

Caltech 336

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

The campus community biweekly
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Tecolote trek



Close to 40 students took part in the Caltech Y Alternative Spring Break in March, traveling to Tecolote, Mexico; San Francisco; and the Navajo Nation in Utah. The Tecolote group (shown with community center staff members and Y director Athena Castro, far right) painted and tiled the center, played with kids there and at an orphanage, and painted a nearby home. See story on page 2.

Preparing campus for emergencies

In recognition of Emergency Preparedness Month in April, Caltech's Environmental, Health, and Safety Services Office is coordinating a drill to determine how ready the campus would be when dealing with a major emergency, such as an earthquake.

The emergency drill will take place from 3 to 5 p.m. on Tuesday, April 22, beginning at the north and south undergraduate houses and proceeding across California Boulevard to the Braun athletic field. Involving as many as 300 to 500 students, the exercise is intended to test the campus's ability to evacuate students safely and to respond to medical emergencies when municipal emergency response personnel are unavailable.

The scenario will be a 7.5 earthquake that has taken place near Pasadena, causing structural damage to the student houses. Student health advocates will triage and give first aid to a number of "victims," and observers from the Pasadena Fire Department and the American Red Cross will be on campus to evaluate the drill. Caltech's Health Center, along with Residence Life, Security, and Physical Plant, will participate.

In addition to this month's drill, Environmental, Health, and Safety Services
see Preparedness, page 6

Team skates to nationals

Caltech's figure skaters recently placed sixth at the 2003 National Intercollegiate Team Figure Skating Championships in Denver. The four-member team had earlier claimed first-place honors at the Pacific regional competition against schools like Stanford, UC Santa Cruz, and the University of Colorado at Denver. Not bad for a club that didn't exist a year ago.

"It was fabulous," said grad student in planetary science and club cofounder Emily Schaller. "I was very pleased that we skated so well, especially since it was our first time as a team at a national event."

Caltech's team entered 11 freestyle and ice-dancing events at Denver, where they faced eight established teams, like those from Dartmouth and Cornell, which can have up to 12 male and female members.

Caltech's team includes sophomore Kelly Martin, freshman Laura Pruitt, and grad student in aeronautics Olga Schneider. The women all have some experience figure skating—Schaller skated for 16 years and was on the Dartmouth College team, while Pruitt is a registered coach—but most had hung up their skates.

Unlike intercollegiate teams, this club is a purely student-led initiative. Schaller, who had been planning on going to com-
see Skaters, page 2

Kids come to work next week

It's that time of year again, when Caltech staff and faculty can let their kids see for themselves what mom or dad does all day.

Take Our Children to Work Day will be held on Thursday, April 24, and children who are students in the 4th through 12th grades are invited to take part in the program and to "shadow" their parents or visit them in their offices. Caltech's version of the national Take Our Daughters to Work Day is also open to boys and is intended to introduce kids to the various science careers and other opportunities on campus.

The day's activities begin at 10 a.m. in the Beckman Institute courtyard, where children will register for tours of various science laboratories. Lab tours will take place from 10:30 to 11:45 a.m., after which children, parents, and volunteers will return to the Beckman Institute courtyard for lunch. Following lunch, the Caltech Federal Credit Union will make a short presentation on savings accounts, with coloring books for the younger set, and CAPSI (the Caltech Precollege Science Initiative) and Athletics will both have activities. At 2 p.m., the children will proceed to Beckman Auditorium to view a short film by Institute alum Frank Capra. The activities will end at 3 p.m., when employees can pick up their children and take them to the Caltech Bookstore for free Popsicles and giveaways.

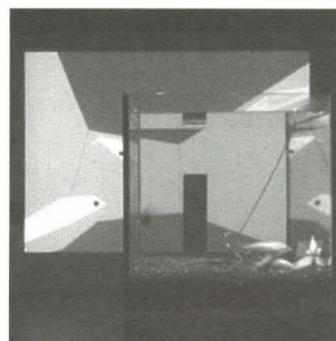
see Children to work, page 6

Ready, detect, LIGO

Armed with one of the most advanced scientific instruments of all time, physicists are now intently watching the universe for the first evidence of gravitational waves. First predicted by Albert Einstein in 1916 as a consequence of his general theory of relativity, gravitational waves have never been detected directly.

In Einstein's theory, alterations in the shape of concentrations of mass or energy have the effect of warping space-time, thereby causing distortions that propagate through the universe at the speed of light. The first generation of detectors, led by the Laser Interferometer Gravitational-Wave Observatory (LIGO), is coming into operation and promises sensitivities that will be capable of detecting a variety of catastrophic events, such as the gravitational collapse of stars or the coalescence of compact binary systems.

The commissioning of LIGO and improvements in its sensitivity are coming very rapidly, as the final interferometer systems are implemented and the sources of noise are uncovered and their
see LIGO, page 6



Infiltrate gives viewers a digital view of life inside a fish tank.

NEURO exhibit blends art and science

At the Art Center College of Design's Williamson Gallery, a cluster of video screens depict women straining to smile continuously for a computer "judge," while, in another room, digital fish mimic the movements of a school of koi in a tank, providing a view from the proverbial fishbowl. At the same time, and across town, the movements of guests at the Athenaeum trigger computer-generated "explosions" in vibrant hues, images that are projected overhead, just below the vaulted ceiling in the faculty club's foyer. The piece is called *Einstein's Dilemma*.

These intriguingly dissimilar displays are the result of a yearlong collaboration between Caltech engineers and Los Angeles-based artists. The art is assembled in *NEURO*, a joint exhibition presented by Caltech and the Art Center College of Design, which recently opened at the two campuses and will run through June 29.

The works of art all utilize, and were inspired by, advanced sensory equipment created at Caltech's Center for Neuromorphic Systems Engineering (CNSE). Much as their predecessors used oils and canvas or hammers and marble slabs, the six contemporary artists are equipped with motion detectors, light-emitting diodes, and vast reserves of data-crunching power. In *NEURO*, the artists have built on the foundations of 20th-century modernism to create art in which technology is the medium: it is not only the artist's means of creation but the raw material as well.

The scientists at the National Science Foundation-funded CNSE specialize in fields as esoteric as psychophysics, learning theory and pattern recognition, optoelectronics, and locomotion, to name a few. Pietro Perona, a professor of electrical engineering at Caltech, directs the center, whose objective is to create electronic devices that perceive the world, are able to learn and discern, and can react to stimuli, much as humans and animals do. To do this, engineers must figure out ways to impart in machines various biological processes, like vision, learning, and movement, all senses and abilities that we take for granted.

see NEURO exhibit, page 6

NewsBriefs



The Broad Center for the Biological Sciences received a load of equipment, including the first of three magnets for its MRI (magnetic resonance imaging) center, on Tuesday, April 8. In order to easily access the basement, where the center is located, the sidewalk south of the building was opened like a hatch. The second magnet is scheduled to be installed in September 2004.

