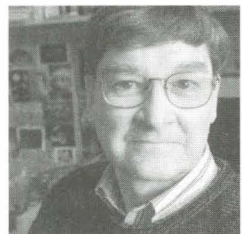


Caltech 336

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

The campus community biweekly

March 18, 2004, vol. 4, no. 6



Rossman receives Feynman Prize

George Rossman, professor of mineralogy and the divisional academic officer for Geological and Planetary Sciences, has been awarded the 2003–04 Richard P. Feynman Prize for Excellence in Teaching. Acting provost Ed Stolper presented him with the award at the February 23 faculty meeting.

The prize committee's recommendation of Rossman reads in part: "George Rossman has been teaching with enthusiasm and with superb results since he joined the Caltech faculty in 1971 . . . George's style of teaching exploits the beautiful and beguiling qualities of minerals and their relationships to geological processes. He employs a series of mind-stretching demonstrations . . . He tells stories about minerals. He asks probing questions about their color, and then leads students to think in general about the proper approach to scientific questions. [His] courses . . . evolve each year, in the best tradition of didactic innovation."

see Rossman, page 6

FBI charges student with arson

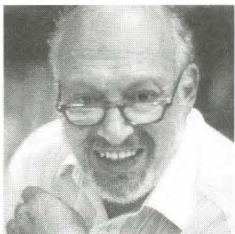
William Jensen Cottrell, a second-year Caltech graduate student in physics, was taken into custody by agents from the Federal Bureau of Investigation on March 9. Cottrell, 23, is suspected of involvement in incidents of arson and vandalism that occurred last year at four San Gabriel Valley automobile dealerships.

The vandals targeted dealerships that feature sport utility vehicles, which are denounced as gas-guzzling polluters by environmental groups.

During the early morning of August 22, 2003, approximately 125 vehicles, primarily Hummers and SUVs, and one warehouse were either damaged by paint or set afire. According to reports, the vandals had painted the words "Polluter," "I ♥ Pollution" and "ELF" on the vehicles. The damage was estimated at \$3.5 million.

ELF is an acronym for the Earth Liberation Front, a group the FBI considers to be dangerous ecoterrorists. This group is not a Caltech student club nor is it affiliated with the Institute in any way.

see FBI, page 2



Revel steps down as dean

Dean of Students and Ruddock Professor of Biology Jean-Paul Revel will step down from his administrative post in June, Vice President for Student Affairs Margo Marshak wrote in a March 8 e-mail memo.

Making the announcement "with great regret," Marshak wrote: "Professor Revel has provided able and generous leadership as Dean since September 1996. Over these past years, Professor Revel has made an important difference in the lives of our undergraduates for whom he has such affection and concern. His advice, compassion, and guidance have been invaluable to students

see Revel, page 6

A course in first response

As the victim lay on the floor of the Brown Gym classroom, a squad of emergency workers huddled over him. Wielding splints, bandages, and an oxygen tank, the four went to work.

"Does everyone have their gloves on?" asked instructor Mark Stapf, who teaches a course for first responders to emergency situations. He nodded approvingly as he watched his students, occasionally issuing a gentle reminder.

Within five minutes, Alex Cervantes, a Caltech security guard, playing the victim of an accident who has sustained various wounds, resembled a mummy. Thus trussed, he was ready to be wheeled into an ambulance.

"A first responder is basically an EMT [emergency medical technician] without the transportation and ambulance issues; but they get training in pretty much everything else," Stapf says. "They do definitive care until other professional help arrives."

Eleven members of the Caltech community are taking part in this first-responder course, meeting twice a week for three hours per session. The course spans 10 weeks and includes 60 hours of instruction, many of those spent acting out various rescue scenarios.

Stapf—the coordinator of the Health Advocates, a Caltech course (PA 50) designed to teach the basics of health

see EMT, page 2

Going the mile



"Bob," the Chevy Tahoe four-wheel drive that was Caltech's entry in Saturday's highly anticipated DARPA autonomous vehicle race, is pictured at last week's qualifying trials with Engineering and Applied Science division administrator Elliott Andrews (who, incidentally, retired on race day). Among the 15 entries, the farthest distance covered was seven miles; Bob navigated itself for a mile of the rugged 142-mile desert course before becoming disabled. Professor Richard Murray will discuss the results of the contest in a Watson Lecture on Wednesday, March 31.

A megadollar grant funds a nanoscience institute

Fred Kavli and the Kavli Foundation have awarded a \$7.5 million grant to create a new institute at Caltech for research in the emerging field of nanoscience.

Caltech's Kavli Nanoscience Institute (KNI) will be founded as a "lasting center dedicated to defining research frontiers and establishing new scientific directions in nanoscience," says David Baltimore, president of Caltech. "This generous award allows us to solidify a plan that we have been considering for some time—one based on our strengths and on the future direction of science."

Nanoscience, in its broadest definition, involves the underlying physical principles that govern the function of devices measuring less than a billionth of a meter.

