

Caltech336

T E S S E N T I A L S T E S S E N T I A L S

The campus community biweekly

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A new, improved Dabney Hall



Jean Ensminger, chair of the Division of the Humanities and Social Sciences, speaks at the reception for the renovated Dabney Hall of the Humanities on September 17. The project, which President David Baltimore called the "first fruit" of Caltech's fund-raising campaign, restored details from architect Bertram Grosvenor Goodhue's original designs.



Paul Jennings returns as provost

A familiar face to many on campus, Paul Jennings begins his term as the new provost this term. It's a position he's familiar with, having been vice president and provost as well as professor and student during his 45-year association with the Institute.

A specialist in earthquake engineering, Jennings succeeds Steve Koonin, who served as provost from 1995 until earlier this year when he took a leave of absence from his faculty appointment to work in London as chief scientist of BP. Jennings was provost from 1989 to 1995.

"The faculty and staff of the Institute have made Missy and me feel quite welcome to be back, and that's very much appreciated," Jennings said recently in his Parsons-Gates office. "I've enjoyed working with old acquaintances. I'd lost touch with some of them, but now I'm working with them here again, and that's very enjoyable."

see *Provost*, page 6

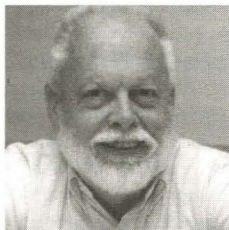
Caltech takes part in Tender Land festival

An exciting arts festival kicks off at more than a dozen Pasadena venues next month. "The Tender Land: A Festival of Art, History, Music, and Science" begins on Saturday, October 9 and Caltech will serve as a venue for events like the screening of high-definition films and as the site of two public art installations.

Encompassing exhibitions, sculptures, musical and theatrical performances, workshops, lectures, family events, and tours, the festival takes its title from an opera by the American composer Aaron Copland. The theme explores the relationship between humans and the environment, and how one influences, shapes, and interacts with the other. The word tender, as a description of the region that became Pasadena and its environs, implies fragility as well as gentleness.

Caltech's participation begins with "Gobo Gobo: Sounds of Nature," which features a screening of *La Mer*, an undersea tour of coral formations and a visit with the rich variety of flora and fauna that call the ocean home, and *Form of Forest*, *Color of Forest*, a trip to the Japanese island of Yakushima, a World Heritage Site blanketed with a forest of sacred *sugi*, or ancient Japanese cedars.

see *Tender Land*, page 6



Maverick scientist Westphal dies

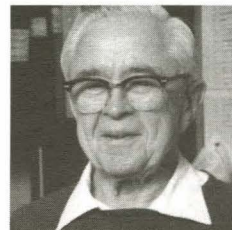
James A. Westphal, who parlayed a bachelor's degree into a major scientific career as a professor at Caltech, a leader of one of the original instrument teams on the Hubble Space Telescope, and the director of Palomar Observatory, died September 8 after a long illness. He was 74.

Westphal earned his bachelor's degree in physics from the University of Tulsa in 1954, a year after he went to work as geophysical research group leader at Sinclair Research Lab in Tulsa. In 1961 he took a job as senior engineer at Caltech and remained at the Institute for the remainder of his career. He was named associate professor of planetary science in 1971 and professor in 1976.

Westphal first got into the business of scientific instrumentation right after high school, when he did well-logging in Texas and Gulf Coast oil fields. In fact, his work at Sinclair Research Labs involved devising unorthodox methods for oil discovery, and one of his discoveries first brought him to the attention of Caltech professor Hewitt Dix, who is often considered the father of exploration geophysics.

Westphal arrived at Caltech initially on a four-month leave of absence to devise a data processor for Dix, but never left. He discovered that the academic freedom individual professors enjoy was amenable to his own predilections, so he soon began branching out to other areas of scientific investigation at Caltech. Before long, he had teamed up with Bruce Murray (later to

see *Westphal*, page 6



Memorial for Ed Lewis slated

He was small of stature but a scientific giant. Edward Lewis—a Nobel laureate, a Caltech alum, and the Thomas Hunt Morgan Professor of Biology, Emeritus—will be honored at a memorial service on Monday, October 25, at 2 p.m. in Ramo Auditorium. All Caltech-JPL community members are invited to attend.

Lewis, who shared the 1995 Nobel Prize in physiology or medicine for his groundbreaking studies of how genes regulate the development of specific body regions, died Wednesday, July 21, at Huntington Hospital after a long battle with cancer. He was 86.

A faculty member since 1946 and a revered campus figure, Lewis spent his life studying fruit fly genetics. His work had profound implications for understanding the genetic regulation of human development. In a recent book, author and longtime collaborator Howard Lipshitz described Lewis's research as "the bridge" linking early 20th-century genetics experiments with the revolutionary approaches of the century's end. Lipshitz also lauded Lewis's lesser-known work in understanding radiation and cancer, and the related issue of nuclear weapons testing policy.

see *Lewis*, page 6

336 survey: The people speak

When we asked for input, we didn't foresee the tidal wave of more than 800 replies. We're grateful for your time and comments in taking the *Caltech 336* survey.

To begin, a disclaimer: Each issue of 336 is a balancing act. Our charge is to present news for a diverse audience of staff, faculty, postdocs, and grad students—all with differing interests—in a limited amount of space. While we try to give 336 the widest appeal possible, we won't be able to please everyone all the time.

That said, there's always room for improvement, and that's where your feedback comes in. Comments ranged from encouraging to constructive to unhelpful. "No idea what 336 is." Okay, we need to publicize 336 more and work on our distribution. "It's boring most of the time!"—with no other details. Well, thanks, but if you don't tell us what would be interesting, how are we supposed to know?

The most requested articles were top stories/campus news and profiles of people or

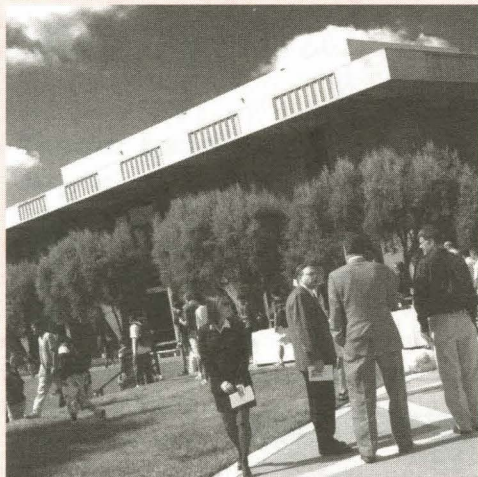
see *Survey*, page 6

A week of memorials

Two more campus greats will also be remembered during the last week of October. A celebration will be held Tuesday the 26th for Robert Sharp, the Sharp Professor of Geology, Emeritus, who died May 25 at age 92. The campus community is invited to the event, which begins at 4 p.m. at the Athenaeum, followed by a reception. Please RSVP to Marcia Hudson at marcia@gps.caltech.edu or ext. 6111.