Personals

Welcome to Caltech

March

Malina Chang, office manager, Student Affairs; **Susan Cline**, administrative assistant, Athenaeum; **John Galetzka**, senior research assistant, geology and geochemistry; **David Imel**, project manager, Infrared Processing and Analysis Center; **John Lilley**, systems administrator, Information Technology Services; **Zsuzsanna Marka**, assistant scientist, planetary sciences; **Katsumi Niki**, visiting associate, chemistry and chemical engineering; **Jan Schroers**, visiting associate, engineering and applied science; **Changjun Yu**, senior research assistant, biology.

April

Rainer Birringer, visiting associate, engineering and applied science; **Matthew Britton**, senior research engineer, Caltech Optical Observatories; **Jurgen Eckert**, visiting associate professor, engineering and applied science; **Dema Faham**, manager, Chemical Physics Letters Editorial Office; **Hamilton Lu**, engineer, Health Group Fabrication Facility; **Ione Negrutiu**, Moore Distinguished Scholar in Biology; **Donald Ross Prothero**, lecturer, geological and planetary sciences; **G. Jeffrey Snyder**, lecturer, engineering and applied science.

Deaths



Anne Buck, university librarian at Caltech since 1995, died on April 2; she was 63. A graduate of Wellesley College who went on to receive her master's degree in library and information science from the University of Kentucky in 1977, Buck held several positions at Bell Laboratories, and, after the breakup of AT&T, established and directed the Bellcore Library Network; she also served two years as director of human resources planning at Bellcore. She taught library management at Rutgers University and the University of Wisconsin-Madison and, before coming to Caltech, was university librarian from 1991 to 1995 at the New Jersey Institute of Technology.

Vice president of the Engineering Information Foundation and a member and past treasurer of the American Society for Information Science and Technology, she was also a public-library director, consultant, and trustee, and she served on the advisory board for the Carnegie Mellon University

Libraries. She contributed chapters to *Professional Writing* and *The Complete Chemical Engineer: A Guide to Critical Thinking*. A member of the American Library Association, the American Society for Engineering Education, and the Women in Engineering Programs and Advocates Network, she was also a member of Rotary International.

A long-term interest in defining a new paradigm for scholarly communication led Buck to organize and cochair the Conference on Scholarly Communication, which Caltech hosted in March 1997. Her recent papers include "The Scholar's Forum: A New Model for Scholarly Communication," which is available at <http://library.caltech.edu/publications/scholarsforum>, and "Library Management 2000," at http://www.uky.edu/CommInfoStudies/SLIS/newsletter/spr_00.htm#buck.

Buck is survived by a daughter, Susan Rentko; a son, Stephen; and two grandchildren.

Media minute

Tracking system stresses international students

An April 11 *Pasadena Star-News* article quoted **Parandeh Kia**, director of Caltech's international student programs, about the Institute's experience with the new Student and Exchange Visitor Information System for tracking foreign students. All student data must be entered into the database by August 1, but, according to the article, the U.S. Justice Department says the program "is plagued with technical problems that could adversely affect U.S. security." Noting that one graduate student has been stranded in China since Christmas, Kia said, "We're concerned that there is a very strong possibility things could go crazy." Many international students currently fear that traveling outside the United States may jeopardize their education, she said. Increased security has created visa problems for international students in technical fields because of the fear that their knowledge could be used by terrorists. Caltech has more than 550 international undergraduate and graduate students from 68 countries. China, India, Canada, Korea, and Romania, the top countries of origin, are not among the 26 nations whose visitors now receive heavy scrutiny.

Skaters, from page 1

petitions on her own, met Martin, and the two represented Caltech in an earlier Pacific regional competition. Then the other students with skating backgrounds came forward.

"It just sort of evolved," Schaller said. "It just so happened that Caltech had skaters."

Although they do not have travel funding or an official coach, Caltech Athletics helped defray some of the team's costs and entrance fees. Student Affairs and the Alumni Association paid for the team's travel expenses to Denver.

Now that it's the skating off-season, the team members will work to raise funds and focus on recruitment. "If you've ever competed before, you can pick it back up right away," Schaller said. "We definitely need men," she added, noting that on this campus it probably won't be too hard to find them.

Flying students soar to victory

Undergraduate students David Armet, Mark Bilinski, and Elaine Ou and graduate student Federico Spedalieri, representing the Aero Association of the California Institute of Technology (also known as the Caltech-JPL Flying Club), won several awards at a recent conference.

Competing at SAFECON (the Safety and Flight Evaluation Conference) against Embry-Riddle Aeronautical University, the U.S. Air Force Academy, Cypress College, Christian Heritage College, Mount San Antonio College, and San Jose State University, Spedalieri placed in the simulated aircraft navigation, power-off landing, and message-drop events, and he and Ou both placed in the computer accuracy event. The awards were made more notable in that Caltech was the only school competing that is not a professional pilot training academy and that has no aeronautics department.

"The Aero Association of Caltech and JPL is a special club," says Alice Huang, Caltech's senior councilor for external relations. "I have been taking lessons over the past year and know how hard our Caltech students have to work in order to place at these competitions. They make us all extremely proud."

Bookstore now has discount tickets

Take a break to ease your spring fever, or get a jump on summer vacation plans. Faculty and staff members can now buy discounted movie tickets, Metro system tokens, and admission to local attractions, from the Caltech Bookstore. (Students can also buy the tickets, but get a slightly better discount at the Caltech Y).

Examples of ticket prices include AMC and Pacific movie theaters, \$5.50; adult Metro tokens, 10 for \$9; Disneyland, \$36, adult or child; Knott's Theme Park, \$23 adult, \$11.50 child; and Universal Studios, \$34, adult or child. Dodger tickets are not discounted, but are sold at the gate price with no service charge. All tickets are nonreturnable.

The bookstore is currently promoting a private party at Magic Mountain on Friday, May 9. From 7 p.m. to 1 a.m., the park will be open only to employees of Caltech and several other companies. Tickets are \$20 and parking is free. For more information on these or other tickets, contact Heidi Bloks at Heidi.Bloks@caltech.edu or ext. 6161.

Attempting to make a difference

Iram Parveen Bilal

This past spring break, when all my friends were going to Vegas, Hawaii, and the Grand Canyon, it seemed less exciting to go to Mexico for community service, but I convinced myself to do so and that I should feel good about helping others. Thus, I went!