The purpose of the KNI will be to foster innovative research at the frontiers of nanoscale science and engineering with an emphasis on efforts to transcend traditional disciplinary boundaries; to create new research opportunities that will attract the best researchers

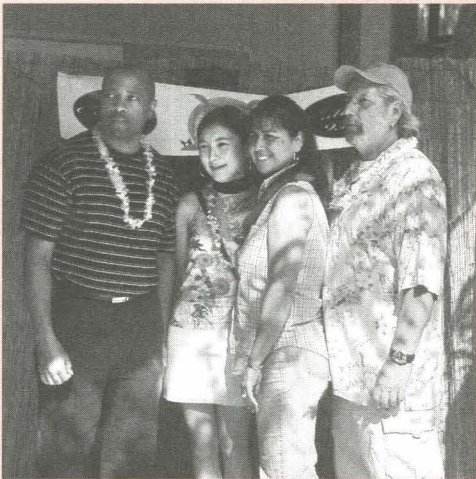
and students worldwide; and to support the cross-disciplinary community through significant infrastructure investment and renewal.

Michael Roukes, Caltech professor of physics, applied physics, and bioengineering, has been named the founding director of the institute. "The primary emphases of the KNI will be on nanobiotechnology, which merges nanodevice engineering with the molecular and cellular machinery of living systems, and nanophotonics, which employs new materials technology and nanofabrication processes to develop novel devices such as optically active waveguides and microlasers," Roukes says. "Central to both of these endeavors is large-scale integration of nanosystems, which will be enabled by the new facilities that we are constructing."

Caltech has had an ongoing interest and presence in nanoscience and nanotechnology—or the engineering of such devices—and, in fact, one of the

see KNI, page 2

NewsBriefs



Chi "Chelsea" Chang '05, second from left, was named winner of the Tech Express's first karaoke contest for her rendition of Faith Hill's "Breathe." Pictured with her are judges (from left) Chris Henderson of Graphic Resources and Mail Services, Linda Bustos of Public Relations, and Joe DeVito of the Tech Express.

Personals

Welcome to Caltech

February

Mircea Badescu, postdoctoral scholar in JPL's science and technology development section; **Jennifer Cruz**, system engineer, Infrared Processing and Analysis Center; **Keith Edelen**, general manager, Dining Services; **Carrie Randle** and **Amanda Whipple**, both assistant animal lab technicians, biology; **Carl Wilson**, utility mechanic, Facilities Management.

March

Matthew Barnet, lab technician, chemistry and chemical engineering; **Richard Chomko**, assistant scientist, planetary sciences; **Mona Delitsky**, visitor in planetary science; postdoctoral scholars **Seung-Yong Jung**, in chemistry, **Sungjee Kim**, in applied physics, and **Alexei Kopylov**, in computer science; **Alan Morrisett**, research engineer, Caltech Optical Observatories; **Yasamin Mostofi**, postdoctoral scholar in electrical engineering; **Jeffery Olin**, board program/Chandler manager, Dining Services; **Tammer Saleh**, Southern California Seismic Network real-time administrator, Seismological Laboratory; visitors **Erik Severin**, in chemistry, and **Patrick Sunter**, in geophysics.

New positions

Sergey Shevchenko, a senior research fellow in physics at Caltech, became a senior research associate in physics effective February 1. He received his BS from Moscow University in 1977 and his PhD from the Institute of Theoretical and Experimental Physics in 1983, did work at Caltech as a research fellow in 1992–93, and returned as senior research fellow in 1997.

Retirements

Elliott Andrews, administrator for the Division of Engineering and Applied Science, has retired effective March 13 after 21 years at Caltech.

Honors and awards

David Anderson has been named the Roger W. Sperry Professor of Biology, effective April 1; this title replaces that of professor of biology. He received his AB from Harvard in 1978 and his PhD from Rockefeller University in 1983, and he joined Caltech's faculty in 1986. He is also an investigator with the Howard Hughes Medical Institute. Nobel Laureate Roger Sperry was Hixon Professor of Psychobiology at Caltech from 1954 to 1984 and Board of Trustees Professor Emeritus from 1984 until his death in 1994.

Pamela Bjorkman has been named the Max Delbrück Professor of Biology, effective April 1; this title replaces that of professor of biology. She will continue as executive officer for biology and as a full investigator with the Howard Hughes Medical Institute. A member of the Caltech faculty since 1988, she received her BA from the University of Oregon in 1978 and her PhD from Harvard in 1984.

Serguei Denissov, Taussky-Todd Instructor in Mathematics, has been selected to receive the Vasil A. Popov Prize in Approximation Theory. Established in honor of the late Professor Vasil A. Popov of Bulgaria, the prize is awarded every three years to an outstanding young approximation theorist with at most six years of professional experience. This year's prize will be awarded in May at the Eleventh International Conference in Approximation Theory, in Gatlinburg, Tennessee. The recipient of a PhD from Moscow State University in 1999, Denissov came to Caltech in 2001 as a Bateman Research Instructor and was appointed Taussky-Todd Instructor in 2002.

Joseph Kirschvink, professor of geobiology, has been elected a fellow of the American Geophysical Union. The honor recognizes scientists who have achieved eminence in the geophysical sciences and is bestowed on only a tenth of a percent of the union's membership in any given year. A Caltech alum, Kirschvink earned his BS and MS degrees here, both in 1975. He received his PhD from Princeton in 1979 and joined Caltech's faculty in 1981.

Stephen Quake has been named the Thomas E. and Doris Everhart Professor of Applied Physics and Physics, effective April 1; this title replaces that of professor of applied physics and physics. Quake received his BS and MS degrees from Stanford, both in 1991, and his DPhil from the University of Oxford in 1994. He joined the Caltech faculty in 1996.

