

# Caltech336

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The campus community biweekly

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Students staff a table near the Red Door Cafe to raise funds for people affected by Hurricane Katrina. See story at right on how the hurricane has affected some campus community members and motivated others to help.

## Family Night to feature *Madagascar*

A flock of special guests that include Cinderella, Prince Charming, and some lovable zoo animals will visit this year's Caltech Family Night.

Kicking off the 2006 United Way campaign, Family Night will be held Friday, October 7, on the Beckman Mall, and is free to Caltech-JPL community members and their families. A highlight will be the animated film *Madagascar*, featuring the voices of Chris Rock, Jada Pinkett Smith, David Schwimmer, and Ben Stiller as animal friends who live a sheltered life in New York's Central Park Zoo. When one of the buddies goes missing, the other three break out to find him and learn about life in the wild. Admission stickers for the 4:15 p.m. show and wristbands for the 6:30 show, in Beckman Auditorium, will be available at Beckman Mall's four corners.

Attendees will also enjoy the traditional pasta dinner, served from 5 to 7 p.m. (no tickets needed), as well as fairy-tale characters, clowns, and face "airbrushing." The evening is sponsored by Campus Life, Human Resources, Housing, Public Events, and Student Affairs.

This year's United Way campaign will begin October 25 and last three weeks. Through more than 250 affiliate nonprofit agencies, the United Way helps nearly 4,000,000 area residents better their lives through education, training, child care, and other programs. Employees may earmark funds for any qualifying orga-

nization, including the Caltech Y, Caltech Children's Center, and JPL Child Educational Center. Donations to the children's centers will provide tuition assistance for campus community members.

A lunch meeting for campaign coordinators will be held soon. Coordinators will be located across campus and will provide information to community members on how to make pledges and donations.

For details on Family Night or the campaign, e-mail [dlorah.gonzales@caltech.edu](mailto:dlorah.gonzales@caltech.edu) or call ext. 8661. To learn more about the United Way in Los Angeles, visit [www.unitedwayla.org](http://www.unitedwayla.org).

## CCAP deadline nears

Parents have until Friday, September 30, to apply for the Child-Care Assistance Program for 2006. Eligible Caltech staff, postdocs, grad students, and faculty may receive up to \$4,000 in aid to offset the costs of care for their dependents age 10 and younger.

Further details, including CCAP policies, care-provider criteria, and an online application, are available at [http://cit.hr.caltech.edu/ccap\\_program.htm](http://cit.hr.caltech.edu/ccap_program.htm). Those of us without Internet access may use the computer kiosks in Human Resources, located at 399 South Holliston Avenue.

## Caltech rallies in Hurricane's wake

Though we may think that the disaster visited on the Gulf states on August 29 affected far-off regions and anonymous strangers, Hurricane Katrina touched Caltech in unexpected ways, prompting many responses of goodwill from students and staff alike.

For nearly two weeks, Caltech students pooled their efforts to collect campus donations. Beginning on September 8, volunteers set up and staffed a table from 11 a.m. to 2 p.m. outside the Red Door Café.

"We had 55 people giving donations," said undergrad Kevin Trotter at the Caltech Y, which worked with the students to coordinate the effort. As of September 19, the students had collected a total of \$1,405 in checks and cash from the Caltech community.

Students plan to continue raising funds through the 23rd, and all monetary donations will be forwarded to the Red

see Hurricane, page 6

## New parking fees to be charged

A new fee-based parking program will go into effect this autumn, bringing to an end the days of free commuter parking at Caltech. The new system will affect all members of the Institute's faculty and staff, and will apply to visitors. A similar student-parking fee schedule will go into effect in January.

The Caltech community was notified in July about the planned fee system, which will help offset construction costs for the new underground parking structure on California Boulevard as well as the three parking structures located on Wilson and Holliston avenues.

Participating staff members will pay the monthly fee as an automatic payroll deduction. Most staff will be charged a flat \$35 fee per month, while commuters with a reserved parking space (faculty, emeriti, senior staff members) will pay a monthly \$70.

Parking spaces will be divided into color-coded zones, and will be distributed around campus in quantities that reflect demand, says Gregg Henderson, chief of security and parking services. Dark red will designate the commuter zone; gold, students; and orange, carpools. Reserved spaces will have names stenciled on the bumpers.

Recent software complications delayed the setup of the online registration process by two weeks, and it is anticipated that staff will be able to register their vehicles in early October.

see Parking, page 6



## Thorne: Scientist of the Year

Kip Thorne, Caltech's Feynman Professor of Theoretical Physics, was named the California Scientist of the Year by the California Science Center.

Thorne was feted for being one of the world's leading experts on the astrophysical implications of Einstein's general theory of relativity and, according to the award citation, "for having trained a generation of scientists." Created in recognition of California's prominent role in science and technology, the award honors a nominee whose current research advances the boundaries of any scientific field. Eleven past winners have gone on to become Nobel laureates.

Among a handful of physicists, Thorne is considered a top authority on gravitational waves. His scientific contributions span the full range of topics in general relativity, including black holes, gravity waves, applications of relativity to stellar structure and evolution, and the means of testing general relativity against rival gravity theories. His gravitational-wave work has included predicting their strengths and their temporal "signatures" as observed on Earth; cofounding the Laser Interferometer Gravitational Wave Observatory (LIGO), a multi-institution project; and seminal work in quantum nondemolition measurements.

see Thorne, page 5

## Alice is ready for Grand Challenge

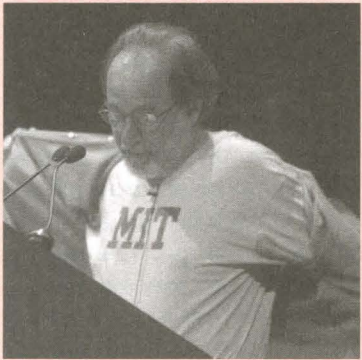
Next week, Alice takes center stage at the California Speedway in Fontana in the National Qualification Event (NQE) of this year's Defense Advanced Research Projects Agency Grand Challenge. Alice is no diva, but Caltech's entrant in the race, a take-no-prisoners field test of autonomously driven robotic vehicles.

During the NQE, which runs from September 28 to October 6, Alice—a Ford E-350 van modified for off-roading (and packed with sophisticated computer servers and sensors)—and 42 other entrants will navigate an obstacle course to determine the 20 teams that will compete on October 8 in the Grand Challenge finals, a wild ride through the desert over unpaved roads and around ditches and sand dunes. The first to complete the

see DARPA, page 6



# NewsBriefs



President David Baltimore shows his true colors at Caltech's third annual convocation last Sunday. The event—a formal welcome and introduction for new undergrads, grad students, and postdocs—also featured Professors Judith Goodstein and Harry Gray and Provost Paul Jennings.

## Personals

### Welcome to Caltech

#### June

**Yvonne Banzali**, career counseling intern, Career Development Center; **Emily Barrett**, resident associate, Campus Life; **Samira Cardona Ruiz**, server, Athenaeum; **Jennifer Flores**, department assistant, Campus Life; **Chung Wah (Warren) Fon**, research engineer, condensed-matter physics; **Benjamin Gudlewski**, senior nanofabrication engineer, physics, mathematics and astronomy; **Chelsea Habell**, cashier, Caltech Bookstore; **Jaime Ibarra**, bus person, Athenaeum; **Andrea Kung**, department assistant, Housing; **Ashish Mahabal**, staff scientist, computational astronomy; **Juan Marquez**, bus person, Athenaeum; **Karen Moore**, senior department assistant, materials science; **Donald Pinkston**, shop programmer, computer science; **Mason Alexander Porter**, postdoctoral scholar in physics; **Hongyu Ran**, staff scientist, applied and computational mathematics; **Hongxing Tang**, research scientist, condensed-matter physics; **Julia Ventura**, assistant animal lab technician, biology.