On Thursday, October 28, at 4 p.m., Arnold Beckman will be honored in Beckman Auditorium—one of several campus buildings bearing his name. A Caltech alum (PhD '28), a former professor, a chairman emeritus of the Board of Trustees, and an Institute benefactor, Beckman died May 18 at age 104. All campus community members are invited to attend.

NewsBriefs



Caltech welcomed new undergraduates, graduate students, and postdoctoral scholars at the second annual Convocation, held in Beckman Auditorium on September 20. Professor Harry Gray, Provost Paul Jennings, Archivist Judy Goodstein, and President David Baltimore addressed the assembled students and staff members.

Personals

Welcome to Caltech

May

Dawn Gelino, science and community outreach scientist, Michelson Science Center; **Karina Lopez**, station attendant, Athenaeum.

June

Timothy Bateman, bus person, Athenaeum; **Ann Brooks**, guest relations coordinator, Athenaeum; **William Burell**, student recruiting coordinator, Career Development Center; **Sara Cina**, laboratory assistant, geology and geochemistry; **Galen Hall**, bus person, Athenaeum; **Kesnel Jean**, custodian, Physical Plant; **Christine Kivork**, research assistant I, biology; **Isidro Nunez**, custodian, Physical Plant; **Monica Saldarriaga**, administrative assistant, Seismological Laboratory; **Angelica Santana**, benefits technical lead, Human Resources; **Anne Wyman**, research technician/assistant, biology; **Serguei Zybine**, scientific researcher, chemistry and chemical engineering.

July

Rana Adhikari, postdoctoral scholar in physics; **Elliot Andrews**, project manager, control and dynamical systems; postdoctoral scholars **Gail Arnold**, in geobiology, and **Idit Avrahami**, in aeronautics and bioengineering; **Gregory Baker**, visitor in physics; **Denis Barkats**, postdoctoral scholar in physics; **Gail Belansky**, assistant to the director of principal and major gifts, Development and Alumni Relations; postdoctoral scholars **Edo Berger**, in astrophysics, and **Kumar Bobba**, in control and dynamical systems and bioengineering; **Olga Breceda**, research support assistant, biology; **Philippe Brieu**, systems administrator, Information Technology Services; postdoctoral scholars **Avery Broderick**, in physics, **Ai Chen**, in biology, and **Jinyu Chen** and **Hui-Yun Cheng**, both in chemistry; **Lee Coleman**, assistant director of training director, Counseling Center; **Juana Cortez**, housing custodian, Physical Plant; **Tracy Davis**, user application consultant, Administrative Technology Center; **Ralf Deiterding**, senior postdoctoral scholar in applied and computational mathematics and computer science; **Wei-qiao Deng**, research assistant, chemistry and chemical engineering; **Jeffrey Drake**, heating and ventilation mechanic, and **Shane Eagen**, electrician, both in Physical Plant; **Karl Eek**, postdoctoral scholar in geobiology; **Hollis Evans**, publications specialist, chemistry and chemical engineering; **Danielle Fontaine**, resident associate, Campus Life; postdoctoral scholars **Nuh Gedik**, in chemistry, and **Anthony Giannetti**, in biology; **Matthew James Graham**, National Virtual Observatory research scientist, Center for Advanced Computing Research; **James Harrington**, postdoctoral scholar in theoretical physics; **Jill Hitselberger**, staff psychologist, Counseling Center; postdoctoral scholars **Po-Ssu Huang**, in biology, and **Matthew Hunt**, in astronomy; **Dale Ingram**, education and outreach coordinator, Laser Interferometer Gravitational-Wave Observatory; **Terrance James**, shipping/receiving-stockroom clerk, chemistry and chemical engineering; **Cheng Jin**, senior postdoctoral scholar in computer science; postdoctoral scholars **Anxiao Jiang**, in

electrical engineering, and **David Kaplan**, in astronomy; **Bonnie Khang-Keating**, project manager, Architectural and Engineering Services; visitors **Ung-Jin Kim**, in biology, and **Joachim Krieger**, in mathematics; **Erika Lee**, research assistant, Caltech Precollege Science Initiative; **Shao Yi Lee**, research aide, planetary sciences; **Wonchul Lee**, postdoctoral scholar in chemistry; **Zailo Leite**, systems administrator, Information Technology Services; postdoctoral scholars **Melvin Leok**, in control and dynamical systems, **Douglas Leonard**, in astronomy, and **Jiao Lin**, in materials science; **Rowena Lohman**, assistant scientist, Seismological Laboratory; **Dagny Looper**, research assistant II, Infrared Processing and Analysis Center; **Carlos Lourenco de Serpa Soares**, postdoctoral scholar in chemistry; **Andrea Manzo**, research technician assistant, biology; **Maria De Lourdes Mata**, housing custodian, Physical Plant; **Taturs Mayberry**, assistant material handler, Caltech Wired; **Thomas McCord**, visitor in planetary science; **Jason McKeever**, postdoctoral scholar in physics; **Michael McKerns**, scientist/software engineer, materials science; **Joseph Mrozinsky**, resident associate, Campus Life; visitors **Adam Muzzin**, in physics, and **Ana Nunez Sanchez**, in chemistry; **Paul O'Gorman**, postdoctoral scholar in environmental science and engineering; **Aracely Ojeda**, guest relations coordinator, Athenaeum; **Paola Oliveri**, scientific research, senior, biology; postdoctoral scholars **Daniel Paik**, in chemistry, and **Robert Peters**, in biology; **Jiong Qiu**, visitor in physics; postdoctoral scholars **Ramanathan Sankaran**, in chemical engineering, **Jeffrey Scruggs**, in applied mechanics, and **Kirill Shtengel**, in physics; **Martha Simms**, server, Athenaeum; **Austin Skidmore**, senior postdoctoral scholar in astronomy; postdoctoral scholars **Ian Spielman**, in physics, **Sean Spillane**, in applied physics, and **David Sprinzak**, in biology; **Rufin VanRullen**, visitor in biology; **Sergiy Vasylyevych**, postdoctoral scholar in control and dynamical systems; **Estella Venegas**, senior project accountant, Cost Studies and Project Accounting; postdoctoral scholars **Guodong Wang**, in physics, **Naoki Yamamoto**, in control and dynamical systems, **Qiang Yang**, in aeronautics, and **Tomoyuki Yoshie**, in electrical engineering.

