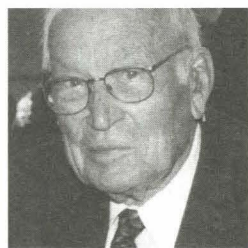


Caltech 336

T F S S M T W T F S S M T W

The campus community biweekly

May 27, 2004, vol. 4, no. 11



Arnold Beckman dies

Arnold Beckman, founder and president of Beckman Instruments, chairman emeritus of the Caltech board of trustees, and a nationally recognized inventor, scientist, philanthropist, and business leader, died in his sleep at Scripps Hospital in La Jolla, California, on May 18, after a long illness. He was 104.

"Arnold Beckman started an instrumentation revolution that completely changed the course of chemistry and biology, not only at Caltech, but all over the world," said Harry Gray, Beckman Professor of Chemistry, founding director of the Beckman Institute at Caltech, and a long-time friend and associate of Beckman's.

Peter Dervan, the Bren Professor of Chemistry, said that the country had "lost one of the truly great visionaries of the 20th century. Arnold Beckman had a huge impact regarding the quality of our lives."

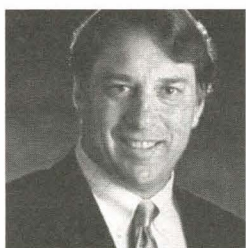
"His instruments combined electronics with chemistry, which accelerated research discoveries in biochemistry and human medicine," Dervan added. "These discoveries fueled the biotechnology revolution in the 20th century."

"An important Caltech alumnus, former faculty member, former chair of our Board of Trustees, and friend has departed—and all associated with the Institute are richer for having had him among us," said Tom Everhart, Caltech president emeritus. Everhart knew Beckman when both men were at the University of Illinois. "He was admired by all and loved by many," he said.

Born in Cullom, Illinois, on April 10, 1900, Beckman earned a bachelor's degree in chemical engineering in 1922 and a master's degree in physical chemistry in 1923, both at the University of Illinois. He then came to Caltech in what would become a lifetime association, first as a graduate student in chemistry, then as a professor, and later as a major benefactor.

Beckman earned his Caltech doctorate in photochemistry in 1928, and six years later invented the pH meter that became the foundation of his career as an inventor. He started Beckman Instruments in 1935, and in 1940 resigned his faculty appointment to devote his full efforts to his rapidly expanding company. That same year he introduced a number of other inventions to the Beckman line, including the Beckman DU spectrophotometer and the Helipot, a helical potenti-

see Beckman, page 5



Times publisher named trustee

John P. Puerner, publisher, president, and CEO of the *Los Angeles Times*, has been elected to Caltech's board of trustees.

Puerner has been at the helm of the *Times* since April 2000. Prior to moving to Los Angeles, he held several positions at the Tribune Company, first at the *Chicago Tribune* and later at the *Orlando Sentinel*. Joining the *Tribune* in 1979 as financial analyst, he also eventually held a variety of other positions, including manager of financial planning and assistant treasurer, director of strategic planning, and vice president and director of marketing and development. He was president of Orlando Sentinel Communications and chief executive officer and publisher of the *Sentinel* from 1993 until 2000.

A member of numerous boards, including those of the Los Angeles Business Advisors, the United Way of Greater Los Angeles, the Los Angeles County Museum of Art, the Los Angeles County Music Center, the Art Center College of Design, and the International Women's Media Foundation, Puerner also serves on the advisory council of the University of Colorado's Leeds School of Business. He earned his bachelor of arts and MBA degrees from the University of Colorado.

Fund will promote innovation

A multidisciplinary team from Business and Finance is on the lookout for creative ideas and programs to help further the unit's vision and goals. Stressing that "almost anything goes," the committee members are preparing to reward the best ideas with up to \$50,000 in funding.

The team is launching the Strategic Initiatives Fund (SIF), one of six facets of the Road Map for Success program. Introduced by Vice President for Business and Finance Al Horvath, the Road Map is a strategy to help realize the following statement of vision: "We will become valued partners with the campus community in support of Caltech's research and teaching mission, while fostering an environment that is rewarding, challenging, and fun."

Representing a cross section of the Business and Finance unit, the 2004-05 committee comprises Bob Carter and

see SIF, page 6

Seeking the sword



This year's Ditch Day events found students Oran Kremen, Tina Dwyer, Mike Quinn, and Jeff Chou of Ruddock House solving the stack "The Legend of Zelda: The Scroll of Lya'ani," based on the Nintendo video-game series. The students had to find three "pendants" with hidden electronic circuits, which when connected released the master sword from its pedestal.

The Athenaeum: a venue for intellectual and social exchange

Amid a constantly evolving campus and world, the Athenaeum, Caltech's renowned faculty club, has grown and changed but has remained steadfast in its purpose. Nearly 75 years after opening, the "Ath"—true to its founders' vision—continues to serve as a hub for intellectual, cultural, and social interaction among Caltech community members.

Part of a centuries-old tradition of academic societies named for Athena, the Greek goddess of wisdom, Caltech's Athenaeum was envisioned by astronomer and Institute trustee George Ellery Hale as a similar venue for learned discourse. The dream began taking shape in 1929, when Mr. and Mrs. Allan Balch gave Caltech a gift in the form of stocks to build the club.

Cashed in just before that year's infamous market crash, the stocks brought in \$500,000—an amount that enabled the Institute to erect an elegant edifice in the California (Mediterranean-influenced) style, replete with intricately styled ceilings, antique furnishings, and lush landscaping. A two-story, U-shaped complex surrounding an open patio, the club includes 28 guest rooms and suites, dining facilities, and tennis courts.

The Athenaeum opened its doors in 1930. Its first formal dinner, in February 1931, brought together Nobel Prize winners Robert Millikan, A. A. Michelson, and Albert Einstein, who with his wife

