# Caltech336

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

The campus community biweekly

**January 22, 2004, vol. 4, no. 2**


## Here's mud in your eye

**Students revive the decades-old Mudeo—a Caltech tradition of "a lot of random mayhem with tons of mud." The January 19 event included men's and women's wrestling matches, a tug-of-war, and a wheelbarrow race at the mucky construction site on the athletic field.**

## Wouk to give Michelin Lecture

Herman Wouk, the Pulitzer Prize–winning author of *The Caine Mutiny* and other novels, will deliver Caltech's 2004 Michelin Distinguished Lecture on Tuesday, February 3. "A Random Walk Through My Literary Life," an interview of Wouk by historian and California state librarian Kevin Starr, will begin at 8 p.m. in Beckman Auditorium. The event is free and open to the public.

Born in 1915 in New York into a family of Russian Jewish immigrants, Wouk graduated from Columbia University, and worked for a time as a highly paid radio scriptwriter. As a commissioned Navy officer in the Pacific during World War II, he began writing novels to relieve the monotony. His first, a satire of radio titled *Aurora Dawn* (1946), was followed by the autobiographical novel *City Boy*, and *Slattery's Hurricane*, about Navy weather pilots, which was made into a 1949 movie starring Richard Widmark.

*see Wouk, page 6*

## Provost Koonin to step down

After nine years as Caltech's provost, Steve Koonin will step down on February 2. He will also begin a leave of absence in March from his faculty post as professor of theoretical physics to take a position in industry.

Writing "with an intense sense of personal regret" at Koonin's departure, President David Baltimore noted in a January 9 e-mail to the campus community that he "could not [have hoped] for a more valuable and talented Provost. . . . Steve and I have had a strong working relationship that dates from my arrival at Caltech in 1997, and over the past six years, I have relied on his insight, energy, innate intelligence and detailed knowledge of Caltech as we have worked to further the Caltech cause."

Along with serving as its seventh provost, Koonin has had a decades-long association with Caltech that began in his undergraduate days (class of 1972) and resumed when he joined the faculty in

*see Koonin, page 6*

## Artists will enhance campus

Two Southland-based artists, Lita Albuquerque and Michael C. McMillen, will create ephemeral works on campus as part of Caltech's contribution to a citywide festival celebrating the arts, science, music, and history.

The artwork will also fulfill the city of Pasadena's Art in Public Places requirement, which stipulates that one percent of the construction costs of certain academic and administrative buildings be dedicated to public art. Caltech has been attempting to meet the requirement for the Broad Center for the Biological Sciences, which opened in September 2002.

Albuquerque and McMillen will discuss their work at a presentation, open to the campus community, on Tuesday, February 24, from 4 to 6 p.m. in the Beckman Institute auditorium. Both artists view their projects as collaborations with Caltech students, faculty, and staff, and look forward to feedback in developing art for and about the Institute.

Albuquerque is a leading artist who is linked with the California Light and Space tradition. In the last decade, she has focused on ephemeral, site-specific earth installations, particularly in the desert. The recipient of numerous awards, her work is included at such museums as the Smithsonian Institution, the Whitney Museum of Art, and the Getty Trust. She has created dozens of public art projects and commissions in Southern California and internationally.

At Caltech, Albuquerque hopes to engage her fascination with astronomy, the earth, and the relationship between human curiosity and the great questions of science. Working with Institute researchers and facilities, she will further

*see Artists, page 6*

## *Nano* exhibit features grad's work

A pair of sunglasses, a handheld drawing tool, and a set of plastic tongs are the equipment necessary to draw and grow three-dimensional crystals in Steven Schkolne's installation at *Nano*, an exhibit currently on view at the Los Angeles County Museum of Art. The show is a roundup of pieces that play with the concepts of nanotechnology and nanoscience, emerging fields of study that focus on the atom and the molecule.

Much like a computer mouse that controls an onscreen cursor, the tools in Schkolne's piece, titled *The Crystal*

*see* Nano, *page 6*

## Caltech welcomes the world

Government bureaucracies have long suffered a bad reputation, and in many cases that reputation is deserved. Pick a government agency, and the path to the documents it guards may be exceedingly tortuous, littered with roadblocks, and seemingly designed to discourage the applicant.

For citizens of other countries accepted to Caltech, the application process was probably the easy part; wrestling the U.S. government for a visa to study at the Institute can be daunting.

Prospective international students and postdocs at Caltech rely on the International Offices—International Student Programs and International Scholar Services—to navigate this sea of red tape. These offices, which fall under the Human Resources banner, have become even more vital for international students now that national security is at the forefront of the U.S. government's priorities.

"We do all the paperwork that enables international students and scholars to get their visas," says Marjory Gooding, director of both of Caltech's international offices. "We are dealing with more than once piece of the U.S. government. These are huge bureaucracies, and knowing how to navigate them is key."

The agencies in question are the Department of Homeland Security, which oversees the U.S. Citizenship and Immigration Services (formerly the INS); the

*see International, page 2*

## Diekman named new trustee

John D. Diekman, a founder and managing partner of 5AM Ventures in Menlo Park, California, has been named a member of Caltech's Board of Trustees.

5AM Ventures is a seed and early-stage fund that focuses on creating and building biotechnology companies. The fund focuses on companies that may be too young to work with larger venture capital funds and that need hands-on assistance.

Diekman has a long-running respect for Caltech that dates back to his days as a kid growing up in the Midwest. "My mother, who did not go to college, always told me to go to Caltech to get my education," he says. "She read constantly, and envied people who could pursue a science education at a world-class university.

"But at the time we couldn't afford the long trips to California from Cincinnati.

