# Caltech336

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

The campus community biweekly

**October 20, 2005, vol. 5, no. 15**


## Admissions and student population

***Erica O'Neal, assistant vice president for student affairs***

The renovation of the South Houses has caused some concern about the size of Caltech's student population and raised questions about the Institute's ability to house first-year students on campus. Additionally, some are seeking to understand admissions processes in greater detail.

Admissions is a delicate balance of art and science: a probability game with the need to both understand a prospect's quantifiable academic achievements, and to include factors more difficult to assess, such as character and a passion for science, math, or engineering. Caltech admissions professionals follow national, international, and campus trend data to make the best predictions of the yield on admits, i.e., the number of students who will matriculate in a given year, out of the total admitted. Yield rates for the past few years at Caltech help decide how many undergraduates to admit. At the graduate level, decisions are guided mostly by available grant money and student-to-faculty matches in areas of research interest. Changes at many levels—the national economy, federal and state financial aid, visa processing, our competitor schools, and size of the prospect pool—also figure into yield.

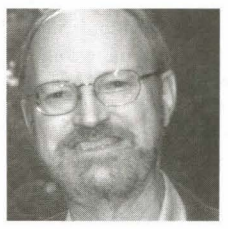
Looking at six years of fall-term data, we can see that our student body has remained at approximately 2,000 students, including the current and past year. What may not be as well known is that Caltech's undergraduate student body has decreased while the graduate population has increased, but that the overall total does not typically fluctuate by more than 50 students from year to year.

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005* |
|---|---|---|---|---|---|---|
| Undg | 929 | 942 | 939 | 891 | 896 | 905 |
| Grad | 1,039 | 1,116 | 1,181 | 1,281 | 1,275 | 1,257 |
| Total | 1,968 | 2,058 | 2,120 | 2,172 | 2,171 | 2,162 |

**Fall 2005 numbers are as of October 6, 2005.*

Both the undergraduate and graduate admissions processes seek to engage the most competitive students nationally and internationally. For undergraduates, domestic student (U.S. citizens and permanent residents) admission is need blind, meaning that students are admitted regardless of their ability to pay. At present, approximately 58 percent of undergraduates qualify for need-based federal, state, and Caltech aid. This figure is similar to that of MIT, but higher than at other selective institutions such as Harvard and Stanford, which have numbers closer to 50 percent, not to mention larger endowments. International undergraduate admission is need sensitive, meaning that a family's ability to pay does influence whether the student will be admitted. The size of endowment allocated for scholarships, the interest it earns, and the amount of need

*see Admissions, page 6*



## Grubbs is newest Nobelist

Move over, Rudy Marcus and Ahmed Zewail. There's another Nobel Prize winner on your turf.

With Robert Grubbs, Atkins Professor of Chemistry, winning the 2005 prize in chemistry, the Division of Chemistry and Chemical Engineering is now the first division in Caltech history to have three active Nobel laureates in its ranks.

Grubbs, Richard Schrock of MIT, and Yves Chauvin of France's Institut Français du Pétrole were cited "for the development of the metathesis method in organic synthesis." The three will share the $1.3 million award, to be presented on December 10 in Stockholm.

When the Nobel committee called with the news, Grubbs was in New Zealand on a fellowship. The first thing he did, he says, was to call his three grown children. He also plans to bring two of them along to the Nobel festivities. "Apparently there are great parties at this thing," he says.

The partying started earlier, though, on October 10 in the Parsons-Gates garden. Wearing a broad smile, Grubbs was introduced by David Tirrell, chair of the Division of Chemistry and Chemical Engineering, and feted by fellow Nobelists Marcus, Zewail, and David Baltimore. After Grubbs thanked his wife, Helen, his kids, and the many students, postdocs, and others who contributed to his work, dozens of well wishers joined in a toast: "Here's to nice guys finishing first."

Metathesis is an organic reaction in which chemists strip out certain atoms in a compound and replace them with atoms of another element that were previously part of a second compound. The result is a custom-built molecule with specialized properties. By developing powerful new catalysts for metathesis, Grubbs enabled the building of molecules that have led to such products as improved medications and plastics that can better conduct electrical impulses.

His work, he says, defies the conventional descriptions of organic, inorganic, and polymer chemistry, "and that's really what modern chemistry is all about. These traditional fields are being blurred so you cut across all these areas, and in many cases that's where the fun stuff is—at the interface."

Applications that have resulted include materials made from corn, soybean, and other seed oils, which can substitute for nonrenewable petroleum sources; a polymer treatment that would make baseball

*see Grubbs, page 6*

## Fun-tastic Family Night

**Kids enjoy some of the numerous activities at this year's Caltech-JPL Family Night. The kickoff for the annual United Way campaign brought close to 1,800 campus community members to the Beckman Mall on October 7.**

## Ath gains GM, members

With the new school term have come changes in the Athenaeum's top management, changes designed to further customer enjoyment and the quality of the culinary experience at Caltech's most refined dining establishment.

In addition, the Athenaeum's search for a general manager ended last week with the selection of Marisu Jimenez, the club's director of marketing, catering, and special events for the past three years. Jimenez was selected after a nationwide search.

"The House Committee looks forward to collaborating with her in writing the next chapter of the Athenaeum's history," said David Levy, Caltech's director of financial aid and the new chair of the club's house committee. On staff at the Ath for 11 years, Jimenez will make one of her first priorities to conduct a search for the facility's next executive chef.

At a recent member orientation meeting, Arden Albee, professor of geology and planetary science, emeritus, announced that he would step down as the chair of the house committee. John Baldeschwieler, the Johnson Professor and professor of chemistry, emeritus, also announced that he is ending his duty as chair of the board of governors.

*see Athenaeum, page 6*

## Parking Q&A with Henderson

Q&A with Gregg Henderson, chief of security and parking services:

**How is implementation of the new fee-based parking system going?**

Everyone realizes that this is a major change to the campus. The patience and understanding that the community has shown with the implementation of the new parking program is appreciated. We have had constructive suggestions on how to improve the program. We had a fantastic team working on this project, with a very short time to implement a process that involved all of the community. This team included ATC, ITS, Commuter Services, Finance, Human Resources, Campus Planning, Public Relations, the six academic divisions, and Campus Life.

