

Caltech 336

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

The campus community biweekly

September 19, 2002, vol. 2, no. 13



Caltech community members and local residents toured the newly opened Broad Center for the Biological Sciences at its dedication ceremony last week.

Broad Center opens its doors

Mike Rogers

With its stainless-steel facade shimmering in the afternoon sun, Caltech's Broad Center for the Biological Sciences was dedicated on September 10. Area politicians and Caltech community members celebrated the opening with Caltech trustee Eli Broad and his wife, Edythe. The Broads provided the principal funding for the \$50 million edifice.

The Broad Center, which was the cornerstone of Caltech's \$111 million Biological Sciences Initiative fund-raising effort, is the Institute's first new building of the 21st century. When fully staffed, it will house 13 research groups from a range of disciplines, including biology, chemistry, and engineering, each focusing on the biological sciences, and many of which will collaborate.

"Big challenges are in front of us," said President David Baltimore, who won the Nobel Prize in 1975 for his work in virology. "They are the challenges of ever-greater understanding of both the molecular underpinnings of living systems and the integration of individual events to make a functioning whole. Broad science reflects these two directions. We have the structural chemists and biologists working at the molecular level and the neurobiologists, behavioral biologists, developmental and cellular biologists, and computational biologists concerned with integration." He pre-

dicted that advances made in the center "will increase our understanding of human life and help solve the daunting problems of neurologic, cellular, and genetic disease."

Located at the northwest corner of campus, the Broad Center is 120,000 square feet in size, with three floors above ground and two below. It will

see Broad, page 6

U.S. News ranks Caltech fourth

U.S. News & World Report has released its 2003 *America's Best Colleges* guidebook, ranking more than 1,400 four-year institutions. Caltech tied for number four among 249 schools in the prestigious Best National Universities category. Other rankings the Institute achieved included Great Schools at Great Prices (first), Best Undergraduate Engineering Programs (third), Best Aerospace/Aeronautical/Astronautical Programs (fifth), Programs That Really Work—Undergraduate Research/Creative Projects (sixth), and Campus Diversity—Percentage of International Students (10th). The full list of rankings can be seen at www.usnews.com/usnews/edu/college/rankings/rankindex_brief.php.

A time to reflect

On Wednesday of last week—the first anniversary of the terrorist attacks on New York City and the Pentagon—those of us who felt a need for a personal timeout, a few minutes of quiet contemplation, could do so in the Reflection Room, which was set up for the day in Winnett Lounge.

Inside, the blinds were closed against the late summer sun, creating a cool dark space into which any member of the Caltech community could enter. As soft music played on a stereo, visitors scribbled messages and thoughts on sheets of paper and spoke quietly.

April White, MSW, the director of consulting services at the Staff and Faculty Consultation Center, said the space was set aside for people who wanted to remember the events in a quiet setting.

"We know that anniversaries are hard, especially the first anniversary after a traumatic event," she said. "We wanted to set up a space that wasn't going to be overwhelming, a space that was unobtrusive."

White and her colleagues took turns staffing the room to provide a sympathetic ear to anyone who needed to express their emotions.

see Remembrance, page 5



New director of multicultural education named

The Institute has appointed a new associate dean and director of multicultural education and student affairs, effective October 1.

"I am delighted to announce the appointment of Dr. Erica O'Neal as the new associate dean and director of multicultural education and student affairs," said Gary Lorden, acting vice president for student affairs. "The knowledge, experience, and commitment she brings to Caltech will contribute greatly to our efforts to increase the diversity of our undergraduate and graduate student populations and to enhance the educational experiences of all of our students."

O'Neal is currently associate director of development in the School of Humanities and Sciences at Stanford University. Previously, as an assistant dean in the school of engineering there, she worked

see O'Neal, page 5



Two new VPs come aboard

Caltech has appointed a new vice president for student affairs, Margo Marshak, and for development and alumni relations, Gary Dicovitsky.

Marshak, currently vice president and dean of students at the University of Chicago, will begin her Caltech post on October 21. In the process, she will become the Institute's first female vice president, as well as its first full-time vice president for student affairs (all who previously held the post were also faculty members). An attorney by training, she brings extensive experience in student affairs to the position.

"I am overjoyed that a person of Margo's qualifications has agreed to come to Caltech," said President David Baltimore. "I am sure that generations of Caltech students will benefit from her caring approach to student life and her deep knowledge of the needs of, and opportunities for, students. She will personally contribute to increasing the role of women at Caltech. She has long been deeply committed to increasing diversity in higher education and will bring a wealth of ideas to us."

Prior to the University of Chicago, Marshak held vice and assistant deanships at the University of Pennsylvania Law School and the University of San Diego School of Law, and was vice president for student affairs for 10 years at New York University. A graduate of the University of Rochester, she holds an MA from the University of Michigan and a law degree from the California Western School of Law.