August

Postdoctoral scholars **Vikas Agrawal**, in biology, **Markus Buehler**, in chemistry, and **Calum Chisholm**, in materials science; **Tuyen Dang**, grant manager, chemistry and chemical engineering; **Jamila Dudley**, assistant director of admissions, Undergraduate Admissions Office; **Jie Gao**, postdoctoral scholar in the Center for the Mathematics of Information; **Abel Gonzalez**, assistant laboratory technician, biology; **Andrew Hawkins**, postdoctoral scholar in environmental science and engineering; **Martha House**, visitor in geology; **Qi (Stephanie) Huang**, research technician assistant, biology; **Sanja Ilic**, senior administrative secretary, humanities and social sciences; **Eric Johnson**, postdoctoral scholar in chemistry; **Yashar Kalani**, scientific researcher, chemistry and chemical engineering; **Jason Kaufman**, postdoctoral scholar in biology; **Tiffanie Love**, assistant director of admissions, Undergraduate Admissions Office; **Suman Machinani**, research technician/assistant, biology; **Victor Mendez**, security officer, Campus Security and Parking; **Yasushi Mino**, senior postdoctoral scholar in physics; **Jennifer Padilla**, postdoctoral scholar in applied and computational mathematics; **Gabriele Peters**, visitor in electrical engineering; **Sophie Ricci**, Caltech postdoctoral scholar in JPL's ocean science research element; **Reed Riddle**, postdoctoral scholar in astronomy; **Dominic Rizzo**, research staff engineer, computer sciences; **Ze'ev Rosenkranz**, archival researcher, humanities and social sciences; visitors **Al Seckel**, in biology, **Kentaro Somiya**, in physics, **Tomomi Tanaka**, in economics, and **Lydia Taylor**, in geophysics; **Jian Yuan Thum**, research technician, environmental sciences; **Baijun Tian**, associate scientist, planetary sciences; **Josh Willis**, Caltech postdoctoral scholar in JPL's ocean sciences element, earth sciences section; **Zanxian Xia**, staff scientist, biology; **Lexing Ying**, postdoctoral scholar in applied and computational mathematics.

Victoria Orphan joined Caltech effective August 4 as an assistant professor of geobiology. Her expertise is in the field of molecular evolutionary biology, and her appointment is expected to strengthen the Institute's geobiology program and to stimulate collaborations within and between the divisions of biology, geological and planetary sciences, and engineering and applied science. She received her BA in 1994 and her PhD in 2001, both from UC Santa Barbara.

New positions

Arden Albee, professor of geology and planetary science, emeritus, and chair of the Athenaeum House Committee, has been named interim Athenaeum general manager, a position he has held previously. He replaces general manager Crystal Thomas, who recently resigned. Albee joined Caltech's faculty in 1960, and has also served as academic officer for geological and planetary sciences, 1971–79; chief scientist at JPL, 1979–84; and dean of graduate studies, 1984–2000.

Fred Culick, Hayman Professor of Mechanical Engineering and professor of jet propulsion, became emeritus on June 1, after 43 years at Caltech. He received all of his degrees from MIT, including his PhD in 1961, and joined Caltech that same year as a research fellow in jet propulsion. He was appointed assistant professor in 1963 and professor in 1971 and was named Hayman Professor in 1997.

Federico Echenique has been appointed an assistant professor of economics, effective June 1. A theorist whose primary work has been in the area of strategic complementaries, he received his master's degree from Universidad de la Republica, Uruguay, in 1995 and his PhD from UC Berkeley in 2000. He joined Caltech as an instructor in 2002.

Ken Farley, Keck Foundation Professor of Geochemistry, has been named chair of geological and planetary sciences, effective September 1. He joined Caltech in 1993 as an assistant professor, was promoted to professor in 1998, and was named Keck Foundation Professor in 2003. He received his BS from Yale in 1986 and his PhD from UC San Diego in 1991.

Wilfred Iwan became professor of applied mechanics, emeritus, on July 1. He received all of his degrees from Caltech, including his PhD in 1961, and he joined the Institute's faculty as an assistant professor in 1964, becoming professor in 1972. He served as executive officer for civil engineering and applied mechanics from 1980 to 1986, and continues to serve as director of the Earthquake Engineering Research Laboratory.

Wolfgang Knauss, von Kármán Professor of Aeronautics and Applied Mechanics, became emeritus on July 1. He received all of his degrees from Caltech, including his PhD in 1963, and joined Caltech that year as a research fellow in aeronautics. He became assistant professor in 1965 and professor in 1978, was appointed professor of aeronautics and applied mechanics in 1982, and was named von Kármán Professor in 2001.

Charles Steidel, Dubridge Professor of Astronomy, has been named executive officer for astronomy, effective August 15. He received his PhD from Caltech in 1990 and joined the Institute in 1995 as an assistant professor, becoming professor in 1998 and Dubridge Professor this year. He received his bachelor's degree from Princeton in 1984.

Retirements

George Krause, a member of the maintenance-services staff for faculty housing, retired on June 18, after 14 years at Caltech.

Cesar Labarca retired on July 30. A member of the professional staff in biology, he had worked at Caltech for 18 years.

John Racs will retire on September 30 after 41 years at Caltech. He is a senior research assistant in biology.

Susan Shaar retired on September 3 after 23 years at Caltech. She provided administrative support in chemistry.

Maggie van Genderen, a member of the support staff for business and finance, retired on July 9. She had worked at Caltech for 32 years.

Deaths

Ernest Hugg, a former senior engineer with Physical Plant, died on March 5, 1998; he was 90. He had retired from Caltech in 1975, after 31 years at the Institute. A graduate of Caltech, he received his BS in 1929 and his MS in 1930, both in civil engineering.

Peter Snow, director of the Beckman Institute's protein expression facility, died on August 4 in a bicycling accident while vacationing in Maine; he was 51. A professor at the State University of New York at Albany prior to joining Caltech, he received his bachelor's degree in chemistry and biology from Bates College and his PhD in immunology from Harvard Medical School. An avid bicyclist, he was, according to his family, "in a place he loved doing a sport he loved" at the time of the accident. He is survived by his mother, Catherine; a sister, Susan Clark; and a brother, Timothy.

Elbert to fill in as VP

Art Elbert has been named as acting vice president for business and finance, effective September 15, President David Baltimore announced in an e-mail to the Caltech community.

Elbert is assuming the role formerly held by Al Horvath, who accepted a position at Columbia University, while a committee led by Provost Paul Jennings seeks a new vice president. The appointment was made "to ensure that the responsibilities of this key office are properly covered during this interim period and to enable the search process to proceed at an appropriate pace," Baltimore said, noting that "the complex nature of this position" and its significant role in Institute life will be reflected by a deliberate and thoughtful search.

Elbert joined Caltech in 2002 in the new position of associate vice president for campus planning, bringing with him 30 years of experience in university administration. Most recently he had been vice president for administration and finance at Cal State Northridge, where he led campus reconstruction efforts following the 1994 earthquake. "Here at Caltech Art's efforts have brought a new level of discipline and efficiency to our capital-planning process and the essential services that support all our activities on the campus," Baltimore said.

Elbert holds a PhD in educational administration from Northwestern University, an MA in industrial psychology from Bowling Green State University, and a BA in psychology from the University of Dayton.

Change in the air at Student Affairs

Vice President for Student Affairs Margo Marshak has announced staffing changes that have occurred during the summer within Student Affairs.

With the recent departure of Timothy Downes, Mark Harriman is serving as the interim director of athletics, physical education, and recreation. Because Downes also served as interim assistant vice president for student affairs, Stan Borodinsky, chief administrator of student affairs, has agreed to oversee Athletics and Performing and Creative Arts. A 30-year Caltech employee, Borodinsky had worked closely with the assistant vice president over the last five years in administering these departments. In addition to his new responsibilities, he oversees Student Affairs' budgets, personnel, and computer support services.