#### July

**Maria José Aldegunde Rodriguez**, visitor in chemistry; postdoctoral scholars **Baojun Bai**, in chemistry, and **Seth Blumberg**, in applied physics; **Vasken Bohossian**, senior postdoctoral scholar in electrical engineering; **Justin Boland**, postdoctoral scholar in electrical engineering; **Carrie Bridge**, visitor in the Infrared Processing and Analysis Center (IPAC); postdoctoral scholars **Mairi Brookes**, in JPL's astrophysics and space science section, **Brent Buckalew**, in IPAC, **Emanuele Casarotti**, in geophysics, **Martin Centurion MacLean**, in the Center for Physics of Information, **Gloria Choi**, in biology, **Matthew Cook**, in electrical engineering, and **Domitilla Del Vecchio**, in control and dynamical systems; **Francesca Di Luccio**, visitor in geophysics; **Andrew Drake**, research scientist, Center for Advanced Computing Research; **Lisa Flores**, payroll support specialist, Human Resources; postdoctoral scholars **Jimmy Fung**, in control and dynamical systems, **Daniel Harki** and **Matthew Hartings**, both in chemistry, and **Jun Huh** in biology; **Roberta Johnson**, visitor in IPAC; postdoctoral scholars **Elizabeth Jones**, in biology, **Laetitia Le Pourhiet**, in geophysics, **Christopher Lee**, in high-energy physics, **Yougen Li**, in chemical engineering, **Qi Liu**, in chemistry, **Zheng Meng**, in biology, **Christine Moissl**, in JPL's spacecraft mechanical engineering section, and **Robert Nielsen**, in chemistry; **Jennifer Nollar**, project cataloger, humanities and social sciences; **Yao-Chun Peng**, postdoctoral scholar in chemistry; research assistant **Diana Perez** and postdoctoral scholar **Alexander Perryman**, both in biology; **Allen Pu**, senior postdoctoral scholar in electrical engineering; **Gustavo Rahmer**, electronics engineer, Caltech Optical Observatories; **Adrienne Roeder**, postdoctoral scholar in biology; **Stephan Schleim**, visitor in biology; postdoctoral scholars **Dong Hun Shin** and **Claudiu Simion**, both in biology, **Joshua Simon**, in astronomy, **Heather Sumner**, in chemistry, **Ian Swanson**, in physics, **Cara Ann Tracewell**, in chemical engineering, **Christopher White**, in electrical engineering, **Travis Williams**, in chemistry, **Jeremy Witzens**, in electrical engineering, **Aiguo Wu** and **Woon-Seok Yeo**, both in chemistry, and **Jr-Kai Yu**, in biology; **Frank Zielinski**, visitor in geobiology; **Yan Zhang**, postdoctoral scholar in biology.

#### August

**Jocelyn Banuelos**, cashier, Caltech Bookstore; **Valerio Boschi**, visitor in physics; **Stefano Campagnola**, assistant research engineer, computer science; **Amy Cording**, research technician, biology; **Daniel Davis**, banquet chef, Athenaeum; **Tsegereda Embaye**, research scientist, geological and planetary sciences; **Byeong Ho Eom**, postdoctoral scholar in JPL's thermal and cryogenic engineering section; **Roberto Espinoza**, dishwasher/general helper, Athenaeum; **Diego Fazi**, visitor in physics; **Jean Fees**, recreational services administrative assistant, Athletics; **Ghislain Granger**, postdoctoral scholar in physics; **Jeanne Hariton**, project manager, Architectural and Engineering Services; **Amy Marie Hasquet**, assistant director of the alumni fund, Development and Alumni Relations; postdoctoral scholars **Gregory Herczeg**, in astronomy, and **Jongwon Kim**, in chemistry; **Helena Kopecky**, staff psychologist, Counseling Center; postdoctoral scholars **Matthew LaHaye**, in the Center for Physics, and **Zhe Liang**, in aeronautics; purchasing clerk **Christopher Lucko** and general helper/server **Liliana Meza**, both in Dining Services; **Antonia Moreno**, JPL Café 303 cashier, Dining Services; **Takuya Okuda**, postdoctoral scholar in theoretical physics; **Maria Olague**, assistant to the vice president, Business and Finance; **Jose Ortiz**, dishwasher, Dining Services; **Antonis Papachristodoulou**, postdoctoral scholar in control and dynamical systems; **Annelie Pernthaler**, Texaco Prize Postdoctoral Scholar, geobiology; **Dean Perton**, senior project manager, Architectural and Engineering Services; **Cameron Pinckney**, assistant director of admissions, Undergraduate Admissions Office; **Klaus Pontoppidan**, postdoctoral scholar in planetary science; **Basmah Riaz**, visitor in IPAC; **Carol Schuil**, office manager, Office of the General Counsel; postdoctoral scholars **Sota Shimizu**, in mechanical engineering, **Zhiyin Song**, in biology, and **Philip Stier**, in environmental science and engineering; **Erika Strandberg**, research technician assistant, biology; **Matthias Stute**, postdoctoral scholar in JPL's astrophysics and space sciences section; **Jenny Tam**, assistant animal laboratory technician, biology; **Michael Tinio**, card and dining system support, Dining Services; **Martha Torres**, worker's compensation claims coordinator, Human Resources; **Vivian Valentin**, postdoctoral scholar in psychology; **Jesus Valles**, dining-room server, Athenaeum; **Dunwei Wang**, postdoctoral scholar in chemistry; **Qiong (Joan) Xie**, associate applications developer, IPAC; **Lili Yang**, scientist, biology; **Joseph Young**, postdoctoral scholar in JPL's thermal and cryogenic engineering section.

**Kathy Svitil** joined Media Relations on August 31 as a senior science writer. She will write press releases and articles for campus publications and will assist the media. For the past 13 years, she has worked at *Discover* magazine, most recently as an associate editor, researching and writing news and feature articles (such as the cover story last November featuring Caltech professor Mike Brown) and serving as editor of the *Discover* website. She received her MA in journalism with a certificate in science writing from New York University, and has a BS in biology from UCLA.

#### September

**Mateo Amador**, general helper, Athenaeum; **Joerg Buehler**, visitor in computer science; **Anna Estrada**, admissions assistant, Undergraduate Admissions Office; **Sepehr Hojjati**, research analyst, biology; **Anna Moore**, instrument scientist, Caltech Optical Observatories; **Jose Navarrete**, parking assistant, Campus Security and Parking; **Andreea Petric**, visitor in IPAC.

#### New positions

**Denise Nelson Nash** has been appointed assistant vice president for public events, effective September 15. The director of public events since 1998, she has overseen comprehensive programs in public events, community outreach, and performing arts; special exhibitions and visits by dignitaries; and numerous collaborations with area cosponsors. Her additional responsibilities include coordinating the campus art committee and supervising filming on campus and at (CIT)<sup>2</sup>—formerly St. Luke Medical Center. Nash has served as president of the Tournament of Roses Foundation, been honored as a 27th Congressional District Woman of the Year, and received the Raymond Pitts Human Relations Award in Education. She is a graduate of Scripps College.

**Robert C. "Sandy" Pool** has been appointed director of gift planning, effective August 8. He will have primary responsibility for Caltech's bequest and life-income giving programs, including almost \$130 million in life-income assets currently under

management, and for the gift-planning program's contribution to Caltech's capital campaign. A staff member since 1988, he served most recently as the associate general counsel of Caltech and JPL. Previously, Pool was senior attorney for the U.S. General Accounting Office in Washington, D.C. He received his JD with honors from Suffolk University Law School in 1978, and he is a member of the bar in Massachusetts and California.