At Caltech, Marshak will be the senior executive overseeing student welfare and

see VPs, page 6

Caltech issues diversity statement

As part of its effort to increase recruitment and retention of female and minority faculty, the administration has released a statement, "Reaffirming and Extending Caltech's Commitment to Attract and Retain a Diverse Faculty." Signed by President David Baltimore and Provost Steve Koonin and endorsed by the academic division chairs, the statement is a response to last year's report by the Committee on the Status of Women Faculty at Caltech. The statement can be seen at <http://diversity.caltech.edu/divpr902.html>, and will run in the next issue of 336.

NewsBriefs



Gladiators, the Graduate Student Council's annual sports day, brought students out on a sun-drenched Saturday in August to compete in wild and wacky games.

Personals

Welcome to Caltech

June

Sabine Ellen Arndt, postdoctoral scholar in chemistry; **Pablo David Davidov**, postdoctoral scholar in chemistry; **Robert Drewell**, postdoctoral scholar in biology; **Sandrine Fauqueux**, visitor in geophysics; **Jaron Hansen**, Caltech postdoctoral scholar in JPL's atmospheric chemistry element; **Kai Hormann**, postdoctoral scholar in computer science; **Andrew Landahl**, visitor in physics; **Richard Massey**, visitor in astronomy; **Tae-Soon Park**, postdoctoral scholar in aeronautics; **Dnyanesh Pawaskar**, postdoctoral scholar in mechanical engineering; **Darren Segall**, postdoctoral scholar in mechanical engineering; **Charles Spence**, postdoctoral scholar in applied physics; **Katsuyuki Takahashi**, visitor in biochemistry; **Russel White**, postdoctoral scholar in astronomy; **Lingchong You**, postdoctoral scholar in chemistry.

Duncan Brown joined the Institute as a visitor in physics. He received his PhD from the University of Wisconsin, Milwaukee, in 1999, and has been a research assistant at the Milwaukee campus since 2000.

July

John Brewer joined Caltech effective July 1 as professor of history and literature. Considered one of the world's most distinguished historians, he is noted for working at the leading edge of key conceptual and methodological developments in history and literature and for his major contributions to social, political, and cultural history. He received his BA in 1968, MA in 1972, and PhD in 1973, all from the University of Cambridge.

Christopher Umans has joined the Institute as an assistant professor of computer science, effective July 1. His research focuses on the mathematical foundations of information science and technology, specifically complexity theory. He received his BA from Williams College in 1996 and his PhD from UC Berkeley in 2000.

August

Timothy Canty, Caltech postdoctoral scholar in JPL's atmospheric chemistry research element; **Jianye Ching**, George W. Housner Postdoctoral Scholar in Civil Engineering; **Edward Coles**, postdoctoral scholar in biology; **Song Gao**, postdoctoral scholar in environmental science and engineering; **Ting Gao**, postdoctoral scholar in chemistry; **Jong-In Han**, postdoctoral scholar in environmental science and engineering; **Kevin Hickson**, Caltech postdoctoral scholar in JPL's atmospheric chemistry element; **Jennifer Lee**, visitor in chemistry; **Alexander Leshansky**, postdoctoral scholar in chemistry; **Laurent Moreaux**, postdoctoral scholar in biology; **Sang Tae Park**, postdoctoral scholar in chemistry; **Paul Penzes**, postdoctoral scholar in computer science; **Lara Arielle Phillips**, Irvine Foundation

Postdoctoral Fellow in Astrophysics; **Michael Plissi**, visitor in physics; **Norbert Schorghofer**, postdoctoral scholar in planetary science; **Jong-Shik Shin**, postdoctoral scholar in bioengineering; **Todd Squires**, Lee A. DuBridge Postdoctoral Scholar in Physics; **Julien Sylvestre**, postdoctoral scholar in physics; **Carol Chace Tydell**, senior postdoctoral scholar in biology; **Liang Zhao**, postdoctoral scholar in chemistry.

Patricia "Trish" Bailey joined Caltech's Office of Corporate Relations on August 1 as associate director. Previously assistant director of corporate and foundation relations at Occidental College, she has also worked as special-events coordinator for the Juvenile Diabetes Research Foundation and as training department manager for the Grantsmanship Center in Los Angeles. She received her BA from Douglass College, Rutgers University, and she is currently working on her master's degree in negotiation and conflict management, at Cal State Dominguez Hills.

Federico Echenique has joined Caltech as an assistant professor of economics, effective August 1. The recipient of an MA from the Universidad de la Republica (Uruguay) in 1995 and a PhD from UC Berkeley in 2000, he is an economic theorist whose primary work has been in the area of strategic complementarities, an area of research related to the analysis of the stability game-theoretic equilibria.

