

Caltech 336

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

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Plays well with mud



Students let the mud fly once again in the decades-old tradition of Mudeo, revived last year after a six-year hiatus. The January 17 event included ultimate Frisbee, tug-of-war, wheelbarrow races, and other games in a 100-foot-long swamp of mud north of Avery House.

Iwan to head tsunami inquiry

Craig Comartin, president-elect of the Earthquake Engineering Research Institute (EERI), announced on January 17 the appointment of Professor Wilfred D. Iwan to coordinate the massive tsunami and earthquake investigation being carried out by EERI as part of its Learning From Earthquakes program.

Iwan, professor of applied mechanics, emeritus, and director of the Earthquake Engineering Research Laboratory at Caltech, is a member of the National Academy of Engineering. He served for many years as chairman of the California Seismic Safety Commission and the National Research Council's Board on Natural Disasters. He has chaired scientific committees of the International Association of Earthquake Engineering and the International Association for Seismology and Physics of the Earth's Interior.

"In addition to Bill's internationally recognized credentials as a researcher, he brings to this unprecedented investigation critical organizational skills and numerous contacts throughout the devastated region," Comartin said.

Currently more than three dozen investigators from universities, government agencies, and private firms in the United States

and India are carrying out field studies in more than half a dozen countries where tsunami and earthquake impacts have destroyed countless communities and taken the lives of more than 150,000 people.

"There are many lessons to be learned from this extraordinary event," Iwan said. "These range from science and engineering to societal impact and public policy. We must improve our understanding of such events so that we can prevent such catastrophes from happening in the future."

Iwan will be working with leading seismologists, tsunami experts, civil and structural engineers, lifeline engineers, and social and policy scientists to compile a comprehensive picture of the events and to extract lessons for research and practice in the United States and other countries at risk. Reports will be contributed by members of the reconnaissance teams as well as from experts in each of the affected countries.

Iwan was cochair of the United States delegation to the closing of the International Decade on Natural Disaster Reduction. He is the recipient of the Nathan M. Newmark Medal for contributions to dynamic analysis of structures and the

see Iwan, page 6

NASA salutes Huygens probe

NASA Administrator Sean O'Keefe offered congratulations to the European Space Agency (ESA) on the successful January 14 touchdown of its Huygens probe on Saturn's largest moon, Titan—1.2 billion kilometers (744 million miles) from Earth and the farthest point in the solar system where a spacecraft has landed.

"The descent through Titan's atmosphere and down to its surface appeared to be perfect," O'Keefe said. "We congratulate ESA for their spectacular success. We're very proud of the Cassini-Huygens teams that helped to make this both an engineering and scientific victory, and we appreciate the dedication and support from our international partners."

Cassini-Huygens is a joint mission of NASA, ESA, and the Italian Space Agency (ISA). JPL, a division of Caltech, designed and built the Cassini orbiter and manages the mission for NASA's Science Mission Directorate in Washington. ESA built and managed the development of Huygens and oversees the probe operations. ISA provided the high-gain antenna and contributed much to the radio system and to several of Cassini's science instruments.

Huygens was carried to Saturn's orbit aboard Cassini and sent on its way to Titan on December 24. The probe entered Titan's upper atmosphere at about 5:15 a.m. EST on January 14. During its two-and-one-half-hour descent to the moon's surface, it sampled the chemical composition of the atmosphere. After touching down, the probe continued transmitting data for more than 90 minutes. The data were sent to Cassini and relayed through

see Huygens, page 6

Images from space shed light on disaster

New images from three NASA spaceborne instruments provide valuable insights into the December 26 tsunami produced by a massive earthquake near Sumatra. The images from the Terra spacecraft's Multi-angle Imaging SpectroRadiometer (MISR) and Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) and the Shuttle Radar Topography Mission offer unique views of the region and will be used by scientists and government agencies to assist with disaster recovery, increase their understanding of tsunamis, and prepare for future natural hazards. Images from the MISR include the only known animations produced by a remote-sensing instrument to capture tsunami waves in motion as they fall on land. Visit www.nasa.gov/vision/earth/lookingatearth/tsunami-images.html to view the images.

Caltech wins Energy Star Award

Caltech students and staff can rest assured that the fuel used to generate electricity is spent wisely and is environmentally friendly.

That's what the Combined Heat and Power (CHP) Partnership, a division of the Environmental Protection Agency, concluded last month when it bestowed, on behalf of the EPA and the Department of Energy, a 2004 CHP Energy Star Award to Caltech.

"Through the recovery of otherwise waste heat for campus cooling and heating, Caltech has demonstrated leadership in energy use and management," the award's announcement letter read. "Caltech's CHP system is a great example for other facilities across the nation."

Caltech's CHP system can boast of an efficiency of 73 percent, which means that the system uses approximately 30 percent less fuel than equivalent separate heat and power systems.

The Institute's aging CHP system was replaced in 2003 with a highly efficient, natural-gas-burning system that not only reduces pollution but is also able to generate up to 90 percent of the energy consumed on campus.

The new system produces power at about five cents per kilowatt-hour. This virtually eliminates Caltech's vulnerability to dreaded rolling blackouts and brownouts while minimizing dependence on oil and natural gas.

Alum establishes grad fellowship

"It's habit-forming," says Howard Oringer of his long rapport with faculty and students at Caltech. Which is why the 1963 Caltech graduate established the Oringer Fellowship Fund in Information Science and Technology, a \$600,000 endowment to generate support for Caltech graduate students.