#### Retirements

**James Boyk**, lecturer in electrical engineering / music, retired on June 30, after 26 years at Caltech. An accomplished pianist, he held Alive! with Music weekly performance and discussion sessions for many years.

**Helga Galvan** retired on June 30. A member of the administrative staff for the Division of the Humanities and Social Sciences, she had worked at Caltech for 15 years.

**Margaret Lindstrom** retired on June 30 after 10 years at Caltech. She was a member of the administrative staff for the Division of the Humanities and Social Sciences.

**Otto Matherny**, facilities manager at LIGO's Hanford Observatory, retired on May 15. He had been employed by Caltech for 10 years.

**Irena Petrac** retired on June 24. A member of the LIGO staff, she had worked at Caltech for 15 years.

## Honors and awards

**Emmanuel Candes**, associate professor of applied and computational mathematics, received the James H. Wilkinson Prize in Numerical Analysis and Scientific Computing at the Society for Industrial and Applied Mathematics annual meeting, held July 11–15 in New Orleans; his prize lecture was titled "Uncertainty Principles and Signal Recovery from Incoherent and Incomplete Measurements." The honor, established in 1979 to encourage younger researchers in their careers, recognizes Candes's "outstanding theoretical and practical contributions to computational harmonic analysis and image processing." Candes joined Caltech in 2000 as an assistant professor, becoming associate professor in 2003.

**Mark Konishi**, Bing Professor of Behavioral Biology, and his former postdoctoral researcher Eric Knudsen, now chair of the neurobiology department at Stanford, have been awarded this year's Peter Gruber Foundation Neuroscience Prize. They have been recognized for their work on the brain mechanisms of sound localization in barn owls, a focus of Konishi's research since the 1970s. The pair will receive an unrestricted cash prize of \$200,000, a gold medal, and a citation for their contributions to neuroscience. Konishi joined Caltech in 1975 as professor of biology and was named Bing Professor in 1980.

**Shri Kulkarni**, MacArthur Professor of Astronomy and Planetary Science, has been chosen as the Biermann Lecturer for 2005. The Biermann Lectureship is considered the highest visiting position of the Max Planck Institute for Astronomy, located near Munich, Germany. He is expected to give three lectures: "Cosmic Explosions," "Astrometric Searches for Extra-Solar Planets," and "Recent Advances in Neutron Stars." Kulkarni came to Caltech as a Millikan Research Fellow in 1985, rising to become MacArthur Professor in 2001.

**Jerrold Marsden**, Braun Professor of Engineering and Control and Dynamical Systems, was selected to give this year's John von Neumann Lecture at the Society for Industrial and Applied Mathematics annual meeting, held July 11–15 in New Orleans. Established in 1959, the award provides an honorarium for an invited lecture. Marsden, chosen "in recognition of his fundamental contributions to geometric mechanics based on symmetry," lectured on "Geometric and Computational Dynamics." A Sherman Fairchild Distinguished Scholar at Caltech in 1992, Marsden joined the faculty as professor of control and dynamical systems in 1995, becoming Braun Professor in 2003.

**George Rossman**, professor of mineralogy and divisional academic officer for geological and planetary sciences, has been awarded the Austrian Mineralogical Society's 2005 Friedrich Becke Medal. The first U.S. recipient of the award, Rossman is being recognized for his "outstanding contributions in the fields of mineralogy, petrology, and geochemistry." Presentation of the medal will take place at the 2005 MinPet meeting in Austria. A Caltech alum (PhD '71), Rossman joined the Institute's faculty that same year as instructor and then assistant professor. He was named professor in 1983, and academic officer in 1999.



Robert Hurt (IPAC)

Artist's concept of a view of the planet, looking back toward the distant sun.

## A new planet and other strangers

Caltech professor of planetary astronomy Mike Brown and his colleagues announced a startling discovery on July 29: a new planet larger than Pluto in our solar system. But they also found two other objects, and all three are oddities that could revolutionize our understanding of the solar system.

The discoverers have nicknamed the objects "Santa," "Easterbunny," and "Xena." Brown, along with former Caltech postdoc Chad Trujillo, who is currently at the Gemini Observatory in Hawaii, and David Rabinowitz of Yale, detected the three objects with the 48-inch Samuel Oschin Telescope at Palomar Observatory.

All three objects are nearly Pluto-sized or larger, with Xena large enough to be called the tenth planet. The three also have odd elliptical orbits, and are members of the Kuiper belt, a region beyond Neptune's orbit that for decades was merely theoretical. When astronomers began detecting Kuiper-belt objects in the mid-1990s, the region suddenly became reality.

Xena, which is currently about 97 astronomical units away (one AU equals the distance between the sun and Earth, or approximately 93 million miles), is at least the size of Pluto and probably much larger. The researchers hope that infrared data returned by the Spitzer Space Telescope in late August, plus recent data from the 30-meter IRAM telescope in Spain, will help nail down Xena's size. Brown predicts that Xena will be highly reflective, because spectrographic data gathered by Trujillo show the surface composition is similar to that of Pluto. If, like Pluto, Xena reflects 70 percent of the sunlight reaching it, then it is about 2,700 kilometers (over 1,600 miles) in diameter.

The second object, nicknamed Santa because it was found on December 28, 2004, is one of the more bizarre objects in the solar system, according to Rabinowitz. His observations from a small telescope in Chile show that Santa is a cigar-shaped body whose length is about the diameter of Pluto. No large body in the solar system comes close to rotating as fast as Santa, which has a four-hour period. Observations by the team at the W. M. Keck Observatory have shown that Santa also has a tiny moon, nicknamed Rudolph, which circles it every 49 days.

Easterbunny, so named because of its discovery last March, is 52 astronomical units away, and like Santa is probably about three-quarters the size of Pluto. Moreover, Easterbunny is now the third Kuiper belt object, after Pluto and Xena, known to have a surface covered in frozen methane. For decades, Pluto was the only known methane-covered object beyond Neptune, but "now we suddenly have three, in a variety of sizes at a variety of distances, and can finally try to understand Pluto and its cousins," says Kris Barkume, a PhD student working with Brown.

The research is funded by NASA. For more information see [www.gps.caltech.edu/~mbrown](http://www.gps.caltech.edu/~mbrown).



# the academic week at Caltech

is a printed version of selected events from the online master calendar,

<http://today.caltech.edu/calendar>. To publish events online, register as an event planner on the Caltech Today 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](mailto:debbieb@caltech.edu).

# September 26–October 9, 2005

SEPTEMBER 26 27 28 29 30 OCTOBER 1 2 3 4 5 6 7 8 9

## Monday, September 26

### Geological and Planetary Sciences Seminar

155 Arms, Robert Sharp Lecture Hall, 4 p.m.—“The Effect of Secular Variation in Seawater Mg/Ca (Calcite and Aragonite Seas) on Calcareous Biomineralization,” Justin Ries, postdoctoral scholar, department of earth and planetary sciences, Johns Hopkins University.

### Special Organic Chemistry Seminar

153 Noyes, Sturdivant Lecture Hall, 4 p.m.—“Natural Products as a Driving Force for Discovery in Organic Chemistry,” Brian Stoltz, assistant professor of chemistry, Caltech.

## Tuesday, September 27

### Annual Meeting, Center for the Science and Engineering of Materials

Beckman Institute auditorium, 8 a.m. to 5 p.m.—Annual meeting of the Center for the Science and Engineering of Materials.