Also as a result of Downes's departure, Miriam Feldblum has agreed, on an interim basis, to coordinate several offices under the umbrella of academic support services. Now reporting to her will be the Health and Counseling Centers, Women's Center, Career Development Center, and Office of Fellowships Advising and Study Abroad. Feldblum is Student Affairs' senior director for academic support, projects, and planning, as well as special assistant to President Baltimore and a faculty associate and lecturer in the humanities.

Interim Director of Minority Student Education (formerly Minority Student Affairs) Brandi Jones has been named director. In this capacity, she provides leadership to create and sustain a supportive campus environment for minority undergraduate and graduate students, including programs to improve retention

September 27–October 10, 2004

S E P T E M B E R O C T O B E R

Monday, September 27

Geological and Planetary Sciences Seminar

Topic to be announced. Michael Brown, associate professor of planetary astronomy, Caltech.

Tuesday, September 28

Thesis Seminar

106 Spalding Lab, Hartley Memorial Seminar Room, 2 p.m.—“Semiflexible Polymers: Fundamental Theory and Applications in DNA Packaging,” Andrew Spakowitz, graduate student in chemical engineering, Caltech.

Carnegie Observatories Colloquium Series

William T. Golden Auditorium, 813 Santa Barbara Street, 3:30 to 5 p.m.—“First Science from the Submillimeter Array,” Paul Ho, Harvard-Smithsonian Center for Astrophysics. Refreshments.

General Biology Seminar

119 Kerckhoff, 4 p.m.—“Unique and Overlapping Functions of BMP Antagonists in Vertebrate Development,” Richard Harland, professor of genetics and development, department of molecular and cell biology, UC Berkeley.

Wednesday, September 29

Environmental Science and Engineering Seminar

142 Keck, 3:40 to 5 p.m.—“Agricultural Chemical Transport along a Short Flow Path, Merced River Basin, California,” Joseph Domagalski, hydrologist, Water Resources Division, U.S. Geological Survey. Information: www.esse.caltech.edu/seminars/index.html.

Thursday, September 30

Physics Research Conference

201 E. Bridge, 4 p.m.—“Understanding the *Columbia* Shuttle Accident,” Douglas Osheroff, J. G. Jackson and C. J. Wood Professor of Physics, Stanford. Information: www.pma.caltech.edu/~physcoll/PhysColl.html.

Friday, October 1

Ulric B. and Evelyn L. Bray Seminar

25 Baxter, 4 p.m.—Topic to be announced. Professor Whitney Newey, economics department, MIT. Refreshments.

Inorganic-Organometallics Seminar

151 Crellin, 4 p.m.—“Kinetic Resolution of Chiral α -Olefins Using Ziegler-Natta Polymerization Catalysts: Chain End Control vs. Enantiomorphic Site Control,” Jeffery Byers, graduate student in chemistry, Caltech.

Saturday, October 2

Third Annual Merck/Caltech Symposium on Organic Synthesis

22 Gates Annex, 10 a.m.—“Development and Applications of ‘Open-Flask’ Transition Metal Catalysts,” Professor Dean Toste, department of chemistry, UC Berkeley. Refreshments.

Third Annual Merck/Caltech Symposium on Organic Synthesis

22 Gates Annex, 11 a.m.—“Directed Evolution of Enantioselective Enzymes,” Professor Manfred Reetz, Max-Planck-Institut für Kohlenforschung, Mulheim. Refreshments.

Third Annual Merck/Caltech Symposium on Organic Synthesis

22 Gates Annex, 2 p.m.—“New Chemical Approaches for Mapping Cell Signaling Pathways,” Professor Kevan Shokat, department of chemistry, UC Berkeley and UC San Francisco. Refreshments.

Third Annual Merck/Caltech Symposium on Organic Synthesis

22 Gates Annex, 3 p.m.—“The Alkaloid Reserpine: Problems and Progress in the Search for Specificity in Total Synthesis,” Professor Gilbert Stork, department of chemistry, Columbia University. Refreshments.

Monday, October 4

Quick Overview of Information Resources

Sherman Fairchild Library, multimedia conference room, noon to 1:30 p.m.—Learn how to use library services and resources. This session is designed especially for graduate students, postdocs, and research staff, but all are welcome. This class is held on a walk-in basis.

Geological and Planetary Sciences Seminar

155 Arms, Robert Sharp Lecture Hall, 4 p.m.—“Mantle Melting as a Function of Water Content at Subduction Zones,” Katherine Kelley, postdoctoral fellow, department of terrestrial magnetism, Carnegie Institution of Washington.

Inorganic-Electrochemistry Seminar

147 Noyes, Sturdivant Lecture Hall, 4 p.m.—“Diluted Magnetic Semiconductors: From Nanocrystal Synthesis to Ferromagnetism,” Professor Daniel Gamelin, department of chemistry, University of Washington.

Tuesday, October 5

Carnegie Observatories Colloquium Series

William T. Golden Auditorium, 813 Santa Barbara Street, 3:30 to 5 p.m.—“Constraints on Dark Energy, and Other Novel Science, Made Possible by the DEEP2 Redshift Survey,” Marc Davis, professor of astronomy and physics, UC Berkeley. Refreshments.

General Biology Seminar

119 Kerckhoff, 4 p.m.—“Adaptation in the Neural Code of the Retina,” Markus Meister, Moore Distinguished Scholar in Biology, Caltech.

Wednesday, October 6

Quick Overview of Information Resources

Sherman Fairchild Library, multimedia conference room, noon to 1:30 p.m.—Learn how to use library services and resources. This session is designed especially for graduate students, postdocs, and research staff, but all are welcome. This class is held on a walk-in basis.

Environmental Science and Engineering Seminar

142 Keck, 3:40 to 5 p.m.—“The Effect of Bubble Dynamics and Mining on Gases in the Ocean: Implication for Productivity Measurements near Hawaii,” Roberta Hamme, postdoctoral scholar, Scripps Institution of Oceanography. Information: www.esse.caltech.edu/seminars/index.html.

Organic Chemistry Seminar

153 Noyes, Sturdivant Lecture Hall, 4 p.m.—“Chemistry, Selectivity, and the Biological Interface,” Dr. Paul Reider, Chemistry Research and Discovery, Amgen.

Thursday, October 7

Quick Overview of Information Resources

Sherman Fairchild Library, multimedia conference room, 2 to 3:30 p.m.—Learn how to use library services and resources. This session is designed especially for graduate students, postdocs, and research staff, but all are welcome. This class is held on a walk-in basis.

Chemical Engineering Seminar

106 Spalding Lab, Hartley Memorial Seminar Room, 4 p.m.—“Phase Transitions in Protein Solutions,” Professor Peter G. Vekilov, department of chemical engineering, University of Houston. Refreshments, 113 Spalding Lab, 3:30 p.m. Information: www.che.caltech.edu/calendar/seminars.html.