see Athenaeum, page 6

The Ath at a glance

Established: 1930

Architect: Gordon B. Kaufmann

Landscapers: Florence Yoch and Lucile Council

Size: 54,000 square feet

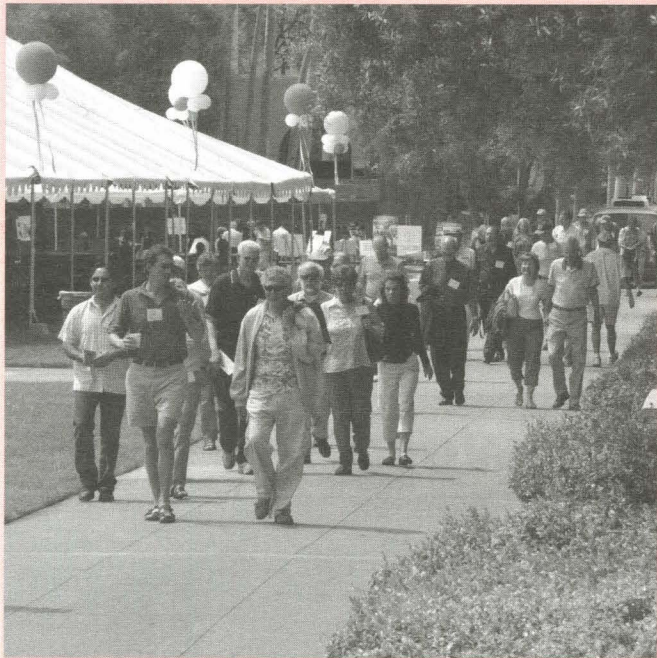
Staff: 84 full-time, plus occasionals

Members: 4,200-plus

Governance: An unincorporated association, the Athenaeum is member-run by a board of governors, which is responsible for membership and operating policy; a house committee, which oversees operations; and committees for design review, finance, food, membership, tennis, and wine.

Filming: A popular backdrop for filming, the club has appeared in *The Wedding Planner*, *The X-Files* movie, *Beverly Hills Cop II*, and numerous commercials.

NewsBriefs



The Alumni Reunion Weekend and 67th Annual Seminar Day activities brought hundreds of alumni—some from the class of 1939 and earlier—and their guests back to campus from May 13 to 16.

Personals

Welcome to Caltech

May

Teresita Arciniega, guest-relations coordinator, Athenaeum; **Bryan Barr**, visitor in physics; **Wayne Baumgartner**, postdoctoral scholar in astronomy; **Louise Bell**, administrative assistant, Minority Student Education; **Christopher Echols**, mechanical engineer, Caltech Optical Observatories; **Cristian Guzman**, cashier, Caltech Bookstore; **Zuryzyv Kent**, systems/network administrator, Space Radiation Laboratory; **Kristin Kruse Madsen**, visitor in physics; **Dwight Lee**, visitor in applied physics; postdoctoral scholars **Gerald Lelais**, in chemistry, and **Michael Liebling**, in biology; **Calvin Murphy**, guest-relations coordinator, Athenaeum; **Dan Nae**, visitor in astronomy; **Nathan Niemi**, facility manager, geology and geochemistry; **Mirna Orozco**, security officer, Campus Security and Parking; **Jere Price**, equipment operator, Facilities Management; **Michael Spezio**, postdoctoral scholar in psychology; **Thomas Treynor**, postdoctoral scholar in biology and associate, Howard Hughes Medical Institute; **Zahid Yaqoob**, postdoctoral scholar in electrical engineering.

New positions

April White, director of consulting services in the Caltech Staff and Faculty Consultation Center (SFCC), has been named director of staff education and career development in Human Resources. White has been with the SFCC since 1999, where she has conducted training programs and workshops for the Caltech community on a variety of topics, including stress relief, transition, change management, and cross-cultural communication. She has also coordinated and further developed a comprehensive work-life program for Caltech. A member of the Colleges and Universities Work/Family Association, the Alliance of WorkLife Professionals, the Employee Assistance Professionals Association, and the International Association of Employee Assistance Programs in Education, White received her bachelor's degree in women's studies / cross-cultural studies from UCLA and her Master of Social Work degree from USC.

Honors and awards

Jacqueline Barton, Hanisch Memorial Professor and professor of chemistry, has been named the recipient of a grant award of \$50,000 for two years by the National Foundation for Cancer Research. Her work involves metal complexes and the reaction of DNA sites. Professor of chemistry at Caltech since 1989, Barton received her bachelor's degree from Barnard College in 1974 and her PhD from Columbia University in 1978. She was named Hanisch Professor in 1997.

Michela Muñoz Fernández, a PhD student in electrical engineering, has received her second Amelia Earhart Fellowship Award from Zonta International. The Fellowship Awards were established in 1938 in honor of Earhart, the famed pilot and a member of Zonta International, and Earhart Fellows are selected worldwide from among graduate students who are pursuing degrees in aerospace-related science or engineering and who demonstrate outstanding academic credentials. Muñoz's research, which focuses on deep-space optical communications, is conducted in collaboration with the Jet Propulsion Laboratory.

Ed Stolper, Leonhard Professor of Geology, chair of the Division of Geological and Planetary Sciences, and acting provost, has been selected to receive the Arthur L. Day Medal, which is awarded "for outstanding contribution to geologic knowledge through the application of physics and chemistry to the solution of geologic problems." Presentation of the medal will be made at the Geological Society of America Presidential Address and Awards Ceremony on November 6, during the GSA's 2004 annual meeting in Denver. Appointed professor in 1983 and Leonhard Professor in 1990, Stolper served as executive officer for geochemistry from 1989 to 1994, the year he became division chair. He was appointed acting provost this year.

Caltech undergrads honored

Lizhou "Lisa" Wang, a senior in applied physics and economics, has been awarded a 2004 Paul and Daisy Soros Fellowship for New Americans. Established in 1997 as a charitable trust to assist "New Americans"—naturalized citizens, resident aliens, or the children of naturalized citizens—the fellowships provide a stipend of up to \$20,000 plus half-tuition for as many as two years of graduate study at any institution of higher learning in the United States. Wang—a Goldwater Scholar, a recipient of Caltech's Carnation Scholarship, and a junior electee of the engineering honor society Tau Beta Pi as well as president of its Caltech chapter—plans to unite her interests in mathematical science and socioeconomic justice by pursuing joint doctorates in economics and law.

Hosein Kouros-Mehr, who received a BS in biology from Caltech in 2000 and is currently at the UC San Francisco Medical School, is also a 2004 Fellowship recipient. **Fei Fei Li**, who received a bachelor's degree from Princeton University and is studying at Caltech for a PhD in electrical engineering, received a Soros Fellowship in 1999.

Iram Bilal, a senior in engineering and applied science, and **Anita Choi**, a senior in chemistry, have been selected as the 2004 recipients of the Mabel Beckman Prize. According to the *Caltech Catalog*, the \$3,000 prize is awarded to undergraduate women who have "achieved academic excellence and demonstrated outstanding leadership skills, a commitment to personal excellence, good character, and a strong interest in the Caltech community."

Bilal is the president and founder of the Caltech Public Speaking Club and vice president of the Society of Women Engineers. Choi is the student representative for the Women's Center Advisory Board and the president of the Chemistry Club. Both women have been involved as well in many other academic, cultural, and social activities campuswide.