Sure enough, it turned out to be a lot more fun than I expected. Tecolote was the site of our work, and we were involved in tiling the bare cemented floors that we had to sleep on, painting the community center, playing with orphans in the local orphanage, and painting houses in the nearby slums. The Caltech Y has been arranging these projects for the past five years with a woman in Tecolote, who in turn works with a community-service department in San Diego. She picks out projects for us to do, and then we go ahead and take charge.

It was really an adventure to learn how to tile from scratch: cleaning the ground, mixing the cement, laying out the tiles, grouting the cracks, and then washing the tiles. And then painting in the hot Tecolote sun was not very easy, but with a great team of 15 we were able to pull off almost everything with a perfect example of division of labor and specialization of tasks!

In the times that we had to rest and eat, we walked around the streets of Tecolote, which are such a contrast to the much-hyped Tijuana. There are slums almost everywhere you can see. The two aspects that I felt much shock about were, firstly, a huge dump of hundreds of cars on a nice green hill and, secondly, wild dogs present at a frequency of at least every 30 feet.

The former, according to local citizens, is the way the government gets rid of cars left on the streets unattended. The latter I have no explanation for, except to say it is not an easy vacation if one does not like dogs because they are wild and everywhere.

Having done only the painting and tiling, I cannot really say much about the orphanage except that the director informed us that the kids really liked the visit. One wonders if they would ever say otherwise, though. I mean, they have a different group coming in every month or so, and they pass out some candy and play with the kids, but that is it. Surely, even that makes a difference.

However, on these trips one thing that always comes to mind is, can we do more than just tile a room or paint a small house? The answer is that we are limited by the director, and at times one might wonder about the system of matching the real needs and the jobs that are allocated. It could be that someone is actually holding back on people trying to make a difference because they want certain areas to be left undeveloped so that they can make more contracts with other community service groups. These were questions that rose in my mind, because I wanted to do a lot more and there were a lot of factors that I thought needed improvement, but we could not do anything about them as the director had not asked us to.

Hence, the inflexibility of what one could do was a little frustrating at times. However, whenever frustrated, one could always turn to the ever-tasty, authentic, and extremely cheap Mexican cuisine. One could have the biggest meal, burrito, or combo plate and a drink, and the bill would only be \$3.

It was a short, four-day trip, and on my return I had time for some other plans I had made for spring break. Tecolote made me tired, humbled, and satisfied with a little ounce of helplessness and gratefulness, partly to the Y and mostly to God!

Caltech junior Iram Parveen Bilal is a writer for the California Tech.

April 21–27, 2003

M T W T F S S

Monday, April 21

Aeronautics Seminar

101 Guggenheim Lab, Lees-Kubota Lecture Hall, 1 p.m.—“Hypersonics: Past, Present, and Future,” C. R. McClinton, NASA Langley Research Center. Information: www.galcit.caltech.edu/seminars.shtml.

General Biology Seminar

119 Kerckhoff, 4 p.m.—“From Genes to Memory,” Susumu Tonegawa, Whitehead Professor of Biology and Neuroscience, MIT, and investigator, Howard Hughes Medical Institute.

Geological and Planetary Sciences Seminar

155 Arms, Robert Sharp Lecture Hall, 4 p.m.—“A Combined Lu-Hf and Sm-Nd Isotopic Perspective on Planetary Differentiation,” Janne Blichert-Toft, visiting associate professor of geochemistry, Caltech. Information: www.gps.caltech.edu.

High Energy Physics Seminar

469 Lauritsen, 4 p.m.—Topic to be announced. Gustavo Burdman, Lawrence Berkeley National Laboratory. Information: www.theory.caltech.edu/people/helen/seminar1.html.

Inorganic-Electrochemistry Seminar

147 Noyes, Sturdivant Lecture Hall, 4 p.m.—“Fragment-Assembly Approaches to Drug Discovery: Antagonists of the Interleukin-2/IL-2 Receptor,” Dr. Michelle Arkin, staff scientist, Sensus Pharmaceuticals.

Applied and Computational Mathematics Colloquium

101 Guggenheim Lab, Lees-Kubota Lecture Hall, 4:15 p.m.—“Modeling Textures with Total Variation Minimization and Oscillating Patterns in Image Processing,” Luminita Vese, department of mathematics, UCLA. Refreshments, 3:45 p.m. Information: www.acm.caltech.edu/colloq.shtml.

Tuesday, April 22

Beckman Institute Seminar

Beckman Institute auditorium, 10:30 a.m. to noon—“Beyond the Genome,” Mel Simon, Biaggini Professor of Biological Sciences, and principal investigator for the Genome Research Center, Beckman Institute. Refreshments, 10 a.m. Information: 395-2791 or www.its.caltech.edu/~bi/seminars.html.

LIGO Science Seminar

351 West Bridge, LIGO Science Conference Room, 11 a.m.—“White Light Cavities in Gravitational-Wave Detectors,” Dr. Guido Mueller, department of physics, University of Florida.

Quick Review for Electronic Theses

Sherman Fairchild Library, multimedia conference room, noon—Caltech requires that theses be submitted in both paper and electronic versions. This presentation will offer a brief overview of techniques useful in the production and publication of electronic theses. The session will include tips

on formatting, intellectual-property considerations, turning paper to pixels, creating PDFs, how to submit a thesis, and availability (who can see it and when) issues. Information: 395-6713 or kathleen@library.caltech.edu.

Computation and Neural Systems Seminar

100 Broad Center, 2 p.m.—“From Neuron to Brain: Stereopsis and Object Recognition,” Dr. Doris Y. Tsao, department of neurobiology, Harvard Medical School and NMR Center, Massachusetts General Hospital.

Institute for Quantum Information Seminar

74 Jorgensen, 3 p.m.—Topic to be announced. Michael Wolf, Technical University, Braunschweig, Germany.

Mechanical Engineering Seminar

206 Thomas, 3 p.m.—“Microfluidic Actuation by Modulation of Surface Stresses,” Sandra Troian, associate professor of chemical engineering, Princeton University.

Ulric B. and Evelyn L. Bray Seminar

25 Baxter, 4 p.m.—“Characterizing Equilibria in Asymmetric First-Price Auctions,” David McAdams, assistant professor in applied economics, Sloan School of Management, MIT. Refreshments.

Caltech-Huntington Seminar Series In American Studies

237 Baxter, 4 p.m.—“From the Christmas Card to the Avant-Garde: Modern Art and *Modern Art*,” Dr. JoAnne Mancini, lecturer in American history, University of Sussex. Refreshments.