Physics Research Conference

201 E. Bridge, 4 p.m.—“Ultrahigh-Resolution Studies of (At Least One) Non-equilibrium Quantum Phase Transition,” Professor Robert Duncan, department of physics and astronomy, University of New Mexico.

Friday, October 8

Inorganic-Organometallics Seminar

151 Crellin, 4 p.m.—“Low-Temperature NMR Studies of Diimine Platinum Complexes,” Martin Lersch, visitor in chemistry, Caltech.

Running out of gas?

Contrary to what American driving habits seem to indicate, Earth’s oil supply is not bottomless. In fact, predicts David Goodstein, the planet will start to run out of cheap, conventionally produced oil much sooner than most people expect, possibly within the decade.

Goodstein—Caltech’s vice provost, Gilloon Distinguished Teaching and Service Professor, and professor of physics and applied physics—will kick off the 2004–05 Watson Lecture series on Wednesday, October 13. His talk, “Out of Gas: The End of the Age of Oil,” will begin at 8 p.m. in Beckman Auditorium, and is based on his recent book of the same name, which will be available for sale and signing.

In the face of this impending oil crisis, Goodstein says, we must immediately reduce our dependence on fossil fuels and begin developing alternatives. Goodstein will discuss the reasoning behind his conclusions and offer possible technological solutions to avoid such a scenario.

Seating for the free public talk is first-come, first-served, beginning at 7:30 p.m. 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). All lectures will be available online at Caltech’s Streaming Theater, <http://today.caltech.edu/theater>.

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CampusEvents

Monday, September 27

Auditions for Caltech Concert Band and Jazz Bands

Student Activities Center, room 15, 4 to 6 p.m. and 8 to 10 p.m.—Play whatever you want, even if it's only a scale. If you need to borrow an instrument, please e-mail the director, William Bing, at wbmg@its.caltech.edu. Each group rehearses only one night per week, and we have snacks at all the rehearsals.

Chamber Music Auditions for Instruments Other than Piano

Student Activities Center, Room 12, 4 to 6 p.m. and 8 to 10 p.m.—Auditions are friendly and informal. A short prepared piece is recommended but not required. No previous chamber music experience is necessary.

First Rehearsal of Caltech Women's Glee Club

Student Activities Center, 5 p.m.—Women of all ability levels in the Caltech/JPL community are welcome to join the Caltech Women's Glee Club.

Ballroom Boot Camp

Winnett lounge, 9 p.m.—Learn six dances in three nights. Monday kicks off with tango and cha-cha lessons. The cost is free, and no dance experience or partner is necessary.

Tuesday, September 28

Preschool Playgroup

Tournament Park, 10 a.m. to noon—Song and storytime, crafts and free play for toddlers and preschoolers (from walking to age 4). Information: 584-0970 or kimdeman@yahoo.com.

CIT Knitters Group Meeting

256 Mudd Laboratory South, noon—All levels of knitters and related handcrafters are welcome. We make items for others and ourselves. Information: 395-6699 or 395-6905.

Caltech Shorinji Kempo Club

Brown Gymnasium, 7 p.m.—Learn effective self-defense and martial arts. Sessions are free. No experience required. Wear comfortable clothing.

Caltech Tai Chi Club

Winnett lounge, 9:30 p.m.—Meets Tuesdays and Fridays weekly. Sessions are free. Information: www.its.caltech.edu/~taichi.

Ballroom Boot Camp

Winnett lounge, 9:30 p.m.—Learn six dances in three nights. Tuesday night the fun continues with East Coast swing and modern jive (also known as Ceroc). The cost is free, and no dance experience or partner is necessary.

Wednesday, September 29

Reinventing Yourself

Brown Gym classroom, 8:30 a.m. to 12:30 p.m.—In this workshop for supervisors and non-supervisors, discover ways to redirect thinking, overcome negative behavior, and acquire skills to inspire others and to achieve success. Registration: 395-8055 or diane.williams@caltech.edu. Information: http://cit.hr.caltech.edu/Education/super&non_super/reinventing_yourself.htm.

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: 793-2535 or nancyhewett@earthlink.net.

Falun Gong Workshop

125 Baxter, 7:30 p.m.—Falun Dafa, also known as Falun Gong, is a slow-motion meditation exercise that is practiced by over 100 million people in 60 countries. In this workshop, you will be shown video documentaries about the background of Falun Gong and will learn the five sets of exercise. A Q&A session will follow.

Thursday, September 30

Caltech Shorinji Kempo Club

Brown Gymnasium, 7 p.m.—Learn effective self-defense and martial arts. Sessions are free. No experience required. Wear comfortable clothing.

Ballroom Boot Camp

Winnett lounge, 9 p.m.—Learn six dances in three nights. Thursday night concludes the series with the graceful waltz and sensual rumba. The cost is free, and no dance experience or partner is necessary.

Friday, October 1

Caltech Tai Chi Club

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

Saturday, October 2

Belly-Dancing Classes

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

Ballroom Bash Dance Party

Avery House, 8 p.m.—The party begins with a mini-lesson, followed by general dancing (including ballroom, Latin, and swing), student and professional dance demonstrations, mixers, and refreshments. Admission is free, and no partner or previous dance experience is required.

Sunday, October 3

Caltech Shorinji Kempo

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

Lagerstrom Chamber Music Concert

Dabney Lounge, 3:30 p.m.—Grammy Award-nominated guitarist Paul Galbraith will perform music by Debussy, Ravel, and Bach. No tickets or reservations are required.

Caltech-Occidental Chamber Orchestra

Ramo Auditorium, 7:30 p.m.—The orchestra, under the direction of Allen Robert Gross, will perform works by Mozart, Holst, Newman, and Haydn. Featured violinist will be Michael Emery. A free reception will follow the performance.

Tuesday, October 5

Preschool Playgroup

Tournament Park, 10 a.m. to noon—Song and storytime, crafts and free play for toddlers and preschoolers (from walking to age 4). Information: 584-0970 or kimdeman@yahoo.com.

Caltech Women's Club Fall Gathering

The Athenaeum's west patio, 11:30 a.m.—The Fall Gathering is a time for new and returning members to learn about Women's Club events and activities. Lunch may be purchased for \$16 (\$10 for students). Reservations by September 28. Information: Karen Blake, 351-4201 or kblake@its.caltech.edu.

Caltech Shorinji Kempo Club

Brown Gymnasium, 7 p.m.—Learn effective self-defense and martial arts. Sessions are free. No experience required. Wear comfortable clothing.

Caltech Tai Chi Club

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

Wednesday, October 6

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: 793-2535 or nancyhewett@earthlink.net.

Resumania

Olive Walk, 11 a.m. to 2 p.m.—Bring your résumé to the tent on Olive Walk. Caltech Alumni will be on campus to review your résumé and give you advice and suggestions for improvement. Career Development Center counselors will also be available to answer quick questions. This is a great way to help you prepare for the Fall Career Fair on October 13 and for on-campus interviews.