### Information Science and Technology Seminar

74 Jorgensen, 4:30 p.m.—“Pseudo-random Walks in Regular Digraphs and the RL vs. L Question,” Salil Vadhan, associate professor of computer science, Harvard University.

### Einstein Centennial Lecture

Beckman Auditorium, 8 p.m.—“Turning Classical Physics Upside Down: How Einstein Found Relativity Theory,” Jürgen Renn, executive director, Max Planck Institute for the History of Science, Berlin. Admission is free.

## Wednesday, September 28

### Special Kellogg Seminar

Lauritsen Library, 1:30 p.m.—Topic to be announced. Areg Danagoulain, department of physics, University of Illinois at Urbana-Champaign.

### Organic Chemistry Seminar

153 Noyes, Sturdivant Lecture Hall, 4 p.m.—“New Opportunities at the Interface of Chemistry and Biology,” Professor Peter Schultz, department of chemistry, Scripps Research Institute.

## Thursday, September 29

### Control and Dynamical Systems Seminar

114 Steele, 10 a.m.—“Modeling and Control in Cancer Genomics,” Professor Aniruddha Datta, department of electrical engineering, Texas A&M University.

### Bioengineering Seminar Series

142 Keck, 4 p.m.—“Modeling Many Molecular Motors in Muscle: A Study of Coupled Systems,” Professor Thomas Daniel, Komen Chair of Biology, University of Washington.

### Physics Research Conference

201 E. Bridge, 4 p.m.—“RHESSI Gamma-Ray/Hard X-Ray Imaging Spectroscopy Observations of Particle Acceleration in Solar Flares,” Robert Lin, professor of physics, UC Berkeley.

### USGS Public Lecture Series

Beckman Institute auditorium, 8 p.m.—“The Great 1906 Earthquake: Lessons Learned,” Mary Lou Zoback, USGS scientist. Admission is free.

## Friday, September 30

### ESE & Society Discussion Group

151 Arms, Buwalda Room, noon—Discussion groups are held on Friday mornings. Bring your own lunch. Dessert will be provided.

### Kellogg Seminar

Lauritsen Library, 4 p.m.—“The Strange Vector Current in the Nucleon: The G0 Forward Angle Experiment,” Jianglai Liu, department of physics, University of Maryland, College Park.

## Monday, October 3

### Aeronautics Seminar

101 Guggenheim Lab, Lees-Kubota Lecture Hall, 1 p.m.—“The DC-3: A Historic and Technical Perspective,” John Vassberg, Phantom Works, Boeing.

### Geological and Planetary Sciences Seminar

155 Arms, Robert Sharp Lecture Hall, 4 p.m.—“The Weak-Fault Problem,” John Suppe, professor of geosciences, Princeton University.

### High Energy Physics Seminar

469 Lauritsen, 4 p.m.—“The UNO and HUSEP Projects,” Chang Kee Jung, professor of physics, SUNY at Stony Brook.

### Applied Mathematics Colloquium

101 Guggenheim Lab, Lees-Kubota Lecture Hall, 4:15 p.m.—“Averaging and Memory,” Professor Alexander Chorin, mathematics department, UC Berkeley.

## Wednesday, October 5

### Environmental Science and Engineering Seminar

142 Keck, 3:40 to 5 p.m.—“Lipopeptides of Bacilli and Their Use in Oil Recovery,” Professor Michael McInerney, department of botany and microbiology, University of Oklahoma.

### Bray Theory Workshop

25 Baxter, 4 p.m.—“A Game Theoretic Approach for Robust Option Pricing,” Ilan Kremer, associate professor of finance, Graduate School of Business, Stanford University.

### Earnest C. Watson Lecture Series

Beckman Auditorium, 8 p.m.—Professor of Mathematics Gary Lorden, Caltech’s executive officer for mathematics and head of the team of Caltech mathematicians who serve as consultants for the TV series *NUMB3RS*, will explain how the show combines realistic applications of mathematics, dramatic crime-solving, and famous unsolved problems in a unique package that has scored ratings success while sparking people’s interest in mathematics. Admission is free. Information: <http://events.caltech.edu/events/event-2681.html>.

## Thursday, October 6

### Biochemistry Seminar

147 Noyes, Sturdivant Lecture Hall, 4 p.m.—“Interfacing and Templating Nanostructures with Biomolecules,” Shana Kelley, assistant professor of chemistry, Boston College.

### Bioengineering Seminar Series

142 Keck, 4 p.m.—“The Crucial Role of Bioengineering in Regaining Control of Posture and Locomotion Following Spinal Cord Injury,” Professor Reggie Edgerton, physiological science department, UCLA.

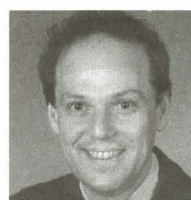
## Friday, October 7

### High Energy Theory Seminar

469 Lauritsen, 11 a.m.—Topic to be announced. Professor David Berenstein, department of physics, UC Santa Barbara.

### ESE & Society Discussion Group

151 Arms, Buwalda Room, noon—Discussions are held on Friday mornings. Bring your own lunch. Dessert will be provided.



Jürgen Renn

## Lectures celebrate Einstein’s “miracle year”

Caltech’s yearlong celebration of Albert Einstein will draw to a close with the final events in the Einstein Centennial Lecture Series. The free public lectures mark the 100th anniversary of the scientist’s “miracle year.” In 1905, at age 26, Einstein published four papers that revolutionized modern physics, among other things introducing the special theory of relativity and establishing the equivalence of mass and energy, famously expressed as  $E = mc^2$ .

On Tuesday, September 27, Jürgen Renn, executive director of the Max Planck Institute for the History of Science in Berlin, will present “Turning Classical Physics Upside Down: How Einstein Found Relativity Theory.” His talk will describe how Einstein’s reinterpretation of Lorentz’s theory of electromagnetism launched the relativity revolution of 1905. The event will begin at 8 p.m. in Beckman Auditorium.

For the final event, on Wednesday, November 16, the series will join the Watson Lectures in presenting “Einstein’s General Relativity, from 1905 to 2005,” by Kip Thorne, Caltech’s Feynman Professor of Theoretical Physics. For more information, contact Public Events at 1 (888) 2CALTECH, (626) 395-4652, or [events@caltech.edu](mailto:events@caltech.edu), or visit [www.events.caltech.edu](http://www.events.caltech.edu). Individuals with a disability can call 395-4688 (voice) or 395-3700 (TDD).

## “Math by the NUMB3RS”

Caltech numbers guru Gary Lorden will kick off the 2005–06 Earnest C. Watson Lecture Series on October 5, discussing the CBS-TV show *NUMB3RS*. The free public talk will begin at 8 p.m. in Beckman Auditorium.

Since last January, a new series has piqued television viewers’ interest in—of all things—math. In *NUMB3RS*, a young professor at CalSci (modeled after Caltech) uses his genius for math to help his FBI-agent brother solve crimes. Lorden, executive officer for and professor of mathematics, will discuss his experiences heading a team of Institute mathematicians who serve as consultants for the show, now going into its second season.

For more information, contact Public Events at 1 (888) 2CALTECH, (626) 395-4652, or [events@caltech.edu](mailto:events@caltech.edu), or visit [www.events.caltech.edu](http://www.events.caltech.edu). Individuals with a disability can call 395-4688 (voice) or 395-3700 (TDD). All lectures will be available online at <http://today.caltech.edu/theater>.



# CampusEvents

## Sunday, September 25

**Chamber Music Auditions for Pianists**  
Gary Lorden Lounge, Avery House, 1 to 3 p.m.—Appointments for auditions may be made at the chamber-music table at the Club Fair on September 24 or on the sign-up sheets on the Avery House lounge door. Bring the music you’re comfortable playing. Auditions are friendly and informal. Information: Delores Bing, dbing@caltech.edu.