The reason, Oringer says, is the people he meets at Caltech. "My visits to campus to meet with graduate students and faculty have deepened my commitment to Caltech and to the research model the Institute has uniquely developed," he says. "I marvel at the quality of the students, their ability to communicate their ideas, and the diversity of backgrounds and interests."

Recipients of the fellowships will be selected in the area of a recently launched Caltech initiative called Information Science and Technology (IST), with a preference for students in mathematics of information. It is the first integrated research and teaching activity in the country that investigates information from all

see Fellowship, page 6

NewsBriefs



From left, the 2004 winners of the Doris S. Perpall SURF (Summer Undergraduate Research Fellowships) Speaking Competition are Priya Kollipara '06, Clare Moynihan '05, Ann Rajala '06, Daniel Koslover '06, and Rachel Maire '06. Created in 1993 by Robert Perpall, a Caltech alum and SURF board member, the competition seeks to reward students who give the best presentations of their research projects at the annual SURF Seminar Day.

Personals

Welcome to Caltech

December

Larry Fletcher, helper, Carpenter Shop; **Jack Stewart**, senior UNIX systems administrator, Information Technology Services.

January

Anwar Abdus-Samad, senior information-technology auditor, Audit Services and Institute Compliance; **Abraham Boogert**, research assistant, radio astronomy; **Victorio Carlos**, senior utility plant operator, Central Utility Plant; **Jessica Escalante**, general helper/server, Dining Services; **Cheryl Geer**, option secretary, mechanical engineering; **Paul Herrera**, mission planner, space astrophysics; **Fredrick High**, research assistant, astronomy; postdoctoral scholars **Teruyuki Ikeda**, in materials science, **William Ja**, in biology, **Hackjin Kim**, in psychology, and **Youyong Li**, in chemistry; general helper/servers **Frank Martinez** and **Mark McKay** and general helper/dishwasher **Antonio Mendez**, all in Dining Services; **Noelle Messier**, veterinary technician, biology; **Yike Ni**, postdoctoral scholar in chemistry; **Lynn Pertum**, administrative assistant, physics, mathematics and astronomy; **Anthony Pinedo**, mechanic's aide, Physical Plant; **Marcus Riedel**, researcher, electrical engineering; **Carlos Romero Talamas**, postdoctoral scholar in applied physics; **Nicole Sammons**, veterinary technician, biology; **Juan Sanchez**, cook, Dining Services; **Julie Schoen**, grant manager, biology; **Brian Sisk**, research assistant, chemistry and chemical engineering; **Timothy Tayler**, postdoctoral scholar in biology.

New positions

Michelle Cesario has been named to serve as Caltech's interim ombudsperson until a permanent replacement for Helen Hasenfeld can be identified by the Ombuds Search Committee. An intern in Caltech's Ombuds Office in the fall of 2004, Cesario has also held internships in the Alternative Dispute Resolution Unit of the Equal Employment Opportunity Commission in Los Angeles and the Office of the Ombuds at UC Santa Barbara. She received her BA in psychology from UC Santa Cruz in 1991, and her master's degree in dispute resolution from Pepperdine University School of Law in 2004.

Retirements

Georgia Frueh retired on January 14. A member of the physics administrative and support staff, she had worked at Caltech for 15 years.

Judith Hadsell, information services coordinator in Human Resources, retired on January 10 after 34 years at Caltech.

Honors and awards

Yanbei Chen, postdoctoral scholar in theoretical astrophysics, has been selected to receive a Sofja Kovalevskaja Award, which is funded by Germany's Federal Ministry of Education and Research. The award sum of up to 1.2 million euros gives recipients "an opportunity to concentrate on high-level, innovative research work in Germany, virtually without administrative constraints, in order to promote the internationalization of research in Germany." Chen received his BS from Peking University in 1999 and his PhD from Caltech in 2003.

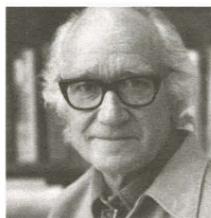
Charles Elachi, Caltech vice president, director of the Jet Propulsion Laboratory, and professor of electrical engineering and planetary science, "in recognition of outstanding dedication and service to the national security of the United States" has been chosen to receive the Bob Hope Distinguished Citizen Award for 2005. The award will be presented by the National Defense Industrial Association at a black-tie dinner scheduled to take place February 25. During his 30-year career at JPL, Elachi has "played the lead role in developing the field of spaceborne imaging radar from a small research area to a major field of scientific research and application." Elachi received his bachelor's degree at the University of Grenoble in 1968 and his Caltech PhD in electrical engineering in 1971, the same year he went to work for Caltech/JPL.

Harald Pfeiffer, Sherman Fairchild Postdoctoral Scholar in Caltech's numerical relativity group, has been selected to receive the American Physical Society's 2005 Nicholas Metropolis Award for Outstanding Doctoral Thesis Work in Computational Physics. "Established to recognize doctoral thesis research of outstanding quality and achievement in computational physics and to encourage effective written and oral presentation of research results," the award consists of \$1,500 and a certificate, which will cite Pfeiffer for "his outstanding research on determining initial data for the dynamics of black holes." Pfeiffer received his PhD from Cornell University in 2003.

Media minute

Caltech graduate student in bioengineering **Princess Imoukhuede** appears in one of four National Collegiate Athletic Association (NCAA) public-service announcements currently airing on ESPN2 and viewable online at www2.ncaa.org/index_sports.php. Imoukhuede, a track-and-field athlete, describes her specialty—the hammer throw—as "brutal" and says, "I had to study biomedical engineering just to relax." The NCAA is a voluntary organization of U.S. college athletics programs that is "committed to the best interests, education and athletics participation of student-athletes."