**When does parking enforcement officially begin? And who gets the revenue from fines?**

The new program, including enforcement, will be implemented on Monday, October 24. The fine for parking violations is regulated by the city and is currently $35. The revenue generated from parking violations goes to the city of Pasadena; Caltech does not receive any revenue from the fines.

*see Parking, page 6*

# NewsBriefs

**Team Caltech members—shown here preparing for the event—worked valiantly to keep Alice the van (in background) on track in the DARPA Grand Challenge autonomous vehicle race on October 8. Unfortunately, after driving itself successfully for eight miles, Alice suffered a GPS glitch and veered off course. The Stanford University entry later completed the 132-mile course, winning the $2.1 million prize.**

## Personals

### Welcome to Caltech

**July**

**Jaksa Cvitanic** joined Caltech effective July 1 as professor of mathematical finance, a relatively new field in which he is considered one of the most prominent young scholars, having introduced techniques that are now generally recognized to be as important as the initial breakthroughs that founded the field. He received his BA and MS from the University of Zagreb, Croatia, in 1985 and 1988, respectively, and his MPhil and PhD from Columbia University in 1991 and 1992, respectively.

**Kristine Haugen** joined Caltech as assistant professor of English, effective July 1. Specializing in the period lasting roughly from 1600 to 1800, her interests range from English literary history to neo-Latin poetry to the history of theology. She has a thorough command of Greek, Latin, Hebrew, and half a dozen vernacular languages and has authored prize-winning articles. She received her BA from the University of Chicago in 1996 and her PhD from Princeton University in 2001.

**Matias Iaryczower** started with Caltech effective July 1 as assistant professor of economics and political science. Noted in the field of political economy for both his work as a theorist and his empirical work, he has studied the effect of political parties on legislation, and the limits of judicial power. He received his BA from Universidad de Buenos Aires in 1997, his MA from Universidad de San Andrés, Argentina, also in 1997, and his PhD from UCLA in 2005.

**Leeat Yariv** joined the Institute as associate professor of economics, effective July 1. With her work bridging both the theoretical and the experimental, she studies behaviorial economics and psychology, political economy, and the dynamics of beliefs in games. She received her BSc and MSc from Tel Aviv University in 1992 and 1995, respectively, and her PhD from Harvard University in 2001, and she recently held the position of assistant professor at UCLA.

**August**

**Thomas Graber** joined Caltech effective August 1 as associate professor of mathematics. Thought to be one of the best algebraic geometers of his generation, Graber has had extensive teaching experience at UC Berkeley and Harvard. He received his AB from Harvard in 1994 and his PhD from UCLA in 1998, and his work currently focuses on intersection theory and moduli spaces.

**Elena Montovan** joined Caltech's faculty as assistant professor of mathematics, effective August 1. Specializing in arithmetic geometry—the geometric side of algebraic number theory—she has concentrated on the number theoretic and geometric aspects of Shimura varieties, where she is considered to have made significant breakthroughs. She received her MA and PhD from Harvard University in 1998 and 2002, respectively.

**September**

Postdoctoral scholars **Andreea Boca**, in physics, and **Aristides Bonanos**, in aeronautics; **Sylvia Carballo**, guest-relations coordinator, Athenaeum; **Agnes Dequina**, assistant animal lab technician, biology; postdoctoral scholars **Suvi Gezari**, in physics, and **Tetsunari Kimura**, in chemistry; **Jennifer Schmidt**, assistant director of events and programs, Alumni Association; **Alexis Smith**, assistant animal lab technician, biology; **Min-Chien Tsai**, visitor in geology; **Virginie Nelly van Wassenhove**, postdoctoral scholar in biology.

### Retirements

**Theodore Helland** retired on October 3 after 19 years at Caltech. He was a member of the Housing Office maintenance staff.

**Suzanna Horvath**, member of the professional staff and director of biopolymer synthesis in the Beckman Institute, retired on September 30. She had been at Caltech for 27 years.

**Donna Johnson**, a member of the support staff in chemical engineering, retired on September 30 after 44 years at Caltech.

**Jocelyn Keene** retired on September 30 after 24 years at Caltech. She was a member of the professional staff in the Spitzer Science Center.

**James Pool** retired on September 30. Deputy director of the Center for Advanced Computing Research, he had been at Caltech for 12 years.

**Patricia Somer**, supervising accountant in Property Services, will retire on October 31. She has been at Caltech for 20 years.

**Sigrid Washburn** retired on September 30 after 20 years at Caltech. She was a lecturer in German.

## Honors and awards

**James Beck**, professor of applied mechanics and civil engineering, has been awarded the Senior Research Prize in the area of Computational Stochastic Mechanics by the International Association for Structural Safety and Reliability. After receiving his BSc and MSc from the University of Auckland in 1969 and 1970, respectively, Beck came to Caltech as a grad student, receiving his PhD in 1979. He joined the Institute's faculty in 1981 as an assistant professor and was appointed professor in 1996. He served as executive officer for applied mechanics and civil engineering from 1993 to 1998.

**Charles Elachi**, Caltech vice president, director of the Jet Propulsion Laboratory, and professor of electrical engineering and planetary science, has been selected by the American Astronautical Society (AAS) to receive its 2005 Space Flight Award. The AAS's highest honor, the award is given annually "to the person whose outstanding efforts and achievements have contributed most significantly to the advancement of space flight and space exploration." Previous recipients include Wernher von Braun, William Pickering, John Casani, Dan Goldin, Ed Stone, Neil Armstrong, John Glenn, and Sally Ride. Elachi came to work for Caltech/JPL in 1971, the same year he received his PhD from Caltech.

**Matthew Jackson**, Wasserman Professor of Economics, has been named a Fellow of the John Simon Guggenheim Memorial Foundation. "Guggenheim Fellows are appointed on the basis of distinguished achievement in the past and exceptional promise for future accomplishment," and this fellowship will help support Jackson's research on social networks while he is on leave at the Center for Advanced Studies in Behavioral Sciences at Stanford University. He received his BA from Princeton in 1984 and his PhD from Stanford in 1988. He joined Caltech's faculty in 1997 as professor, and was named Wasserman Professor in 2003.