**Auditions for the Jazz Band, the Concert Band, and Brass Chamber Music**  
Ramo Auditorium, 2 to 5 p.m. and 7 to 10 p.m.—Auditions are informal. Sign up for an audition time at the band table during the Club Fair on September 24, or simply drop by during the audition times.

**Skeptics Society Lecture**  
Baxter Lecture Hall, 2 p.m.—“Indivisible by Two: Lives of Extraordinary Twins (and What They Teach Us About Human Nature),” Nancy Segal, professor of psychology, Cal State Fullerton. Donation is \$8 for nonmembers, \$5 for members and non-Caltech students. Free to the Caltech/JPL community. Tickets and information: 794-3119 or skepticmag@aol.com. Book signing to follow the lecture.

**Men’s Glee Club and Chamber Singers Tryouts**  
Brennan Conference Room, third floor, Center for Student Services, 2:30 to 4:30 p.m.—All Caltech and JPL community members are welcome to try out for the Men’s Glee Club. Tryouts for the Chamber Singers are open to Caltech students only, both men and women.

**Women’s Glee Club Sign-Ups**  
Room 19, Baxter basement, 2:30 to 4:30 p.m.—The Women’s Glee Club announces the beginning of its 2005–06 performance year. All women in the Caltech/JPL community are welcome to join this nonauditioned, 60-member ensemble. Sign up this afternoon, then come to the first rehearsal on Monday, September 26, from 5 to 6 p.m.

**Chamber Music Auditions for Strings and Woodwinds**  
Gary Lorden Lounge, Avery House, 3 to 5 p.m.—Appointments for auditions may be made at the chamber-music table at the Club Fair on September 24 or on the sign-up sheets on the Avery House lounge door. Bring the music you’re comfortable playing. Auditions are friendly and informal. Information: Delores Bing, dbing@caltech.edu.

**Caltech Shorinji Kempo**  
Braun Athletic Center, aerobics room, 3:30 p.m.—Learn effective self-defense and martial arts with the Shorinji Kempo club. Sessions are free. No experience required. Wear comfortable clothing.

**Coleman Chamber Concert**  
Beckman Auditorium, 3:30 p.m.—The Emerson String Quartet will perform works by Mozart, Shostakovich, and Mendelssohn. Information: <http://events.caltech.edu/events/event-2382.html>.

**Caltech-Occidental Symphony Orchestra Auditions**  
Brennan Conference Room, third floor, Center for Student Services, 7 to 10 p.m.—Auditions for the orchestra, under the direction of Allen Robert Gross, will be held today and on Monday, September 26. Information: Allen Gross, [agross@its.caltech.edu](mailto:agross@its.caltech.edu).

## Monday, September 26

**Men’s Glee Club and Chamber Singers Tryouts**  
Beckman Auditorium basement, 2:30 to 4:30 p.m.—See Sunday, September 25, for details.

**Women’s Glee Club Sign-Ups and First Rehearsal**  
Beckman Auditorium basement, 2:30 to 4:30 p.m.—The Caltech Women’s Glee Club announces the beginning of its 2005–06 performance year. All women in the Caltech/JPL community are welcome to sign up. The first rehearsal will take place today from 5 to 6 p.m.

**Auditions for the Jazz Band, the Concert Band, and Brass Chamber Music**  
Ramo Auditorium, 4 to 6 p.m. and 8 to 10 p.m.—See Sunday, September 25, for details.

**Chamber Music Auditions for Strings and Woodwinds**  
Gary Lorden Lounge, Avery House, 4 to 6 p.m. and 8 to 10 p.m.—See Sunday, September 25, for details.

**Men’s Glee Club Rehearsal**  
Brennan Conference Room, third floor, Center for Student Services, 5 p.m.—The first rehearsal of the Men’s Glee Club, open to Caltech and JPL community members.

**Caltech-Occidental Symphony Orchestra Auditions**  
Brennan Conference Room, third floor, Center for Student Services, 7:30 to 10 p.m.—See Sunday, September 25, for details.

**Ballroom Boot Camp, Day 1: Funk**  
Winnett Center, 9 p.m.—The Ballroom Dance Club’s “Boot Camp” program offers lessons in six dances over three nights. Tonight offers ceroc and East Coast swing. No partner or experience is necessary. Admission is free.

## Tuesday, September 27

**Chamber Singers Rehearsal**  
Beckman Auditorium basement, 5 to 6:30 p.m.—The first rehearsal of the Chamber Singers.

**Einstein Lecture Dinner: Friends of Beckman Auditorium Event**  
Athenaeum, 6 p.m.—Join the Friends of Beckman Auditorium for a pre-lecture dinner at the Athenaeum, with historian Virginia Iris Holmes of the Einstein Papers Project. After dinner, as a group, we’ll attend the third of four Einstein Centennial Lectures celebrating Albert Einstein’s “miracle year.” The dinner is open only to members of the Friends of Beckman Auditorium. For information on the Friends, a community-based support group for Caltech Public Events, please go to <http://events.caltech.edu/support.html>.

**Ballroom Boot Camp, Day 2: Passion**  
Winnett Center, 9 p.m.—The Ballroom Dance Club’s “Boot Camp” program offers lessons in six dances over three nights. Tonight will heat up with American cha-cha and tango. No partner or experience is necessary. Admission is free.

## Wednesday, September 28

**Parenting Teens: How to Stay Sane When Your Child Is Behaving Insanely**  
Winnett lounge, noon—Child psychologist Dr. Enrico Gnaulati will discuss ways of dealing with problematic teen behavior.

## Thursday, September 29

**Caltech Women’s Club Fall Gathering**  
Athenaeum, 11:30 a.m. to 1 p.m.—The fall gathering is a time for new and returning members to learn about Women’s Club events and activities. Lunch, to be served on the west patio, may be purchased for \$18 (\$10 for students). Child care is available at the Children’s Center. Information: Carol Andersen at (818) 790-8175 or [carol@vis.caltech.edu](mailto:carol@vis.caltech.edu).

**Caltech Management Association**  
JPL, von Karman Auditorium, 4:45 p.m.—The Caltech Management Association presents “Entrepreneurial Space: An Insider’s Observations,” with Rex Ridenoure, CEO, Ecliptic Enterprises Corporation. Admission is free. All JPL and campus personnel and retirees are welcome.

**Ballroom Boot Camp, Day 3: Romance**  
Winnett Center, 9 p.m.—The Ballroom Dance Club’s “Boot Camp” program offers lessons in six dances over three nights. Tonight ends the series with international waltz and rumba. No partner or experience is necessary. Admission is free.

## Friday, September 30

**How to Choose a College**  
Winnett lounge, noon—Caltech director of admissions Rick Bischoff will discuss the art of the college search.

## Saturday, October 1

**Caltech-Occidental Chamber Orchestra**  
Ramo Auditorium, 7:30 p.m.—The program, conducted by Allen Robert Gross, will feature Mozart’s overture to *Idomeneo* and his *Exsultate, jubilate*, with soprano soloist Jean Lee Duong; Barber’s Adagio for Strings; C. P. E. Bach’s Symphony no. 3 in F Major; and Marquez’s Danzón no. 2. Admission is free. A reception for all will follow the performance. See Public Events contact information on this page. The same program will be performed at Occidental College’s Thorne Hall on Sunday, October 2, at 2:30 p.m.; for details, call (323) 259-2785.

**Bohola**  
Beckman Institute auditorium, 8 p.m.—Consisting of accordion virtuoso Jimmy Keane, fiddler Sean Cleland, percussionist/singer Pat Broaders, and guitarist/singer Kat Eggleston, Bohola has been called an Irish-American supergroup. Presented by the Caltech Folk Music Society. See Public Events contact information on this page.