Professors of Mechanical Engineering **Chris Brennen** and **Melany Hunt** were featured on the PBS program *Nova scienceNOW* on January 25. A film crew visited the desert with Hunt and Brennen to explore their research on how some sand dunes can "sing."



Physicist Robert Walker dies

Robert Walker, a retired Caltech professor of physics, died January 4 in New Mexico at age 85.

Born June 29, 1919, in St. Louis, Walker earned his bachelor's degree at the University of Chicago. While a doctoral student in physics at Cornell University during World War II, he joined the Manhattan Project, working both at Los Alamos and the University of Chicago. He finished his PhD in 1948, and after an additional year at Cornell as a postdoctoral researcher he joined Caltech as an assistant professor.

Walker became an associate professor in 1953 and a full professor in 1959, serving as executive officer for physics for a time. Coauthor of a textbook, *Mathematical Methods of Physics*, he specialized in experimental high-energy physics. He worked on the Caltech synchrotron, both as a developer along with colleagues Robert Langmuir and Bruce Rule, and as a researcher throughout the accelerator's 30-year lifetime. For many years, he was also designated principal investigator by Caltech's contract with the Department of Energy and its predecessors to do experimental and theoretical research in elementary-particle physics.

According to Charles Peck, a Caltech professor of physics, emeritus, who earned his doctorate under Walker, his mentor was a "superb teacher" whose collaborative synchrotron research was foundational to what is now known as the Standard Model of elementary-particle physics. Walker's research was also useful in his longtime Caltech colleague Richard Feynman's theoretical studies of particles' underlying mechanisms.

After retiring from Caltech in 1981, Walker built harpsichords at his home near Santa Fe. He is survived by two children, Robert Craig Walker and Jan Walker Roenisch.

Caltech author's take on desperate housewives

What does a Caltech lecturer know about desperate housewives, family feuds, and the facades of middle-class suburbia?

Merrill Joan Gerber, a lecturer in creative writing, comments on these issues in her new book, *This is a Voice from Your Past: New and Selected Stories*. Gerber's collection of short stories deals with what's hiding beneath the surface of normal middle-class life, revealed through family fights and triumphs, vulnerable women, and paranoid housewives.

The *New York Times Book Review* has said, "Gerber's supple prose takes us right inside her characters' minds, sometimes funny, sometimes frightening, always absorbing and believable." Published in January by Ontario Review Press, the book is now available in stores.

A Caltech lecturer since 1989, Gerber has authored 25 books, including *Anna in the Afterlife*, one of the *Los Angeles Times's* "Best Books of 2002"; the travel

Holiday drives a success

A flurry of giving by Techers last month resulted in successful drives for several nonprofit agencies—two of them local and one halfway around the world.

With about 2,000 books and 10 computers collected for a new library in Ethiopia, Career Development Center director Jerry Houser, who spearheaded the drive with the Alumni Association and the Caltech Y, is thanking the campus community for its support. The goal of 10,000 books and 15 computers, he said, will be reached by the end of January.

"Our Ethiopian partners are thrilled with the results and are very thankful for your assistance," he said. Houser spoke with Badeg Bekele of Ethiopia's International Leadership Institute, who expressed his gratitude to all who helped out.

The organization is building the library in Addis Ababa, the capital, and the donations will assist in gaining accreditation from the Ethiopian Ministry of Education, as well as help support the University of Ethiopia. Close to 200 students are currently in the institute's academic leadership program, with several hundred more expected to enroll in a certificate program this summer. Many students are top leaders in government, industry, and nonprofit agencies.

"This program is already having a positive influence on the stability, quality, and productivity of the Ethiopian government and nongovernmental organizations, and is increasing many services to Ethiopian citizens," Houser said. "I am proud that Caltech made such a generous contribution to this great program."

Closer to home, gift drives for two agencies benefited numerous children. Caltech has helped with the *Angel holiday program* for five years, according to Betty McWilliams of the Foothill Unity Center. "And how you have helped!" she said. "The quality and level of gifts are always spectacular. Each time we picked up at Caltech, they filled the whole van with gifts."

This year, campus community members sponsored 200 low-income children through Human Resources—a "huge increase over last year," says Dlorah Gonzales of HR—and another 50 through a new program initiated by Carol Sosnowski in the Division of Engineering and Applied

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memoir *Botticelli Blue Skies: An American in Florence; King of the World*, winner of the Pushcart Press Editor's Book Award; and *The Kingdom of Brooklyn*, which received *Hadassah Magazine's* Ribalow Prize. Her short stories have appeared in the *New Yorker*, the *Atlantic Monthly*, *Mademoiselle*, and *Redbook*, winning her numerous awards, including the O. Henry Award in 1986.

The author will read from and discuss *This is a Voice from Your Past* on Friday, February 4, at the Huntington Library Overseers' Room, 1151 Oxford Road, San Marino, at 2:30 p.m. On Wednesday, February 23, at 7 p.m., she will appear at Vroman's Bookstore, 695 East Colorado Boulevard, Pasadena.

Gerber lives in Sierra Madre with her husband, a retired Pasadena City College professor. She can be reached at mjgerber@caltech.edu or www.its.caltech.edu/~mjgerber.

January 31–February 6, 2005

M T W T F S S

Monday, January 31

Geological and Planetary Sciences Seminar

155 Arms, Robert Sharp Lecture Hall, 4 p.m.—“Size-Dependent Fractionation of Gases in Polar Ice During Bubble Close-off: New Insights from Noble Gases in Antarctic Firn Air,” Professor Jeffrey Severinghaus, department of geosciences, Scripps Institution of Oceanography.