Douglas Rees has been named the Roscoe Gilkey Dickinson Professor of Chemistry, effective April 1; this title replaces that of professor of chemistry. He will continue as executive officer for chemistry and as a full investigator with the Howard Hughes Medical Institute. He received his BS from Yale in 1974 and PhD from Harvard in 1980, and joined Caltech's faculty in 1989.

Paul Sternberg has been named the Thomas Hunt Morgan Professor of Biology, effective April 1; this title replaces that of professor of biology. A member of the Caltech faculty since 1987, he received his BA from Hampshire College in 1978 and his PhD from MIT in 1984. Sternberg is also an investigator with the Howard Hughes Medical Institute. Nobel Laureate Thomas Hunt Morgan was the first chairman of Caltech's Division of Biology.

Yuk Ling Yung, professor of planetary science, has been elected a fellow of the American Geophysical Union. The honor recognizes scientists who have achieved eminence in the geophysical sciences and is bestowed on only a tenth of a percent of the union's membership in any given year. Yung received his BS from UC Berkeley in 1969 and his PhD from Harvard in 1974. After coming to Caltech as a visiting associate in 1976, he joined the faculty in 1977.

Grad student receives new Sandia fellowship

Graduate student **McKell Carter** has received the first award of a new fellowship that will be given annually to select universities by Sandia National Laboratory's Advanced Concepts Group (ACG). The \$50,000 engineering fellowship is partially matched by Caltech funds and is renewable for an additional four years. Carter will continue his work in the lab of **Christof Koch**, Troendle Professor of Cognitive and Behavioral Biology, professor of computation and neural systems, and principal investigator for the project in cognitive neuroscience. They will also collaborate with Caltech alum Geroald Yonas (PhD '66), vice president of the ACG; Peter Merkle, principal ACG contact; and researchers at University College London. The group will use fMRI (functional magnetic resonance imaging) to examine and compare human brain activity during variations of fear conditioning in which subjects are either unaware or aware of the stimuli that predict a shock.

EMT, from page 1

care—teaches undergraduates many of these same rescue skills.

The first responders receive training in rescue cardiopulmonary resuscitation, taking vital signs (such as blood pressure), treating shock, assisting with diabetic emergencies and seizures, and mitigating many other life-threatening conditions. They are also taught how to summarize a victim's status and convey it to paramedics.

The first-responder course, which is in a pilot phase, is a collaboration between the Health Center and Staff Education and Career Development, which is a part of Human Resources. In the event of a local catastrophe that overwhelms city rescue operations, trained technicians have to respond to the injured, says Gregg Henderson, chief of Caltech Security and Parking Services.

"All security personnel have first-aid and CPR training, but we're looking to take it to the next level," Henderson adds. "We wanted the training to enable security staff, who are usually the first persons on site, to provide professional care in the event of an emergency." He points out that it is logical for security officers, who patrol the campus day and night, to be able to assume this role.

Those taking the course represent a cross section of campus staff and students. Two of them, John Bender and Jessica Edwards, are resident associates; one is a geology staff member; and eight are security staff, including Loren Kajitani, manager of field security services.

"We learn to size up the victim, how to examine them, how to talk to them, and how to fit them with protective devices," Kajitani says. "We're also learning to take blood pressure, and there's lots of bandaging and splints."

At the end of the first-responder course, the final exam will include hands-on treatment of both routine and not immediately detectable injuries.

Henderson and Stapf do not know if this course will be offered again. But if it is, Henderson would like to see all of the security officers and others who are regularly on campus, such as members of Facilities Maintenance, take the course.

"Those who take the course need to understand that it is a commitment of 60 hours of training," Henderson says. "Once they are trained, they may be called on to assist in a major emergency."

Caltech community members who are interested in the first-responder course can send an e-mail to Henderson at gregg.henderson@caltech.edu.

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FBI, from page 1

Agents had visited Caltech earlier this year after tracing e-mails to a campus library computer. The e-mails, sent to the *Los Angeles Times*, purported to be written by someone involved in the attacks. The FBI maintains that the writer knew facts about the attacks that were not released to the public.

On the day of Cottrell's arrest, Caltech issued a statement to staff and the media that read in part: "We have been aware that the FBI has been pursuing its investigation of these incidents and the Institute has been cooperating fully. In doing so, we have been mindful of the rights of our student as well as our legal obligations. There should be no question, however, that these acts of vandalism are neither supported nor endorsed by Caltech and are directly contrary to our mission."

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KNI, from page 1

Institute's most renowned researchers is credited with the origin of the concept.

In 1959, Caltech physicist Richard Feynman gave a now-famous lecture titled "There's Plenty of Room at the Bottom," in which he mapped out possibilities for extremely small devices, consistent with the principles of quantum mechanics. Since that time, research at Caltech and other institutions has led to discoveries that are bringing about a realization of Feynman's vision.

In January 2000, President Bill Clinton visited Caltech and announced the launch of the "National Nanotechnology Initiative," which has since led to an upsurge of activity nationally. A number of universities and research institutions have embarked upon their own "nano" initiatives.