Carnegie Observatories Colloquium Series

William T. Golden Auditorium, 813 Santa Barbara Street, 4 p.m.—“First Light and the Dawn of Galaxies,” Professor Piero Madau, department of astronomy and astrophysics, UC Santa Cruz. Refreshments, 3:30 p.m.

Wiersma Lecture

24 Beckman Labs, 4 p.m.—“Olfactory Learning in Mammals,” Barry Keverne, professor of behavioural neuroscience and director of the subdepartment of animal behaviour, department of zoology, University of Cambridge.

Wednesday, April 23

Astronomy Colloquium

155 Arms, Robert Sharp Lecture Hall, 4 p.m.—“Ultraluminous Infrared Galaxies: Quasars/Ellipticals in Formation?,” Sylvain Veilleux, associate professor, department of astronomy, University of Maryland, College Park. Information: www.astro.caltech.edu/~gma/colloquia.html.

Environmental Science and Engineering Seminar

142 Keck, 4 p.m.—“Why Is the Land Green and the Ocean Red?,” Professor Paul Falkowski, Institute of Marine and Coastal Sciences and department of geology, Rutgers University. Refreshments, Keck Labs lobby, 3:40 p.m.

Information Sciences Seminar Series

070 Moore, 4 p.m.—“Dual-Based Multicast Congestion Control,” Koushik Kar, assistant professor, department of electrical, computer, and systems engineering, Rensselaer Polytechnic Institute. Information: <http://netlab.caltech.edu/seminar/>.

Rhetoric, Knowledge, and Information Seminar Series

237 Baxter, 4 p.m.—“The Tribe of Cool: Information Culture, Knowledge Work, and History,” Professor Alan Liu, department of English, UC Santa Barbara. Refreshments.

Social and Information Sciences Laboratory Seminar Series

25 Baxter, 4 p.m.—“The Academic Effects of Patentable Research,” Professor Richard Jensen, department of economics, Notre Dame. Refreshments.

Wiersma Lecture

24 Beckman Labs, 4 p.m.—“Impact of Imprinting on Brain and Behavior,” Barry Keverne, professor of behavioural neuroscience and director of the subdepartment of animal behavior, department of zoology, University of Cambridge.

Earnest C. Watson Lecture Series

Beckman Auditorium, 8 p.m.—“Voting: Where We Have Been, Where We Are Going,” R. Michael Alvarez, professor of political science, Caltech. Information: <http://events.caltech.edu/events/event-285.html>.

Thursday, April 24

Kellogg Seminar

Lauritsen Library, 11 a.m.—“The Future of Super-Kamiokande? GADZOOKS!”, Mark Vagins, assistant research physicist, department of physics and astronomy, UC Irvine.

Caltech Library System Presents: Web of Science for Science and Engineering

Sherman Fairchild Library, multimedia conference room, 2 p.m.—Learn tips and tricks for searching Web of Science databases more effectively. Registration: <http://library.caltech.edu/learning/form.htm>. Open to Caltech community members only.

Chemical Engineering Seminar

106 Spalding Lab, Hartley Memorial Seminar Room, 4 p.m.—Topic to be announced. Curtis W. Frank, W. M. Keck, Sr., Professor of Chemical Engineering and professor, by courtesy, of chemistry and of materials science and engineering, Stanford University. Refreshments, 113 Spalding Lab, 3:30 p.m. Information: www.che.caltech.edu/calendar/seminars.html.

Geoclub Seminar

151 Arms, Buwalda Room, 4 p.m.—“Rates of Dehydration, Melting, and Differentiation in Subduction Zones,” James Gill, professor of earth sciences, UC Santa Cruz.

Physics Research Conference

201 E. Bridge, 4 p.m.—“Digital Dynamics and Nonequilibrium Physics,” Raissa D’Souza, theory group, Microsoft Research. Refreshments, 114 E. Bridge, 3:45 p.m. Information: www.pma.caltech.edu/~physcoll/PhysColl.html.

Friday, April 25

High Energy Theory Seminar

469 Lauritsen, 11 a.m.—Topic to be announced. Albion Lawrence, assistant professor of physics, Brandeis University. Information: www.theory.caltech.edu/people/seminar/schedule.html.

Fluid Mechanics Seminar

101 Guggenheim Lab, Lees-Kubota Lecture Hall, 3 p.m.—“On the Motion of a Single Air Bubble Rising in Still Water,” Professor Mingming Wu, physics department, Occidental College. Information: www.galcit.caltech.edu/Seminars/Fluids/CurrentFluids/index.html.

Inorganic-Organometallics Seminar

151 Crellin, 4 p.m.—“Probing the Mechanism of Inducible Nitric Oxide Synthase with Sensitizer-Linked Substrates,” Wendy Belliston, graduate student in chemistry, Caltech.

Kellogg Seminar

Lauritsen Library, 4 p.m.—Topic to be announced. Mike Snow, associate professor of experimental nuclear physics, Indiana University Cyclotron Facility.

Swiss Film Series: A Koller Retrospective

Baxter Lecture Hall, 7:45 p.m.—Xavier Koller, *Tanner, the Rebellion*, 1985; with English subtitles.

Saturday, April 26

Caltech/MIT Enterprise Forum

Baxter Lecture Hall, 7:45 a.m. to 12:30 p.m.—“Strategic Relationships in Life Science.” Speakers and additional information to be announced. Fee: \$40; \$10 for full-time students with ID; free for Caltech students and faculty. Information: <http://www.entforum.caltech.edu>.

Undergraduate Physics Competition

070 Moore, 1 to 5 p.m.—The Boston Area Undergraduate Physics Competition is a four-hour exam consisting of six problems that require little expertise but lots of ingenuity. The only prerequisites are freshman-level physics and math. The top prize is \$300. Information and registration: <http://liquids.deas.harvard.edu/oleg/competition>. Previous years’ problems are available on the website.

April 28–May 4, 2003

M T W T F S S

Monday, April 28

Thesis Seminar

151 Crellin, 3 p.m.—“Molecular Recognition of Biomolecules in the Gas Phase,” Ryan Julian, graduate student in chemistry, Caltech.

Astronomy Tea Talk

106 Robinson, 4 p.m.—“The Growth of a Cluster in a Hierarchical Universe: The Case Study 0024 at $z=0.39$,” Tommaso Treu, postdoctoral scholar in astronomy, Caltech. Information: www.astro.caltech.edu/~cc/tea_talks.

Dow Lecture in Organometallic Chemistry

147 Noyes, Sturdivant Lecture Hall, 4 p.m.—“Weak Metal-Ligand Interactions; Bivalent Metallocenes of the f-Block Metals Are Good for Something,” Richard A. Andersen, professor of chemistry, UC Berkeley.