High Energy Physics Seminar

469 Lauritsen, 4 p.m.—“Searches for New Physics in the Top Quark Sector,” Robin Erbacher, assistant professor, department of physics, UC Davis.

Thesis Seminar

151 Crellin, 4 p.m.—“Low Spin Pseudo-tetrahedral Cobalt Tris(phosphino)borate Complexes,” David Jenkins, graduate student in chemistry, Caltech.

Tuesday, February 1

Caltech Library System Presents: Web of Knowledge

Sherman Fairchild Library, multimedia conference room, noon to 1:30 p.m.—The Web of Knowledge offers the extensive Web of Science database for science, engineering, humanities, and social science, plus Journal Citation Reports. This session will cover linking to full-text articles, navigating, exporting records, conducting searches, and more. Information: <http://library.caltech.edu/learning/default.htm>.

Carnegie Observatories Colloquium Series

William T. Golden Auditorium, 813 Santa Barbara Street, 3:30 to 5 p.m.—“Black Holes in Galaxy Mergers,” Lars Hernquist, professor of astronomy, Harvard University. Refreshments.

Applied Physics Special Seminar

070 Moore, 4 p.m.—“Metamaterials, Shrinking Circuit Element, and Near-Field Nano-Devices and System,” Professor Nader Engheta, department of electrical and systems engineering, University of Pennsylvania.

General Biology Seminar

119 Kerckhoff, 4 p.m.—Topic to be announced. Professor Fred “Rusty” Gage, Laboratory of Genetics, Salk Institute for Biological Studies.

Wednesday, February 2

Applied Physics Optics Seminar

070 Moore, noon—“Microfluidic Actuation by Modulation of Surface Forces: Fundamentals, Devices, and Sensing Arrays,” Professor Sandra Troian, Microfluidic Research and Engineering Laboratory, Princeton University.

Mathematical Physics Seminar

351 Sloan, noon—“Spectral Properties of Laplacians on Bond-Percolation Graphs,” Peter Mueller, visiting associate researcher, UC Irvine.

Environmental Science and Engineering Seminar

142 Keck, 3:40 to 5 p.m.—“Investigating the Sources of Halogenated Organic Compounds in Marine Mammals: Are They Naturally Produced or Industrially Derived?,” Christopher Reddy, visiting associate in geobiology, Caltech.

Astronomy Colloquium

155 Arms, Robert Sharp Lecture Hall, 4 p.m.—“Physics of the Dark Side,” Marc Kamionkowski, professor of theoretical physics and astrophysics, Caltech.

Organic Chemistry Seminar

147 Noyes, Sturdivant Lecture Hall, 4 p.m.—“Reverse Engineering Biomolecular Recognition with Combinatorial Protein Libraries,” Professor Gregory Weiss, department of chemistry, molecular biology and biochemistry, UC Irvine.

Thursday, February 3

High Energy Theory Seminar

469 Lauritsen, 2 p.m.—Topic to be announced. Dr. Gautam Mandal, department of theoretical physics, Tata Institute.

Bioengineering Seminar Series

142 Keck, 4 p.m.—“Building Biological Systems,” Drew Endy, assistant professor, biological engineering department, MIT.

General Biology Seminar

100 Broad Center, 4 p.m.—“Multidimensional Drug Profiling by Automated Microscopy,” Dr. Steve Altschuler, Bauer Center for Genomics Research, Harvard University.

Geology Club Seminar

151 Arms, Buwalda Room, 4 p.m.—“The Mass-Independent Oxygen Isotope Effect in Stratospheric Ozone and in the Earliest Solids in the Solar System,” Rudolph Marcus, Noyes Professor of Chemistry, Caltech.

Physics Research Conference

201 E. Bridge, 4 p.m.—“Physical Resources, Entanglement, and the Power of Quantum Computation,” Carlton M. Caves, professor of physics and astronomy, University of New Mexico. Refreshments, 114 E. Bridge, 3:45 p.m.

General Biology Seminar

100 Broad Center, 4:45 p.m.—“Dissecting Overlapping Feedback Mechanisms in the Yeast Budding Pathway,” Dr. Lani Wu, Bauer Center for Genomics Research, Harvard University.

Friday, February 4

Theoretical Astrophysics and Relativity Seminar

114 E. Bridge, 2 p.m.—“Relativistic Jets from Black Hole Accretion Systems,” Dr. Jonathan McKinney, Harvard-Smithsonian Center for Astrophysics.

Organic Chemistry Seminar

147 Noyes, Sturdivant Lecture Hall, 3 p.m.—“Chemistry That Controls DNA Structure and Function,” Professor Hiroshi Sugiyama, department of chemistry, Kyoto University.

Inorganic-Organometallics Seminar

151 Crellin, 4 p.m.—“Olefin Metathesis Catalysts with Chelating Alkylidenes,” Andrew Hejl, graduate student in chemistry, Caltech.

Kellogg Seminar

Lauritsen Library, 4 p.m.—“Universality in Few-Body Physics: From Nuclei to Cold Atoms,” Professor Hans Hammer, research assistant professor, University of Washington.

February 7–13, 2005

M T W T F S S

Monday, February 7

Biophysics Lecture Series

153 Noyes, Sturdivant Lecture Hall, 4 p.m.—“Prediction and Design of Protean Structures and Protein Interactions,” David Baker, associate professor of biochemistry, University of Washington.