The KNI will involve many researchers, spanning five of Caltech's six academic divisions—biology; chemistry and chemical engineering; engineering and applied science; geological and planetary sciences; and physics, mathematics and astronomy. Its governing board consists of faculty drawn from this community. The KNI's facilities will include centralized nanofabrication clean rooms, a suite of "research incubation" laboratories for highly interactive, cross-disciplinary research projects; and offices and conference facilities.

The nanofabrication facilities will include a nanofluidics foundry, state-of-the-art nanolithography systems, nanofabrication processing facilities, and laboratories for metrology, imaging, and novel instrument development.

An external advisory board of scientists, members of the business community and funding agencies, and Caltech trustees will be appointed to provide guidance to the KNI's governing board.

Based in Oxnard, California, the Kavli Foundation was created in December 2000 by Fred Kavli to advance science for the benefit of humanity and to promote public understanding of and support for scientists and their work. The foundation focuses its efforts on the areas of cosmology, life sciences (emphasizing the nature and evolution of life and the human being), and nanotechnology (with initial emphasis on nanobiotechnology).

Fred Kavli is the founder, former chairman, and CEO of the Kavlico Corporation. Based in Moorpark, California, the company is one of the world's largest suppliers of sensors for aeronautics, automotive, and industrial applications. Kavli led the firm to prominence before selling it in 2001, and he subsequently established the Kavli Foundation and its sister organization, the Kavli Operating Institute, which supports research to benefit humanity.

For further information, visit the KNI website at <http://kni.caltech.edu>, or contact Professor Michael Roukes at roukes@caltech.edu.

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March 22–28, 2004

M T W T F S S

Monday, March 22

Quick Review for Electronic Theses

Sherman Fairchild Library, multimedia conference room, 11 a.m.—Caltech requires that theses be submitted in both paper and electronic versions. This presentation will offer a brief overview of techniques useful in the production and publication of electronic theses. The session will include tips on formatting, intellectual-property considerations, turning paper to pixels, creating PDFs, how to submit a thesis, and availability (who can see it and when) issues. Information: <http://library.caltech.edu/learning/default.htm>.

General Biology Seminar

119 Kerckhoff, 4 p.m.—“Stem Cells and Leukemia Stem Cells,” Irv Weissman, department of pathology, Stanford University.

Tuesday, March 23

Beckman Institute Seminar Series

Beckman Institute auditorium, 10:30 a.m. to noon—“Flow Cytometry and Fluorescence-Activated Cell Sorting at Caltech: Multiparameter Power,” Ellen Rothenberg, professor of biology and director of the Flow Cytometry / Cell Sorting Facility. Refreshments, 10 a.m. Information: 395-2791 or www.beckmaninstitute.caltech.edu/seminars200304.html.

Quick Review for Electronic Theses

Sherman Fairchild Library, multimedia conference room, 11 a.m.—Caltech requires that theses be submitted in both paper and electronic versions. This presentation will offer a brief overview of techniques useful in the production and publication of electronic theses. The session will include tips on formatting, intellectual-property considerations, turning paper to pixels, creating PDFs, how to submit a thesis, and availability (who can see it and when) issues. Information: <http://library.caltech.edu/learning/default.htm>.

General Biology Seminar

234 Kerckhoff, 4 p.m.—“Stem Cells and Allorecognition in Chordates and Protochordates,” Irv Weissman, department of pathology, Stanford University.

Wednesday, March 24

Quick Review for Electronic Theses

Sherman Fairchild Library, multimedia conference room, 11 a.m.—Caltech requires that theses be submitted in both paper and electronic versions. This presentation will offer a brief overview of techniques useful in the production and publication of electronic theses. The session will include tips on formatting, intellectual-property considerations, turning paper to pixels, creating PDFs, how to submit a thesis, and availability (who can see it and when) issues. Information: <http://library.caltech.edu/learning/default.htm>.

The Beckman pH Meter: Landmark Celebration

Beckman Institute auditorium, 2 to 4 p.m.—The development and impact of the Beckman pH meter is being recognized by the American Chemical Society as a National Historic Chemical Landmark. Major speakers will include John Roberts, Institute Professor of Chemistry, Emeritus, Caltech, and Gerald Gallwas of the Beckman Foundation and Arnold Thackray of the Chemical Heritage Foundation. A reception will follow the ceremony.

Organic Chemistry Seminar

147 Noyes, Sturdivant Lecture Hall, 4 p.m.—“Designer Solvents for Organic Synthesis and Catalysis,” Professor Istvan T. Horvath, department of chemical technology and environmental chemistry, Eotvos University, Hungary.

Thursday, March 25

Geometry and Topology Seminar

257 Sloan, 10:30 a.m.—“Rapid Decay and Relatively Hyperbolic Groups,” Professor Indira Chatterji, department of mathematics, Cornell. Information: www.its.caltech.edu/~manning/topseminar.htm.

Caltech Library System Presents: Patents

Sherman Fairchild Library, multimedia conference room, 2 to 3:30 p.m.—This session will provide a quick review of the patenting process, searching for patents and patent equivalents, legal status issues, and current awareness techniques. Information: <http://library.caltech.edu/learning/default.htm>.

Biochemistry Seminar

147 Noyes, Sturdivant Lecture Hall, 4 p.m.—“Flash-Freezing in Structural Biology: It’s Cool but Is It Kosher?”, Professor Brian Matthews, Howard Hughes Medical Institute and Institute of Molecular Biology, University of Oregon.

