Indian Institute of Technology, and is a senior manager at the MSC, supervising and mentoring graduate students. An expert in molecular simulations, she has authored numerous publications on the subject. Vaidehi was a corecipient of NASA's Space Science Award 2000 along with Caltech professor Bill Goddard, and was a key contributor to her group's winning the 1999 Feynman Molecular Nanotechnology Theory Prize. She is involved with the Caltech Precollege Science Initiative and speaks on science to middle- and high-schoolers. "Dr. Vaidehi is in my strong opinion a model of excellence for her remarkable scientific achievements, her important service to oth-

# Parking deadline extended

The registration deadline for campus parking has been extended through today, October 4. All cars parked on campus must be registered, and must display a registration placard beginning Monday, October 8. Placard distribution continues through Friday, October 5, from 9 a.m. to 4 p.m. at Beckman Auditorium.

Also starting October 8, visitors must fill out a visitor information form at the Holliston Parking Structure in order to park on campus. Advance parking reservations can also be made and should be completed five business days prior to the visitor's arrival. The form can be found online at http://atc.caltech.edu/CIT\_Parking/home.htm.

In other parking developments, on October 1, a permit-only zone went into effect on the west side of Wilson Avenue south of California Boulevard, and a residentsonly zone became effective on Cornell Road. A Polytechnic School permit is re-

a.m. to 3 p.m. on school days.

Any questions regarding these parking changes can be directed to the Parking Office at ext. 8877 or parking@caltech.edu.

quired to park in the Wilson zone from 8

ers, and her indisputable character," said graduate student René Trabanino.

The Institute will recognize the four women at a ceremony hosted by Bill Jenkins, on Wednesday, October 10, from 3 to 4:30 p.m. in the Avery dining room and courtyard. Ell will also be honored at Women at Work's 2001 Medal of Excellence luncheon on October 25. Women at Work, a nonprofit Pasadena organization, holds the yearly awards to encourage local companies to recognize outstanding female employees.

# O'Rourke, from page 1

issues and has gone out of his way to make friends for Caltech. It is clear that he loves the place and is able to send its message widely and effectively. Promoting him to vice president will give him greater visibility and authority as Caltech moves forward."

The head of Caltech public relations since 1986, O'Rourke has 28 years of experience in nonprofit public relations, including at the University of Wisconsin Center for Health Sciences, at the Medical College of Pennsylvania, and as press secretary to the president of Boston University. He has strengthened Caltech's internal and external relations by establishing such programs as Caltech's first Web publishing department, the Caltech visitor's center, a monthly talk show on KPCC radio, the annual Biology Forum, and the DuBridge Distinguished Lecture Series.

A member of the Public Relations Society of America, O'Rourke has served in numerous community organizations, including the Pasadena Chamber of Commerce, Pasadena World Cup Strategic Planning Committee, and Los Angeles World Affairs Council, and as a founder of the Pasadena Pops Orchestra.

## BSI, from page 1

Cochairs for the BSI were Ben Rosen '54, now chairman of the board of trustees, whose \$5 million contribution singlehandedly met the campaign's goal for endowed graduate fellowships, and senior trustee Camilla Frost, who contributed \$5 million toward construction of the Broad Center for the Biological Sciences.

The physical centerpiece of the initiative, the Broad Center is named for Caltech trustee and Los Angeles business and civic leader Eli Broad and his wife, Edythe Broad, who provided the project's lead gift of \$23 million. An additional \$8 million in capital funds and \$1.4 million in discretionary funds has come from the estate of William Hacker '31. The center, designed by renowned architect James Freed and projected to open next summer, will house about a dozen research groups and electron microscopy and magnetic resonance imaging facilities.

Trustee Donald Bren contributed \$10 million through the Donald L. Bren Foundation to support new faculty as Bren Scholars and eventually endow five professorships. Caltech also received \$5 million from the late William and Georgina Gimbel and from the Keck Foundation; and trustee Ron Linde (MS '62, PhD '64) and his wife, Maxine Linde, matched gifts from more than 5,500 alumni toward the Ronald and Maxine Linde/Caltech Alumni Laboratories in the Broad Center.

Through the BSI, Caltech has already appointed several new faculty members with interdisciplinary research interests, including David Chan, assistant professor of biology and Bren Scholar, and Dianne Newman, the Luce Assistant Professor of Geobiology and Environmental Engineering Science.

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