## Sunday, October 2

**Women’s Club Family Potluck**  
Tournament Park, 4 to 7 p.m.—The Caltech Women’s Club annual family potluck will feature a traveling nature class with live animals. Bring yourself, your family, and a potluck dish. Plates, cups, utensils, and drinks will be provided. This is a great chance to meet other Caltech/JPL families and have fun. Information: 403-7163 or 791-4225.

## Tuesday, October 4

**First Responders’ Course**  
Brown Gym classroom, 8 to 11 a.m.—This intensive, advanced emergency response class, taught by an American Red Cross instructor, is aimed at people with a legal duty to act. The 10-week, 60-hour class will meet twice a week and cover the full range of first-aid and CPR skills. Students who successfully complete the class will receive American Red Cross First Responder Certificates and patches. Registration: [diane.williams@caltech.edu](mailto:diane.williams@caltech.edu), 395-8055, or [http://hr.caltech.edu/Education/super&non\\_super/first\\_responder.htm](http://hr.caltech.edu/Education/super&non_super/first_responder.htm).

**Transition to Leadership Series**  
Brown Gym classroom, 8:30 a.m. to 12:30 p.m.—This series of three classes is for new (and potential) supervisors interested in learning basic management skills that can help them succeed in their new positions. The other two sessions will be held on October 18 and November 1. Registration and information: 395-8055, [diane.williams@caltech.edu](mailto:diane.williams@caltech.edu), or [http://hr.caltech.edu/Education/super&non\\_super/leadership.htm](http://hr.caltech.edu/Education/super&non_super/leadership.htm).

## Thursday, October 6

**Caltech Library System: Quick Overview of Information Resources**  
Sherman Fairchild Library, multimedia conference room, 2 to 3:30 p.m.—Let us show you the most effective ways to use library services and resources. This session is designed especially for graduate students, postdocs, and research staff, but all are welcome. Information and registration: <http://library.caltech.edu/learning/default.htm>.

## Saturday, October 8

**Animal Tales: A Dolphin Story, Peacocks, and Wild Mustangs**  
Beckman Auditorium, 2 p.m.—High-definition cameras follow a pod of dolphins in *A Dolphin Story*. Peacocks and wild mustangs are the subject of *Classic Animal Tracks*. Flamenco guitarist Luis Villegas will perform an accompaniment to the films. The first 500 tickets issued will be free. See Public Events contact information on this page.

## Sunday, October 9

**Skeptics Society Lecture**  
Baxter Lecture Hall, 2 p.m.—“Ploughs, Plagues, and Petroleum: Global Warming, Climate Change, and the Future of the Environment,” William Rudiman, climate scientist, University of Virginia at Charlottesville. Donation is \$8 for nonmembers, \$5 for members and non-Caltech students. Free to the Caltech/JPL community. Tickets and information: 794-3119 or skepticmag@aol.com. A book signing will follow the lecture.

## Ongoing events

### Tuesdays

**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: 584-0970 or [kimdeman@yahoo.com](mailto:kimdeman@yahoo.com).

**CIT Knitters Group Meeting**  
256 Mudd Laboratory, South, noon—All levels of knitters and related handcrafters are welcome. We make items for others and ourselves. Information: 395-6905.

### Wednesdays

**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. Stop by and make new friends from around the world. Information: 793-2535 or [nancyhewett@earthlink.net](mailto:nancyhewett@earthlink.net).

### Public Events information and tickets

395-4652, 1 (888) 2CALTECH, or [events@caltech.edu](mailto:events@caltech.edu). Individuals with a disability: 395-4688 (voice) or 395-3700 (TDD). Visit Public Events at [www.events.caltech.edu](http://www.events.caltech.edu).



## Summer news in brief

### Rutledge is new E&AS chair

David Rutledge, Tomiyasu Professor of Electrical Engineering and a leading researcher in wireless telecommunication, has been named chair of the Division of Engineering and Applied Science, effective September 1. Rutledge replaces Richard Murray, who had been the chair since 2000.

President David Baltimore says that Rutledge "will provide strong leadership to this important division at a time when invention and discovery in engineering is occurring at a spectacular pace." Rutledge joined Caltech as an assistant professor in 1980, becoming professor in 1989 and Tomiyasu Professor in 2001, and is director of Caltech's Lee Center for Advanced Networking. His research in microwave circuits has been important for advances in wireless communications and other applications.

### ATC, ITS merge

The Administrative Technology Center (ATC) and Information Technology Services (ITS) have formed a single operation to oversee Caltech's computing needs. In a July memo to the Caltech community, Provost Paul Jennings and Vice President for Business and Finance Dean Currie said that Richard Fagen, formerly of ITS, has become Caltech's chief information systems officer and head of the new unit, Information Management Systems and Services (IMSS), part of Business and Finance. They also acknowledged the "tremendous leadership" of David Werntz and John Dundas in ATC and ITS, respectively.

### Caltech grad receives Fulbright

With a 2005–06 Fulbright grant in hand, David Powers will pursue graduate studies in environmental biochemistry at Nagasaki University in Japan. Powers, who graduated with honors in June with a BS in chemistry, will use the prestigious award to investigate the effects of pollution on the human body at the molecular and biochemical level. Originally from Thousand Oaks, he enjoys tennis and anime in his spare time.

Powers joins the ranks of other Fulbright recipients, which include Nobel Prize winners, politicians, scholars, artists, Supreme Court justices, and CEOs. Sponsored by the U.S. government, the internationally renowned Fulbright Program provides grants for students, scholars, and professionals around the world to pursue graduate study, research, and teaching assignments abroad to "increase mutual understanding between the people of the United States and the people of other countries."

### Thorne, from page 1

A Caltech alum (BS '62), Thorne received his PhD from Princeton in 1965. He returned to the Institute as an associate professor in 1967, becoming full professor in 1970, Kenan Professor in 1981, and Feynman Professor in 1991. Among his many honors has been election to the American Academy of Arts and Sciences and the National Academy of Sciences, and he has received the American Physical Society's Lilienfeld Prize, the German Astronomical Society's Karl Schwarzschild Medal, two American Institute of Physics Science Writing Awards in Physics and Astronomy, and the Phi Beta Kappa Science Writing Award.



## Women's Club has a grand birthday

At 90 years old, the Caltech Women's Club (CWC) has had a full life. Yet far from slowing down, the club is livelier than ever.

Founded in 1916, when Caltech was still the Throop College of Technology, the CWC began as a social outlet for about two dozen faculty wives who met in each others' homes with their sewing and knitting at hand. Since that time, the club has grown and evolved. Today the CWC looks very different, with close to 300 members, both women and men, from across the Caltech-JPL community and its affiliates. What remains unchanged, however, is the club's aim—"to promote friendliness and the sharing of mutual interests."

Over the years, the CWC—which club archivist Carol Andersen believes is the longest-running such organization in Southern California—has contributed greatly to Caltech's sense of community. Members have given many hours to providing educational and cultural programs and services such as English conversation classes, the Caltech Architectural Tour Service, the Caltech Service League, the Pasadena Area Guide, and the Playreaders, a joint activity with the Athenaeum. The club also formed the Caltech Children's Center, which, along with its spin-off, the Child Educational Center at JPL, is now an independent entity. Members with children have especially valued the Preschool Playgroup and Wednesdays in the Park programs, babysitting cooperative, and household equipment and loan pool.