Thursday, October 7

GSC Board of Directors Monthly Meeting

Winnett clubroom #1, noon—The GSC will meet to discuss student concerns, plan social events, and improve funding for various activities around campus.

Planning Your Retirement Income

Winnett clubroom #1, 2 p.m.—“Planning Your Retirement Income,” Marc Gottschalk, retirement counselor, Fidelity Investments. This workshop will focus on those who are less than five years from retirement. Benefit from the opportunity to create a plan to help meet your needs during your retirement years.

Caltech Shorinji Kempo Club

Brown Gymnasium, 7 p.m.—Learn effective self-defense and martial arts. Sessions are free. No experience required. Wear comfortable clothing.

Friday, October 8

Caltech Tai Chi Club

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

Amazones

Beckman Auditorium, 8 p.m.—Les Percussions de Guinee performs an original program of music, song, and dance. 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, October 9

Belly-Dancing Classes

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

Gobo Gobo: The Sounds of Nature

Beckman Auditorium, 2 p.m.—Composer Masakazu Yoshizawa and the Kokin-Gumi ensemble will perform live music for two films from the CineMuse high-definition collection: *La Mer*, about the diversity of life in the sea, and *Form of Forest*, *Color of Forest*, about a mysterious forest of ancient cedars on the island of Yakushima. Information: 395-4652, 1 (888) 2CALTECH, or events@caltech.edu. Individuals with a disability: 395-4688 (voice) or 395-3700 (TDD).

Sunday, October 10

Caltech Shorinji Kempo

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

Fall Career Fair is coming

You told yourself you'd look for a job this summer, but those sunny, care-free days just zoomed right by. Not to worry—Caltech's Fall Career Fair is right around the corner. Bring your résumés to the Bechtel Mall (just west of Millikan Library) on Wednesday, October 13, anytime between 10:30 a.m. and 2:30 p.m.

Open to the Caltech community, the fair gives undergrads, grad students, and postdocs an opportunity to gather information, talk with company representatives, and drop off résumés in a casual atmosphere.

Many of the companies slated to attend as of press time were the usual suspects: JPL, Microsoft, Raytheon, the Rand Corporation, and national laboratories Lawrence Livermore, Los Alamos, and MIT Lincoln. Others were new to Caltech, such as Novellus and Hitachi Chemical Research Center.

The fair isn't just for those seeking full-time careers. Still in your first or second undergraduate year? Come anyway and get to know the companies—summer internships are often available.

For more information, e-mail career@caltech.edu or call ext. 6361.

Rideshare, Graphic Resources team up at fair

An upcoming campus event will combine the Rideshare Fair with Graphic Resources / Mail Services' Promotional Fair to raise awareness about alternative transportation while offering printing, postal, and passport services. The event will feature live music, free dessert, and a chance to win valuable prizes. Attendees can also purchase a barbecue lunch for a nominal fee.

Rideshare Week this year begins on October 4, and Campus Security and Parking Services encourage the Caltech community to bike, carpool, vanpool, or take public transportation to work. Representatives from local bus and rail lines, the AAA, and Pasadena Cyclery will share the benefits of alternative transportation. Attendees who sign pledge cards to rideshare for at least one day that week will be entered into the drawing.

Many of the functions that Graphic Arts / Mail Services offers will be available at the fair, including personalized luggage tags, holiday stamps, and photo restoration. The prizes that will be raffled off include an Apple iPod music player, bookstore certificates, postage stamps, a DVD player, and certificates to dine at the Athenaeum.

The event will take place on October 1 from 11 a.m. to 2 p.m. at the Winnett Center mall.



From the president: Update on the campaign

David Baltimore

This October, we reach the two-year mark in our ambitious and comprehensive campaign to raise \$1.4 billion in five years. Although many on campus have spent long hours moving the campaign ahead and reporting on its progress, there are still people who wonder about how well it is doing. So I thought I would devote my fall letter to discussing the campaign's progress and the new projects that will soon enhance Caltech's community.

I am glad to report that, as of September, we have raised close to \$1 billion—\$969 million to be exact. For a school with only about 20,000 living alumni and 220 students per undergraduate class, the goal is quite optimistic and the progress is gratifying. Of course, we were helped enormously by the \$600 million gift from Gordon and Betty Moore. We now have three years to achieve our ultimate goal, and I am confident that we will make it.

Remember that we brought in Gary Dicovitsky as vice president for development and alumni relations after we had started the campaign, and he even later hired Bob McQuinn as associate vice president for development. This new team had some strong staff members in place but had to bring others aboard. So we have raised these funds while we have been molding our team, making the total raised even more impressive. We now have a smoothly running operation that should serve us well through the campaign and into the future.

The campaign gifts have already had a significant impact on the campus. Half of the Moore gift comes as yearly grants from the Moore Foundation, grants we have been receiving for almost three years. We have been able to purchase much-needed large equipment such as magnetic resonance imagers, cryo-electron microscopes, and an X-ray beamline at the Stanford accelerator. We have started programs like the Tectonics Observatory, and we have expanded programs such as design of the proposed Thirty-Meter Telescope. The funds have also helped set up the laboratories of new faculty and bring postdoctoral fellows to campus. Gordon and Betty's own contributions have allowed us to maintain the Moore Visiting Scholar program, which brings outstanding academics to campus, and have provided postdoctoral fellowships. This money has also helped with construction projects and in other ways. But its major contribution has been to our endowment.

One of our essential campaign goals was to bring in funds for new and renovated buildings. We have been quite successful in finding donors for these buildings. The first evidence is the wonderful renovation of Dabney Hall of the Humanities, which was rededicated on September 17. Next, we will commence construction of the Cahill Center for Astronomy and Astrophysics, for which we have chosen an architect. We have much but not all of the money for this project. To build this building we first had to construct an underground parking structure, which will be completed by early in the new year.

We have money in hand for the Walter and Leonore Annenberg Center for Information Science and Technology (IST), to be built next to the Moore building. The center will house a new highly interdisciplinary Caltech effort to study information: its nature, transformations, storage, and manipulation. From our board chairman, Benjamin Rosen, we have the lead

gift for the Campus Center, which will bring together our community with music facilities, a movie theater, a café, an art gallery, a student lounge, and more. And finally, although we have only raised a fraction of the needed funds so far, we are going ahead next June with the badly needed renovation of the South Houses.

So the most visible result of the campaign will be that Caltech will be a multi-focal construction site for years to come. These buildings will benefit students, faculty, research programs, and the look of the campus. While we are committed to maintaining Caltech as a small school, we need to provide quality living and working space for the remarkable people who come here.

Buildings are simply hollow shells without the very best people to animate them. Thus a major focus of the campaign has been funds for people. We have raised \$43 million for professorships, \$33.2 million for undergraduate financial aid, and \$15 million for graduate fellowships. Even Summer Undergraduate Research Fellowships (SURF) has received \$2 million of endowment support. We have also raised \$97 million in research funds, and a significant amount of this money and the project funds will go to supporting people.