Geological and Planetary Sciences Seminar

155 Arms, Robert Sharp Lecture Hall, 4 p.m.—“Isotopic Evolution of the Biogeochemical Carbon Cycles on Early Earth,” Dave Des Marais, senior research scientist, NASA Ames Research Center.

High Energy Physics Seminar

469 Lauritsen, 4 p.m.—Topic to be announced. Kirill Tuchin, research associate, department of physics, University of Washington. Information: www.theory.caltech.edu/people/helen/seminar1.html.

Applied and Computational Mathematics Colloquium

101 Guggenheim Lab, Lees-Kubota Lecture Hall, 4:15 p.m.—“An Adaptive Treecode for Long-Range Particle Interactions,” Robert Krasny, department of mathematics, University of Michigan. Refreshments, 3:45 p.m. Information: www.acm.caltech.edu/colloq.shtml.

Tuesday, April 29

LIGO Science Seminar

351 West Bridge, LIGO Science Conference Room, 11 a.m.—“The 3PN Effective-One-Body Templates for Binary Black Holes,” Professor Bala Iyer, theoretical physics group, Raman Research Institute, India.

Quick Review for Electronic Theses

Sherman Fairchild Library, multimedia conference room, noon—Caltech requires that theses be submitted in both paper and electronic versions. This presentation will offer a brief overview of techniques useful in the production and publication of electronic theses. The session will include tips on formatting, intellectual-property considerations,

turning paper to pixels, creating PDFs, how to submit a thesis, and availability (who can see it and when) issues. Information: 395-6713 or kathleen@library.caltech.edu.

Institute for Quantum Information Seminar

74 Jorgensen, 3 p.m.—Topic to be announced. Ben Schumacher, Moore Distinguished Scholar in Physics, Caltech.

Mechanical Engineering Seminar

206 Thomas, 3 p.m.—“Thermodynamics Aspects of Transport and Mechanics in Nanostructures,” Professor Arun Majumdar, department of mechanical engineering, UC Berkeley.

Carnegie Observatories Colloquium Series

William T. Golden Auditorium, 813 Santa Barbara Street, 4 p.m.—“Ultraluminous Infrared Galaxies: Quasars/Ellipticals in Formation?,” Sylvain Veilleux, associate professor, department of astronomy, University of Maryland, College Park. Refreshments, 3:30 p.m.

General Biology Seminar

119 Kerckhoff, 4 p.m.—“Microbes Gone Wild: Insights into Mitotic and Cytoskeletal Evolution from *Giardia lamblia*,” Scott Dawson, department of molecular and cell biology, UC Berkeley.

Mathematics Colloquium

151 Sloan, 4:15 p.m.—“A Canonical Factorization for Meromorphic Herglotz Functions on the Disk and a Proof of the Jacobi Matrix P_2 Sum Rule on One Foot,” Barry Simon, IBM Professor of Mathematics and Theoretical Physics, Caltech. Information: <http://math.caltech.edu/seminars.html>.

Wednesday, April 30

Mathematical Physics Seminar

351 Sloan, noon—“Matrix-Valued Orthogonal Polynomials and Their Applications to Spectral Analysis of PDE: Absolutely Continuous Spectrum of Massless Dirac Operator,” Serguei Denisov, Taussky-Todd Instructor in Mathematics, Caltech. Information: www.math.caltech.edu/events/mathphys.html.

Astronomy Colloquium

155 Arms, Robert Sharp Lecture Hall, 4 p.m.—Topic to be announced. Renyue Cen, astrophysical sciences department, Princeton. Information: www.astro.caltech.edu/~gma/colloquia.html.

Environmental Science and Engineering Seminar

142 Keck, 4 p.m.—“Versatile Vibrionaceae: Microbial Adaptations from the Ocean Abyss to the Human Gut,” Professor Doug Bartlett, Marine Biology Research Division, Scripps Institution of Oceanography, UC San Diego. Refreshments, Keck Labs lobby, 3:40 p.m.

Information Sciences Seminar Series

070 Moore, 4 p.m.—Topic to be announced. Rafail Ostrovsky, senior research scientist, applied research, Telcordia Technologies. Information: <http://netlab.caltech.edu/seminar>.

Joint Chemical Engineering, Materials Science Seminar

106 Spalding Lab, Hartley Memorial Seminar Room, 4 p.m.—“Plasma-Enhanced Growth of Dielectrics and Metal Nitrides,” Professor Thomas Mantei, department of electrical and computer engineering and computer science, University of Cincinnati. Refreshments, 113 Spalding Lab, 3:30 p.m. Information: www.che.caltech.edu/calendar/seminars.html.

Thursday, May 1

Caltech Library System Presents: Crystallographic Databases

Sherman Fairchild Library, multimedia conference room, 2 p.m.—Learn how to search for online crystal structure data. Open to Caltech community members only.

Chemical Engineering Seminar

106 Spalding Lab, Hartley Memorial Seminar Room, 4 p.m.—“Directing Polymer and Colloid Assembly at Surfaces,” Professor Paula T. Hammond, chemical engineering department, MIT. Refreshments, 113 Spalding Lab, 3:30 p.m.

Geoclub Seminar

151 Arms, Buwalda Room, 4 p.m.—Topic to be announced. Professor Joel Norris, assistant professor of climate and atmospheric sciences, Scripps Institution of Oceanography.

Social and Information Sciences Laboratory Seminar Series

25 Baxter, 4 p.m.—“Information Flow and Cooperative Control of Multi-Agent Systems,” Richard Murray, professor of mechanical engineering, Caltech. Refreshments.

Friday, May 2

High Energy Theory Seminar

469 Lauritsen, 11 a.m.—“Strings from Partons,” Andreas Karch, assistant professor, department of physics, University of Washington. Information: www.theory.caltech.edu/people/seminar/schedule.html.

High Energy Theory Seminar

469 Lauritsen, 1 p.m.—“BRST = Ext,” Eric Sharpe, postdoctoral research associate, department of mathematics, University of Illinois, Urbana-Champaign. Information: www.theory.caltech.edu/people/seminar/schedule.html.

Fluid Mechanics Seminar

101 Guggenheim Lab, Lees-Kubota Lecture Hall, 3 p.m.—“Diffusion Limited Cascades and the Energetics of Ocean Circulation,” Professor William Young, Scripps Institution of Oceanography, UC San Diego. Information: www.galcit.caltech.edu/Seminars/Fluids/CurrentFluids/index.html.