Andréa Vasconcellos, a junior in biology, has been chosen to receive a scholarship from the Donald A. Strauss Public Service Scholarship Foundation. Established as a memorial to the late Beckman Instruments executive and Newport Beach public servant Don Strauss, the foundation awards \$10,000 scholarships to at least 14 California college juniors annually. The scholarships fund public-service projects the students propose and then carry out during the summer as well as throughout their senior year.

Vasconcellos will work with Pasadena fifth-grade children from lower socio-economic backgrounds as they put together an art display of their daily lives, a photo collage of which will be exhibited at Caltech. Her ambition for the project is that it will promote self-esteem, confidence, creativity, and assertiveness in the children. Active in the Caltech Women's Center, the Caltech Christian Fellowship, and student government, Vasconcellos has been elected copresident of the senior class.

Brant Carlson, a junior in physics, **Patrick Hummel**, a sophomore in mathematics, and **Jennifer Li**, a junior in biology, have been awarded Barry M. Goldwater Scholarships for the 2004–05 academic year. The one- and two-year scholarships will cover the cost of tuition, fees, books, and room and board up to a maximum of \$7,500 per year.

Established in honor of the late Senator Barry M. Goldwater and intended to "encourage outstanding students to pursue careers in the fields of mathematics, the natural sciences, and engineering," the Goldwater Scholarship "is the premier undergraduate award of its type in these fields."

L.A. whitewash described

Bill Deverell, associate professor of history, examines the history of Los Angeles's relationship with Mexicans and Mexican Americans within the context of the city's booming growth during the late 19th and early 20th centuries, a boom he describes as a historical marvel in his new book, *Whitewashed Adobe: The Rise of Los Angeles and the Remaking of Its Mexican Past* (University of California Press, 2004). But, as the title suggests, this relationship was often troubled.

The city's elite builders, according to Deverell, approached Mexicans in ways that variously co-opted, appropriated, and even obliterated the region's connections to Mexican places and Mexican people, while at the same time borrowing Mexican cultural traditions and using resident Mexicans as workers for building the modern metropolis. From the official L.A. response toward the nation's last major outbreak of bubonic plague, to the filling of the Los Angeles River with concrete, to the *Mission Play*, a famed drama tied to regional assumptions about history, progress, and ethnicity, Deverell examines the dimensions of that complex relationship.

It was not that the city's elite were trying to render Mexicans invisible, writes Deverell. On the contrary, assimilation was specifically not the goal. Instead, he says, the goal was to keep new arrivals from Mexico as well as long-standing Californians of Mexican descent visible in the burgeoning city but very much isolated within specific "containers"—containers created by discriminatory wage systems, public segregation in schools and social spaces, and political exclusion.

"If the city of the future is to work at all," he says, "we must look closely at how these containers were built, who built them, and how they got filled. Then we have to work together to make sure that we take them apart."

Students to venture beyond silicon

Peter Mendenhall

Silicon is a champion among materials—one upon which an entire, extraordinarily fast-moving industry has been built. So what happens when the champ can no longer keep up as a computational substrate and cries uncle? It's a question many people are thinking about, and some of those thinking the hardest are from Caltech.

Four of them—Professors André DeHon, Jim Heath, Hideo Mabuchi, and Erik Winfree—will lead the Computing Beyond Silicon Summer School (CBSSS), an intensive four-week introduction to the emerging fields of molecular, biomolecular, and quantum computing. The program will run from June 14 to July 9, and its lectures are open to the entire Caltech and JPL community.

Designed as the first major outreach effort of Caltech's Information Science and Technology (IST) group, the CBSSS will bring 50 undergraduate and graduate students from Caltech and around the country, plus many guest speakers, to campus to explore the ways we can aid, abet, and supersede silicon with new computational substrates at the molecular and atomic levels. All lectures for the four weeks will be held in room 74 of Jorgensen Laboratory, unless otherwise noted.

If you have just one day, however, to find out where we're at and where we go from here, plan on heading to the Rock Auditorium in the Broad Center for the Biological Sciences on Tuesday, June 15. The kickoff event will feature tidy overviews by the four program chairs on their respective areas: DeHon will speak on the physics of computation, Heath will cover molecular computing, Mabuchi will discuss quantum computing, and Winfree will tell it like it is for biomolecular computing.

In addition, Professor Shuki Bruck, director of Information Science and Technology, will talk about the big picture of IST and how Caltech is poised to make major contributions to information science across a broad spectrum of disciplines. And as director of IST's Center for the Physics of Information, Professor John Preskill will describe how the center will help create new computational substrates, architectures, and algorithms for the computing devices and systems of the future.

For all the nitty-gritty details on the program, and to learn how and why Caltech is a hotbed for post-VLSI computing and new ways of manipulating information, go to www.cs.caltech.edu/cbsss.

Peter Mendenhall is outreach coordinator for Caltech's Division of Engineering and Applied Science.

May 31—June 20, 2004

M T W T F S S

Monday, May 31

Memorial Day holiday

Tuesday, June 1

Caltech/JPL Association for Gravitational-Wave Research Seminar Series
114 E. Bridge, 4 p.m.—“A Synthetic LiSA, with Science and Engineering Applications,” Michele Vallisneri, lecturer in physics, Caltech.

Informal High Energy Physics Seminar
248 Lauritsen, 4 p.m.—“B Physics at DO,” Professor Rick Van Kooten, department of physics, Indiana University.

Wednesday, June 2

Astronomy Colloquium
155 Arms, Robert Sharp Lecture Hall, 4 p.m.—“Watching the Formation of Super Star Clusters,” Professor Jean Turner, department of physics and astronomy, UCLA. Information: www.astro.caltech.edu/~gma/colloquia.html.

General Biology Seminar
119 Kerckhoff, 4 p.m.—“Dotting Eyes and Crossing Ts: Linking Receptive Field Structure to Form Selectivity in Area V4,” Doris Tsao, department of neurobiology, Harvard Medical School.

Thursday, June 3

Thesis Seminar
134 Beckman Institute, 1 p.m.—“Kinetics and Thermodynamics of Group VIII Metal Complexes in Nanocrystalline TiO₂ Photoelectrodes,” Elizabeth Mayo, graduate student in chemistry, Caltech.

Physics Research Conference
201 E. Bridge, 4 p.m.—“Computing with Neural Ensembles,” Miguel Nicolelis, MD, associate professor of neurobiology and biomedical engineering, and codirector, Duke Center for Neuroengineering. Refreshments, 114 E. Bridge, 3:45 p.m.

Friday, June 4

High Energy Theory Seminar
469 Lauritsen, 11 a.m.—“SUSY Breaking by Fluxes and Dielectric Brane Distributions,” Professor Nick Warner, department of physics and astronomy, USC. Information: www.theory.caltech.edu/people/seminar/schedule.html.