*see Diekman, page 6*

# NewsBriefs


**Caltech and the U.S. Geological Survey marked the 10th anniversary of the Northridge earthquake on Saturday, January 17, with demonstrations, lectures, and exhibits. A crowd estimated at nearly 3,000 learned everything about quakes, from their mechanics to how to best prepare for them.**

## Personals

### Welcome to Caltech

**December**

**Danny Armijo**, cashier, Caltech Bookstore; **John Cortese**, postdoctoral scholar in physics; **Patricia Cravioto**, housekeeper, Athenaeum; **Jason Fortelny**, electrician's aide, Facilities Management; **Clare Hayward**, postdoctoral scholar in bioengineering; **Jeffrey Horner**, security officer, Campus Security and Parking Services; **Myungshin Im**, visitor in physics; **Suneel Kunamaneni**, postdoctoral scholar in chemical engineering; **Janet Lee**, assistant animal laboratory technician, biology; **Cassandra Meagher**, associate director of foundation relations, Development and Alumni Relations; **Sheila Miyazaki**, editorial assistant, environmental science and engineering; **Shelby Montevirgen**, senior administrative secretary, chemistry and chemical engineering; **Konstantin Piatkov**, postdoctoral scholar in biology; **Casey Stokes**, bus person, Athenaeum; **Evy Tresvant-Graves**, administrative assistant, Cost Studies and Project Accounting.

**January**

**Bader Al-Anzi** and **Catherine Baker**, both postdoctoral scholars in biology; visitors **Jochem Baselmans**, in physics, and **Kristen Beverly**, in chemistry; postdoctoral scholars **Markus Covert**, in biology, and **Maria DeRosa** and **Michael Drake**, both in chemistry; **Toomas Erm**, senior controls engineer, Caltech Optical Observatories; **Rachel Gray**, research assistant, biology; **Swaminathan Krishnan**, postdoctoral scholar in geophysics; **Robert Lankford**, dispatch officer, Campus Security and Parking Services; **Gaylin Laughlin**, senior IT auditor, Audit Services and Institute Compliance; visitors **Francois Lekien**, in control and dynamical systems, and **Stephen Leroy**, in planetary science; **Mark Mehn**, postdoctoral scholar in chemistry; **Karen Payne**, staff psychologist, Health Center; **Andrew Pickles**, associate director, Caltech Optical Observatories; **Maya Popova**, research assistant I, chemistry and chemical engineering; **Antigona Segura-Peralta**, visitor in astronomy; **Xun Su**, collaborative environment network engineer, high-energy physics; **Susan Vite**, administrative assistant, humanities and social sciences; **Donald Williams**, network administrator, Information Technology Services; **Peter Willis**, postdoctoral scholar in chemistry.

**February**

**Nichole Baker** has been appointed associate director/manager of trusts and bequests in Caltech's Office of Gift and Estate Planning, effective February 2. She comes to Caltech from Polaris Financial—a company she cofounded—where she has been serving as financial planner and investment advisor. She received her BA in photography from USC and is a Certified Financial Planner, having completed the certificate program at the College of Financial Planning in Denver. In addition, she is currently enrolled in the Certified Specialist in Planned Giving Program at Cal State Long Beach.

### Retirements

**Robert Brucato**, assistant director at Palomar Observatory, will retire on February 1. He has been with Caltech for 22 years.

**Rudy Francisco** will retire on February 1 after 22 years at Caltech. He worked in the area of campus operations and facilities systems.

**John Rousseau** will retire on February 1. An architectural and engineering construction inspector, he has been at Caltech for 15 years.

### Deaths

**Juan Carrasco**, for years the night operator of Palomar Observatory's 200-inch Hale Telescope, died on January 3; he was 72. A West Texas native and high-school dropout whose jobs ranged from highway work to barbering, he served in the Army during the Korean War and ultimately earned his degree by correspondence. Prior to joining Caltech in 1969, he operated the McDonald Observatory's 82-inch telescope and worked as a lab technician at UC San Diego. As senior night assistant for the Hale Telescope, for decades the world's largest, Carrasco guided the instrument for some of the world's most notable astronomers. He retired in 1996. His care and skill in operating the telescope were featured by Richard Preston in his book *First Light*, and Carrasco was in addition honored by the astronomical community when an asteroid was named for him—4171 Carrasco. He is survived by Lilly, his wife of 47 years; two daughters, Vera and Peggy; and two grandchildren.

## Honors and awards

**David Baltimore**, president of Caltech and Nobel laureate, will receive an honorary degree at Columbia University's 250th commencement, which will take place on May 19 at Columbia's Morningside Heights campus.

**Fatemeh Jalayer**, Housner Postdoctoral Scholar in Civil Engineering, has been named a corecipient of the Norman Medal, which is awarded by the American Society of Civil Engineers for a paper "judged worthy of special commendation for its merit as a contribution to engineering science." She and her coauthors—Stanford engineering professor C. Allin Cornell, University of Illinois civil engineer Douglas Foutch, and Ronald Hamburger, of Simpson, Gumpertz and Heger Inc.—were honored for their paper "Probabilistic Basis for 2000 SAC Federal Emergency Management Agency Steel Moment Frame Guidelines," which appeared in the April 2002 *Journal of Structural Engineering*.

**Tom Phillips**, professor of physics and director of Caltech's Submillimeter Observatory, has been selected to receive the American Astronomical Society's 2004 Joseph Weber Award for Astronomical Instrumentation, which "is awarded to an individual, of any nationality, for the design, invention or significant improvement of instrumentation (not software) leading to advances in astronomy." Professor of physics at Caltech since 1979 and director of the Submillimeter Observatory since 1986, Phillips received his doctorate from the University of Oxford in 1964.

**Anneila Sargent**, professor of astronomy and director of the Owens Valley Radio Observatory, has been designated by the Council of the National Academy of Sciences and the Governing Board of the National Research Council a lifetime National Associate of the National Academies "in recognition of extraordinary service to the National Academies in its role as advisor to the nation in matters of science, engineering, and health." A graduate of the University of Edinburgh, Sargent received her PhD from Caltech in 1977 and has served as a member of the Institute's research faculty or professional staff ever since.