Inorganic-Organometallics Seminar

151 Crellin, 4 p.m.—“(PNP)CrPh₃ Complexes as Models for Ethylene Trimerization Catalysts: Insights into Mechanism and Active Species,” Susan Schofer, graduate student in chemistry, Caltech.

Science, Ethics, and Public Policy Seminar

25 Baxter, 4 p.m.—“The Low Tide of General Relativity: 1925–1955,” Professor Jean Eisenstadt, Paris Observatory. Refreshments. Information: www.hss.caltech.edu/ses/index.html.

CampusEvents

Monday, April 21

Child Educational Center Summer Camp Sign-Up

Enrollment is open for the CEC's Summer Camp Program for children completing kindergarten through 6th grade. Caltech and JPL families have priority enrollment. Information: (818) 354-3418 or www.ceconline.org.

Standard First-Aid/CPR Training

Brown Gym classroom, 7:30 a.m. to 5 p.m.—Standard first-aid and CPR training will be offered by Caltech's Safety Office in conjunction with the American Red Cross. Fee: \$20 for materials, due in advance. Registration: 395-6727 or safety.training@caltech.edu.

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.

Men's Golf

SCIAC 18-Hole Tournament of 72, at Annandale Country Club, noon.

Ceroc Dance Lessons

Winnett Lounge, 7:30 p.m.—Ceroc is a hip, international dance club sensation. This is a series of 10 weekly classes sponsored by the Ballroom Dance Club. No experience is required. Fee: \$1; free for freshmen, first-year graduate students, and those taking the class for PE credit. The series began March 31.

Tuesday, April 22

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: 792-7808 or julia@astro.caltech.edu.

Campus Emergency Drill

North Athletic Field, 3 to 5 p.m.—This drill is designed to test the state of readiness of the Institute for an emergency involving mass casualties. It will primarily involve undergraduate students, and staff members from the Health Center, the Safety Office (Environmental, Health, and Safety Services), the Security Office, and Residence Life. Pasadena Fire Department and American Red Cross representatives will be on campus to help evaluate our response. Information: 395-6727.

Adult, Child, and Infant First-Aid and CPR Training

Brown Gym classroom, 5:30 to 10 p.m.—Adult, child, and infant first-aid and CPR training will be offered by Caltech's Safety Office in conjunction with the American Red Cross. Fee: \$25 for materials. This is a two-day class; to receive certification, you must attend tonight and on Thursday, April 24. Registration: 395-6727 or safety.training@caltech.edu.

Caltech Tai Chi Club

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

Intermediate Jazz Dance Class

Braun Gym, multipurpose room, 9:30 p.m.—Intermediate jazz dance, taught by a professional instructor. Open to everyone with a valid gym membership. No special clothing or shoes are required. The trial class costs \$5; fee for the full term is \$30 for Caltech students, \$40 for non-students. Sponsored by the GSC, ASCIT, and the Alumni Fund.

Wednesday, April 23

CPR Recertification Training

Brown Gym classroom, 7:30 a.m. to noon—CPR recertification training will be offered by Caltech's Safety Office in conjunction with the American Red Cross. There is a small fee for materials. Information and registration: 395-6727 or safety.training@caltech.edu.

Baby Furniture and Household Equipment Pool

See Monday, April 21, for details.

Wednesdays in the Park

Tournament Park, 10 a.m. to noon—Conversation and coffee for parents and caregivers, and playtime for children. Information: 355-3874 or lcklavins@hotmail.com.

Women's Wellness Series: Preparing for Childbirth

Avery Library, noon—This panel discussion will cover pre- and postnatal health and nutrition, Caltech benefits and leave policies, day-care resources, and lactation information. Brown-bag lunches will be provided. Space is limited. Registration and information: 395-3221 or wcenter@studaff.caltech.edu.

CPR Recertification Training

Brown Gym classroom, 1 to 5 p.m.—CPR recertification training will be offered by Caltech's Safety Office in conjunction with the American Red Cross. There is a small fee for materials. Information and registration: 395-6727 or safety.training@caltech.edu.

American Smooth-Style Dance Lessons

Winnett Lounge, 7:30 p.m.—An assortment of popular American smooth-style dances, including the fox-trot, tango, and waltz, taught by a professional instructor. This is a series of nine weekly classes, sponsored by the Ballroom Dance Club. No previous experience is necessary. Fee: \$6 per class for Caltech students, \$8 per class for others, with a discount for full payment in advance. The series began April 9.

Dance Team Fox-Trot Classes

Winnett Lounge, 9:30 p.m.—Join the Caltech Ballroom Dance Team for this series of classes, which includes five weeks of fox-trot and four weeks of quickstep, to be taught by a professional instructor. No experience is required. The series began April 9.

Hip-Hop Dance Class for Advanced Beginners

Braun Gym, multipurpose room, 9:30 p.m.—This hip-hop class offers beginners a more challenging experience. Open to everyone with a valid gym membership. No special clothing or shoes are required. The trial class costs \$5; fee for the full term fee is \$30 for Caltech students and \$40 for nonstudents.

Thursday, April 24

Men's Tennis

Ojai Tournament, at Ojai, 9 a.m. Continues through Sunday.

Women's Tennis

Ojai Tournament, at Ojai, 9 a.m. Continues through Sunday.

Video Compression for Presentations, Web, and CD/DVD

NewMedia Classroom, 363 S. Hill Avenue, 10 a.m. to noon—Learn why and how video is compressed for playback on a computer. There will be hands-on exercises with Cleaner 5 software, and demonstrations of other compression software such as Premiere and Sorenson Squeeze. Fee: \$50. Reservations: wenyee@caltech.edu. Information: <http://muri.caltech.edu/nmc/index.htm>.

Caltech Architectural Tours

Athenaeum, 11 a.m. to 12:30 p.m.—Meet in the entry hall of the Athenaeum. Led by members of the Caltech Architectural Tour Service. Reservations: Susan Lee, 395-6327 or suze@caltech.edu.

Men's Golf

SCIAC 18-Hole Tournament, at Hacienda Country Club, noon.

Amnesty International Monthly Meeting

Caltech Y lounge, 7:30 p.m.—Caltech/Pasadena AI Group 22 holds its monthly meeting to discuss current activities and plans. All are welcome. Refreshments. Information: (818) 354-4461 or lkamp@lively.jpl.nasa.gov.

Friday, April 25

Standard First Aid and CPR Training

Brown Gym classroom, 7:30 a.m. to 5 p.m.—Standard first-aid and CPR training will be offered by Caltech's Safety Office in conjunction with the American Red Cross. Fee: \$20 for materials, due in advance. Registration: 395-6727 or safety.training@caltech.edu.