Inorganic-Organometallics Seminar
151 Crellin, 4 p.m.—“Enantioselective Ruthenium Catalyzed Metathesis,” Jacob Berlin, graduate student in chemistry, Caltech.

Monday, June 7

High Energy Physics Seminar
469 Lauritsen, 4 p.m.—“Quantized Cosmology,” Marvin Weinstein, Stanford Linear Accelerator Center. Information: www.theory.caltech.edu/people/helen/seminar1.html.

Inorganic-Electrochemistry Seminar
147 Noyes, Sturdivant Lecture Hall, 4 p.m.—“Applications of Neutron Scattering to Inorganic Chemistry or Structural Determinations Without Bragg,” John F. C. Turner, assistant professor of chemistry and director, Neutron Sciences Consortium, department of chemistry, University of Tennessee.

Wednesday, June 9

Materials Research Lecture
106 Spalding Lab, Hartley Memorial Seminar Room, 4 p.m.—“Crystallization and Mechanics of Polypropylene Composites with Micro- and Nanofillers,” Markus Gahleitner, Christelle Grein, and Kshama Motha, PO Development, Borealis GmbH, Linz, Austria; and Elisabeth Ingolic, Center for Electron Microscopy, Graz, Austria. Refreshments, 113 Spalding Lab, 3:45 p.m. Information: www.matsci.caltech.edu/seminars.html.

Organic Chemistry Seminar
147 Noyes, Sturdivant Lecture Hall, 4 p.m.—“Mechanisms and Dynamics of Pericyclic Reactions and Diradical Diversions,” Professor Kendall N. Houk, department of chemistry and biochemistry, UCLA.

Thursday, June 10

Herbert Newby McCoy Award Seminar
153 Noyes, Sturdivant Lecture Hall, 4 p.m.—“Olefin Metathesis: A Versatile Tool for the Synthesis of Small, Medium, Large, and Extralarge Molecules,” Tae-Lim Choi, postdoctoral fellow, UC Berkeley.

Von Karman Lecture Series
JPL, von Karman Auditorium, 7 p.m.—“Finding Planets and Searching for Life: Worthy Goals for 21st-Century Science,” Dr. Charles Beichman, executive director, Caltech Michelson Science Center. Admission is free. Information: www.jpl.nasa.gov/lecture.

Friday, June 11

Commencement
Beckman Mall, 10 a.m.

Von Karman Lecture Series
Pasadena City College, 1570 E. Colorado, the Vosloh Forum (south of Colorado on Bonnie), 7 p.m.—“Finding Planets and Searching for Life: Worthy Goals for 21st-Century Science,” Dr. Charles Beichman, executive director, Caltech Michelson Science Center. Admission is free. Information: www.jpl.nasa.gov/lecture.

Tuesday, June 15

Informal High Energy Physics Seminar
248 Lauritsen, 4 p.m.—“Readout Studies with an Analog Hadronic Calorimeter,” Gerald Eigen, professor in experimental particle physics, University of Bergen, Norway.

Thursday, June 17

Thesis Seminar
151 Crellin, 2 p.m.—“Investigations in Enantioselective Catalysis: Development of Novel Asymmetric Organocatalytic Reactions,” Christopher Borths, graduate student in chemistry, Caltech.

Friday, June 18

General Biology Seminar
119 Kerckhoff, 4 p.m.—“Neurogenetic Mechanisms for Intoxication and Swimming in *C. Elegans*,” Jon Pierce-Shimomura, Ernest Gallo Clinic and Research Center, UC San Francisco.

CampusEvents

Monday, May 31

Memorial Day holiday

Credit Union Closure

All branches of the Caltech Employees Federal Credit Union will be closed in observance of the Memorial Day holiday.

Ceroc Lessons

Winnett lounge, 7:30 p.m.—Ceroc is an exciting and stylish form of dance that blends elements of swing and salsa. It can be performed to a variety of music, ranging from '40s swing to modern dance mixes. This is the last lesson of a 10-week series. No partner or dance experience is needed. Cost: \$1 per class. Refreshments. A free, optional practice session will be held from 9 to 9:30 p.m.

Tuesday, June 1

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). Information: 793-4099 or camila_bruns@hotmail.com.

Caltech Tai Chi Club

Winnett lounge, 7 p.m.—Meets Tuesdays and Fridays weekly. Sessions are free. Information: www.its.caltech.edu/~taichi.

Wednesday, June 2

Baby Furniture and Household Equipment Pool

234 S. Catalina, 10 a.m. to 12:30 p.m.—Loans of kitchen and household necessities and baby furniture are made to members of the Caltech community. Information: 584-9773. Temporarily available by appointment only. Please call 395-6174.

Wednesdays in the Park

Tournament Park, 10 a.m. to noon—Every Wednesday there's conversation and coffee for parents and caregivers, and playtime and snacks for children. Information: 403-7163 or ktclark@caltech.edu.

Watch Your Back! Back Safety Training

118 Keith Spalding Building, 3 p.m.—This course includes a brief discussion on back anatomy and proper methods and realistic approaches to handling and moving materials. There will be a video presentation and hands-on lifting. Space is limited. Please call 395-6727 or e-mail safety.training@caltech.edu to reserve a place.

Thursday, June 3

Argentine Tango Lessons

Winnett lounge, 7:30 p.m.—Argentine tango, taught by professional instructors. This is the last of a 10-week series. No partner or dance experience is needed. Fee for students: \$6 per class; nonstudents: \$8 per class. Refreshments. A free, optional practice session will be held from 9 to 9:30 p.m.

Friday, June 4

OASIS Cultural Show

Ramo Auditorium, 6 p.m.—The Organization of the Associated Students from the Indian Subcontinent (OASIS) invites you to "Pehlu," a program presenting different facets of today's youth from the Indian subcontinent. The performance is free and open to the public. Afterward, enjoy a catered Indian dinner, to be served outside Ramo Auditorium for the price of \$5 per person.

Caltech Tai Chi Club

Winnett lounge, 7 p.m.—Meets Tuesdays and Fridays weekly. Sessions are free. Information: www.its.caltech.edu/~taichi.

Caltech Chess Club

Page House dining room, 8 p.m.—Be you master or novice, you will enjoy the chess club's weekly meetings. Information: www.its.caltech.edu/~citchess.

Sunday, June 6

Lagerstrom Chamber Music Concerts

The Old Mill, 1120 Old Mill Road, San Marino, 2:30 p.m.—Calico Winds will perform. Admission is free. 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.

Tuesday, June 8

Interviewing: Picking the Right People the First Time

Brown Gym classroom, 8:30 a.m. to 12:30 p.m.—One of the most crucial jobs of management is the selection of new employees. This hands-on workshop, designed for managers, will provide an opportunity to practice preparing interview questions. Information: http://cit.hr.caltech.edu/Education/super&non_super/interviewing.htm.