The CWC will celebrate its 90th with a series of birthday-themed events, beginning with the annual fall gathering on Thursday, September 29. Originally called the Welcoming Meeting, the gathering was renamed Doris DuBridge Day in 1974 in honor of the former Caltech first lady, "who felt it was very important to welcome newcomers," Andersen says. "This is our traditional event to welcome back members and encourage newcomers to join."

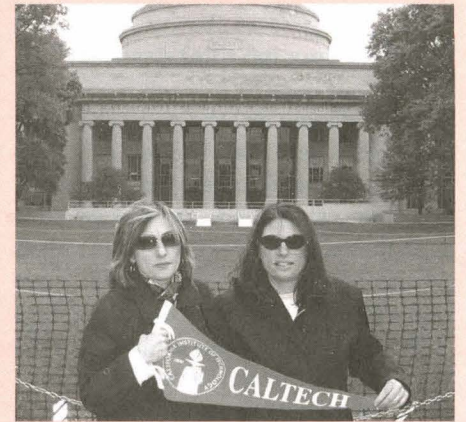
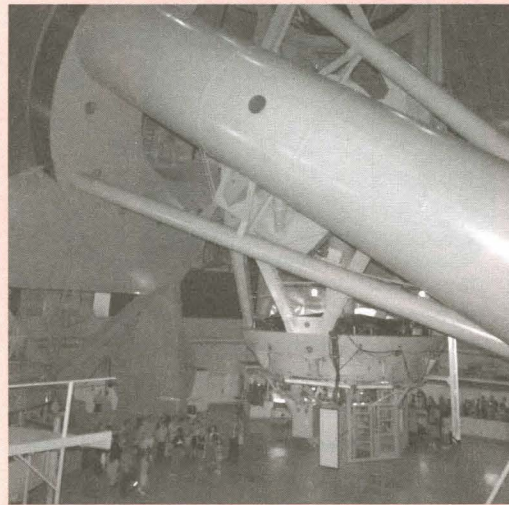
Open to all members, prospective members, and their guests, this year's event will feature a parade of former CWC presidents and will begin at 11:30 a.m. on the Athenaeum west patio. Lunch is \$18 per person (\$10 for students and post-docs). For reservations, contact Andersen at (818) 790-8175 or carol@vis.caltech.edu.

Prospective members are also invited to the welcoming coffees, which provide an opportunity to learn about the CWC. The next event will be held on Friday, November 4, from 11 a.m. to 1 p.m. at JPL's von Karman Auditorium. Additional times are planned on January 20 at the Rathskellar and on April 21 at the Red Door Café.

Other upcoming events for members are a history of the CWC, presented by member Alice Stone, on November 10, and the annual adult holiday party on December 1. In 2006, members will enjoy a lunch and cabaret-style musical revue on February 9, a luncheon tea and arts and crafts exhibit on April 13, and the Spring Scattering—a traditional event that brings generations together—tentatively set for May 6.

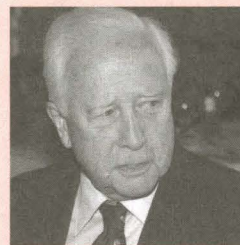
For more information on the Women's Club, visit [www.its.caltech.edu/~cwclub](http://www.its.caltech.edu/~cwclub) or e-mail [cwclub@its.caltech.edu](mailto:cwclub@its.caltech.edu).

## Scenes from the summer



Top, left: Crowds of people got an up-close-and-personal look at the inner workings of the 200-inch telescope during Palomar Observatory's open house in July.

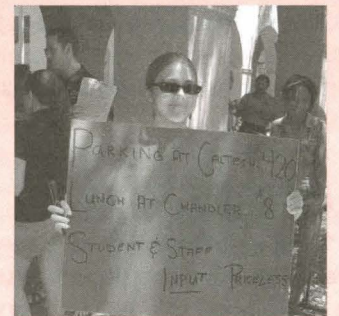
Above: Manager of financial reporting and analysis Karla Caprari (right) and her sister, Paula Hanson, show their Caltech spirit in front of MIT's Great Dome. The sisters, in Boston for their nephew's Tufts graduation, were supporting Caltech students who had just done pranks at MIT.



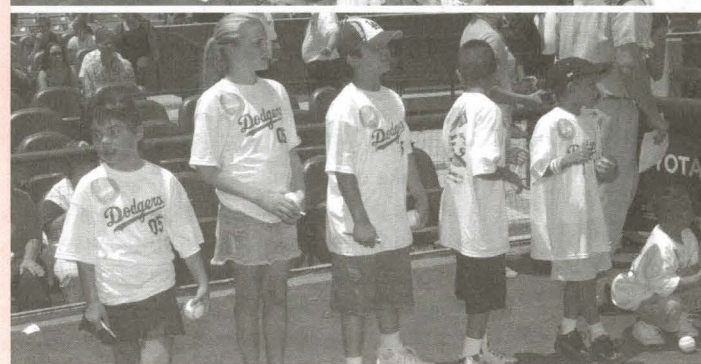
Left: Pulitzer Prize-winning historian David McCullough spoke on campus in June about his



latest book, *1776*, a study of America's defeat of the British. Center: In August, Shotokan Karate of America hosted the 49th annual Nisei Week Karate Exhibition and Tournament—the oldest such demonstration in the country—in Brown Gymnasium. Right: Students and staff protested in July over rising food prices and imminent parking charges, to no avail. The new parking fees will be implemented this fall for staff and in January for students.



Left, top: Students participating in this year's Young Engineering and Science Scholars (YESS) program pose at their banquet. YESS brings talented high school students to Caltech each summer for a challenging agenda of academics and research, working alongside Caltech students and faculty. Bottom: At this year's Dodger Day, lucky Caltech-JPL kids Jeremy Avila, Victoria Burescia-Torres, Shannon Proctor, Marco Robles, Alexander Smith, and Daniel Trillo were chosen to run with Dodger players onto the field, where the players signed baseballs for them.



## Art show will feature staff work

"Off the Clock: Art on Your Own Time" is an arts and crafts show that will feature the works of faculty, staff, and postdocs. Members of these groups are encouraged to delve into their treasury for prime samples of their work, to be exhibited on October 20 and 21 in Dabney Lounge.

"I hope all community members will take the opportunity to exhibit their work," says Tom Schmitt, associate vice president for human resources. "Just complete the online registration form (at [www.hr.caltech.edu/events.htm](http://www.hr.caltech.edu/events.htm)) and e-mail it to [Christine.Boyle@caltech.edu](mailto:Christine.Boyle@caltech.edu). It can also be sent by campus mail to MC 153-84. Instructions will be sent to all who register."

All those thinking of participating in the art show should note that the deadline for registration is Friday, October 14.

## Caltech, KPCC consider minute

Can "funny" and "science" be used in the same sentence? Caltech and KPCC radio are considering the creation of a humorous one-minute daily program designed to give listeners their recommended daily allowance of science. Even listeners who may have earned a C in high-school trigonometry or exploded the chemistry lab should enjoy it.

Potentially called the *Loh Down on Science*, the program would air on KPCC, 89.3 FM, and would be hosted by writer and performer Sandra Tsing Loh. The new show would marry Loh's hard-earned 1983 bachelor's degree in physics from Caltech with her talents for humor and the performing arts.

The segments would include historic, basic, and breaking science news. They would even be palatable to those who fear science.

An update on the project will be provided in an upcoming issue of 336.



## Staff center stage: Ernie Garcia

**What's your job title?** Assistant recycler.

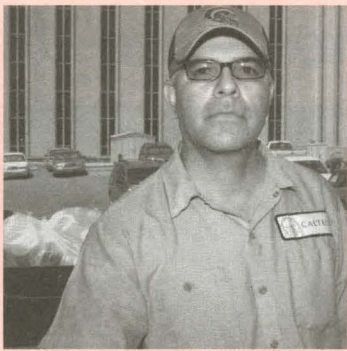
**What do you do?** We go to all the buildings where there are recycling bins on every single floor. We pick up paper and glass, fill up the truck, and then take it all to the recycling center near the Michigan parking lot and put it in order. A private company comes by and picks it up.