**Guruswami Ravichandran** has been named the John E. Goode, Jr., Professor of Aeronautics and Mechanical Engineering. He received a BE from the University of Madras (Regional Engineering College) in 1981 and an ScM in solid mechanics and structures, an ScM in applied mathematics, and a PhD from Brown University in 1983, 1984, and 1986, respectively. He came to Caltech as an assistant professor in 1990, and was appointed professor in 1999.

**Ares Rosakis,** von Kármán Professor of Aeronautics and Mechanical Engineering and director of the Graduate Aeronautical Laboratories, in recognition of his "sustained and distinguished technical contributions to the field of experimental mechanics," has been selected by the Society for Experimental Mechanics to receive its 2005 W. M. Murray Medal and to deliver the 2005 Murray Lecture. Rosakis came to Caltech in 1982, the same year he received his PhD from Brown University. He received his bachelor's degree from Oxford in 1978.

**Christina Smolke**, assistant professor of chemical engineering, has been named the recipient of a 2005 Beckman Young Investigator Award. The Beckman Young Investigator program provides research support "to the most promising young faculty members in the early stages of academic careers in the chemical and life sciences." She received her BS from USC in 1997 and her PhD from UC Berkeley in 2001, and she joined Caltech's faculty in 2003.

**Ahmed Zewail**, Pauling Professor of Chemical Physics and professor of physics and recipient of the 1999 Nobel Prize in chemistry, has been awarded the Grand Gold Medal by Komensky University in Slovakia. He has also received an honorary degree from Tohoku University in Japan. Zewail received his BSc from Alexandria University in 1967 and his PhD from the University of Pennsylvania in 1974, and he joined Caltech's faculty in 1976 as an assistant professor, becoming professor in 1982 and Pauling Professor in 1990.

## Upperclass students continue shining

The Scholarships and Financial Aid Committee has announced the recipients of the 2005-06 Caltech Upperclass Merit Awards, based on outstanding scholastic achievement, research, and related endeavors.

Made possible by generous donors, this year's awards total more than $1 million, and comprise the Carnation Scholarships, funded by the Stuart Foundation; Caltech Upperclass Merit Awards, endowed by Lew and Edie Wasserman; John Stauffer Merit Scholarships, earmarked for chemistry or chemical engineering majors; and Rosalind W. Alcott Merit Scholarships.

Congratulations to these students, whose awards will range from three-quarters tuition to full tuition plus room and board for the academic year.

**Carnation Scholarship**
Pavel Batrachenko, Yang Chen, Kevin Cossel, Adam D'Angelo, Mithun Diwakar, Elena Fabrikant, Sukhada Sharad Fadnavis, Daniel Fu, Jeremy Gillula, Yuan Gong, Kenneth Heafield, Lea Hildebrandt, Patrick Hummel, Qinzi Ji, Anthony Kelman, Daniel Koslover, Jeremy Leibs, Milo Lin, Po-Ru Loh, Wen Mao, Timothy Nguyen, Yingkai Ouyang, Yun-Chieh Peng, Akil Srinivasan, Leo Stein, Elisabeth Streit, Martin Suchara, Amber Swenson, Kuanshuan (Helen) Tai, Matyas Tamas, Michael Villet, Ruiqi (Rachel) Wang, Qian Wang, Michael Woods, Wensi Xu, Huan Yang, Ke (Michael) Zhang, Yifan Zhou.

**Caltech Upperclass Merit Award**
Derek Chang, Todd Gingrich, Joseph Gonzalez, Nicholas Halpern-Manners, David Hardee, Jimmy Jia, Dorota Korta, Jun Lu, Rachel Maire, James Mao, Bart McGuyer, Laura Pruitt, Harrison Stein, Zhan Wang, Trevor Wilson.

**John Stauffer Merit Scholarship**
Lydia Ng, Lillian Pan.

**Rosalind W. Alcott Merit Scholarship**
Christina Dwyer, Michael Kolodrubetz.

## Your budget questions answered

As Caltech continues resolving its budget deficit, campus community members may e-mail their questions and concerns to budgetinfo@caltech.edu. Questions are routed to the most appropriate administrator for reply; selected questions and answers will be posted at the website http://budgetinfo.caltech.edu/FAQ.html. The following questions were posted on October 6.

**Has the ratio of administration to faculty/postdocs/staff/students changed over the years? What is that ratio and what was it 10 years ago?**

The following figures are taken from the report of the Ad Hoc Committee on Faculty Size, dated November 29, 2004. They cover the period from 1993 to 2003.

Employees: 2,785 to 3,616—30% growth
Students: 1,976 to 2,297—16% growth
Academic (including big projects):
3,511 to 4,275—22% growth
Administrative:
1,181 to 1,535—30% growth
Postdoctoral scholars:
380 to 580—53% growth

The professorial faculty and undergraduates remained essentially constant during this period, while the graduate student population grew about 30 percent, from approximately 1,000 to 1,300.

**What steps will be taken to reduce the cost of nonscientific construction and renovations (e.g., parking structures, student housing) not directly related to research?**

While we can't reduce the costs for structures already built, current building plans, both for research and for support services, are being tightly managed by the faculty and project management staff. For instance, they are being held to budgets set some time ago when the capital campaign was launched.

**How was the decision made to reimburse people for parking at St. Luke and taking a shuttle to campus, and how much was spent on that incentive? How was that justified in light of the deficit?**

While it is fair to argue that the reimbursement for parking at St. Luke was too generous, we thought that we faced a very short-term dislocation affecting individuals who had been promised parking. We hope that the recent budget cuts, painful as they

*see Budget, page 6*

## A chance to honor excellent teaching

Calling all campus community members: Provost Paul Jennings is requesting nominations from for the 2005–06 Richard P. Feynman Prize for Excellence in Teaching.

The prize is awarded each year to a professor who shows "unusual ability, creativity, and innovation in undergraduate and graduate classroom or laboratory teaching." All professorial faculty are eligible.

Enabled through an endowment from Ione and Robert E. Paradise and contributions from Mr. and Mrs. William H. Hurt, the prize—a $3,500 cash award and an equivalent annual raise—was established in appreciation of Richard Feynman's contributions to excellent teaching.