## Wu honored on his 80th

**Theodore Yao-Tsu Wu**, Caltech alum and professor of engineering science, emeritus, will be honored on his 80th birthday with the Theodore Y.-T. Wu Symposium on Engineering Mechanics, focusing on his scientific achievements. Cosponsored by the American Society of Mechanical Engineers and the American Society of Civil Engineers, the symposium will be held in conjunction with the 23rd International Conference on Offshore Mechanics and Arctic Engineering, taking place June 20 to 25, 2004, in Vancouver, British Columbia.

After earning his BS in 1946 from Chaio-Tung University, his MS in 1948 from Iowa State University, and his PhD in 1952 from Caltech, Wu joined the Institute's faculty and pursued research in engineering science. He has made major contributions in fluid physics and stability theory, nonlinear water waves, and geophysical and biophysical fluid mechanics, and has authored several books and more than 150 scholarly papers. A member of the National Academy of Engineering and a foreign member of the Chinese Academy of Sciences, Wu has been a John Simon Guggenheim Fellowship recipient, and is a fellow of the American Physical Society and the Japan Society of Promotion of Science. In 1993, he received the American Physical Society's Fluid Dynamics Prize.

## *International*, *from page 1*

Department of Labor, involved with work issues; and the Department of State, which issues visas.

At an institute as well regarded as Caltech, where Gooding says 65 percent of the postdocs and about a quarter of the student population hail from other countries, the services that the international offices provide have to be first rate.

"Caltech is more international than many other universities," she says. The chill that has recently descended over the entire visa application process has significantly affected the Institute. The government now requires extensive background checks of all those who seek an American visa, and Gooding reports that some Caltech students and scholars have suffered from long delays and rude treatment at the hands of government representatives.

"I don't blame the individuals in the bureaucracies, and we certainly want to cooperate with them because we care about security as much as anyone," Gooding says. "But we see instances where people are delayed or denied or insulted."

Invariably, she says, international students who desire to study at Caltech are the brightest young people in their respective countries. "They are likely to become leaders in their own countries, who will lead important government ministries and scientific establishments. We certainly hope that they will not look back at their U.S. experience with bitterness."

Once international students enroll at Caltech, they find that the International Student Programs office provides and encourages activities designed to enhance a sense of belonging, and Gooding says many students become deeply involved in them.

The premier cultural event that the International Student Programs office sponsors is the annual International Week, held in April. This is when all the international student clubs get to shine by demonstrating the cuisine, dance, music, and art of their native lands. Many of the students are members of clubs that hold film festivals or cultural events throughout the year.

"The international students at Caltech are intent on their studies, but they also understand the importance of a real community," Gooding says. "They are willing to work hard to foster that ideal. They are absolutely amazing in how much time they are willing to devote to Caltech, particularly during new international student orientation."

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# January 26–February 1, 2004

M T W T F S S

## Monday, January 26

**Bioengineering Seminar**
142 Keck, 4 p.m.—"The Biophysics of Insect Gas Exchange: Exploring How the Other 95% Breathes," Professor John Lighton, department of biological sciences, University of Nevada, Las Vegas.

**Geological and Planetary Sciences Seminar**
155 Arms, Robert Sharp Lecture Hall, 4 p.m.—"Interpreting Ancient Microbial Behavior from Carbonates," Dawn Y. Sumner, associate professor of geology, UC Davis.

**High Energy Physics Seminar**
469 Lauritsen, 4 p.m.—Topic to be announced. Patrick Fox, UC Santa Cruz. Information: www.theory.caltech.edu/people/helen/seminar1.html.

**Inorganic-Electrochemistry Seminar**
147 Noyes, Sturdivant Lecture Hall, 4 p.m.—"Oxygen Activation at Nonheme Iron: The Oxoiron(IV) Reaction Landscape," Professor Lawrence Que Jr., department of chemistry, University of Minnesota, Twin Cities.

**Applied and Computational Mathematics Colloquium**
101 Guggenheim Lab, Lees-Kubota Lecture Hall, 4:15 p.m.—"Simulations Using Particles," Petros Koumoutsakos, professor of computational sciences, ETH, Zurich. Refreshments, 3:45 p.m. Information: www.acm.caltech.edu/colloq.shtml.

## Tuesday, January 27

**Beckman Institute Seminar Series**
Beckman Institute auditorium, 10:30 a.m. to noon—"Vapor Detection Using Arrays of Conducting Polymer Composite Chemiresistors," Nate Lewis, Argyros Professor and professor of chemistry, Caltech. Refreshments, 10 a.m. Information: 395-2791 or www.its.caltech.edu/~bi/seminars200304.html.

**Institute for Quantum Information Seminar**
74 Jorgensen, 3 p.m.—"Entanglement Engineering of Atomic States in Optical Cavities," Scott Parkins, department of physics, University of Auckland, New Zealand.

**Chemical Physics Seminar**
147 Noyes, Sturdivant Lecture Hall, 4 p.m.—"Biological Systems Span Many Length and Time Scales: How Can Theory and Computer Simulation Address This Challenge?", Professor Gregory A. Voth, department of chemistry, University of Utah.

**General Biology Seminar**
119 Kerckhoff, 4 p.m.—Topic to be announced. Professor Adam Arkin, department of bioengineering and chemistry, UC Berkeley.

## Wednesday, January 28

**Information Science and Technology Seminar**
080 Moore, 3 p.m.—"Protecting Technology via Intellectual Property Rights: What Entrepreneurs Need to Know about Patents, Copyrights, and Trade Secrets," Roxana Yang, Law Office of Roxana H. Yang. Information: http://netlab.caltech.edu/seminar.

**Astronomy Colloquium**
155 Arms, Robert Sharp Lecture Hall, 4 p.m.—"Understanding Magnetic Dynamos and Their Importance in Accretion-Ejection Phenomena," Eric G. Blackman, associate professor of physics and astronomy, University of Rochester. Information: www.astro.caltech.edu/~gma/colloquia.html.