Friday, March 26

Thesis Seminar

100 Broad Center, 10 a.m.—“Fundamental Aspects of DNA-Mediated Charge Transport,” Tashica Williams, graduate student in chemistry, Caltech.

March 29–April 4, 2004

M T W T F S S

Monday, March 29

Information Sciences and Technology Seminar
070 Moore, 2 p.m.—Topic to be announced. Amin Saberi, College of Computing, Georgia Institute of Technology. Information: <http://netlab.caltech.edu/seminar>.

Norman Davidson Lecture
119 Kerckhoff, 4 p.m.—Topic to be announced. Professor Michael Snyder, department of molecular, cellular, and developmental biology, Yale.

Geological and Planetary Sciences Seminar
155 Arms, Robert Sharp Lecture Hall, 4 p.m.—“Zircon as a Window into the Early History of the Earth,” Bruce Watson, professor of science, Rensselaer Polytechnic Institute.

High Energy Physics Seminar
469 Lauritsen, 4 p.m.—Topic to be announced. Zoltan Ligeti, Lawrence Berkeley National Laboratory. Information: www.theory.caltech.edu/people/helen/seminar1.html.

Tuesday, March 30

General Biology Seminar
119 Kerckhoff, 4 p.m.—Topic to be announced. Professor George Daley, department of biological chemistry and molecular pharmacology, Harvard Medical School.

Wednesday, March 31

Mathematical Physics Seminar
351 Sloan, noon—“Dynamics of Quasi-periodic Schrödinger Cocycles and Applications,” Artur Avila, CNRS–Laboratoire de Probabilités, Université Pierre et Marie Curie. Information: www.math.caltech.edu/events/mathphys.html.

Information Science and Technology Seminar
74 Jorgensen, 4 p.m.—Topic to be announced. Professor Eddie Kohler, computer science, UCLA.

Plasma Seminar
125 Steele, 4 p.m.—“New Results from Solar Prominence Simulation Experiment,” Shreekrishna Tripathi, post-doctoral scholar in engineering and applied science, Caltech.

Earnest C. Watson Lecture Series
Beckman Auditorium, 8 p.m.—“Team Caltech: Racing to Win the DARPA Grand Challenge,” Richard Murray, professor of mechanical engineering, Caltech. Caltech undergraduates have worked since the spring of 2003 to modify a 1996 Chevy Tahoe named “Bob” to compete in the March 13th competition. In this talk, Murray will describe Team Caltech’s efforts and the results of the competition.

Thursday, April 1

Quick Overview of Information Resources
Sherman Fairchild Library, multimedia conference room, 2 to 3:30 p.m.—Learn the most effective ways to use library services and resources. This session is designed especially for graduate students, postdocs, and research staff, but all are welcome. No reservations are required. Information: <http://library.caltech.edu/learning/default.htm>.

Biophysics Lecture
153 Noyes, Sturdivant Lecture Hall, 4 p.m.—“Protein Interactions in Amyloids and Prions,” Professor David S. Eisenberg, department of chemistry and biochemistry, UCLA.

Chemical Engineering Series
106 Spalding Lab, Hartley Memorial Seminar Room, 4 p.m.—“Self-Assembled Silica Nanoparticles and the Growth Mechanisms of High-Silica Zeolites,” Professor Raul Lobo, department of chemical engineering, University of Delaware. Refreshments, 113 Spalding Lab, 3:30 p.m.

Physics Research Conference
201 E. Bridge, 4 p.m.—“Unveiling a Supermassive Black Hole at the Center of Our Galaxy,” Professor Andrea Ghez, department of physics and astronomy, UCLA. Refreshments, 114 E. Bridge, 3:45 p.m.

Friday, April 2

Condensed Matter Physics Seminar
107 Downs Lab, noon—Topic to be announced. Professor Stephan Haas, department of physics and astronomy, USC.

Fluid Mechanics Seminar
101 Guggenheim Lab, Lees-Kubota Lecture Hall, 3 p.m.—Topic to be announced. Ralf Deiterding, post-doctoral scholar, Center for Advanced Computing Research, Caltech. Information: www.galcit.caltech.edu/Seminars/Fluids/CurrentFluids/index.html.

William and Myrtle Harris Distinguished Lecture in Science and Civilization
25 Baxter, 4 p.m.—“Human Dissection and Vivisection: Science, Religion, and Politics in Ancient Greece,” Heinrich von Staden, professor of classics and history of science, Institute for Advanced Study, Princeton University. Refreshments.

Inorganic-Organometallics Seminar
151 Crellin, 4 p.m.—“The Coordination Chemistry of “[BP₃]NiX” Platforms,” Cora MacBeth, senior research fellow in chemistry, Caltech.

CampusEvents

Monday, March 22

Baby Furniture and Household Equipment
234 S. Catalina, 10 a.m. to 12:30 p.m.—Loans of kitchen and household necessities and baby furniture are made to members of the Caltech community. Information: 584-9773. Available today by appointment only; call 395-6174.

Tuesday, March 23

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

Caltech Tai Chi Club

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

Wednesday, March 24

Baby Furniture and Household Equipment
234 S. Catalina, 10 a.m. to 12:30 p.m.—Loans of kitchen and household necessities and baby furniture are made to members of the Caltech community. Information: 584-9773.

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.