Nomination letters and supporting material should be sent by December 30 to the Feynman Prize Selection Committee, Caltech, MC 206-31, Pasadena, California, 91125. .

For more information, contact Stacey Scoville in the Provost's Office at (626) 395-6320 or staceys@caltech.edu.

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# October 24–30, 2005

M T W T F S S

## Monday, October 24

**Geological and Planetary Sciences Seminar**
155 Arms, Robert Sharp Lecture Hall, 4 p.m.—"Silicate Liquids in Earth's Deep Interior," Professor Lars Stixrude, department of geological sciences, University of Michigan, Ann Arbor.

**High Energy Physics Seminar**
469 Lauritsen, 4 p.m.—"Results from CDF," Professor David Stuart, department of physics, UC Santa Barbara.

**Applied Mathematics Colloquium**
101 Guggenheim Lab, Lees-Kubota Lecture Hall, 4:15 p.m.—"Gating of Dendritic Spikes in Hippocampal CA1 Pyramidal Neurons," Professor William Kath, engineering sciences and applied mathematics department, Northwestern University.

## Tuesday, October 25

**5th Annual Theoretical Astrophysics in Southern California Meeting**
Winnett lounge, 9 a.m. to 6 p.m.—This daylong meeting is intended to bring together the Southern California theoretical astrophysics community (faculty, researchers, postdocs, and students) so as to help each other become familiar with the range of research activities in the area. There will be no registration fee and no plenary talks. All participants are invited to contribute short talks on their current research. Judges will present a prize for the best student talk. Information: www.tapir.caltech.edu/~tasc05/tasc.html.

**Institute for Quantum Information Seminar**
74 Jorgensen, 3 p.m.—Topic to be announced. Luc Bouten, postdoctoral scholar in physics, Caltech.

**Mechanical Engineering Seminar**
206 Thomas, 3 p.m.—"Lessons on Structure from the Structures of Viruses," Professor Richard James, department of aerospace engineering and mechanics, University of Minnesota, Twin Cities. Refreshments, 210 Thomas, after the seminar.

**Carnegie Observatories Colloquium Series**
William T. Golden Auditorium, 813 Santa Barbara Street, 3:30 to 5 p.m.—"The Atacama Cosmology Telescope: Probing Fundamental Physics through Measurements of Cosmic Structure," Dr. Raul Jimenez, University of Pennsylvania. Refreshments.

**General Biology Seminar**
119 Kerckhoff, 4 p.m.—Topic to be announced. Professor Steven Small, department of biology, New York University.

## Wednesday, October 26

**Environmental Science and Engineering Seminar**
142 Keck, 3:40 to 5 p.m.—"Global Partitioning of Nitrogen Oxides Sources Using Satellite Observations," Lyatt Jaeglé, assistant professor, department of atmospheric sciences, University of Washington.

**Astronomy Colloquium**
155 Arms, Robert Sharp Lecture Hall, 4 p.m.—"Spitzer+Keck Spectroscopy and the Building Blocks of Planetary Systems," Geoffrey Blake, professor of cosmochemistry and planetary sciences and professor of chemistry, and deputy director, Owens Valley Radio Observatory.

**Ulric B. and Evelyn L. Bray Seminar**
25 Baxter, 4 p.m.—Topic to be announced. Han Hong, associate professor of economics, Duke University.

**General Biology Seminar**
119 Kerckhoff, 4 p.m.—Topic to be announced. Dr. Alla Karpova, Cold Spring Harbor Laboratory.

## Thursday, October 27

**Engineers for a Sustainable World @ Caltech**
306 Thomas, 3 p.m.—Topic to be announced. Dr. Paul Polak, International Development Enterprises (IDE).

**Mechanical Engineering Seminar**
206 Thomas, 3 p.m.—"Martensitic Transformation of Nanograins," Professor F. D. Fischer, Institute of Mechanics, Leoben, Austria. Refreshments, 210 Thomas, after the seminar.

**Physics Research Conference**
201 E. Bridge, 4 p.m.—"The Quark Gluon Plasma at RHIC," Barbara Jacak, professor of physics, Stony Brook University.

## Friday, October 28

**Continuing the Dialogue in the History and Philosophy of Science**
363 S. Hill Ave., Einstein Papers Project, 9:45 a.m. to 6 p.m.—"A Workshop in Memory of Mara Beller." This two-day workshop, which will feature various speakers, will be continued on October 29 from 9:30 a.m. to noon. Information: 395-1724 or sanja@hss.caltech.edu.

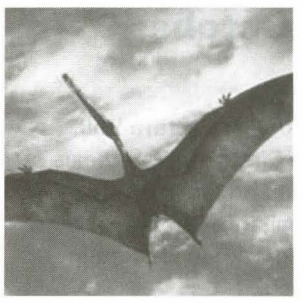
**High Energy Theory Seminar**
469 Lauritsen, 11 a.m.—Topic to be announced. Professor Steven Giddings, department of physics, UC Santa Barbara.

**ESE & Society Discussion Group**
151 Arms, Buwalda Room, noon—Discussion groups are held on Friday mornings. Bring your own lunch.

**Fluid Mechanics Seminar**
101 Guggenheim Lab, Lees-Kubota Lecture Hall, 3 p.m.—"Quantum Turbulence," Professor Russell Donnelly, department of physics, University of Oregon.

**Civil Engineering Seminar**
206 Thomas, 4 p.m.—"A Class of Null Space Techniques for Damage Localization," Dionisio Bernal, associate professor, department of civil and environmental engineering, Center for Digital Signal Processing, Northeastern University.

**Inorganic-Organometallics Seminar**
151 Crellin, 4 p.m.—"The Stabilization of Organic Radicals with Mo and Ti *tris*-Anilides," Arjun Mendiratta, postdoctoral scholar in chemistry, Caltech.



## Science made fun for kids

Do your kids think science is boring or too hard to understand? Caltech Public Events has two programs that just might show them otherwise. These events are designed for children ages 6 and older and their families, and take place on Saturday afternoons at 2 p.m. in Beckman Auditorium.