**Information Science and Technology Seminar**
080 Moore, 4 p.m.—"Commercializing Technology and Intellectual Property: What Entrepreneurs Need to Know About Licensing," Dr. Joseph Yang, of Skadden, Arps, Slate, Meagher & Flom LLP. Information: http://netlab.caltech.edu/seminar.

**Materials Research Lecture**
106 Spalding Lab, Hartley Memorial Seminar Room, 4 p.m.—"Computational Design of Nanostructures and Nanostructured Materials," Giulia Galli, Lawrence Livermore National Laboratory. Refreshments, 113 Spalding Lab, 3:45 p.m. Information: www.matsci.caltech.edu/seminars.html.

**Organic Chemistry Seminar**
147 Noyes, Sturdivant Lecture Hall, 4 p.m.—"Diastereoselectivity in Asymmetric Allylations. An Effective Construct for the Convergent Synthesis of Complex Marine Natural Products," Professor David R. Williams, department of chemistry, Indiana University.

**Special High Energy Theory Seminar**
469 Lauritsen, 4 p.m.—Topic to be announced. Jerome Gauntlett, Perimeter Institute. Information: www.theory.caltech.edu/people/seminar/schedule.html.

## Thursday, January 29

**Introduction to the Cambridge Structural Database**
Sherman Fairchild Library, multimedia conference room, 2 to 3:30 p.m.—Learn to search the Cambridge Structural Database and other crystal structure compilations and online databases. Information: http://library.caltech.edu/learning/default.htm.

**Chemical Engineering Seminar Series**
106 Spalding Lab, Hartley Memorial Seminar Room, 4 p.m.—"Structures, Reactions and Applications of Thiol-Ene Photopolymerization," Professor Christopher N. Bowman, department of chemical and biological engineering, University of Colorado. Refreshments, 113 Spalding Lab, 3:30 p.m. Information: www.che.caltech.edu/calendar/seminars.html.

**Environmental Science and Engineering Seminar**
142 Keck, 4 p.m.—"Dynamical Influences on Recent Ozone Changes," Professor Ted Shepherd, department of physics, University of Toronto. Refreshments, Keck Labs lobby, 3:40 p.m.

**Physics Research Conference**
201 E. Bridge, 4 p.m.—"Potassium Channel Gating," Professor Youxing Jiang, graduate school of biomedical sciences, University of Texas Southwestern Medical Center at Dallas. Refreshments, 114 E. Bridge, 3:45 p.m.

**Research Techniques for CORE Science-Writing Course**
Sherman Fairchild Library, multimedia conference room, 4 to 5:30 p.m.—This session is intended for undergraduates working on their CORE lab (Science Writing) requirement. Undergraduates are encouraged to attend for an introduction to the library's resources and services. Information: http://library.caltech.edu/learning/default.htm.

## Friday, January 30

**High Energy Theory Seminar**
469 Lauritsen, 11 a.m.—"A Paradigm of Open/Closed Duality," Leonardo Rastelli, department of physics, Princeton University. Information: www.theory.caltech.edu/people/seminar/schedule.html.

**Fluid Mechanics Seminar**
101 Guggenheim Lab, Lees-Kubota Lecture Hall, 3 p.m.—Topic to be announced. Professor Ted Shepherd, department of physics, University of Toronto. Information: www.galcit.caltech.edu/Seminars/Fluids/CurrentFluids/index.html.

**Inorganic-Organometallics Seminar**
151 Crellin, 4 p.m.—"Development of Novel Carbon Nanotube Microscopy Probes for Measurements of Biomolecular Dynamics," Garrett Bittner, graduate student in chemistry, Caltech.

**William Bennett Munro Memorial Seminar**
25 Baxter, 4 p.m.—"Demons, Knights, and Nature in the Early Modern Colonial Expansion to the New World," Jorge Canizares, associate professor of history, SUNY. Refreshments.

## Father of Ig Nobel Prizes to speak

Marc Abrahams boldly goes where most *self-respecting scientists dare not venture*: into the realm of research that "cannot or should not be reproduced."

Abrahams will present examples of such research—the best (or worst) of which is recognized each year at the Ig Nobel Prize ceremony at Harvard University—as part of Caltech Public Events' Voices of Vision Series. His free public talk will take place Tuesday, January 27, at 8 p.m. in Beckman Auditorium.

The Ig Nobel Prizes grew out of the science humor magazine that Abrahams cofounded, the *Annals of Improbable Research*. Presented by actual Nobel Prize winners, the awards recognize the goofiest annual achievements in science, economics, and literature. Past winners have included a University of Sydney researcher who studied belly-button lint; two scientists from India who created a formula for measuring the surface area of an elephant; and the executives of Enron, WorldCom, and Arthur Andersen, who received the economics award "for adapting the mathematical concept of imaginary numbers for use in the business world."

No tickets or reservations are required for this event. 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). Cosponsored by the Caltech Employees Federal Credit Union and the San Gabriel Valley Newsgroup.

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# February 2–8, 2004

M T W T F S S

## Monday, February 2

**Geological and Planetary Sciences Seminar**
155 Arms, Robert Sharp Lecture Hall, 4 p.m.—"Constraints on the Evolution and Interiors of Large Planetary Satellites," Quentin Williams, professor of earth sciences, UC Santa Cruz.

**Applied and Computational Mathematics Colloquium**
101 Guggenheim Lab, Lees-Kubota Lecture Hall, 4:15 p.m.—"Radiative Transfer for Random Parabolic Waves and Applications to Time Reversal," Albert Fannjian, professor of mathematics, UC Davis. Refreshments, 3:45 p.m. Information: www.acm.caltech.edu/colloq.shtml.

## Tuesday, February 3

**Introduction to the Inorganic Crystal Structure Database**
Sherman Fairchild Library, multimedia conference room, noon to 1:30 p.m.—Learn to search the Inorganic Crystal Structure Database and other crystal structure compilations and online databases. Information: http://library.caltech.edu/learning/default.htm.