Baseball

vs. Claremont-Mudd-Scripps, 3 p.m.

Women's Club Welcoming Coffee

Athenaeum Rathskeller, 4:30 to 6 p.m.—An opportunity to meet new friends, welcome newcomers, and learn more about the Caltech Women's Club. Information: Carol Andersen, (818) 790-8175 or carol@vis.caltech.edu.

Caltech Tai Chi Club

See Tuesday, April 22, for details.

Rick Miller in *MacHomer: The Simpsons Do Macbeth*

Beckman Auditorium, 8 p.m.—Rick Miller performs a one-man show featuring over 50 voices from TV's *The Simpsons* in Shakespeare's bloodiest tragedy. Suggested for ages 12 and older. Tickets and information: 395-4652, 1 (888) 2CALTECH, or events@caltech.edu. Individuals with a disability: 395-4688 (voice) or 395-3700 (TDD). Visit Public Events at www.events.caltech.edu.

Saturday, April 26

Coleman Chamber Ensemble Competition

Ramo Auditorium, 9 a.m. to 5 p.m.—Entrants compete for a total of \$13,000 in prizes. Prize-winners will perform on Sunday, April 27, in Ramo Auditorium at 3:30 p.m. Tickets and information: 395-4652, 1 (888) 2CALTECH, or events@caltech.edu. Individuals with a disability: 395-4688 (voice) or 395-3700 (TDD). Visit Public Events at www.events.caltech.edu.

Baseball

vs. Claremont-Mudd-Scripps, doubleheader, 11 a.m.

Intermediate Ballet Class

Braun Gym, multipurpose room, 1 p.m.—Free class taught by experienced members of the Caltech Dance Troupe. No special clothing or shoes are required.

Track & Field

SCIAC Prelims, at University of La Verne, 4 p.m.

Sunday, April 27

Skeptics Society Lecture

Baxter Lecture Hall, 2 p.m.—"The Art of the Infinite: The Pleasures of Mathematics," Dr. Robert Kaplan and Ellen Kaplan, founders, the Math Circle. 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.

Coleman Chamber Ensemble Competition Winners Concert

Ramo Auditorium, 3:30 p.m.—The prize-winners of the 57th annual competition will perform. Tickets and information: 395-4652, 1 (888) 2CALTECH, or events@caltech.edu. Individuals with a disability: 395-4688 (voice) or 395-3700 (TDD). Visit Public Events at www.events.caltech.edu.

Amnesty International Book Discussion Group

Vroman's Bookstore, 695 E. Colorado Boulevard, 2nd floor, 6:30 p.m.—This month we discuss *A Sky So Close*, by Iraqi author Betoool Khediri. All are welcome. Registered members of the group can buy the book at a discount from Vroman's. Sponsored by Caltech/Pasadena AI Group 22. Visit Group 22 at www.its.caltech.edu/~aigp22.

Monday, April 28

Baby Furniture and Household Equipment Pool

See Monday, April 21, for details.

Track & Field

SCIAC Finals, at University of La Verne, 5 p.m.

Ceroc Dance Lessons

See Monday, April 21, for details.

Tuesday, April 29

Preschool Playgroup

See Tuesday, April 22, for details.

Caltech Tai Chi Club

See Tuesday, April 22, for details.

Intermediate Jazz Dance Class

See Tuesday, April 22, for details.

Wednesday, April 30

Men's Golf

SCIAC Championships, at Los Serranos Country Club, 8 a.m.

Baby Furniture and Household Equipment Pool

See Monday, April 21, for details.

Wednesdays in the Park

See Wednesday, April 23, for details.

Laboratory Safety for Continuing Researchers

118 Keith Spalding Building, 3 p.m.—This refresher course will review issues including laboratory organization, emergencies, injuries, fire, earthquake, chemical and radioactive material incidents, general laboratory safety, chemical storage, transporting chemicals, preparation for experiments, electrical safety, mechanical safety, and Safety Office services. Registration: 395-6727 or e-mail safety.training@caltech.edu. (New researchers should register for Lab Safety 101.)

American Smooth-Style Dance Lessons

See Wednesday, April 23, for details.

Voices of Vision Series

Ramo Auditorium, 8 p.m.—"Writing in a Multicultural World: A Poetry Performance and Open Discussion," Marilyn Chin. A renowned Chinese American poet, Chin will recite her own poems and discuss "identity" issues. Chin's poems are considered Asian American classics and are taught in universities across the nation and internationally. She is the director of the master of fine arts program at San Diego State University. Information: <http://events.caltech.edu/events/event-291.html>.

Dance Team Fox-Trot Classes

See Wednesday, April 23, for details.

Hip-Hop Dance Class for Advanced Beginners

See Wednesday, April 23, for details.

Friday, May 2

Baseball

at University of La Verne, 3 p.m.

Caltech Tai Chi Club

See Tuesday, April 22, for details.

Capitol Steps

Beckman Auditorium, 8 p.m.—The Capitol Steps are a troupe of congressional staffers-turned-comedians who travel the United States satirizing the very people and places that once employed them. Tickets and information: 395-4652, 1 (888) 2CALTECH, or events@caltech.edu. Individuals with a disability: 395-4688 (voice) or 395-3700 (TDD). Visit Public Events at www.events.caltech.edu.

Saturday, May 3

Baseball

vs. University of La Verne, doubleheader, 11 a.m.

Intermediate Ballet Class

See Saturday, April 26, for details.

Capitol Steps

See Friday, May 2, for details.

Sunday, May 4

Coleman Chamber Concert

Beckman Auditorium, 3:30 p.m.—The Academy of St. Martin in the Fields will perform works by Tchaikovsky, Shostakovich, and Mendelssohn. Tickets and information 395-4652, 1 (888) 2CALTECH, or events@caltech.edu. Individuals with a disability: 395-4688 (voice) or 395-3700 (TDD). Visit Public Events at www.events.caltech.edu.

NEURO exhibit, from page 1

"The National Science Foundation encourages us to make our science and technology accessible to everyone," says Perona, who with artist Ken Goldberg created the fish-tank work called *Infiltrate*. "Through the work of talented artists we can reach people who may feel intimidated by our scientific lingo."

Perona also participated in the creation of the work featuring the smiling women, titled *Cheese*. Described as an experiment in the architecture of sincerity, the piece by artist Christian Möller, software engineer Sean Crowe, and Caltech graduate student in electrical engineering Pierre Moreels, seeks to detect sincerity in a smile. While scrutinized by a computer perception system, six actresses hold a smile for as long as they can; when they lose concentration or tire and fail to display enough happiness, an alarm orders them to show more sincerity.