The program Science Saturdays at 2 presents stunning high-definition films that serve as a springboard for lively discussions with Caltech scientists about the science behind nature's beauty and wonder. On October 29, with the theme *Walking with Dinosaurs*, the program will feature *Giant of the Skies*. Set 127 million years ago, the film tells the story of a gigantic *Ornithocheirus*, the largest flying creature known, as it embarks on an epic flight from Brazil to southern Europe to find a mate. The reptile's journey reveals the incredible diversity of life in the Early Cretaceous period. Caltech grad student in chemistry Brian Leigh will introduce the film and lead a postscreening discussion.

A second series, Saturdays at 2, combines a focus on science with attention-grabbing performing arts. On November 12, the season opening event will feature Garry Krinsky and *Toying with Science*. Krinsky brings alive basic science principles through mime, song, and circus skills—for example, demonstrating how to find the center of gravity by balancing five ladders on his chin. This interactive, fast-paced program will captivate kids so much, they won't even realize they're learning science! Event cosponsor Radio Disney will also present activities, music, and contests, starting one hour before the show.

For ticket 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).

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# October 31–November 6, 2005

M T W T F S S

## Monday, October 31

**Thesis Seminar**
153 Noyes, Sturdivant Lecture Hall, 2:30 p.m.—"The First Total Synthesis of (-)-Lemonomycin and Progress Toward the Total Synthesis of (+)-Cyanocycline A," Eric Ashley, graduate student in chemistry, Caltech.

**Applied Mathematics Colloquium**
101 Guggenheim Lab, Lees-Kubota Lecture Hall, 4 to 5:15 p.m.—"Dynamics of Vortex Lines in Ideal Fluid," Professor Vladimir Zakharov, mathematics department, University of Arizona.

**General Biology Seminar**
119 Kerckhoff, 4 p.m.—Topic to be announced. Professor Larry Abbott, cognitive and systems neurobiology, Columbia University.

**High Energy Physics Seminar**
469 Lauritsen, 4 p.m.—"Results from LIGO," Alan Weinstein, professor of physics, Caltech.

## Tuesday, November 1

**Mechanical Engineering Seminar**
206 Thomas, 3 p.m.—"Nonlinear Mechanics Approaches to Micro- and Nano-Scale Sensing," Professor Kimberly Turner, department of mechanical engineering, UC Santa Barbara. Refreshments, 210 Thomas, after the seminar.

**Carnegie Observatories Colloquium Series**
William T. Golden Auditorium, 813 Santa Barbara Street, 3:30 to 5 p.m.—"The Astrophysics of Massive Black Hole Coalescence," Milos Milosavljevic, senior postdoctoral scholar and Hubble Fellow in theoretical astrophysics, Caltech. Refreshments.

## Wednesday, November 2

**Environmental Science and Engineering Seminar**
142 Keck, 3:40 to 5 p.m.—"Environmental Interfaces Studied by Lasers: From Geochemistry to Atmospheric Chemistry," Franz Geiger, assistant professor, department of chemistry, Northwestern University.

**Astronomy Colloquium**
155 Arms, Robert Sharp Lecture Hall, 4 p.m.—"The Limits of Quintessence," Robert Caldwell, associate professor of physics and astronomy, Dartmouth.

**Ulric B. and Evelyn L. Bray Seminar**
25 Baxter, 4 p.m.—Topic to be announced. Werner Ploberger, professor of economics, University of Rochester.

**Earnest C. Watson Lecture Series**
Beckman Auditorium, 8 p.m.—"Spirit and Opportunity's Excellent Adventure in Mars Geology," Joy Crisp, Mars Exploration Rover Project Scientist, JPL. Admission is free. Information: 395-4652, 1 (888) 2CALTECH, or events@caltech.edu. Individuals with a disability: 395-4688 (voice) or 395-3700 (TDD).

## Thursday, November 3

**Caltech Library System: Quick Overview of Electronic Theses**
Sherman Fairchild Library, multimedia conference room, 2 to 3:30 p.m.—This course will offer a brief overview of techniques useful in the production and publication of Caltech electronic theses. The session will include tips on format guidance, intellectual property considerations, submitting a thesis, and availability issues (who can see it and when). Information and registration: http://library.caltech.edu/learning/default.htm.

**Engineers for a Sustainable World @ Caltech**
306 Thomas, 3 p.m.—Topic to be announced. Dr. Joel Segre, Project Impact.

**General Biology Seminar**
119 Kerckhoff, 4 p.m.—Topic to be announced. Professor David Bartel, Whitehead Institute, MIT.

**Physics Research Conference**
201 E. Bridge, 4 p.m.—"Beyond Dark Energy," Sean Carroll, assistant professor, physics department, Enrico Fermi Institute, University of Chicago.

## Friday, November 4

**High Energy Theory Seminar**
469 Lauritsen, 11 a.m.—Topic to be announced. Tadashi Takayanagi, postdoctoral scholar, Kavli Institute for Theoretical Physics, UC Santa Barbara.

**ESE & Society Discussion Group**
151 Arms, Buwalda Room, noon—Discussions are held on Friday mornings. Bring your own lunch.

**Theoretical Astrophysics and Relativity Seminar**
114 E. Bridge, 2 p.m.—"From Megaparsecs to Gigaparsecs: The Clustering of Luminous Red Galaxies and Its Cosmological Implications," Nikhil Padmanabhan, department of physics, Princeton University.

**Inorganic-Organometallics Seminar**
151 Crellin, 4 p.m.—"Stoichiometric and Catalytic Interactions between Iridium Hydrides and Alkynes," Xingwei Li, postdoctoral scholar in chemistry, Caltech.

**Kellogg Seminar**
Lauritsen Library, 4 p.m.—"The KTeV Measurement of |Vus|," Dr. Richard Kessler, Enrico Fermi Institute, University of Chicago.

## Saturday, November 5

**Robert F. Bacher Symposium on Reinventing Caltech and on a Vision for the Next 25 Years of PMA**
Ramo Auditorium, 9 a.m. to 5 p.m.—From 1950 to 1970, Robert Bacher and Lee DuBridge "reinvented" Caltech, transforming it into the modern Institute. Robert Christy will describe that transformation, and his talk will be followed by a panel discussion on possible transformations in the present era. Panelists will be David Baltimore, Paul Jennings, and selected trustees and faculty. The symposium will continue with faculty members presenting their visions of the next 25 years for their fields at Caltech.