One project I have not mentioned is our nanoscience program. This received notable support from the Kavli Foundation, which was augmented by the Moore Foundation, and will give Caltech a remarkable capability in this critical area.

It should be evident that after only two years, the campaign is touching every aspect of Caltech. All of the divisions have felt the impact. Graduate student and postdoctoral support will be enhanced further, and staff will be working in new facilities and more modern, renovated spaces. Undergraduates and graduate students already are benefiting from the Moore-Hufstедler Fund, established to improve the quality of student life with funds carved out from the Moore gift, and supplemental support from the MacArthur Foundation. We have even been able to use campaign funds to bring our budget in balance so that this year we will restart our traditional salary enhancement programs.

Our campaign is by no means over. Raising more than \$400 million dollars is still a difficult challenge. We will need the help of many on campus to sell our programs and remind the world of what an unusual and important place we have here. Our slogan for this campaign, *there's only one. Caltech*, reminds us of our unique role in America's and the world's research and education. It is important that this message be spread widely.

Child-care aid available

Burdened by child-care costs? Caltech staff, faculty, postdocs, and grad students who meet certain financial conditions may receive up to \$3,500 from the Child Care Assistance Program for dependent children up to age 10. Applications for 2005 awards are due September 30. For details and to apply online, visit http://cit.hr.caltech.edu/ccap_program.htm. Those without online access may use the Human Resources computer kiosks at 399 South Holliston.

Student Affairs, from page 2

and graduation rates, mentoring and high school outreach programs, and student diversity and recruitment efforts. Jones joined Caltech in 2000 as the office's assistant director and became associate director in 2002.

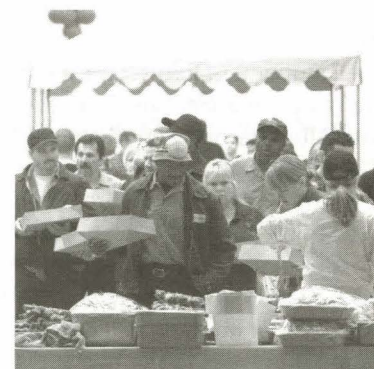
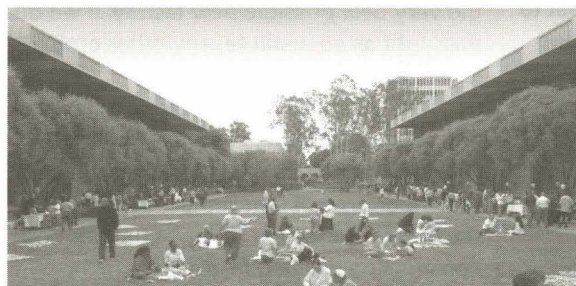
André Mallié has been named executive chef of the Athenaeum while continuing as dining services director for Caltech, JPL, and Pasadena's Westridge School. A classically trained French chef, Mallié is responsible for improving the dining experience at all locations. Under his leadership, Caltech Dining Services has received numerous national awards in the last five years for its catering and student board program.

Caltech Wired manager Mindy Mallié has been named the store's director, a new position. As manager since Caltech Wired opened in 1998, Mallié has worked

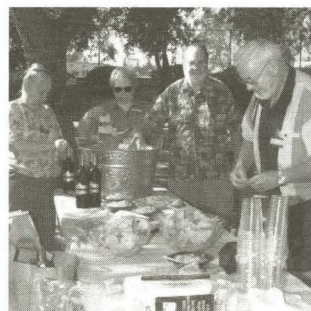
to broaden product offerings and increase the staff's technical expertise. In her new role, she will continue to strengthen the store's service to better assist customers.

Tom Mannion has been named assistant vice president for student affairs for campus life. He served as director of Campus and Auxiliary Business Services (CABS) from 1995 to 2003 and became senior director for campus life when CABS moved into Student Affairs. Campus Life includes dining services at Caltech and JPL; student, faculty, and staff housing; the Caltech bookstore and convenience store and the JPL store; the Caltech and JPL child-care centers; and student and residential life. Mannion will also serve as the Institute liaison to the Caltech Y.

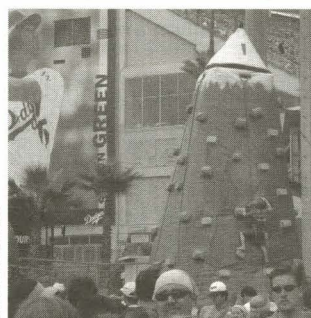
Summer scenes at Caltech



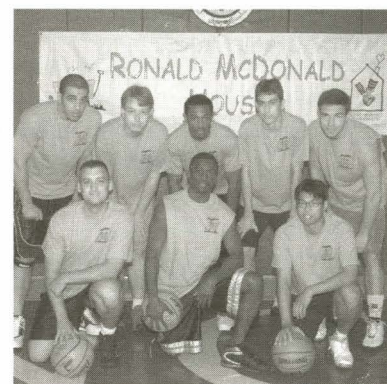
Members of Caltech's staff were treated to music, games, prizes, and a free lunch at "A Fair to Remember," the Institute's first-ever gala in celebration of staff, on June 29, on the Beckman Mall. Staff members line up for the shish kebabs (above); spend a leisurely afternoon on the lawn (left top); and enjoy a refreshing balloon toss (left bottom).



The Associated Retirees of Caltech/JPL enjoyed their 16th annual barbecue picnic at Tournament Park on September 14.



Kids from the campus community enjoyed the climbing wall and other activities at the third annual Caltech-JPL Dodger Day in August.



A team of Caltech students and staff was victorious in "Hoops for Hopes," a basketball fund-raising event in June that benefited the Ronald McDonald House.



The Strategic Initiatives Fund (SIF) of Business and Finance recently made its first awards to fund innovative proposals that further the unit's vision and goals. Top: SIF committee member Bob Carter (Human Resources) congratulates Ruth Whitson (Accounting Services) and Rainbow Lee (Institute Finance). Bottom: Committee member Tye Welch with winners Linda Hodges and Gaylin Laughlin (not pictured is Lynn Theriault). All four work for Audit Services.



Tender Land, from page 1

Live music by composer Masakazu Yoshizawa and the Kokin-Gumi ensemble will provide an aural backdrop to the crisp visuals of these CineMuse high-definition films in Beckman Auditorium. This presentation will be followed by a discussion with Ann Marie Polsenberg, a graduate student from the Division of Engineering and Applied Science, and Yoshizawa and the members of Kokin-Gumi. This presentation is suitable for children over the age of 6.

"Gobo Gobo" is the initial offering in the new Caltech Public Events series called Science Saturdays at 2:00. Future presentations will include the films *Walking with Dinosaurs*, *Weird Nature—Marvelous Motion*, and *Space—Boldly Go*.

Caltech's tradition of serving as host to outdoor art continues with the unveiling on October 9 of two sculpture installations by the acclaimed California artists Lita Albuquerque and Michael McMillen. They have been able to refine their ideas through work with researchers, and access to the Institute's vast resources.