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). Information: 793-4099 or camila_bruns@hotmail.com.

Caltech Tai Chi Club

Winnett lounge, 7 p.m.—Meets Tuesdays and Fridays weekly. Sessions are free. Information: www.its.caltech.edu/~taichi.

Amnesty International Letter Writing

Athenaeum Rathskeller, 7:30 p.m.—Caltech/Pasadena AI Group 22 will host an informal meeting to write letters on human-rights abuses around the world. All are welcome. Refreshments. Information: (818) 354-4461 or lkamp@lively.jpl.nasa.gov. Visit our website at www.its.caltech.edu/~aigp22.

Wednesday, June 9

Baby Furniture and Household Equipment

234 S. Catalina, 10 a.m. to 12:30 p.m.—Loans of kitchen and household necessities and baby furniture are made to members of the Caltech community. Information: 584-9773. Temporarily available by appointment only. Please call 395-6174.

Wednesdays in the Park

Tournament Park, 10 a.m. to noon—Every Wednesday there's conversation and coffee for parents and caregivers, and playtime and snacks for children. Information: 403-7163 or ktclark@caltech.edu.

Thursday, June 10

How to Put "Steam" Into Your Self-Esteem

Brown Gym classroom, 8:30 a.m. to 12:30 p.m.—In this workshop for supervisors and nonsupervisors, participants will learn skills with which to handle sticky situations, and discover ways to build self-esteem. Registration: 395-8055 or diane.williams@caltech.edu.

Friday, June 11

Caltech Tai Chi Club

Winnett lounge, 7 p.m.—Meets Tuesdays and Fridays weekly. Sessions are free. Information: www.its.caltech.edu/~taichi.

Caltech Chess Club

Page House dining room, 8 p.m.—Be you master or novice, you will enjoy the chess club's weekly meetings. Information: www.its.caltech.edu/~citchess.

Tuesday, June 15

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). Information: 793-4099 or camila_bruns@hotmail.com.

Caltech Tai Chi Club

Winnett lounge, 7 p.m.—Meets Tuesdays and Fridays weekly. Sessions are free. Information: www.its.caltech.edu/~taichi.

Wednesday, June 16

Baby Furniture and Household Equipment

234 S. Catalina, 10 a.m. to 12:30 p.m.—Loans of kitchen and household necessities and baby furniture are made to members of the Caltech community. Information: 584-9773. Temporarily available by appointment only. Please call 395-6174.

Wednesdays in the Park

Tournament Park, 10 a.m. to noon—Every Wednesday there's conversation and coffee for parents and caregivers, and playtime and snacks for children. Information: 403-7163 or ktclark@caltech.edu.

Travel Fair

Chandler Dining Hall, 11 a.m. to 2 p.m.—Caltech's second annual Travel Fair provides an opportunity for students, staff, and faculty to meet the travel and p-card departments and our many travel vendors. There will be live music in front of Chandler Dining Hall, and a barbecue meal will be available for purchase. Prizes will be donated by our top vendors; winners—who must be Caltech students, staff, or faculty—need not be present to win.

Summer Salsa Classes

Winnett lounge, 7 to 11 p.m.—An eight-week series of salsa classes, offered at two skill levels. Learn the fundamentals of salsa dancing in the beginners' class, starting at 8:30 p.m. If you already know the basics, come to the intermediate class at 7 p.m. to learn L.A.-style moves and some Cuban rueda. Everyone is welcome to stick around for the free practice session from 10 to 11 p.m. Cost: \$7 for a single class, \$40 for the series.

Thursday, June 17

How to Write Letters, Memos, and Reports

Brown Gym classroom, 8:30 a.m. to 4 p.m.—This workshop, designed to give supervisors and nonsupervisors a firm grasp of the principles of effective business writing, will teach you to shape your message for your intended audience. This is the second in a series of three classes. The next class, Techniques for Identifying and Correcting Mistakes in Written Communication, is scheduled for September 1. Information: http://cit.hr.caltech.edu/Education/super&non_super/Write_Letters.htm. Registration: 395-8055 or diane.williams@caltech.edu.

Reel Women's Film Series: Maggie Growls

Caltech Women's Center, noon—*Maggie Growls* is a portrait of the charming and unstoppable Maggie Kuhn. In 1970, she founded the Gray Panthers after being forced to retire at the age of 65 from a job she loved. Her outrage and determination fueled a political chain reaction that forever changed the lives of older Americans, repealing mandatory retirement laws and proving that "old" is not a dirty word. Lunch and drinks provided.

Friday, June 18

Caltech Tai Chi Club

Winnett lounge, 7 p.m.—Meets Tuesdays and Fridays weekly. Sessions are free. Information: www.its.caltech.edu/~taichi.

Saturday, June 19

Caltech/MIT Enterprise Forum

Baxter Lecture Hall, 8 to 11 a.m.—"Entrepreneurial Opportunities in Software." A look at areas of software holding special entrepreneurial promise. The keynote speaker will be Peter Coffee, technology editor for *eWeek*. Reservations: 395-3916 or entfor@caltech.edu. Information: www.entforum.caltech.edu.

Sunday, June 20

Amnesty International Book Discussion Group

Vroman's Bookstore, 695 E. Colorado Boulevard, second floor, 6:30 p.m.—This month's book is *The Crazyed*, by Ha Jin. Sponsored by Caltech/Pasadena AI Group 22. Visit Group 22 at www.its.caltech.edu/~aigp22.

Fine wine to benefit CEC

Wine aficionados will once again be able to indulge their passion for a good cause, as JPL's Child Education Center (CEC) presents its 15th annual Wine Tasting Benefit. This year's event will take place Saturday, June 19, from 5:30 to 10 p.m. at Avery House on the Caltech campus.

In addition to numerous premium wines (and Sierra Madre Brewing Company ales and lagers for those who prefer hops over grapes), the evening will feature appetizers, live jazz by the Chad Edwards Quartet, and an auction. Some of the items that guests will be able to bid on include a week's stay on the Martha's Vineyard waterfront; vacations at Mammoth and at Lake Tahoe; original works of art and photography; an exclusive night tour of the Palomar Observatory; and an autographed football from the New Orleans Saints.

General admission tickets are \$35 per person; connoisseur tickets are \$65 per person and include 10 additional tastes of premium wines. All proceeds will benefit the CEC, a nonprofit organization begun in 1979 that provides day care, preschool, and summer programs for children of Caltech and JPL employees and the local community. For tickets and information, call (818) 354-3418.