Women's Tennis

vs. MIT, 3 p.m.

Banff Mountain Film Festival World Tour
Ramo Auditorium, 7:30 p.m.—Get a taste of mountain adventure from around the world. The 2004 lineup includes films from Canada, the United States, Poland, Norway, Slovakia, the United Kingdom, Europe, and Australia. Sponsored by the Caltech Alpine Club and the Outland Mountain Shop. Fee: \$10 in advance; \$12 at the door; \$5 for students. 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.

Thursday, March 25

Women's Tennis

vs. Cornell College, 9 a.m.; vs. University of Puget Sound, noon.

Caltech Architectural Tours

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

Men's Tennis

vs. University of Puget Sound, noon.

Baseball

at Cal State Monterey Bay, 2 p.m.

Friday, March 26

Caltech Tai Chi Club

See Tuesday, March 23, for details.

Saturday, March 27

Track and Field

Northridge Invitational, at Cal State Northridge, 10 a.m.

Baseball

at Simpson College, doubleheader, 11 a.m.

Women's Tennis

at Whitworth College, 2 p.m.

Men's Tennis

vs. Cal Lutheran University, 3 p.m.

Steve Gillette and Cindy Mangsen

Beckman Institute auditorium, 8 p.m.—Gillette and Mangsen are songwriters, vocalists, and musicians who use their low-key charm and humor to blend together original contemporary songs with traditional pieces. They perform at Caltech every other year. Tickets and information: 395-4652, 1 (888) 2CALTECH, or events@caltech.edu. Individuals with a disability: 395-4688 (voice) or 395-3700 (TDD). Visit the Folk Music Society at http://www.folkmusic.caltech.edu.

Sunday, March 28

Women's Tennis

at Mills College, 11 a.m.

Skeptics Society Lecture

Baxter Lecture Hall, 2 p.m.—"Upright: The Evolutionary Key to Becoming Human," Dr. Craig Stanford, codirector, Jane Goodall Primate Research Center, and professor of biological anthropology, USC. Donation is \$8 for nonmembers and non-Caltech students. Free to the Caltech/JPL community. Tickets and information: 794-3119 or skepticmag@aol.com. Visit the Skeptics Society at www.skeptic.com. Book signing to follow the lecture.

Monday, March 29

Baby Furniture and Household Equipment

See Monday, March 22, for details.

Tuesday, March 30

Preschool Playgroup

See Tuesday, March 23, for details.

TheatreworksUSA: Ramona Quimby

Beckman Auditorium, 10 a.m. and noon—Ramona, an exasperating but lovable third-grader, has delighted young readers for the last 40 years through the books of Newbery Award-winning writer Beverly Cleary. Now, she comes to life in this presentation by TheatreworksUSA, America's largest and most prolific professional not-for-profit theater for young and family audiences. Tickets: TheatreworksUSA, (800) 497-5007.

Caltech Tai Chi Club

See Tuesday, March 23, for details.

Wednesday, March 31

Baby Furniture and Household Equipment

See Wednesday, March 24, for details.

Wednesdays in the Park

See Wednesday, March 24, for details.

Bloodborne Pathogens

118 Keith Spalding Building, 3 p.m.—This course, designed for individuals who are exposed to blood or other potentially infectious agents, presents information on preventing exposure to bloodborne pathogens, including hepatitis B and human immunodeficiency viruses. Requires registration; call 395-6727 or e-mail safety.training@caltech.edu.

Friday, April 2

Women's Club Welcoming Coffee

Winnett lounge, 9 to 10:30 a.m.—An opportunity to meet new friends, welcome newcomers, and learn more about the Caltech Women's Club. Information: Carol Andersen, (818) 790-8175 or carol@vis.caltech.edu.

Track and Field

CA/NV State Meet, at Fresno State, 10 a.m.

Men's Tennis

at Claremont-Mudd-Scripps, 2 p.m.

Baseball

at Pomona-Pitzer, 2:30 p.m.

Caltech Tai Chi Club

See Tuesday, March 23, for details.

Acting Company in Murder by Poe

Beckman Auditorium, 8 p.m.—*Murder By Poe* mixes four Edgar Allan Poe tales into a psychological and supernatural brew. This performance honors Jerry Willis, Caltech Public Events' founding director. It runs approximately 80 minutes with no intermission. Tickets and information: 395-4652, 1 (888) 2CALTECH, or events@caltech.edu. Individuals with a disability: 395-4688 (voice) or 395-3700 (TDD). Visit Public Events at www.events.caltech.edu.

Saturday, April 3

Track and Field

CA/NV State Meet, at Cal Poly San Luis Obispo, 10 a.m. Continues Sunday.

Women's Tennis

at Cal Lutheran University, 10:30 a.m.

Baseball

vs. Pomona-Pitzer, at Pasadena High School, doubleheader, 11 a.m.

All-Mozart Concert

Ramo Auditorium, 8 p.m.—The program will feature the Flute Concerto no. 1 in G Major, K. 313; the Quartet for Piano and Strings no. 1 in G Minor, K. 478; the Ave Verum Corpus in D Major, K. 618; and "Vesperae Solennes de Confessore," K. 339. Admission is free.

Sunday, April 4

Men's Tennis

Alumni/Faculty Match, 2 p.m.

Women's Tennis

Alumni/Faculty Match, 2 p.m.