**Ulric B. and Evelyn L. Bray Seminar**
25 Baxter, 4 p.m.—"A General Theory of Time Preferences," Efe Ok, assistant professor of economics, New York University. (Joint work with Y. Masatlioglu.) Refreshments.

**Chemical Engineering Seminar**
106 Spalding Lab, Hartley Memorial Seminar Room, 4 p.m.—"Why Are Proteins Charged Molecules? The Role of Electrostatics in the Stability, Activity, and Processing of Proteins," Professor Jeffrey D. Carbeck, department of chemical engineering, Princeton University. Refreshments, 113 Spalding Lab, 3:30 p.m. Information: www.che.caltech.edu/calendar/seminars.html.

**General Biology Seminar**
119 Kerckhoff, 4 p.m.—Topic to be announced. Professor Maria Karayiorgou, Laboratory of Human Neurogenetics, Rockefeller University.

**Michelin Distinguished Visitors Lecture**
Beckman Auditorium, 8 to 9:30 p.m.—"A Random Walk Through My Literary Life (with a boon companion, Dr. Kevin Starr)," Herman Wouk, Pulitzer Prize–winning writer, author of *The Caine Mutiny*, *The Winds of War*, and *War and Remembrance*. Dr. Kevin Starr is the state librarian of California and the author of numerous books on the state's history.

## Wednesday, February 4

**Edward B. Lewis Symposium**
119 Kerckhoff, 4 p.m.—"From Fruit Flies to Fallout: Ed Lewis and His Science," Howard D. Lipshitz, Divisions of Endocrinology and Genetics, Hospital for Sick Children, Toronto.

**Materials Research Lecture**
106 Spalding Lab, Hartley Memorial Seminar Room, 4 p.m.—"Adhesion and Mechanical Reliability of Thin-Film Device Structures: New Material and Length Scale Challenges," Professor Reinhold Dauskardt, materials science and engineering, Stanford University. Refreshments, 113 Spalding Lab, 3:45 p.m. Information: www.matsci.caltech.edu/seminars.html.

**Organic Chemistry Seminar**
147 Noyes, Sturdivant Lecture Hall, 4 p.m.—"The Power of Chemical Synthesis: From Natural Products to Cancer Vaccines," Dr. Don Coltart, department of pharmacology and chemistry, Memorial Sloan-Kettering Cancer Center.

## Thursday, February 5

**Cambridge Structural Database Workshop**
Sherman Fairchild Library, multimedia conference room, 2 to 3:30 p.m.—Intended as a follow-up to the introductory class, the workshop will be a hands-on session for specific search and structure questions. Laptop computers will be provided for attendees, with priority given to those who sign up in advance. Information: http://library.caltech.edu/learning/default.htm.

**2004 Dow Lecture in Organometallic Chemistry**
22 Gates Annex, 4 p.m.—"Electronic Communication at the Micropiology Level," Professor F. Albert Cotton, department of chemistry, Texas A&M University, College Station. Refreshments, 3:30 p.m.

**Social and Information Sciences Laboratory Seminar Series**
25 Baxter, 4 p.m.—"Conditioning Prices on Purchase History," Professor Hal Varian, department of economics, UC Berkeley. Refreshments.

## Friday, February 6

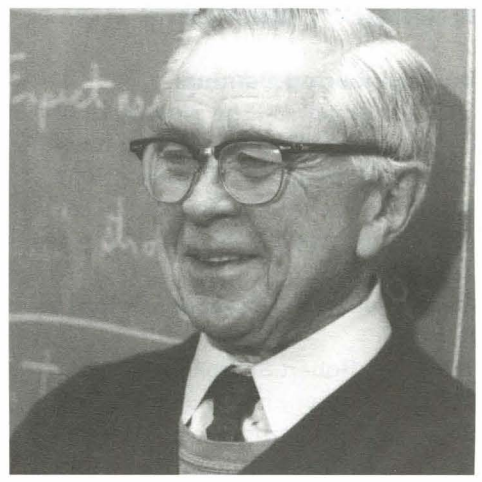
**High Energy Theory Seminar**
469 Lauritsen, 11 a.m.—"Cosmic Censorship Violation in String Theory," Thomas Hertog, department of physics, UC Santa Barbara. Information: www.theory.caltech.edu/people/seminar/schedule.html.

**Condensed Matter Physics Seminar**
107 Downs Lab, noon—Topic to be announced. Professor George Crabtree, Northern Illinois University and Argonne National Laboratory.

**Fluid Mechanics Seminar**
101 Guggenheim Lab, Lees-Kubota Lecture Hall, 3 p.m.—Topic to be announced. Eric Wintenberger, graduate student in aeronautics, Caltech. Information: www.galcit.caltech.edu/Seminars/Fluids/CurrentFluids/index.html.

**Inorganic-Organometallics Seminar**
151 Crellin, 4 p.m.—"Probing the Reactivity of Transition Metal Centers Using New Generations of Anionic Borato Ligands," Christine Thomas, graduate student in chemistry, Caltech.

**William Bennett Munro Memorial Seminar**
25 Baxter, 4 p.m.—"The Rule of Love: The History of Western Romantic Love in Comparative Perspective," William Reddy, Laprade Professor and professor of cultural anthropology, Duke University. Refreshments.



## Lewis Symposium to honor gene pioneer

Edward Lewis, Caltech's Morgan Professor of Biology, Emeritus, and a Nobel laureate, will be honored Wednesday, February 4, with a special symposium.

The Edward B. Lewis Symposium will feature former Caltech professor Howard Lipshitz, who worked closely with Lewis for 20 years and who is now with the Hospital for Sick Children in Toronto. "From Fruit Flies to Fallout: Ed Lewis and His Science," will begin at 4 p.m. in the Norman Davidson Lecture Hall (119 Kerckhoff).