# CampusEvents

## Monday, October 24

**Voices of Vision Series**
Beckman Auditorium, 8 p.m.—Award-winning writer and former *New York Times* science reporter Dava Sobel explores the origins and oddities of the planets through the lens of popular culture. A book signing will immediately follow the talk. Admission is free.

**West Coast Swing**
Winnett Center, 8:30 p.m.—Learn today's hippest, smoothest dance with award-winning dancer Gary Ulaner. This eight-week series, which began on October 3, will show you all you need to know to burn up the dance floor. West Coast swing can be danced to music ranging from big band to hip hop, so you'll always have an opportunity to show off your moves. No partner or experience is necessary. Fee: $8 per class, $6 for students; $56 for the series, $40 for students.

## Tuesday, October 25

**Beginning Ballet**
Braun Gym, multipurpose room, 9 p.m.—This is a free, introductory ballet class for women and men with little or no prior dance experience. Students will learn basic ballet technique, which leads to better balance, flexibility, and strength. Wear comfortable clothing and bring socks or ballet shoes. Join any time.

## Thursday, October 27

**Caltech Architectural Tour**
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.

**Amnesty International Monthly Meeting**
Caltech Y lounge, 7:30 p.m.—Caltech/Pasadena AI Group 22 holds its monthly meeting to discuss current activities and plans. All are welcome. Refreshments. Information: (818) 354-4461 or lkamp@lively.jpl.nasa.gov. Visit the website at www.its.caltech.edu/~aigp22.

**Intermediate Competitive Ballroom Dance**
Winnett Center, 8:45 p.m.—With a focus on technique and style, this class is designed for bronze- or silver-level dancers. The eight-week series, which began on October 6, is split into Standard and Latin. The regular price for both is $80; the student price is $50. For Standard or Latin alone, the regular price is $40; the student price is $25. Team membership is not required.

**Beginning-Intermediate Lyrical Dance**
Braun Gym, multipurpose room, 9 p.m.—Lyrical dance incorporates the movements from ballet and jazz and focuses on the interpretation and emotion of music. Students will learn basic dance technique as well as expression in movement. Wear comfortable clothing and bring socks or dance shoes. Join any time. Fee: $5 per class for students, or $25 for all eight classes; $10 per class for nonstudents, or $50 for the term.

## Friday, October 28

**Volleyball**
vs. Occidental College, 7:30 p.m.

## Saturday, October 29

**Men's Soccer**
vs. University of Redlands, 11 a.m.

**Men's Water Polo**
vs. Occidental College, 11 a.m.

**Belly Dancing**
Braun Gym, multipurpose room, 12:45 p.m.—Belly dancing is taught by Leela, a professional instructor who was voted best dance instructor in Glendale for 2003. No experience or special shoes are needed. Fee: $5 per class for students, $25 for all eight classes; $10 per class for nonstudents, $50 for the term.

***Giant of the Skies***
Beckman Auditorium, 2 p.m.—This film takes us back 127 million years. A gigantic *Ornithocheirus* embarks on an epic flight from Brazil to southern Europe to find a mate. During his journey the incredible diversity of life in the early Cretaceous period is revealed. Graduate student Brian Leigh will introduce the film and lead a postscreening discussion. See Public Events contact information on this page.

## Sunday, October 30

**Beginning Competitive Ballroom Dance**
Winnett Center, 2 p.m.—With a focus on technique and style, this class is designed for beginners. The professionally taught eight-week series, which began on October 9, is split into Standard and Latin. The regular price for both is $80; the student price is $50. For Standard or Latin alone, the regular price is $40; the student price is $25. Free team membership is available but not required for newcomers who purchase the entire series.

**Skeptics Society Lecture**
Baxter Lecture Hall, 2 p.m.—"Hiding in the Mirror: The Mysterious Allure of Extra Dimensions, from Plato to String Theory and Beyond," Dr. Lawrence Krauss, professor of physics, Case Western Reserve University. Donation is $8 for nonmembers, $5 for members and non-Caltech students. Free to the Caltech/JPL community. Tickets and information: 794-3119 or skepticmag@aol.com. A book signing will follow the lecture.

## Monday, October 31

**West Coast Swing**
Winnett Center, 8:30 p.m.—Learn today's hippest, smoothest dance with award-winning dancer Gary Ulaner. This eight-week series, which began on October 3, will show you all you need to know to burn up the dance floor. West Coast swing can be danced to music ranging from big band to hip hop, so you'll always have an opportunity to show off your moves. No partner or experience is necessary. Fee: $8 per class, $6 for students; $56 for the series, $40 for students.

## Tuesday, November 1

***Faces of Science*: Photographer Mariana Cook**
155 Arms, Robert Sharp Lecture Hall, 8 p.m.—For her book *Faces of Science*, renowned photographer Mariana Cook turned her camera on some of the greatest men and women of the scientific community. This talk will provide an intimate look at the people behind many of the great discoveries of our time. Admission is free. A book signing will follow.

**Beginning Ballet**
Braun Gym, multipurpose room, 9 p.m.—This is a free, introductory ballet class for women and men with little or no prior dance experience. Students will learn basic ballet technique, which leads to better balance, flexibility, and strength. Wear comfortable clothing and bring socks or dance shoes. Join any time.

## Wednesday, November 2

**Men's Soccer**
vs. Occidental College, 2:30 p.m.

## Thursday, November 3

**Investing in Uncertain Markets**
Beckman Institute auditorium, noon—This presentation by Fidelity Investments will address the major economic factors that can affect the stock and bond investments in your retirement savings plan. Learn how market volatility can work for you during the accumulation stage and during the retirement withdrawal stage, with proper allocation of assets among money-market, bond, and stock investments. Contact Fidelity at (800) 642-7131 to reserve a space.

**Volleyball**
vs. Whittier College, 7:30 p.m.

**Voices of Vision Series**
Beckman Auditorium, 8 p.m.—In his new book, *The Truth (with jokes)*, Al Franken picks up where *Lies* and *The Al Franken Show* left off. Armed with an arsenal of facts and humor, Franken is ready to take the fight to the Bush administration. Franken will give a Voices of Vision lecture on the subject of his book and follow it with a book signing. Admission is free.