Albuquerque, whose long-held fascination with astronomy and the earth informs her artwork, will create an installation that looks to the heavens for inspiration. Specifically, she will reproduce the alignment of the stars as they appeared in the sky during the last supernova event. McMillen's engaging mixed-media sculptures embrace found objects and castoffs and reaffirm their value by making them central elements in his works. He will produce an interactive piece that engages the Institute's history while exploring the relationship between nature and science. The installations will be on view through March 1, 2005.

The "Tender Land" arts festival runs through January 2005. Major sponsorship has been provided by the Caltech Employees Federal Credit Union.

Provost, from page 1

"But it isn't like I walked away in '95 and I'm coming back now," he added. "I had two stints as acting vice president for business and finance after that, so I didn't drop the thread and connection with the administration."

A Colorado native, Jennings earned an MS from Caltech in 1960 and a PhD in 1963. A research fellow here in civil engineering in 1965, he rose up the ranks to become a full professor in 1972. In 1985 he became chair of the engineering and applied science division. With such a long and active Institute history, Jennings has gained the invaluable advantage of perspective.

He also takes on a role that has changed and grown since his previous term as provost. Jennings steps in to the job while the Institute is in the midst or on the verge of major endeavors like the ongoing capital campaign and extensive construction and renovation initiatives.

"Things are in fact going pretty well and we want to keep the good things going and address issues that need more attention," he said. "The most important thing I'll do is to oversee the recruiting and promotion of the faculty. I want to make sure that during my term as provost we continue to hire the very best possible new faculty. If we do that right as an institute, any other problems get smaller."

This strategy of making careful plans to ensure success comes naturally to him. A civil engineer by training, Jennings stresses the importance of detailed planning during the design stage over making changes once construction has begun. It's the time-honored "measure twice, cut once" approach shared by carpenters and other craftsmen.

"A job I want to make sure I do well is to help provide effective communication between the central administration and the faculty and the staff," he said. "I want to get around and talk to people and find out what's going on, what the issues are, before they become major issues."

Jennings paused for a second. "I had forgotten the sheer volume of things to deal with," he said with a laugh. "I guess I put that out of my mind. It's not that the volume has increased so much, I'd just forgotten that there's a lot of stuff."

Off campus, Jennings chairs Pasadena's City Hall Restoration Oversight Committee, which guides the earthquake retrofitting of the historic building. Base isolators, which act like shock absorbers for buildings, will be installed under each supporting column to buffer a quake's shaking. The endeavor is expected to cost \$93 million and last three years, he said.

A tall, trim man with an easygoing demeanor, Jennings enjoys fly fishing, a fact hinted at by a framed picture of a fish on a shelf by his desk. Locally, he's gone trout fishing in the San Bernardino Mountains with Caltech president David Baltimore.

Lewis, from page 1

Born in Pennsylvania in 1918, Lewis had an early fascination with the genetics of the fruit fly *Drosophila melanogaster*. He experimented on *Drosophila* as a high school freshman and published several research papers while still in college. After taking a bachelor's degree in 1939 at the University of Minnesota, he earned his PhD at Caltech in 1942.

Following four years in the U.S. Army, Lewis returned to Caltech as an instructor and soon was a known expert in fly genetics. He became assistant professor of biology in 1948, professor in 1956, and Morgan Professor in 1966. Although he retired in 1988, he stayed active in his campus lab until recently.

In a campus article in 1957, Lewis described how he created mutant four-winged flies by bombarding normal two-winged flies with X rays. "We now have a working model for picturing the genetic control of development," he said. His studies were key to discovering the role of homeotic genes, which influence how undifferentiated cells in a fertilized embryo form into organs in the correct positions and which affect all animal development, from insects to humans.

Nearly 40 years later, Lewis received the Nobel Prize in physiology or medicine for his finding of "how genes were arranged in the same order on the chromosomes as the body segments they controlled."

Adapted from a Caltech Media Relations release. The original article can be found at <http://pr.caltech.edu/media/>.

Westphal, from page 1

become director of the Jet Propulsion Lab) to do thermal infrared scans of the moon in order to see if humans could walk on the lunar surface without sinking entirely. Westphal and Murray's work showed that rocky areas could be identified with the thermal imaging, which in turn led to the inference that the Apollo astronauts could safely walk on the dirt.

"He was the most talented instrument designer I ever knew at Caltech or at JPL," Murray said. "That's why he could move through so many fields: he could figure out what was needed, and how to build it simply and cheaply."

The full article can be found at <http://pr.caltech.edu/media/>.

Survey, from page 1

departments, which we'll do our best to bring you more of. Science and research stories were also popular; we try to include several in each issue. Also, for those interested in science, good resources are <http://pr.caltech.edu/media/>, for Caltech news releases, and *Engineering & Science*, a quarterly magazine (<http://pr.caltech.edu/periodicals/EandS>).

A number of people also requested classified ads; unfortunately that would require more time than our small staff has. Caltech Today (<http://today.caltech.edu>) has such a section; click on "classifieds."

Many folks don't receive 336 or know where to find it, but they'd read it more if it came to their personal mailbox. Obviously, our current distribution system (bundles sent to mail stops) isn't working too well. We're going to try sending 336 to individual mailboxes this academic year, and see how it goes.

One faculty member said the calendar leaves out too many seminars and events. We try to include as many as possible, but due to our production schedule, we have to have a cutoff point. Thus, *Caltech Today* is the best way to stay up to date. Click on "calendar"; to receive reminders for various events, click "e-mail alerts."

A grad student wrote, "The 'honors and awards' reported seem arbitrarily chosen." We have to know about something before we can publish it—but often we can't find out unless you tell us. Send work- or research-related honors to 336@caltech.edu for consideration.

Some folks would like to see 336 go entirely online. However, many in the campus community (800 to 900, according to Human Resources) do not have online access. Because 336 is a main news source for them, we'll continue to publish hard copies, but we'll look into using environmentally friendly printing materials.

Last but not least, 10 winners will be receiving Red Door gift certificates. Again, a big thank you to all who took time to return the survey. Your responses will help us shape 336 into a newspaper that has something for most everyone.

Survey results at a glance

Total responses: 815. Respondents: staff, 521; grad students, 165; postdocs, 54; faculty, 51; other, 24.

How often do you read Caltech 336? Never, 79; occasionally, 369; often, 189; every issue, 178.

If never or occasionally, what is the main reason you don't read it more often? Didn't know about it, 40; don't know where to find it, 83; don't have time, 187; not useful or interesting, 63; other, 63.

How do you usually get 336? Personal mailbox, 302; stack near mail area, 307; rack in public area, 117; other, 89.

What do you like most about 336? Science / research, 358; top stories / campus news, 510; news briefs / honors / personals, 300; calendars / event notices, 449; profiles of people / departments, 335; other, 46.

What would you like to see more of? Science / research, 193; top stories / campus news, 276; news briefs / honors / personals, 134; calendars / event notices, 183; profiles of people / departments, 244; other, 74.

Caltech 336

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