Geological and Planetary Sciences Seminar

155 Arms, Robert Sharp Lecture Hall, 4 p.m.—“Sedimentologic Evidence for Long-Term Environmental Instability Following the End-Permian Mass Extinction: Implications for a Delayed Biotic Recovery,” Sara Pruss, postdoctoral fellow, department of organismic and evolutionary biology, Harvard University.

High Energy Physics Seminar

469 Lauritsen, 4 p.m.—“Baryogenesis from Inflationary Gravity Waves: An Observational Constraint on the String Scale,” Dr. Stephon Alexander, Stanford University.

Applied Mathematics Colloquium

101 Guggenheim Lab, Lees-Kubota Lecture Hall, 4:15 p.m.—“Reduced Dimensional Computational Models of Hydrogen Fuel Cell Stacks,” Professor Brian Wetton, mathematics department, University of British Columbia.

Tuesday, February 8

Caltech Library System Presents

Sherman Fairchild Library, multimedia conference room, noon to 1:30 p.m.—Learn to search the Cambridge Structural Database and other crystal structure compilations and online databases. Registration: <http://oliphant.library.caltech.edu/forms/cls-classes>.

Carnegie Observatories Colloquium Series

William T. Golden Auditorium, 813 Santa Barbara Street, 3:30 to 5 p.m.—“The Main Event: A Three-Round Fight with Sagittarius A*,” Dr. Geoffrey Bower, UC Berkeley. Refreshments, 3:30 p.m.

Ulric B. and Evelyn L. Bray Seminar in Political Economy

25 Baxter, 4 p.m.—Topic to be announced. John Lapinski, assistant professor of political science, Yale University.

Chemical Physics Seminar

147 Noyes, Sturdivant Lecture Hall, 4 p.m.—“Controlling and Understanding Complex Biochemical Reaction Networks in Space and Time Using Microfluidics,” Professor Rustem Ismagilov, department of chemistry, University of Chicago.

Wednesday, February 9

Mathematical Physics Seminar

351 Sloan, noon—“Continuity of the Lyapunov Exponent for Analytic Quasiperiodic Cocycles,” Melinda Schulteis, assistant professor of mathematics, Concordia University.

Environmental Science and Engineering Seminar

142 Keck, 3:40 to 5 p.m.—“Antibiotics in Biological Control: Not Just for Competition Anymore!”, Professor Leland (Sandy) Pierson III, department of plant sciences, University of Arizona.

Information Science and Technology Seminar

74 Jorgensen, 4 p.m.—Topic to be announced. Dr. Vinay Vaishampayan, AT&T Labs.

William Bennett Munro Memorial Seminar

Treasure Room, Dabney Hall, 4 p.m.—“The Evolution and Evolvability of Culture,” Professor Kim Sterelny, Australian National University.

Thursday, February 10

Chemical Engineering Seminar

106 Spalding Lab, Hartley Memorial Seminar Room, 4 p.m.—“Pattern Formation in Developing Epithelial Layers,” Professor Stanislav Shvartsman, department of chemical engineering, Princeton University. Refreshments, 113 Spalding Lab, 3:30 p.m.

Geology Club Seminar

151 Arms, Buwalda Room, 4 p.m.—“Terranes and the Mesozoic Accretionary History of Western Mexico,” Professor Elena García, department of geochemistry, National Autonomous University of Mexico.

Friday, February 11

High Energy Theory Seminar

469 Lauritsen, 11 a.m.—Topic to be announced. Marcus Spradlin, UC Santa Barbara.

High Energy Theory Seminar

469 Lauritsen, 1 p.m.—Topic to be announced. Joerg Teschner, Freie University.

Inorganic-Organometallics Seminar

151 Crellin, 2:30 p.m.—“The Mechanism of Olefin Oxidation by Pd(II) Chloride Confirming the Mechanistic Chloride Dependence in the Wacker Process,” John Keith, graduate student in chemistry, Caltech.

History and Philosophy of Science Seminar

Treasure Room, Dabney Hall, 4 p.m.—“Ernst Mayr’s Identification of Typology as the Enemy of Darwin: An Exercise in Metahistory,” Mary P. Winsor, professor emeritus, Institute for the History and Philosophy of Science and Technology, University of Toronto.

Inorganic-Electrochemistry Seminar

147 Noyes, Sturdivant Lecture Hall, 4 p.m.—“Molecular Oxygen, Hydrogen Peroxide, and Oxidation Reactions Catalyzed by Polyoxometalates,” Ronny Neumann, Sieff Professor of Organic Chemistry, Weizmann Institute of Science.

Maus author to discuss comics

Art Spiegelman, the Pulitzer Prize-winning author of the graphic novel *Maus*, will speak in Beckman Auditorium on Wednesday, February 9.

Spiegelman has almost single-handedly brought comic books out of the toy closet and onto the literature shelves. In 1992, he won the Pulitzer Prize for his masterful Holocaust narrative, *Maus*, which portrayed Jews as mice and Nazis as cats. *Maus II* continued the remarkable story of his parents’ survival of the Nazi regime and their later lives in America.

In this illustrated lecture, “Comix 101,” Spiegelman will present a chronological tour of the evolution of comics and graphic novels, and will situate his own work in that timeline. In addition to the *Maus* books, he will also discuss his latest work, *In the Shadow of No Towers*, a diary of his experience of 9/11 that was recently named as one of the *New York Times*’s 100 Notable Books of 2004.