Following the lecture, Lipshitz will also sign copies of a new biography, *Genes, Development and Cancer: The Life and Work of Edward B. Lewis*, for which he served as editor. The book will be available for sale at the event.

Lewis was a corecipient of the 1995 Nobel Prize in physiology or medicine for discoveries concerning genes and early embryonic development. He is renowned for his groundbreaking work, beginning in the 1940s, on genetic mutations in *Drosophila* fruit flies. Ultimately, he was able to predict mutations in the flies based on flaws in specific genes—basic research that, as he noted upon learning of his Nobel Prize, has "turned out to be very important for understanding human development and the mechanisms underlying some genetic diseases."

A native of Wilkes-Barre, Pennsylvania, Lewis earned his BA in 1939 from the University of Minnesota, and his PhD in 1942 from Caltech. He joined the Institute faculty as an instructor in 1946, later becoming full professor and, in 1966, Morgan Professor. He took emeritus status in 1988.

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# CampusEvents

## Monday, January 26

**Standard First Aid/CPR**
Brown Gym classroom, 7:30 a.m. to 5 p.m.—Offered by Caltech's Safety Office in conjunction with the American Red Cross. Fee: $25 for materials. Registration: 395-6727 or safety.training@caltech.edu.

**Intermediate-Level West Coast Swing**
Winnett lounge, 7:30 p.m.—This five-week series, which began on January 5, is taught by a professional instructor. Some previous West Coast swing experience is recommended. No partner is necessary. Fee: Students, $6 per class or $25 for the series; others, $8 per class or $35 for the series. Refreshments.

## Tuesday, January 27

**Adult/Child/Infant First Aid and CPR**
Brown Gym classroom, 7:30 a.m. to noon—The American Red Cross will teach this two-day class, which will continue on Thursday, January 29. You must attend both days to receive your certificate. Fee: $30. Registration: 395-6727 or safety.training@caltech.edu.

**Preschool Playgroup**
Tournament Park, 10 a.m. to noon—Song and storytime, crafts and free play for toddlers and preschoolers (from walking to age 4). Information: 793-4099 or camila_bruns@hotmail.com.

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

**Women's Basketball**
vs. Occidental College, 7:30 p.m.

**Voices of Vision Series**
Beckman Auditorium, 8 p.m.—Marc Abrahams, founder of the Ig Nobel Prizes and cofounder of the science humor magazine *Annals of Improbable Research*, will speak about "wonderfully strange, strangely wonderful" research in science, medicine, and technology. Admission is free. Information: 395-4652, 1 (888) 2CALTECH, or events@caltech.edu. Individuals with a disability: 395-4688 (voice) or 395-3700 (TDD).Visit Public Events at www.events.caltech.edu.

**Samba Dance Class**
Braun Gym, multipurpose room, 9 p.m.—Learn to dance the samba with Ballroom Dance Club members Marcel Gavriliu and Sharon Liu. The free series of classes, which began January 6, runs for five Tuesday nights. (There is a $5 Braun Gym entrance fee for those without Caltech ID.) No partner is necessary. Beginners and more advanced dancers are welcome.

## Wednesday, January 28

**Adult/Child/Infant CPR Recertification**
Brown Gym classroom, 7:30 a.m. to noon—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.

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

**CPR Recertification**
Brown Gym classroom, 1 to 5 p.m.—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.

**Laser Safety Orientation**
118 Keith Spalding Building, 3 p.m.—All laser operators and individuals working in areas where there may be exposure to radiation from Class 3b or Class 4 lasers are required to attend. Class size is limited; please call 395-6727 to reserve a space.

**Men's Basketball**
vs. University of La Verne, 7:30 p.m.

## Thursday, January 29

**Career Day**
Brown Gymnasium, 10:30 a.m. to 2:30 p.m.—This informal event provides undergraduates, grad students, and postdocs an opportunity to gather information about companies, and drop off résumés with company representatives. Freshmen and sophomores are encouraged to attend.

**Women's Tennis**
at Pasadena City College, 3 p.m.

**Beginning Waltz Class**
Winnett lounge, 7:30 p.m.—This series of four classes, which began January 15, will be held on Thursdays through February 5. Fee: $1 per class. No partner is necessary. Refreshments.

## Friday, January 30

**Standard First Aid/CPR**
See Monday, January 26, for details.

**Caltech Tai Chi Club**
See Tuesday, January 27, for details.

**Women's Basketball**
at University of Redlands, 7:30 p.m.

**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.

**Caltech Student Chamber Ensembles**
Ramo Auditorium, 8 p.m.—Program to be announced. Admission is free. A reception for all will follow the concert. 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, January 31

**Women's Tennis**
at Chapman University, 11 a.m.

**Beginning Belly Dancing**
Braun Gym, multipurpose room, 12:45 p.m.—Learn basic belly-dance technique. No special clothing or shoes are required. The class is open to all with valid gym membership. Fee for trial class: $5 for Caltech students, $8 for others. Fee for full term: $20 for Caltech students, $50 for other Caltech community members. Reservations: Kathy.Kelly@caltech.edu.

**Hawaiian Club Hula Lessons**
Winnett lounge, 1 p.m.—Learn hula dancing from the Hawaiian Club. The 10 weekly lessons will be held on Saturdays until March 13. Fee: $5 per class; graduate students and ASCIT members, $3 per class. Pareos are the recommended attire; purchase one at the class for $5. Registration: maruchan@its.caltech.edu. Information: www.ugcs.caltech.edu/~lilinoe/hula.html.

**Introduction to Self-Defense for Women**
Caltech Women's Center, 1 to 5 p.m.—Provides an introduction to the physical techniques involved in self-defense. Participants learn a variety of hands-on techniques and will have the opportunity to rehearse verbal role-play scenarios. Reservations: wcenter@studaff.caltech.edu.