**Where are you from originally?** I'm an L.A. native, from Boyle Heights.

**Do you have any hobbies?** Sports. I play a lot of basketball and softball. I also do a lot of customizing work on cars, especially old Bugs and Karmann Ghias. My friend and I buy one cheap, then put about a thousand dollars into refurbishing it, and resell it.

**What was your first job?** I worked for a car company, ASC [Automobile Specialty Company], on the assembly line, where I built Camaros. I later went to Germany and built Porsches for two years, until the contract ended.

**Why did you come to Caltech to work?** After I lost my job at the car company, I started here as a security guard. In those



days, security was contracted out, so I had no benefits. I took a job in the custodial department when it came open, and that was 10 years ago. I love the atmosphere, and people are really nice.

**What's been your favorite experience on campus?** I'd have to say anytime anyone tells me how good the recycling center looks. When people come from other neighborhoods to see it, they often say we're doing something good for the environment. That makes me feel good.

**What's your favorite place on campus?** I'd have to say the recycling center!

**Where's the best place to eat lunch on or near campus?** Chandler.

**If your supervisor gave you the rest of the week off, what would you do?** I'd probably go to the beach.

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## Hurricane, from page 1

Cross for Hurricane Katrina relief. Members of the community who wish to donate to hurricane relief may contact the Caltech Y at ext. 6163.

Earlier this month, Caltech employee Mark Stapf flew to Texas and continued on to Louisiana, where he reported having encountered several Caltech students. They were volunteering in Red Cross warehouses, shelters, and kitchens.

"They are students who trained for the past couple of years, and being volunteer types, they were really willing to step forward and help in another capacity than what they normally do at Caltech," Stapf said. The students had previously taken the health-advocate program, a sequence of courses that he teaches.

On September 7, Caltech president David Baltimore sent a letter to the community providing an update on Caltech-related relief efforts. He wrote that crisis counselors had been made available to continuing students, and that the admissions and financial-aid offices had been in touch with new and prospective students and with incoming freshmen from Katrina-ravaged areas.

Baltimore also reported that a JPL group of staff members had organized a search-and-rescue team that was headed to the disaster area, while one staffer had joined an NSF-sponsored team that would assess infrastructure damage.

News of the storm's effects on people's lives motivated people to act. One offer of aid came to Caltech from a Pasadena resident who lives near Caltech. In an e-mailed message, the neighbor offered to provide temporary housing to the family of teaching staff affected by Katrina.

Caltech has ties located closer to the hurricane-affected region. Livingston is a small town of about 1,300, situated to the north and west of New Orleans. A small patch of wooded land serves as home for the LIGO Livingston station, which escaped much of the damage brought on by high winds and torrential rains.

"All of our people were safe, though we had some concerns about some," says Stan Whitcomb, deputy director of LIGO, referring to the 30 staffers, many of them collaborators from Louisiana State University, who live in nearby Baton Rouge and surrounding areas.

"We sent all of our people home and we had one person who lives nearby to return after the hurricane passed. He went out there and saw relatively little damage," Whitcomb says, adding that the facility was shut down the Saturday before Katrina was expected to make landfall.

There was little physical damage to the station save for three or four metal panels that blew off the side of a build-

ing. "We got electricity back at our facility on Monday [September 5]. Phone service on Monday as well," Whitcomb reports. "We also use a high-speed Internet connection for data transfer, which we didn't get for about 10 days." He says that the station was fully operational by Friday, September 9.

"Anybody who lives west of the site came out well," he says. Once the storm had passed, though, assessments brought bad news for others. "Some people had some damage to their homes. I think the bigger problems are the disruptions in their lives, like having elderly relatives in New Orleans." Getting food in the first days after the storm was also problematic.

"But I think it's fortunate for the most part that our people at the facility were in a position to help others," Whitcomb says.

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## DARPA, from page 1

almost 175-mile course in less than 10 hours will receive a cool \$2 million.

"I think we'll do great at the NQE," says Richard Murray, professor of control and dynamical systems and Team Caltech's leader. "The race is going to be tough. A lot will depend on how our work over the next two weeks goes," he adds. "We are optimizing and tuning our software, trying to get it to respond intelligently to the many types of conditions it might see during the race."

In last year's race, Team Caltech's Bob, a '96 Chevy Tahoe, didn't respond so intelligently to a swath of barbed wire. Bob got hung up in the wire, ending at mile 1.3. This year, Team Caltech has perfected the sensors and software, and their game plan.

"We want Alice to 'see' what is going on around it and drive based on that knowledge," Murray says. "This is much harder than making use of maps and satellite data to locate the roads ahead of time. With five cameras and five laser ranging devices (LADARs), we have a lot more sensors and computers than many of the other teams. This should give us an advantage if the course isn't just running along dirt roads and trails."

What of the loot if Alice wins? One million dollars will endow a fund to support CS/EE/ME 75, the class in multidisciplinary project design taken by Team Caltech's students; \$500,000 will be divided equally among four student engineering chapters. The other \$500,000 will be divvied up among Team Caltech's student members.

The public is invited to attend the NQE and the Grand Challenge finals. Admission is free, with grandstand seating available. For more information, visit [www.darpa.mil/grandchallenge](http://www.darpa.mil/grandchallenge).

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## Parking, from page 1

"Setting this system up is very extensive, with all the details and setting up the payroll deductions," Henderson says. "Aside from commuting staff, there are so many groups of people who need to park here, such as campus visitors, contractors, non-Caltech staff, JPL staff, and job applicants. We have to deal with each of these different nuances.

"Until we start the registration process and the new parking permits are distributed, the current permits are valid," Henderson says. "We will notify the campus on when and how the permits will be distributed. After that, we will go into enforcement mode, but we'll start with warnings before tickets are issued."

Henderson adds that staff should look into commuting alternatives, especially now that gasoline goes for \$3 per gallon. For years, Caltech has promoted bicycling and commuting alternatives that provide subsidies for carpooling, vanpooling, and public transportation.

"We do have good incentives and we've had them for quite some time," he says of the money-saving options to driving in every day. "People should check with Alternative Transportation and Commuter Services. The monthly Metro pass costs \$58, but is available at the Bookstore for \$33 with the Parking Services instant rebate of \$25."

With the new parking plan in place, carpools are expected to increase in popularity, Henderson says. Carpooling can be one of the more economical forms of transportation: the monthly parking fee for a carpooling vehicle is \$30, an amount that can be split among riders. He adds that more carpooling parking spaces will be added.

For those who do not need a monthly parking pass, daily permits will be available for \$1 per hour for a maximum of \$5 per day. These passes will be available for purchase at parking kiosks to be installed in the lots.

Henderson adds that those thinking of parking in neighborhoods around Caltech should reconsider. "Please respect our neighbors," he says. "This is their home, and we all have to exist in this area. Our neighbors do have a voice in city hall and can make changes."

A list of frequently asked questions and answers, "Everything You Always Wanted to Know about Parking at Caltech" can be viewed online at <http://today.caltech.edu>, in the Alternative Transportation section. For further details, contact the Parking Office at [parking@caltech.edu](mailto:parking@caltech.edu) and at ext. 8877, or visit the Parking website at [http://atc.caltech.edu/CIT\\_Parking/home.htm](http://atc.caltech.edu/CIT_Parking/home.htm).

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# Caltech 336

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