Technique wants your thoughts

Long a useful reference for the campus community, the *Technique* graduate-student guide is seeking reviews of local businesses and services for its upcoming 2004 print and Web editions. Both versions feature plenty of helpful information for Pasadena newbies, such as an introduction to Caltech, contact information for various civic offices, and guides to local services, from restaurants to health care to auto maintenance. The recently updated Web version sports an improved menu structure for easier navigation, new Mapquest links to local businesses, and an online form for submitting reviews.

Editors Julie Fry and Wendy Bittner are seeking as many new reviews as possible, and invite all Caltech community members to contribute to the next edition, which will be published in the fall. Reviews of restaurants and businesses can be submitted at www.its.caltech.edu/~teknique. Fry and Bittner also are adding photos of restaurants and businesses to the website. Every review or picture received by June 30 will earn the submitter entry into a prize drawing for \$50 gift certificates to the Laemmle Theaters. For questions or comments, e-mail teknique@caltech.edu.

Beckman, from page 1

ometer that was an essential component in World War II-era radar. For his invention of the pH meter he was named to the National Inventors Hall of Fame in 1987.

Beckman was a longtime supporter of Caltech and other educational institutions. In addition to providing funding for Caltech's Beckman Institute and the Beckman Auditorium, he gave \$40 million to fund an interdisciplinary research institute at the University of Illinois, \$20 million to create a conference center for the National Academy of Sciences, \$14.5 million in 1998 to improve K-6 science education in Orange County, and many other gifts in support of basic research and public education. By his 100th birthday in 2000, he had provided more than \$270 million for the direct support of research.

Air pollution was a longstanding concern of Beckman's. He provided early support of the scientific investigations that revealed the sources and mechanisms of photochemical smog, and later helped develop pollution-control regulations and smog warning procedures for Los Angeles County.

Beckman was a recipient of both the National Medal of Science and the National Medal of Technology, and in 1997 received the prestigious Treasures of Los Angeles Award from Mayor Richard Riordan.

He is survived by his daughter, G. Patricia Beckman of Corona del Mar, and a son, Arnold S. Beckman of Asotin, Washington. Beckman's wife, Mabel, died in 1989.

Brain can be duped on color, motion

You're driving along in your car and glimpse a green SUV out of the corner of your eye. A few seconds later, you glance over, and to your surprise discover that the SUV is actually brown.

You may assume this is just your memory playing tricks on you, but new research at Caltech and the Helmholtz Institute in the Netherlands suggests that initial perceptions themselves can contain misassigned colors. This can happen in certain cases where the brain uses what it sees in the center of vision and then rearranges the colors in peripheral vision to match.

In an article appearing in the journal *Nature*, Caltech graduate student in biology Daw-An Wu, Caltech professor of biology Shinsuke Shimojo, and Ryota Kanai of the Helmholtz Institute report that an object's color can be misassigned even as observers are intently watching an ongoing event, because of the way the brain combines perceptions of motion and color. Because different parts of the brain are responsible for dealing with motion and color perception, mistakes in "binding" can occur, where the motion from one object is combined with the color of another object.

This phenomenon is demonstrated by a study in which observers gaze steadily at a computer screen with red and green dots in upward and downward motion. In the screen's center, all the red dots are moving upward while all the green dots are moving downward.

Unknown to the observers, however, the researchers are able to control the motion of the red and green dots at the periphery of the screen. In other words, the red and green dots are moving in a certain direction in the center area, but their motion is partially or even wholly reversed on each side of the screen. The observers show a significant tendency to mistake the motion of the red and green

see Brain errors, page 6

Staff to be honored at Service Awards

Close to 200 Caltech and Jet Propulsion Laboratory employees will be honored for their commitment to the Institute and their dedication to their professions. The Service Awards recognize the hard work of those marking 10-year anniversaries and beyond, in 5-year increments. The ceremony will be held this year on Thursday, June 3, at 10 a.m., in Beckman Auditorium. A handful of the longtime personnel, with 35 and 40 years under their belts, recently shared some of their memories.

Bonnie Ludt, an administrative assistant in the Caltech Archives, has been at her current job, in the Beckman Institute's subbasement, for the last 14 of her 40 years working at Caltech.

"When I think back, I'm amazed at how the Institute has grown," Ludt says. "When I was first hired, Beckman Auditorium was new and San Pasqual was a regular street that ran right through campus."

Ludt was born in the Huntington Hospital, grew up in San Gabriel, and went to Orange County schools. She was working at a public library in Orange County when she was recruited to Caltech by a former coworker.

"They were looking for somebody with an accounting background," she says. "The library system was still in Bridge, before Millikan Library was built. I worked there till 1990, and then I moved to Beckman Institute that summer."

"When you think of a job, it's the people who stick in your mind, like the secretaries and regular staff people," Ludt says. She was also the head of acquisitions for the library for a number of years.

Another Caltech staffer with 40 years under his belt is John White, who works at the Infrared Processing and Analysis Center, billed as "NASA's multi-mission center of expertise for long-wavelength astrophysics." His office is located on the third floor of Keith Spalding.

A native of the East Coast, White says he always wanted to move to California, and he got his chance one winter in the form of a job interview. He was called to JPL after responding to a listing in *Scientific American*, but he was also interviewing at the corporation TRW. It was the mild winter that clinched the deal.

"My hardest decision was choosing between the waves at TRW and the

mountains at JPL," he says. "I chose the mountains." He was soon hired as a computer scientist. That was in 1964.

"A highlight of mine was designing the first real-time automated command system," he says. "Before that, launch countdowns were '3, 2, 1—push the button.'"

Back then, he remembers, few people could program a computer, and he impressed many people with his skills. Little did they know that White had bought an early personal computer and taught himself how to program it. "I read the manual," he says.

Jennifer Daniels, an administrative assistant at the Central Utilities Plant, spent nearly half of her 35 Caltech years at the Physical Plant office, now called Facilities Management. She has been an administrative assistant at Central Utilities for the past year and a half.

"It's a great group to work with and Mr. Ohadi is a great guy to work for," Daniels says, referring to Reza Ohadi, the associate director of Campus Operations.

"I started at JPL in 1969 and came over to Caltech in Business Services, and then transferred to Physical Plant in 1979," she says. Daniels was hired as a part-time worker while studying at Pasadena City College, where she got her AA degree.

"The atmosphere here at Caltech is real nice and the campus itself is nice," she says, noting that the campus location is close to her home.

Daniels says she is grateful that her job has given her the means to raise her 3-year-old great-nephew, whom she is in the process of adopting. His name is Dyllan.

"I've worked all over campus," says Olivia Magdaleno. "Everybody knows me." Magdaleno has been on Caltech's custodial team for more than 35 years. She was 21 and a recent arrival from the state of Jalisco, in Mexico, when she came to Caltech and her first job in Housing.