**Baseball**
vs. alumni, at Pasadena High School, 2 p.m.

**Men's Basketball**
vs. University of Redlands, 7:30 p.m.

**Caltech Student Chamber Ensembles**
Ramo Auditorium, 8 p.m.—See Friday, January 30, for details.

**Preservation Hall Jazz Band**
Beckman Auditorium, 8 p.m.—The Preservation Hall Jazz Band performs high-energy, New Orleans–style jazz. Tickets and information: 395-4652, 1 (888) 2CALTECH, or events@caltech.edu. Individuals with a disability: 395-4688 (voice) or 395-3700 (TDD). Visit Public Events at www.events.caltech.edu.

## Sunday, February 1

**Men's Tennis**
vs. Chapman University, 2 p.m.

**Caltech Student Chamber Ensembles**
Ramo Auditorium, 3:30 p.m.— See Friday, January 30, for details.

**Cha-Cha Dance Class**
Winnett lounge, 4:30 p.m.—Learn competitive-style cha-cha from one of the top amateur dance couples in the country. This series of classes will be held on Sunday evenings through March 7. All experience levels are welcome. No partner is necessary. Refreshments.

**Competitive-Style Waltz Class**
Winnett lounge, 5:30 p.m.—Learn international waltz with one of the top amateur dance couples in the country. This series of classes, which began January 11, will be held on Sunday evenings through March 7. All experience levels are welcome. No partner is necessary. Refreshments.

## Monday, February 2

**Intermediate-Level West Coast Swing**
See Monday, January 26, for details.

## Tuesday, February 3

**Preschool Playgroup**
See Tuesday, January 27, for details.

**Caltech Tai Chi Club**
See Tuesday, January 27, for details.

**Women's Basketball**
vs. University of La Verne, 7:30 p.m.

**Samba Dance Class**
See Tuesday, January 27, for details.

## Wednesday, February 4

**Wednesdays in the Park**
See Wednesday, January 28, for details.

**Men's Basketball**
at Pomona-Pitzer, 7:30 p.m.

## Thursday, February 5

**Beginning Waltz Class**
See Thursday, January 29, for details.

## Friday, February 6

**Caltech Tai Chi Club**
See Tuesday, January 27, for details.

**Women's Basketball**
at Cal Lutheran University, 7:30 p.m.

**Caltech Chess Club**
See Friday, January 30, for details.

**Leahy**
Beckman Auditorium, 8 p.m.—A powerhouse of fiddling, singing, and step dancing by a Canadian family of nine brothers and sisters with Irish roots. 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, February 7

**Men's Tennis**
vs. University of Redlands, 9:30 a.m.

**Women's Tennis**
at University of Redlands, 9:30 a.m.

**Track and Field**
Caltech All Comers, 10 a.m.

**Baseball**
vs. Simpson College, at Pasadena High School, doubleheader, 11 a.m.

**Swimming and Diving**
vs. Occidental College, 11 a.m.

**Beginning Belly Dancing**
See Saturday, January 31, for details.

**Hawaiian Club Hula Lessons**
See Saturday, January 31, for details.

**Gross Me Out!**
Beckman Auditorium, 2 p.m.—Join Sally Snot for the grossest game show of them all and learn about all our vital bodily functions. 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.

**Men's Basketball**
vs. Occidental College, 7:30 p.m.

## Sunday, February 8

**Men's Tennis**
vs. La Sierra University, 11 a.m.

**Women's Tennis**
vs. La Sierra University, noon.

**Introduction to Self-Defense for Men**
Caltech Women's Center, 1 to 5 p.m.—Provides an introduction to the physical techniques involved in self-defense. Participants learn a variety of hands-on techniques and will have the opportunity to rehearse verbal and physical role-play scenarios. Registration: wcenter@studaff.caltech.edu.

**Lagerstrom Chamber Music Concerts**
Shumei Hall, 2430 E. Colorado Blvd., Pasadena, 2:30 p.m.—Violinist Linda Wang will perform. Admission is free. Information: 395-4652, 1 (888) 2CALTECH, or events@caltech.edu. Individuals with a disability: 395-4688 (voice) or 395-3700 (TDD). Visit Public Events at www.events.caltech.edu.

**Cha-Cha Dance Class**
See Sunday, February 1, for details.

**Competitive-Style Waltz Class**
See Sunday, February 1, for details.

**Artists**, *from page 1*

refine the concept for her artwork. Possible sites include Throop Memorial Garden lawn, the lawn between Thomas and Guggenheim Labs, the Beckman Institute lawn, and the Avery House lawn at Holliston and Del Mar.

Since 1973, McMillen has been bringing viewers directly into the art experience through mixed-media installation pieces such as *The Central Meridian*, currently on loan at the Los Angeles County Museum of Art, and *Red Trailer Motel*, at the L.A. Louver Gallery in Venice through March 21. McMillen is attracted to the castoffs of material society, incorporating them in his search to find a visual and spiritual poetry.

Excited and challenged by the Caltech project, he is looking to create an interactive piece that engages the Institute's rich intellectual and material history. He also will work with researchers as, using castoff materials from the campus, he attempts to capture the conceptions of nature as conveyed in art and science, and the relationship between humanity and the environment. Sites under consideration include areas near Watson Lab, Noyes Lab, Steele Lab, and Powell-Booth and Keck Labs.

The artwork, which will be on display for six to 12 months, will further an ongoing collaboration between Caltech and the Art Center School of Design's Williamson Gallery. The two institutions are joining forces to produce site-specific works on both campuses as part of their participation in the Tender Land, a Pasadena cultural festival set for October.

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**Wouk**, *from page 1*

Inspired by his war experiences, Wouk's *The Caine Mutiny* (1951) earned him the 1952 Pulitzer Prize in fiction, became one of the best-selling novels of the century, and was turned into a hit movie with Humphrey Bogart. Even its popularity, however, was surpassed by that of his next novel, *Marjorie Morningstar* (1955), about a young Jewish-American woman and her faith. The book sold millions, and its film version, featuring Natalie Wood and Gene Kelly, also was a success. Over the next three decades, Wouk continued to write best-sellers, and in the 1980s, his two-volume historical novel, *The Winds of War* and *War and Remembrance*, was made into an acclaimed television miniseries. His books remain popular to this day.