Sponsored by Caltech’s *Words Matter* project (www.wordsmatter.caltech.edu), the free public lecture will begin at 8 p.m. in Beckman Auditorium. No tickets or reservations are required. For more information, contact Public Events at 1 (888) 2CALTECH, (626) 395-4652, or events@caltech.edu, or visit www.events.caltech.edu. Individuals with a disability can call 395-4688 (voice) or 395-3700 (TDD).

CampusEvents

Monday, January 31

Hustle Dance Class

Winnett lounge, 8 p.m.—This is the final class in a four-class series taught by a professional instructor. Cost for Caltech students is \$6 per class or \$20 for the series; others, \$8 per class and \$28 for the series. No previous experience or partner is required.

Tuesday, February 1

My Darling Clementine

Beckman Auditorium, 8 p.m.—*My Darling Clementine*, directed by John Ford (1946) and starring Henry Fonda, will be presented as part of the Frank Capra Film Series. Admission is free.

Wednesday, February 2

Beginning Ballet Classes

Braun Gym, multipurpose room, 8 p.m.—An eight-week series of ballet lessons taught by a Caltech dancer. Classes began on January 12.

Thursday, February 3

How to Put "Steam" in Your Self-Esteem

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

Women's Basketball

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

Beginning Ballroom Team Class: Standard Dances

Winnett lounge, 8 p.m.—The beginning ballroom team classes concentrate on the waltz, tango, foxtrot, quickstep, and Viennese waltz dances. No partner is necessary. The cost is \$25 for Caltech students and \$40 for nonstudents. Classes began on January 13.

Beginning/Intermediate Jazz Classes

Braun Gym, multipurpose room, 9 p.m.—Learn jazz dance from Colette in this eight-week series. Lessons began on January 20.

Beginning Ballroom Team Class: Latin Dances

Winnett lounge, 9:30 p.m.—The beginning Latin classes concentrate on the technique for five dances: rumba, samba, cha-cha, jive, and paso doble. No partner is necessary. The cost is \$25 for Caltech students and \$40 for nonstudents. Classes began on January 13.

Friday, February 4

Wild Weather: Wet, a School-Day Event

Beckman Auditorium, 10 a.m.—This CineMuse high-definition film takes a ride with the rains to some of the wettest places in the world. For school groups in grades 3 to 12. A discussion will follow the screening. Information: 395-6059.

Baseball

vs. Simpson College, at Pasadena High School, 2 p.m.

Saturday, February 5

Baseball

vs. UC Santa Cruz, at Pasadena High School, doubleheader, 11 a.m.

Swimming and Diving

at Occidental College, 11 a.m.

Belly Dance Class

Braun Gym, multipurpose room, 12:45 p.m.—Learn to belly dance with Leela, a popular performer and instructor. Fee for trial class: \$5 for Caltech students, \$8 for others. Fee for full 8-week series: \$20 for Caltech students, \$50 for others.

Women's Basketball

vs. University of La Verne, 5 p.m.

Stand-Up Opera

Beckman Auditorium, 8 p.m.—B. J. Ward combines opera with stand-up comedy. (See Public Events contact information on this page.)

Sunday, February 6

Intermediate Ballroom Team Class: Standard Dances

Winnett lounge, 2 p.m.—The intermediate class concentrates on the waltz, tango, foxtrot, quickstep, and Viennese waltz dances. No partner is necessary. The cost is \$25 for Caltech students and \$40 for nonstudents. Classes began on January 9.

Intermediate Ballroom Team Class: Latin Dances

Winnett lounge, 3 p.m.—The intermediate team Latin dance classes concentrate on the rumba, samba, cha-cha, jive, and paso doble dances. No partner is necessary. The cost is \$25 for Caltech students and \$40 for nonstudents. Classes began on January 9.

Tuesday, February 8

Watch Your Back! Back Safety Training

118 Keith Spalding Building, 8:30 a.m.—This course includes a brief discussion on back anatomy and proper methods and realistic approaches to handling and moving materials. There will be a video presentation and hands-on lifting. Space is limited. Please call 395-6727 or e-mail safety.training@caltech.edu to reserve a place.

Baseball

at Whittier College, 2:30 p.m.

Wednesday, February 9

Beginning Ballet Classes

Braun Gym, multipurpose room, 8 p.m.—An eight-week series of ballet lessons taught by a Caltech dancer. Classes began on January 12.

Words Matter: Art Spiegelman

Beckman Auditorium, 8 p.m.—Art Spiegelman has almost single-handedly brought comic books out of the toy closet and onto the literature shelves. In 1992 he won the Pulitzer Prize for his masterful Holocaust narrative *Maus*. In this illustrated lecture, "Comix 101," Spiegelman presents a chronological tour of the comics that demonstrates the range and value of this medium and shows why it should be taken seriously. Admission is free.

Thursday, February 10

Changes and Trends in Today's English Usage

Brown Gym classroom, 8:30 a.m. to 4 p.m.—This one-day program, for supervisors and nonsupervisors, can help reduce your writing stress and improve the clarity of your written communications. This practical, hands-on workshop is designed to provide you with a quick and easy review of the current rules of good writing as they relate to your job. Registration: 395-8055 or diane.williams@caltech.edu.

Mean Girls: Mind Games

Caltech Women's Center, noon—This film follows five groups of girls in varied schools and life situations who are affected by social bullying by other girls.

Women's Basketball

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

Beginning Ballroom Team Class: Standard Dances

Winnett lounge, 8 p.m.—The beginning ballroom team classes concentrate on the waltz, tango, foxtrot, quickstep, and Viennese waltz dances. No partner is necessary. The cost is \$25 for Caltech students and \$40 for nonstudents. Classes began on January 13.