Magdaleno knows hard work. She has shampooed carpets and waxed floors for 17 years and says she can perform all the cleaning jobs on campus. "I trained many of the custodians here," she says. These days she works in the subbasement of Church and Church Annex.

Magdaleno has also reaped the rewards of her craft. "This job has helped me raise my five children, two men and three women. The oldest is 41, and the youngest is 29," she says. "I'm very grateful to the Institute. Caltech has been very good to me."

Susan McCurdy, an administrative assistant in Submillimeter Astronomy, is also celebrating 35 years at Caltech.

"I started in the Division of Geological and Planetary Sciences, where I worked for about 11 years, and I've been at Physics, Mathematics and Astronomy ever since," she says. "I've enjoyed working with the support staff very much."

McCurdy remembered fondly her first research group in Geochemistry. "That was a good group, and I still have contact with the retirees from there," she says.

"In this research group, I'm responsible for the management of the grants and monitoring the expenditures and the personnel side, purchasing and payables." She also performs some secretarial support for physics professors Tom Phillips and Jonas Zmuidzinas.

A wall of her office in Downs bears a growing mural of snapshots of smiling children. They belong to current and former coworkers and graduate students, she says. "I've made lifelong friends here."

10 Years

Lucinda Acosta
Janette Aguado
Janet Baer
Stephen Barba
Mario Blanco
Andrew Boden
Rolf Bork
Lauren Bostrom-Connolly
Donald Campbell
Stephanie Castellano
Leslie Crockett
Michael Cronk
Ralph Crowder
Tai Czhang
Guy DeRose
Yolanda Duron
Walter Estrada
Shawn Ewald
Joe Gammie
Kathy Golden
Yvette Grant
Jo Ann Hasbach
Gary Hathaway
Jay Heefner
Michael Heinrich
Gregg Henderson
Rebecca Hernandez
Martin Houde
Hua Hu
Ali Kiani
Kathy Lima
Thomas Mannion
Luis Mendoza
Kaushiki Menon
Sohrab Milanian
Jim Narasimhan
Khue Nguyen
Deborah Padgett
Piotr Polaczek
James Pool
Edith Quintanilla
Ofelia Ramirez
Alison Ross Keller
Paul Russell
Carlos Salazar
Martha Salcedo
William Sandoval
Linda Scott
Terry Scott
Bruce Sears
Doris Shimabukuro
Elizabeth Shon
Esperanza Solorzano
Jerry Stewart
John Van Deusen
Randall West
George White
Sybil Wilder
John Worden

15 Years

Greg Adcox
Laurel Auchampaugh
Melinda Bakarbessy
Bruce Baker
Jose Bermudes
Sharon Brunett
Ann Bussone
Esther Cunningham
Martin De La Cruz
Shelly Erwin
Cynthia Estrada
Donna Fox
Diane Fujitani
Joy Garbo

Sandra Garstang
Beverly Gin
Willie Gomez
Joaquin Gutierrez
Janis Haskell
Michael Hutchings
Russell Keeney
Mih-Seh Kong
Abdul Koshan
Larry Kuntz
Santiago Laparra
Nam Le
Deborah Levine
David Levy
John Magallanes
Larry Martinez
Lycett Martinez
Fran Matzen
Anthony McKoy
Uriel Navarrete
Christina Pinkney
Dianne Pounds
Frederick Raab
Jose Ramos
Timothy Rao
Maureen Renta
Pedro Robledo
Connie Rodriguez
Rosalie Rowe
Ricardo Schroth
Luana Stevens
Davy Stone
Daniel Taylor
Michelle Trinh
Michael Vega
Carole Worra

20 Years

Laraine Amy
Heidi Aspaturian
Charlie Aguilar
Martin Budd
Jacqueline Callahan-Lamar
Guy Colville
Brasilia di Muro
Sandra Ell
David Flores
Curt Giovanine
John Good
Tom Handley Jr.
Patty Hartsteen
Lindsey Hedges
Mark Hodges
John Huber
Harry Irby
Leona Kershaw
Alex Krigman
Patrick Lam
Erwin Larranaga
Carol Lonsdale
Paul Mackel
Doreen McDowell
Michelle Medley
Sally Newman
Elvin Nixon
Susan Ou
Tony Parker
Dalton Perry
Carol Readhead
Laura Rodriguez
Juan Sanchez
Rosanne Scholey
Joel Sercel
Rekha Solomon
Raul Turcios
Gaylene Ursua

Sherri Weed
Penny Wolfe
Rosalind Young
Ren-Yuan Zhu

25 Years

Carolyn Ash
JoAnn Boyd
Stephanie Canada
Chip Chapman
Kar Cheung
Bruce Cuney
Ana Rosa Garcia
Maria De La Torre
Marcia Hudson
Sandy Lester
Michael Long
Howard McCallon
Vi O'Connor
Paul Roberts
Memo Rodriguez
Fernando Solis
Jorge Sosa
Francisco Soto
Bob Thicksten
Greg Van Der Werff
Michelle Vine
Mike Vondrus

30 Years

Gene Akutagawa
Susi Martin
Manya Thain
Stephen Vass
Connie Yehle

35 Years

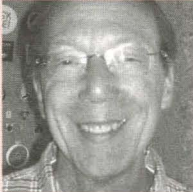
Jennifer Daniels
Olivia Magdaleno
Susan McCurdy

40 Years

Bonnie Ludt
Keith Matthews
John White



Bonnie Ludt



John White



Susan McCurdy



Jennifer Daniels



Olivia Magdaleno



Athenaeum, from page 1

stayed for two months in the suite that now bears his name. Today, it's still possible to glimpse Caltech Nobel laureates hobnobbing over lunch or dinner, joined in spirit by Millikan, Hale, the Balches, and past Institute presidents, whose portraits bedeck the walls of the foyer.

With approximately 4,000 members, the club gains anywhere from one to three dozen or more new members each month. Membership is open to faculty, postdocs, graduate students, trustees, alumni, Caltech Associates, and exempt employees, including those of JPL, other off-campus Caltech facilities, and the Huntington Library, Art Collections, and Botanical Gardens.

General Manager Crystal Thomas and her executive team lead a staff dedicated to providing the finest-quality food and service, and, beyond that, to exceeding members' expectations. The club serves a full breakfast and a wide variety of lunch and dinner selections Monday through Friday. Executive Chef Edward Ungroe and his culinary team "have a lot of fun" creating new dishes to please a range of palates—from the classic (seafood, steaks, and pastas) to the unusual (ostrich, venison, and caribou).