Another piece encourages viewers to see without looking. *Untitled*, by Jessica Bronson, employs light sticks and LED lights that project descriptive words onto a wall. These bursts are too quick to be seen by the eye directly, but they are detected by peripheral vision, and are registered on the retina in a process called retinal painting.

Body Electric, by Simon Penny, professor of arts and engineering at UC Irvine, and Caltech postdoctoral scholar in mechanical engineering Malcolm MacIver, seeks to replicate the sensory system found in weakly electric fish, one that detects fluctuations in a self-generated electric field. The more conceptual *Science*, by Peter Schröder, professor of computer science and applied and computational mathematics, and Martin Kersels, artist and codirector of the art program at California Institute of the Arts, uses an installation and a website to discuss science's lofty, yet somewhat removed, profile, as perceived by the larger culture. Where, Schröder asks, are the Gap commercials featuring the stars of science? The website is at www.science.org.

The Athenaeum, which houses the installation *Einstein's Dilemma*, by Jennifer Steinkamp, is located at 551 S. Hill Avenue in Pasadena and can be reached at (626) 395-8200. The hours of operation are Monday through Friday, from noon to 5 p.m. The Williamson Gallery is located at Art Center College of Design, 1700 Lida Street, in Pasadena, and can be reached at (626) 396-2446. The gallery is open Tuesday through Sunday, noon to 5 p.m., and on Friday from noon to 9 p.m.

LIGO, from page 1

potentially limiting effects are mitigated. In fact, the commissioning has made such rapid progress that LIGO is already capable of performing some of the most sensitive searches ever undertaken for gravitational waves. In Hannover, Germany, meanwhile, a similar device (a German/U.K. collaboration known as GEO) is also getting under way, and those instruments are being used together as the initial steps in building a worldwide network of gravitational-wave detectors.

The first data were recorded during a 17-day data run in September 2002. Those data have now been analyzed for the presence of gravitational waves, and the results were presented at the American Physical Society meeting in Philadelphia earlier this month. No sources have yet been detected, but new limits on gravitational radiation from such sources as binary neutron star inspirals, selected pulsars in our galaxy, and background radiation from the early universe, were reported.

Although detections are realistically not expected at LIGO's present sensitivities, a second data run is now under way employing significantly better sensitivity, and further improvements are expected over the next couple of years.

As the initial LIGO interferometers start to put new limits on gravitational-

wave signals, the LIGO Lab, the LIGO Scientific Collaboration, and international partners are proposing an advanced LIGO to improve the sensitivity by more than a factor of 10 beyond the goals of the present instrument. It is anticipated that this new instrument may see gravitational-wave sources as often as daily, with excellent signal strengths, allowing details of the waveforms to be read off and compared with theories of neutron stars, black holes, and other highly relativistic objects. The improvement in sensitivity of a future LIGO will allow the one-year planned observation time of the initial LIGO to be equaled in a matter of hours.

The National Science Foundation has supported LIGO, and a collaboration between Caltech and MIT was responsible for its construction. A scientific community consisting of more than 400 scientists from around the world is now involved in research at LIGO.

For further information, visit the main LIGO website at <http://www.ligo.caltech.edu>. More information on the LIGO collaboration is at <http://www.ligo.org>. Additional information on the MIT collaboration is at <http://space.mit.edu/LIGO/>. The GEO website is at <http://www.geo600.uni-hannover.de/>.

Children to work, from page 1

Children may shadow their parents before or after the program, with approval from the parent's supervisor. If children are unable to stay with their parents, other arrangements must be made, as no child care will be available before or after the formal program.

Interested employees will need to fill out a registration form and authorization/medical release for each child attending. Forms can be found at <http://cit.hr.caltech.edu/HRForms/TOCTWD.doc> and at Human Resources Employee Services, 399 South Holliston Avenue, and must be received by Magnolia Ycasas in Human Resources, mail code 153-84, by Thursday, April 17. The program is on a first-come, first-served basis and is limited to 200 children.

Take Our Children to Work Day is sponsored by Human Resources and Public Relations, with help from numerous departments, labs, and volunteers across campus. For more information, call Ycasas at ext. 8095 or visit <http://cit.hr.caltech.edu/HRForms/TOCTWD.doc>.

Healthy living

Wiep de Vries from the Tierra Miguel Foundation Farm sold organic produce to crowds at the Health and WorkLife Fair last Friday. Nearly 60 vendors and campus groups provided services and information on healthy living to the Caltech community.

Caltech 336

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ADDRESS SERVICE REQUESTED

Preparedness, from page 1

Office associate director Caz Scislowicz is encouraging the Caltech community to be prepared and to know what to do in the event of an emergency. A campus emergency preparedness and response plan is in place that outlines steps for various campus offices, departments, key personnel, and all individuals, with the goal of ensuring safety and security and minimal disruption of campus operations.

In the event of a campus emergency, senior administrators will determine the level of emergency and the appropriate response. Condition 1 includes minor incidents such as an unusual odor or a limited electrical outage. Condition 2 refers to midlevel emergencies requiring coordination with outside emergency services; for example a fire, power outage, or major chemical spill. Condition 3 indicates disasters affecting a substantial portion of the campus and surrounding community, such as a major earthquake, an explosion, or civil disturbance.

If the disaster is large-scale and requires coordinated response by multiple departments, the administration will activate an emergency operations center (EOC) in the Physical Plant conference room, to which functional representatives and personnel who have been assigned specific roles will report. Some examples of people and departments with key roles include Security (emergency assessment, traffic control, and evacuations), Housing and Food Services (emergency housing and food), Public Relations (information; emergency hotline), Student Affairs (evacuation, student tracking, and parent inquiries), and Student Health (first aid; counseling).

Although emergency teams will respond as quickly as possible across campus, the Safety Office urges all divisions and departments to be prepared to cope until help arrives. Each unit should have an evacuation plan with coordinators, identified routes, and a meeting point; an emergency checklist; and extra water and emergency kits. If classes are in session, faculty are responsible for providing guidance in their classrooms, such as instructing students to take cover during an earthquake and evacuating them to designated assembly areas.

In addition, Scislowicz urges all personnel to individually prepare themselves and their families for emergencies. Caltech community members should arrange communication and assembly plans with their families and their children's schools; maintain personal emergency supplies in their offices, cars, and homes; and learn basic emergency response skills and first aid. The Institute's emergency plan will best succeed, he notes, if all campus personnel are prepared and able to pull together in a coordinated response.

For more information on emergency preparedness, visit www.safety.caltech.edu/crisis/crisis.htm.