All-Mozart Concert

Altadena Community Church, 943 E. Altadena Drive, Altadena, 3 p.m.—The program will feature the Flute Concerto no. 1 in G Major, K. 313; the Quartet for Piano and Strings no. 1 in G Minor, K. 478; the Ave Verum Corpus in D Major, K. 618; and "Vesperae Solennes de Confessore," K. 339. Admission is free.

Coleman Chamber Concert

Beckman Auditorium, 3:30 p.m.—The Eroica Trio will perform works by Beethoven, Shostakovich, and Dvorák. 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.

Posing for Poe



Three members of the Acting Company cast devious gazes in the upcoming production of *Murder By Poe*, to be performed at Beckman Auditorium on Friday, April 2.

18 years of pure Mozart

Once again signaling the arrival of spring, Caltech student musicians will present the traditional and popular All-Mozart Concert, to take place on Saturday, April 3, at 8 p.m. in Ramo Auditorium. The performance will be repeated on Sunday, April 4, at 3:30 p.m. at the Altadena Community Church, 943 East Altadena Drive, at the corner of Lake Avenue. Both performances are free and open to the public.

Conducted by Donald Caldwell, the program will open with the Flute Concerto no. 1 in G Major, K. 313, performed by soloist Kirsten Welge '04 and a chamber orchestra. A foursome comprising alum Isaac See '03, violin; student Sean Hardesty '04, viola; graduate student John Keith, cello; and graduate student Victor Kam, piano, will perform the Quartet for Piano and Strings no. 1 in G Minor, K. 478. Lastly, the Caltech Chamber Singers and a chamber orchestra will present the composer's Ave Verum Corpus in D Major, K. 618, and "Vesperae Solennes de Confessore," K. 339.

According to Caldwell, the program will have something for everyone, with a range of genre and style, emotion and mood. "The concerto is a buoyant feast of melody and invention, despite Mozart's apparent dislike for the flute," he says. "The quartet, which was labeled unplayable by its critics, broods in G minor, the composer's selected key for drama and passion," but it "concludes brilliantly in G major."

He describes the choral selections as varying from Mozart's "sparkling choral declamation of the Psalm texts and the inclusion of one of his most truly sublime soprano solos" to "pure beauty of sound and emotion in the Ave Verum," which he dubs one of Mozart's "last and greatest miniatures."

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Rossman, from page 1

The citation also notes Rossman's part in introducing and funding field trips to such places as Alaska, Greece, Turkey, South Africa, and Brazil that would otherwise not be easily accessible to students, and that "'Best professor at Caltech,' or 'Best mentor at Caltech,' is a frequent distinction applied to George."

Made possible by an endowment from lone and Robert E. Paradise and contributions from Mr. and Mrs. William H. Hurt, the Feynman Prize—a cash award of \$3,500 and an equivalent raise in the winner's salary—is awarded each year to a professor who demonstrates "unusual ability, creativity, and innovation in undergraduate and graduate classroom or laboratory teaching."

Rossman, whose courses include Ge 10 (Frontiers in Geological and Planetary Sciences), Ge 114 (Mineralogy), and Ge 214 (Spectroscopy of Minerals), says, "Getting this prize is something I very much appreciate. I very much enjoy teaching and find the topic interesting, so it's easy to get excited." Adding to that excitement are Caltech's high-caliber students, who he says "are vibrant . . . never let you stagnate. They are very positively stimulating."

He finds minerals themselves "intrinsically interesting" because their study crosses such fields as chemistry, solid-state physics, materials science, industrial technology, and earth history, even "into the realm of anthropology, archaeology, and pigments in art. Minerals are intimately intertwined in almost all aspects of human history and science as we understand them."

Calling his fascination with minerals "an avocation as well as a profession," Rossman says it all began in grade school when a friend gave him some beautifully colored mineral samples. "Some were like glass," he recalls, "and I wondered, how could minerals be so clear and transparent? I asked my teachers questions, and needless to say, they didn't give very satisfactory answers." So he decided to seek answers on his own, and, still in grade school, he set up a lab in his parents' basement. There he learned to make his own chemicals, also receiving some donated by a local college, and used them to study his beloved minerals.

After receiving his BS from Wisconsin State University in 1966, he came to Caltech as a graduate student under Harry Gray, to whom Rossman gives "a lot of credit" in inspiring him to teach more creatively. "[Gray] put me into an interesting TA [teaching assistant] position of organizing and presenting demonstrations to the Chem 1 class. I would

watch him trying to get students excited about the field, and not just stuffing information into their brains."

In 1971, Rossman earned his PhD, joined the Caltech faculty as an instructor, and quickly became an assistant professor. He rose to associate professor in 1977 and full professor in 1983. Since 1999, he has served as academic officer for the division, and in 2001 he was awarded the Dana Medal by the Mineralogical Society of America.

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Astronomer J. Beverley Oke dies

Professor of Astronomy, Emeritus, John Beverley Oke, noted for the design and construction of astronomical instruments and for his work on various astrophysical phenomena, died Tuesday, March 2, at his home in Victoria, British Columbia. He was 75.

A native of Sault Sainte Marie, Ontario, Oke earned his bachelor's and master's degrees from the University of Toronto in 1949 and 1950, respectively, and his doctorate from Princeton University in 1953. A Caltech faculty member from 1958 until his retirement in 1992, he also served as associate director of the Hale Observatories from 1970 to 1978.