In addition to the main dining area, the Hayman Lounge provides a cozy setting for pre- and postdinner drinks, and the Rathskeller and Game Rooms offer casual meals in a publike atmosphere. Members also enjoy special events such as holiday brunches, cooking classes, and dinners featuring gourmet foods accompanied by selected fine wine. Members may also book the various private rooms for parties, receptions, or any celebratory occasion.

The Athenaeum's service-minded approach has brought numerous honors, including designation as a Platinum Club of America by the Club Leaders Forum—a ranking of distinction that puts it among the top 4 percent of the 5,000 private U.S. clubs. Most recently, the club won several awards for its formal dining menu and extensive wine list at the 2004 World Conference on Club Management.

An ethic of excellence pervades the Athenaeum's work environment that encourages achievement, promotes teamwork, and engenders camaraderie and loyalty. Thomas sets the example for her

staff—in February, she became only the 13th person and second woman certified by the Club Managers Association of America (CMAA) as a Master Club Manager, a designation for "professionals who have made extraordinary and long-lasting contributions to the club industry."

The Athenaeum's Employee of the Month award, for which staff members nominate fellow team members, honors and recognizes exemplary service. Staff members have also earned outside honors, such as Marisu Jimenez, director of marketing, catering, and special events, who received an Association of Faculty Clubs International scholarship for the purpose of furthering her professional development; and Jorge Alvarado, food and beverage director, who won a CMAA scholarship to assist him in becoming a certified club manager.

Andres Martinez is an example of a staff member who both typifies and has benefited from the friendly and rewarding atmosphere. A bartender in the Hayman Lounge for almost 25 years, he is a personable man who takes pride in his job and enjoys getting to know his customers. In fact, Martinez had met a couple, Mr. and Mrs. Howard Rath, at a previous workplace, and when the Raths joined the Athenaeum in 2002—some 21 years later—and Martinez spotted them, he was able to greet them by name.

"It's a privilege for me to have such a great, hardworking team," Thomas says. "And it's a privilege for all of us to be here in such a beautiful and historic place, among some of the brightest people. We enjoy serving them and are always looking for ways to continue making each of their Athenaeum experiences better than the last."

Brain errors, from page 5

dots at the periphery. Even when the direction of movement was completely reversed at the sides, the observers would see the same motion all across the screen.

According to Wu, lead author of the article ("Steady-State Misbinding of Color and Motion"), the experiment's design exploits the fact that different parts of the brain are responsible for processing different visual features, such as motion and color. Further, the experiment shows that the brain can be tricked into binding the information back together incorrectly.

"This illusion confirms the existence of the binding problem the brain faces in integrating basic visual features of objects," says Wu. "Here, the information is reintegrated incorrectly because the information in the center, where our vision is strongest, vetoes contradicting (but correct) information in the periphery."

SIF, from page 1

Wade Okumura, staff members in Human Resources; Tracey Fraser, Michelle Lin, and Tina Lowenthal, Financial Services; Marisu Jimenez, Athenaeum; Reza Ohadi, Central Plant; David Mayo, Sponsored Research; David Mispagel, Architectural and Engineering Services; Doris Shimabukuro and David Wernitz, Administrative Technology Center; and Tye Welch, Audit Services and Institute Compliance.

According to Wernitz, the fund is part of an effort to have Business and Finance recognized as an essential contributor to the Institute. Through implementing programs that promote teamwork, service, and quality, committee members hope to help the unit become renowned for its excellence.

"The success of [the SIF] program hinges on people getting on board," Wernitz says. And, adds Shimabukuro, the group is eagerly awaiting ideas and proposals. "We want to tap into creativity at all levels, and give every employee an opportunity to share their insights."

Committee members emphasized that they're open to nearly all suggestions, as long as the proposal has goals in line with

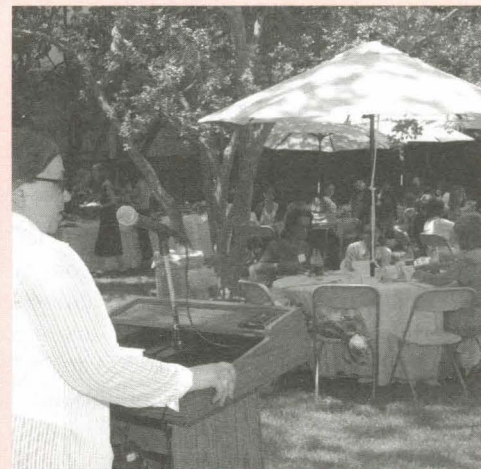
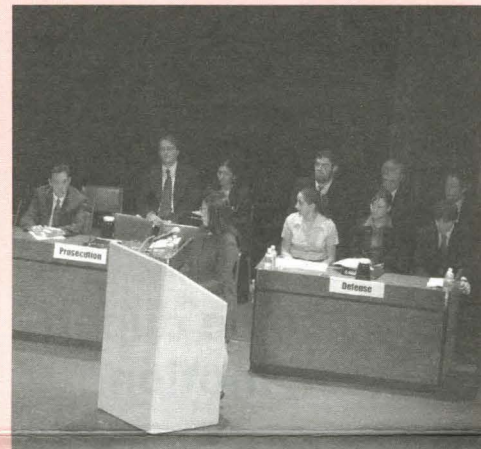
the vision statement, does not have current funding sources, and is made either by or through one or more staff members within Business and Finance.

In particular, the committee is looking for measurable benefits, such as cost savings, improved service, or enhancement of staff morale, and for cross-functional ideas that will have an impact across the organization. Long-term (e.g., two years or more) proposals are welcome, but those anticipating a "quick win" will score more points. Applicants can request any amount up to the full \$50,000, as long as they justify the need; any funds left over in a given year will roll over to the following year.

In order to ensure consideration for 2004–05, proposals must be received by 5 p.m. on June 25, via e-mail to SIFCommittee@business.caltech.edu or by mail to the Strategic Initiatives Fund, c/o Doris Shimabukuro, MC 1-10. Ideas received after the date may be held over until the following year.

Winning proposals will be announced September 17, and will be funded beginning October 1. More information may be found at www.its.caltech.edu/~dgwernitz or by contacting any committee member.

Around campus



Clockwise from left: A new air-conditioning unit for Dabney Hall is flown in by helicopter as renovation continues on the building. Students offer testimony at the fifth annual At the Crossroads of Law and Technology Conference and Mock Trial, held in Beckman Auditorium; Caltech and the Loyola Entertainment Law Symposium sponsored the event, which focused on legal issues surrounding file sharing and digital copyrighting and which featured President David Baltimore's acting debut. Women's Center director Candace Rypsi addresses a lunchtime celebration of the center's 10th anniversary; founded in 1993, the center works to advance women in science and engineering by providing programs and resources that promote "success, equity, and safety" at Caltech.

Caltech 336

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