Beginning/Intermediate Jazz Classes

Braun Gym, multipurpose room, 9 p.m.—Learn jazz dance from Colette in this eight-week series. Lessons began on January 20.

Beginning Ballroom Team Class: Latin Dances

Winnett lounge, 9:30 p.m.—The beginning Latin classes concentrate on the technique for five dances: rumba, samba, cha-cha, jive, and paso doble. No partner is necessary. The cost is \$25 for Caltech students and \$40 for nonstudents. Classes began on January 13.

Friday, February 11

Biology Division Graduate Admissions Weekend

151 Braun Labs, 8 a.m. to 5 p.m.—Prospective graduate students visit campus for personal interviews before the final admission decision is made. Continues on Saturday, February 12. This is the first of two weekends.

Saturday, February 12

Baseball

vs. Bethany College, doubleheader, 11 a.m.

Belly Dance Class

Braun Gym, multipurpose room, 12:45 p.m.—Learn to belly dance with Leela, a popular performer and instructor. Fee for trial class: \$5 for Caltech students, \$8 for others. Fee for full 8-week series: \$20 for Caltech students, \$50 for others.

Women's Basketball

vs. Pomona-Pitzer College, 5 p.m.

Ologundê

Beckman Auditorium, 8 p.m.—Ologundê celebrates the rich Afro-Brazilian culture of Salvador, Bahia, through a diverse repertoire of music and dance. (See Public Events contact information on this page.)

Sunday, February 13

Intermediate Ballroom Team Class: Standard Dances

Winnett lounge, 2 p.m.—The intermediate class concentrates on the waltz, tango, foxtrot, quickstep, and Viennese waltz dances. No partner is necessary. The cost is \$25 for Caltech students and \$40 for nonstudents. Classes began on January 9.

Intermediate Ballroom Team Class: Latin Dances

Winnett lounge, 3 p.m.—The intermediate team Latin dance classes concentrate on the rumba, samba, cha-cha, jive, and paso doble dances. No partner is necessary. The cost is \$25 for Caltech students and \$40 for nonstudents. Classes began on January 9.

Lagerstrom Chamber Music Concert

Dabney Lounge, 3:30 p.m.—The California Quartet will perform works by Debussy, Beethoven, and others. Admission is free.

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.

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.

Caltech Tai Chi Club

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

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.

Thursdays

Baby Furniture and Household Equipment

234 S. Catalina, 10 a.m. to 1 p.m.—Loans of kitchen and household necessities and baby furniture are made to members of the Caltech and JPL communities. Open on Thursdays only. No appointment is necessary. Information: 584-9773 or furnpool@caltech.edu.

Fridays

Caltech Tai Chi Club

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

Caltech Chess Club

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

Public Events information and tickets

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.

Forum to explore workplace trust

Trust will be the topic of a Caltech Management Association leadership forum on Thursday, February 3, with Amy Lyman, cofounder and president of the Great Place to Work Institute. The free event is open to Caltech and JPL community members and will take place from 3:30 to 5 p.m. in Beckman Auditorium.

In "The Importance of Workplace Trust," Lyman will describe her company's Trust Index, which helps measure how employees feel about their organization's credibility, fairness, and internal relationships, and will discuss the factors that create a workplace where employees "trust the people they work for, have pride in what they do, and enjoy the people they work with." This event may be especially beneficial for supervisors and managers.

For more than 20 years, the Great Place to Work Institute has been learning what makes an excellent workplace, researching and consulting with both elite corporations and nonprofits such as Harvard and Stanford. The institute publishes an annual list in *Fortune* magazine of the 100 best employers.

Lyman received her PhD from the University of Pennsylvania, where she began her consulting work as a research fellow at the Wharton Center for Applied Research. The author of numerous articles on business management issues, she speaks regularly at management development workshops and conferences.

For more information, e-mail cma.announce@jpl.nasa.gov or call Dlorah Gonzales, (626) 395-8661. Caltech Business and Finance and JPL Human Resources are cosponsors of the event.

Save a life—give blood

According to the American Red Cross, the supply of blood in the United States is chronically low—often less than two days away from running completely dry. Caltech community members can help relieve the shortage by donating at the Red Cross blood drive, taking place Wednesday, February 9, from 10 a.m. to 4 p.m. in the Winnett lounge. Donors may register online for the blood drive at www.givelife.org, using their e-mail address, birth date, and the sponsor code CALTEC. Information about donating is available by clicking the link "Being a Donor." Please contact Susie Clark at ext. 1745 or Dlorah Gonzales at ext. 8661 with any questions.

Iwan, from page 1

Alfred E. Alquist Award for achievement in earthquake safety.

The Earthquake Engineering Research Institute is a multidisciplinary, national, nonprofit, technical society. EERI seeks to improve our understanding of the impact of earthquakes on the physical, social, economic, political, and cultural environment and to advocate for comprehensive and realistic measures to reduce the harmful impacts of earthquakes.

For over 30 years, EERI has conducted the Learning From Earthquakes Program with funding from the National Science Foundation, in an effort to capture lessons from significant earthquakes throughout the world.

Monologues to aid antiviolence group

A cast of students, staff, postdocs, faculty, and alumnae will stage the second annual Caltech production of Eve Ensler's *The Vagina Monologues* for the 2005 V-Day College Campaign.

Candid, funny, disturbing, and profoundly moving, Ensler's play challenges societal taboos and examines important issues surrounding women's sexuality. The Caltech production, taking place Friday, February 4, is intended to help raise awareness of violence against women and girls and will benefit the Los Angeles Commission on Assaults Against Women.