**Intermediate Competitive Ballroom Dance**
Winnett Center, 8:45 p.m.—With a focus on technique and style, this class is designed for bronze- or silver-level dancers. The eight-week series, which began on October 6, is split into Standard and Latin. The regular price for both is $80; the student price is $50. For Standard or Latin alone, the regular price is $40; the student price is $25. Team membership is not required.

**Beginning-Intermediate Lyrical Dance**
Braun Gym, multipurpose room, 9 p.m.—Lyrical dance incorporates the movements from ballet and jazz and focuses on the interpretation and emotion of music. Students will learn basic dance technique as well as expression in movement. Wear comfortable clothing and bring socks or dance shoes. Join any time. Fee: $5 per class for students, or $25 for all eight classes; $10 per class for nonstudents, or $50 for the term.

## Friday, November 4

**Caltech Women's Club Welcoming Coffee**
JPL, von Karman Auditorium, 11 a.m. to 1 p.m.—All new members of the Caltech/JPL community are invited to attend this casual, family-friendly gathering. Meet fellow newcomers and learn more about the Pasadena area and the many activities of the Women's Club. For questions, contact Vilia Zmuidzinas at (626) 398-4413 or vilia@caltech.edu.

**Men's Soccer**
vs. CSU East Bay, 2:30 p.m.

**Patrick Ball Performs *The Fine Beauty of the Island***
Ramo Auditorium, 8 p.m.—*The Fine Beauty of the Island* is a solo musical theater piece written and performed by Patrick Ball, one of the world's premier Celtic harp players. Presented by the Caltech Folk Music Society. See Public Events contact information on this page.

## Saturday, November 5

**Men's Soccer**
alumni match, 11 a.m.

**Belly Dancing**
Braun Gym, multipurpose room, 12:45 p.m.—Belly dancing is taught by Leela, a professional instructor who was voted best dance instructor in Glendale for 2003. No experience or special shoes are needed. Fee: $5 per class for students, $25 for all eight classes; $10 per class for nonstudents, $50 for the term.

**Battlefield Band**
Beckman Auditorium, 8 p.m.—Scotland's Battlefield Band performs old songs as well as original new music, which they play on both ancient and modern instruments. See Public Events contact information on this page.

## Sunday, November 6

**Beginning Competitive Ballroom Dance**
Winnett Center, 2 p.m.—With a focus on technique and style, this class is designed for beginners. The professionally taught eight-week series, which began on October 9, is split into Standard and Latin. The regular price for both is $80; the student price is $50. For Standard or Latin alone, the regular price is $40; the student price is $25. Free team membership is available but not required for newcomers who purchase the entire series.

## Mondays

**Penultimate Frisbee**
Fox Stanton Track and Field, 12:15 p.m.—An informal recreational group that plays pickup games of Ultimate Frisbee at lunchtime on Mondays, Wednesdays, and Fridays. No experience is needed. Information: http://mailman.its.caltech.edu/penultimate.

## Tuesdays

**Preschool Playgroup**
Tournament Park, 10 a.m. to noon—Song and storytime, crafts and free play for toddlers and preschoolers (from walking to age 4). Sponsored by the Caltech Women's Club and open to Caltech/JPL community members only. Information: 578-0890 or s_l_miller@hotmail.com.

**Caltech Tai Chi Club**
Winnett lounge, 7:30 p.m.—Meets Tuesdays and Fridays weekly. Sessions are free. Information: www.its.caltech.edu/~taichi.

## Wednesdays

**Wednesdays in the Park**
Tournament Park, 10 a.m. to noon—Every Wednesday there's conversation and coffee for parents and caregivers, and playtime and snacks for children. Stop by and make new friends from around the world. Sponsored by the Caltech Women's Club and open to Caltech/JPL community members only. Information: 791-4225 or mcsutton@hotmail.com.

**Penultimate Frisbee**
Fox Stanton Track and Field, 12:15 p.m.—An informal recreational group that plays pickup games of Ultimate Frisbee at lunchtime on Mondays, Wednesdays, and Fridays. No experience is needed. Information: http://mailman.its.caltech.edu/penultimate.

## Thursdays

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

## Fridays

**Penultimate Frisbee**
Fox Stanton Track and Field, 12:15 p.m.—An informal recreational group that plays pickup games of Ultimate Frisbee at lunchtime on Mondays, Wednesdays, and Fridays. No experience is needed. Information: http://mailman.its.caltech.edu/penultimate.

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

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

## Public Events information and tickets

395-4652, 1 (888) 2CALTECH, or events@caltech.edu. Individuals with a disability: 395-4688 (voice) or 395-3700 (TDD). Visit Public Events at www.events.caltech.edu.

### Budget, from page 2

are, do help emphasize our culture of scarcity, where each dollar is seen as one that could potentially be spent on teaching and research and jealously saved for those purposes.

**Has Caltech's practice of bailing out PI's [principal investigators on research projects] who have overspent their federal grants contributed to the deficit? Will Caltech continue this practice?**

Our policy is to recover overspent accounts, a situation that is first and foremost the responsibility of the PI. Sources of recovery funding include other grants and contracts, where charges can be transferred; discretionary accounts controlled by the PI; and other restricted accounts in the division. Division chairs are expected to see that problems are addressed. We are nearly always successful in the long run, but not always.

**Is there a plan to reduce staff retirement benefits?**

There are no current plans to reduce retirement benefits.

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### Athenaeum, from page 1

The historic club has also just concluded a membership drive inviting all full-time Caltech and JPL employees to join. In the three-month period that ended in August, the Athenaeum gained a total of 195 new members. Of that number, 53 from Caltech and 33 from JPL are nonexempt employees. This marks a dramatic improvement over last year's membership drive at Caltech, which attracted 28 new members.

"I think it's a tremendous success and I'm very pleased that we've opened up the Athenaeum to all employees at Caltech and JPL," says Christopher Brennen, the Hayman Professor of Mechanical Engineering. Brennen recently resigned from the membership committee and will serve as chair of the board of governors.

"The board of governors oversees the activities of the Athenaeum but not the detailed running of it," Brennen says. "The house committee reports to the board of governors and does all the work.