Oke's scientific work covered wide areas of astronomical spectroscopy, from white dwarfs to active galactic nuclei, clusters of galaxies, and supernovae. However, he is perhaps best known for devising and building unique instruments for Caltech's Palomar Observatory and the 200-inch Hale Telescope, and later for the Keck Observatory.

His major accomplishments at Palomar include the multichannel spectrophotometer, the double spectrograph, and the 4-shooter camera, which he built with James Gunn and James Westphal. At the Keck Observatory he was the principal investigator, with Caltech astronomy professor Judith Cohen, for the low-resolution imaging spectrograph, which produced many of the 10-meter telescopes' early successes.

In retirement, Oke continued to work at the Dominion Astrophysical Observatory, in Victoria, and was designing an imaging spectrometer for the proposed Thirty-Meter Telescope when he died. He is survived by his wife, Nancy; two sons; and two daughters.

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Revel, from page 1

and to me personally," she added. "Since my arrival on campus, I have greatly appreciated and relied on his wisdom, experience, and knowledge of Caltech."

Revel says, "It's been a lot of fun to be in the position and interacting with students in a way I never had a chance to as a professor. Then, I had my little bailiwick—teaching, having a few students in my lab. But as dean, I got to know many different students, coming from different houses and with different problems. It has been very interesting and enjoyable."

"I hope I was able to help a few of them. That's a good feeling to have." He adds with a chuckle, "I also got to learn more about Caltech—after 30 years, that's not such a bad thing." In addition, early on in his term he began writing a weekly column for the *California Tech* student newspaper that he very much enjoyed, and that became one of the many things students appreciated about him.

Galen Loram '05, president of the Associated Students of the California Institute of Technology, recently mourned Revel's imminent departure in his own *Tech* column. Lauding the dean's dedication to what is supposed to be a part-time job, he noted that the search committee for Revel's replacement had "a big pair of shoes to fill."

For Revel, however, after serving as dean for almost eight years, "A certain time comes when you decide there are other things you need to do." In this case, he is excited about returning to his research, which has largely remained on hold while he devoted his time and energy to administrative duties.

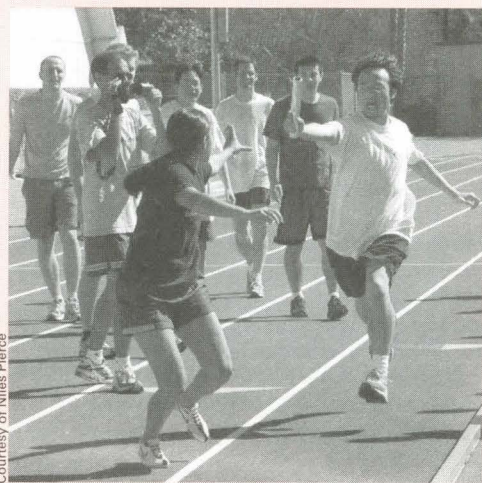
A cell biologist, Revel specializes in using the electron microscope and atomic force microscope to view molecular structures. In particular, he would like to return to studying what is known as the "gap junction," a specialized structure between two cells that lie so close together, they look as though they are touching. The structure is referred to as a gap junction—a term he considers "an oxymoron"—because of the fact that, when two such cells are viewed under an electron microscope, they appear to have a gap between them. However, the structure is actually the means by which small molecules pass from one cell to the other, and it plays a crucial role in such biological functions as keeping the heart synchronized. Revel wants to look at the most primitive multicellular organisms, such as slime mold, to try to capture the earliest appearance of the gap junction in their cells.

Revel earned his BSc from the University of Strasbourg, in his native France, in 1949, and his PhD from Harvard in 1957. He joined Caltech as a professor of biology in 1971, becoming Ruddock Professor seven years later.

Marathon men and women



Athenaeum cook Frank Tang hands out water to runners at mile 21 of the Los Angeles Marathon on Sunday, March 7. Captained by Athenaeum food and beverage director Jorge Alvarado, who has staffed a water station for the past eight years, the nearly 70 Caltech and JPL volunteers also cheered on Ath general manager Crystal Thomas and staff member Jose Bejar, and JPL's Kamal Oudrhiri.



Meanwhile, back at the ranch, a group of 38 students, postdocs, staff, and faculty set a "world record" on the Caltech track in a relay against the L.A. Marathon elite runners. Beginning at the same time the marathoners left the starting line, the group averaged 67.2 seconds per lap for 105.5 laps, with a total time of 1:58:08—beating the marathon world record by more than five minutes. Pictured is Teddy Yu '04 handing off to Tamara Becher '04.

A search committee to name Revel's successor has been convened. Chaired by Professor John Hall, the committee comprises Professors Catherine Jurca, Ken Libbrecht, and David Stevenson; Barbara Green, associate dean; Candace Rypisi, director of the Women's Center; and undergraduates Elizabeth Felnagle, Michael Priolo, and Katherine Richardson. Students and other Caltech community members may contact any committee member with suggestions regarding the appointment.

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T E S S E T S T E S S E T S

The campus community biweekly
March 18, 2004, vol. 4, no. 6

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Published by the Office of Public Relations

California Institute of Technology
Pasadena, California 91125

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