Organized by graduate student in chemistry Rachel Niemer, along with undergrads Samantha Lawler and Jessica Reynolds, the event is sponsored by Caltech Leaders Inspiring Tolerance, Opposing Rape, Incest, Sexism. A sign-language interpretation will be available.

The performance will begin at 8 p.m. in Beckman Auditorium. Tickets are \$15 general and \$5 for students; to purchase, contact Public Events at 1 (888) 2CALTECH, (626) 395-4652, or events@caltech.edu, or visit www.events.caltech.edu. Individuals with a disability can call 395-4688 (voice) or 395-3700 (TDD).

V-Day is an international movement to stop violence against women and girls through creative events that draw attention to issues such as rape, battery, female genital mutilation, and sexual slavery, and that raise money for antiviolence efforts. Each year, the movement works with college students worldwide to stage productions of *The Vagina Monologues* on or around February 14, with proceeds going to local agencies.

For more information, visit http://events.vday.org/2005/College/California_Institute_of_Technology.

Fellowship, from page 1

angles: from the fundamental theoretical underpinnings of information to the science and engineering of novel information substrates, biological circuits, and complex social systems. This is the IST's first graduate fellowship.

Oringer earned his master's degree in electrical engineering at Caltech before embarking on his career in telecommunications. It was a mutual interest in communications and networking that led him to the research of Michelle Effros, an associate professor of electrical engineering, the director of Caltech's data compression laboratory, and an IST member.

"After meeting with Michelle," he says, "I realized the personal impact she could make in an area I had spent my career involved in. So I decided to make permanent the funding that I had supported her lab with each year since 1996."

Effros's research looks for ways to increase the speed of data transmission across the Internet by compressing it. She and her colleagues use computer algorithms that look for redundancies within disparate data and eliminate them. Once the data reaches the receiving end, it is "reassembled" by other algorithms.

"Howard's support over the years has been enormously valuable to both me and my students. It really makes an incredible difference," says Effros. "Over time, Howard has become an integral part of the group. We all really look forward to his visits. He brings to the table a wealth of knowledge and experience and shares that openly with the students. It's a wonderful opportunity for them and for me."

Huygens, from page 1

NASA's Deep Space Network to JPL and to ESA's Space Operations Center in Darmstadt, Germany.

JPL Director Charles Elachi said, "We congratulate our colleagues at ESA on the splendid performance of the Huygens probe and look forward to the science results of this effort. This has been a great example of international collaboration to explore our solar system."

"Our ESA colleagues have every reason to be very proud of the excellent manner in which the Huygens probe performed," said Robert T. Mitchell, Cassini program manager at JPL. "We are also proud of our support for this endeavor."

Cassini continues to orbit Saturn on a four-year mission to study the planet and its rings, moons, and magnetosphere. More information about the Cassini-Huygens mission is available at www.nasa.gov/cassini and <http://saturn.jpl.nasa.gov>.

Holiday giving, from page 2

Science. With the Institute's help, the center's staff served 1,614 children from 938 families, plus additional children who signed up after the event.

McWilliams went on to praise several Teachers who give their time to the center year-round: Ronae Brooks (Employee Relations), who first connected Caltech with the Angel program; Catherine May (Beckman Institute); and Lynda Wright and Vi O'Connor (Facilities Management). "All the volunteers from Caltech are wonderful," McWilliams said. "They bring a positive attitude, caring hearts, and a willingness to help wherever needed. Thank you for helping make our job of fighting hunger easier."

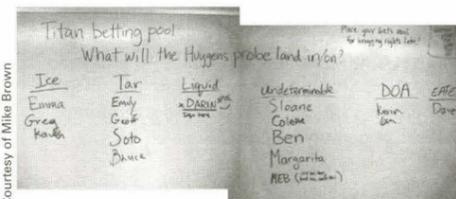
Haven House also got a big boost of presents and donations from the Caltech community, says Sandy Koceski, a senior assistant in the biology division who coordinated the drive. The shelter for families fleeing violent abusers can accommodate 36 people at a time.

"The facility does not keep records of how many presents are from Caltech, but I can tell you that this year we collected about 15 45-gallon bags full of gifts and over \$800 in cash and checks from around campus. This was a very good year," Koceski says, adding that Teachers have always shown their generosity in past drives.

The donated presents were handed out to children and their mothers at the shelter's annual holiday party for current and former residents, Koceski says. About 150 people attended the event.

Koceski has helped organize the Haven House drive for the past 15 years. She first learned of the shelter through Lynn Boucher, who worked in Sponsored Research; Koceski then worked with Mary Torres, formerly of Sponsored Research.

The group of staffers who collected donations and guarded the drop boxes around campus this year includes Susan Davis of Humanities and Social Sciences; Mike Miranda of Biology; Kathy Kelly of Project Accounting; Chris Smith of Chemistry and Chemical Engineering; Patty Bateman of Purchasing Services; and Paul Koceski of Central Plant.



Caltech researchers laid bets on where (or whether) Huygens would land. "I think we probably should count 'tar' as the winner," says Professor Mike Brown. Sounds good—the ESA website proclaims, "Huygens lands in Titanian mud."

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ADDRESS SERVICE REQUESTED

Editor: Daryn Kobata
(626) 395-6240; daryn@caltech.edu
Assistant Editor: Javier Marquez
(626) 395-6624; jmarquez@caltech.edu
Calendar Administrator: Debbie Bradbury
(626) 395-3630; debbieb@caltech.edu
Graphic Artist: Doug Cummings
Photographer: Bob Paz
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