"Arden has been the chair of the house committee for 20 years, and he's done a fantastic job," says Brennen. "He has additionally served as manager on three occasions and is currently the interim general manager. The Ath owes Arden a debt of gratitude."

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## Cashier's Office to close

The Caltech Cashier's Office, located in the Keith Spalding lobby, will be closing as of end of day Friday, November 11.

According to Madeline Lee, director of treasury services, many services currently provided at the cashier's window will be available at the Caltech Employees Federal Credit Union (CEFCU) campus office, beginning Monday, November 14.

The CEFCU, 515 South Wilson Avenue, will offer check cashing and cashing of petty-cash fund replenishment checks (both under current policies), and Institute deposits.

Office hours are Monday to Thursday, 9 a.m. to 4 p.m., and Friday, 8:30 a.m. to 4 p.m. For more information, contact Brian Spritzer, ext. 6300.

Other functions will remain with Treasury Services or move to other departments:

• Payment service will-call checks—available at Payment Services, 116 Keith Spalding, from 10 to 11 a.m. and 2 to 3 p.m. daily. Contact Christina Aguilar, ext. 3098.

• Student and faculty payments—accepted at the Bursar's Office, 120 Center for Student Services, ext. 2988, from 8 a.m. to 5 p.m. daily.

• Cash receipts—Treasury Services, 271 South Chester Avenue, will continue to perform this function. Contact Chris Jones, ext. 6723.

• Payroll checks, batches, and paystubs—details will be forthcoming.

The Cashier's Office petty-cash fund will be closed. For expenditures previously reimbursed through this fund, customers are encouraged to use the appropriate procurement tool (PCard, TechMart, or Payment Requests). Please note that this change does not affect current department petty-cash funds, which will continue under existing procedures.

Frequent Cashier's Office users who have specific concerns about the changes may contact Chris Jones at ext. 6723. General questions can be directed to Jones or to Lee at ext. 4895.

Please note that the Cashier's Office may be closed periodically during the transition. "We ask for your patience during this transition period and apologize for any inconvenience," says Lee. "We look forward to our continued partnership with the Caltech Employees Federal Credit Union."

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### Parking, from page 1

**Is the city planning to put parking meters on California Boulevard?**

The city has no plans to do so. The city's parking manager has said the nearest area being considered for metering is the Pasadena Playhouse District.

**How will the proceeds gathered from parking fees be applied?**

The proceeds will go to the general budget to help offset the structural deficit.

**How can staff members who missed this initial registration period register their vehicle?**

If you did not register, or chose not do so at this time, we can register you at any time. Registration is available online through Oracle, or you can stop by the Parking Office at 515 S. Wilson Avenue.

**At the Rideshare Fair held on October 7, who won the grand prize of a parking permit for the year?**

A grad student won the prize.

**When will the left-turn light at the corner of California Boulevard and Hill Avenue get activated?**

The left-turn light was part of a requirement for the new parking structure under the athletic field. The city is currently doing work on the street along California Boulevard, moving east from Lake Avenue. The light will most likely be activated when the street work is completed.

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### Grubbs, from page 1

bats made of inexpensive wood as durable as hardwood bats; and pharmaceuticals that can be made much more quickly.

The exciting thing, Grubbs says, is that such varied products are possible "based on this one platform technology, which is the catalyst."

According to the Nobel citation, metathesis has led to more efficient and environmentally friendly industrial methods. "Metathesis is an example of how important basic science has been applied for the benefit of man, society and the environment."

A Kentucky native, Grubbs earned his bachelor's and master's degrees at the University of Florida. After completing his PhD in chemistry at Columbia and a year at Stanford as a postdoctoral fellow, he joined the Michigan State University faculty in 1969. He came to Caltech in 1978 with full tenure, and became the Atkins Professor in 1990. He is a member of the National Academy of Sciences and received the Benjamin Franklin Medal in 2000.

The award brings to 32 the number of Nobel Prizes won by 31 Caltech faculty and alumni (Linus Pauling won both the chemistry and the peace prize).

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### Admissions, from page 1

demonstrated by aid qualifiers are critical issues that the Faculty Board's Scholarships and Financial Aid Committee must study continually.

At the graduate level, students are admitted by academic option and, for most options, available research funding guides the number accepted. Almost 40 percent of graduate students are international. Thus, the ease of obtaining a visa figures into the odds of a student matriculating at Caltech, and the list of competitor institutions is global. We add to our own competition, given that Institute alumni and former postdoctoral fellows are on the faculty at many top institutions worldwide.

Caltech has prided itself over the years on its small size, which allows undergraduates to interact with faculty and to engage in research early on. Academic and residential space restrictions limit entering classes to approximately 215 students. First-year students must enroll in core curriculum courses; the physics lecture hall holds 200, and chemistry laboratory locker space is limited to 200.

On the residential side, the Institute requires first-year undergraduates to live on campus, and approximately 80 percent of upper-class students also live in the undergraduate houses. At present, we have 859 undergraduate beds and 587 for graduate students. The remaining undergraduates live off campus in non-Caltech housing or with family. Graduate students are guaranteed Caltech housing for their first year only.

During the 2004–05 year, faculty, students, and staff expressed concern that the upcoming South Houses renovation would make it difficult to attract new undergraduates. The reverse held true, for several reasons that we can surmise. First, Director of Undergraduate Admissions Rick Bischoff and his staff updated recruitment strategies and did an impressive job of collaborating with faculty, staff, current students, and alumni to begin boosting the Institute's visibility. Arguably a slow and deliberate process, raising Caltech's profile is essential to remaining competitive in the future.

Second, faculty and students did an outstanding job of sharing their experiences with admitted students during Prefrosh Weekend. Thanks to the leadership of Vice President for Student Affairs Margo Marshak, the current student body's positive tenor showed throughout the weekend. Third, prospective students were able to tour and see detailed plans of a sample modular housing unit, due to the work of the Housing Office and Campus Planning. Most seemed to like the modular unit, and were also enthusiastic that Caltech is renovating a large portion of undergraduate housing.

Should you have questions or comments regarding student enrollment, please feel free to contact me at eoneal@caltech.edu.

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**Caltech 336**

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

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