A much-published author in his own right, Starr holds an MA and a PhD in American literature from Harvard and a master of library science from UC Berkeley, and is University Professor in the history department at USC.

No tickets or reservations are required for this event. 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).

The goal of the Michelin Distinguished Visitor Lecture Series—established in 1992 by designer Bonnie Cashin in memory of her uncle, James Michelin—is to promote creative interaction between the arts and sciences. Previous lecturers include artist David Hockney, playwright Tom Stoppard, architect Frank Gehry, director Oliver Stone, opera singer Beverly Sills, and author Michael Crichton.

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**Koonin**, *from page 1*

1975, after earning his PhD from MIT. He became full professor in 1981 and served as faculty chair from 1989 to 1991.

A recipient of the ASCIT (Associated Students of the California Institute of Technology) Teaching Award, the Humboldt Senior Scientist Award, and the Department of Energy's E. O. Lawrence Award in Physics, Koonin is a member of the Council for Foreign Relations and has served as an advisor to the National Science Foundation, the Department of Energy, and the Department of Defense. He is a fellow of the American Physical Society, the American Association for the Advancement of Science, and the American Academy of Arts and Sciences. His research interests include theoretical nuclear and computational physics, nuclear astrophysics, and global environmental science.

Koonin's departure "will leave a tremendous hole in the Institute's administrative and academic structure," Baltimore wrote, noting that it will be crucial to continue fulfilling the provost's key responsibilities without interruption, "as the Institute's future is dependent upon the ultimate success of these endeavors."

To that end, he has appointed Professor Edward Stolper as acting provost, effective February 2, while a search committee works to fill the position. Chaired by Professor Ahmed Zewail, the committee, which also includes Professors David Anderson, Peter Bossaerts, Shuki Bruck, Anneila Sargent, and Paul Wennberg, will seek input from the Caltech community in its decision. Also in the interim, Baltimore will resume oversight of Business and Finance, Public Relations, Student Affairs, and the General Counsel, functions that he had delegated to the provost in May.

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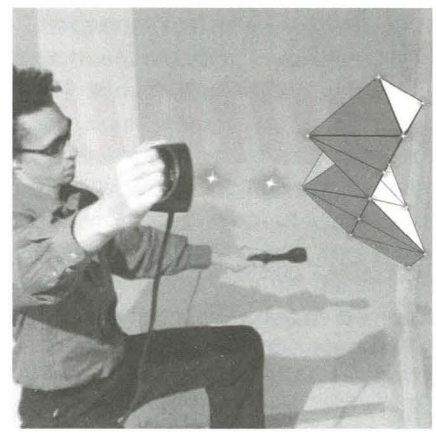

**Nano**, *from page 1*

*Method,* allow the user to draw geometric shapes without a computer monitor.

"My piece lets you create structures that behave in the way they behave at the nano scale," Schkolne says. "It's a 3-D interactive installation. You sit in front of a screen while wearing a pair of sunglasses, and crystal shapes appear to come out of the screen. There are tongs to grab the crystals and the crystals appear to grow."

Although he defended his computer science PhD thesis last October, an interest in art and abstract animation led him to classes at Art Center College of Design. Since then, he has created several other projects that touch on the concept of virtual reality and drawing in space.

"I wanted to do something that tied in with the theme of the show that wasn't a lesson," Schkolne says. While at Caltech, his advisor was Peter Schröder, professor of computer science and applied and computational mathematics, who is renowned for his pioneering work in digital geometry processing.

The exhibition, housed at LACMA's Boone Children's Gallery, features nine installations created by LACMALab and artists and grad students from UCLA. *The Inner Cell* is a walk-in installation where visitors can imagine that they've shrunk to the size of carbon-60 molecules; the *Nanomandala* projects the image of a geometric design—created by Tibetan monks—onto a circular sandbox to represent different views of the universe; and *Quantum Tunnel* uses cameras and microphones to simulate the journey of electrons through a barrier.

Images of Schkolne's piece may be viewed at http://thecrystalmethod2003.com. *Nano* is free to the public and will run through September 6.

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## Jobs galore at Career Day

It's a new year, and time to start thinking about that new job. Caltech's annual Career Day is set for Thursday, January 29, from 10:30 a.m. to 2:30 p.m. at Brown Gymnasium.

Open to the Caltech community, the event is especially geared toward students and postdocs. Along with many of the organizations that are regularly represented, such as Raytheon, Lawrence Livermore National Laboratory, Northrop Grumman, and Microsoft, are some newbies, including RealNetworks and Amazon.com. Attendees should bring their résumés and questions, and come prepared to learn all about prospective careers.

Job seekers can also prepare beforehand at Resumania, which will take place Friday, January 23, from 11 a.m. to 2 p.m. in front of the Winnett Center, facing the Olive Walk. Career counselors and Caltech alums will be available to critique résumés and help get them in great shape for Career Day.

For more information, visit the Career Development Center website at www.career.caltech.edu, e-mail career@caltech.edu, or call ext. 6361.

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**Diekman**, *from page 1*

The East Coast was closer, and I was able to hitchhike back and forth between home and Princeton."

What he finds special about Caltech, Diekman says, is the quality of its teaching, as well as its research. "So for me, it is truly an honor and pleasure to be associated with one of the best teaching and research institutions in the world," he says.

After receiving his AB in chemistry from Princeton, Diekman went on to earn his PhD, also in chemistry, from Stanford University. A founder and former vice chair of Bay City Capital, he is also chair of Bio*One Capital; a general partner of the Aravis Venture I, a European-based life science venture fund; and a board member of several other organizations, including Affymetrix Inc., which develops systems for genetic analysis in the life sciences.

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