Grant Jensen joined the Institute as an assistant professor of biology on August 1; he will be based in the new Broad Center for the Biological Sciences. His expertise is in the area of supramolecular structure, with a focus on cryoelectron microscopy, and his work encompasses all the methods used in that discipline: electron diffraction, single-particle analysis, and electron tomography. He received his BS from Brigham Young University in 1994 and his PhD from Stanford in 1999.

Amy Menes joined Caltech's Development and Alumni Relations East Coast Regional Office on August 5 as events coordinator and administrative assistant. She received a BA in art history from Rutgers University, and an MA in arts administration from New York University. Prior to Caltech, she worked with the board of visitors of Columbia University's law school, directed on-air fundraising events for WNET-TV in New York City, and was associate director of operations at the South Street Seaport Museum in Lower Manhattan.

New positions

June

Peter Bossaerts, professor of finance, has been appointed executive officer for the social sciences, effective June 15. He joined the Institute's faculty in 1990 as an assistant professor and was promoted to professor in 1998. He received his Doctorandus from Universitaire Faculteiten Sint Ignatius (Belgium) in 1982 and his PhD from UCLA in 1986.

David Boyd, postdoctoral scholar in applied physics, was appointed a senior postdoctoral scholar in applied physics.

Ronald Drever became professor of physics, emeritus, on June 26. He earned his BSc and PhD from Glasgow University in 1953 and 1958, respectively, and he joined Caltech in 1977 as professor of physics.

Zhen-Gang Wang, associate professor of chemical engineering, has been appointed professor of chemical engineering, effective June 1. The recipient of a BSc from Beijing University in 1982 and a PhD from the University of Chicago in 1987, he came to Caltech in 1991.

July

Michael Brown, assistant professor of planetary astronomy, became associate professor of planetary astronomy effective July 1. After earning his AB from Princeton in 1987 and his PhD from UC Berkeley in 1994, he joined Caltech in 1997.

John Abelson became George Beadle Professor of Biology, Emeritus, on July 1. He joined Caltech as professor of biology in 1982 and was named Beadle Professor in 1991, and he served as chair of the biology division, 1989–95. He received his BS from Washington State University in 1960 and his PhD from Johns Hopkins University in 1965.

Arden Albee became professor of geology and planetary science, emeritus, on July 1. His first affiliation with Caltech was as a visiting assistant professor in 1959, and he joined the faculty as an associate professor in 1960. Promoted to full professor in 1966, he served as academic officer for geological and planetary sciences, 1971–79; chief scientist at the Jet Propulsion Laboratory, 1979–84; and dean of graduate studies, 1984–2000. He received his AB from Harvard College in 1950 and his AM and PhD from Harvard University in 1951 and 1957, respectively.

William Bridges became Carl F Braun Professor of Engineering, Emeritus, on July 1. After an initial stint at Caltech as a Sherman Fairchild Distinguished Scholar in 1974–75, he was appointed professor of electrical engineering and applied physics in 1977, becoming Braun Professor in 1983 and serving as executive officer for electrical engineering, 1978–1981. He received his BS in 1956, MS in 1957, and PhD in 1962, all from UC Berkeley.

Iain Fraser, senior research fellow in biology, has been appointed senior research associate in biology, effective July 1. He earned his BSc from Heriot-Watt University in 1990 and his PhD from the University of London in 1995, and joined the Institute as senior research fellow earlier this year.

Christopher Hitchcock, associate professor of philosophy, has been appointed professor of philosophy, effective July 1. The recipient of an AB from Princeton in 1986 and dual MAs (philosophy and mathematics) in 1990 and a PhD in 1993, from the University of Pittsburgh, he joined Caltech as associate professor in 1998.

Hugh Taylor became Robert P. Sharp Professor of Geology, Emeritus, on July 1. He earned his BS from Caltech in 1954, his AM from Harvard in 1955, and his PhD from Caltech in 1959, joining the Institute's faculty that same year as an assistant professor. Becoming associate professor in 1964, professor in 1969, and Sharp Professor in 1981, he served as executive officer for geology, 1987–94.

Retirements

Ronald Kibbe, a senior engineering assistant in engineering/estimating, retired on August 1 after 42 years at Caltech.

Wayne Miller retired on July 1. A member of the professional staff with the Seismo Lab, he had been at Caltech for 42 years.

Deaths

Charles Kincaid Witham, a member of the Caltech Environmental Task Force for many years and a leading participant in efforts to create bikeways throughout the San Gabriel Valley, died on August 6, having suffered fatal injuries after colliding with a deer while cycling home from JPL; he was 33. Considered a key member of the JPL team working with direct-methanol fuel cells, he had earned his PhD from Caltech in 2000 and begun working at JPL as a postdoctoral research associate, becoming a member of the engineering staff in January 2001. He is survived by his mother, Linda; his father, Charles; his sister, Nita-Lyn Roth; and a grandmother, Anita Berzin.

see News Briefs, page 5

Group aims to improve campus communication

With a diverse student and staff population totaling roughly 6,000, its own on-campus residences, shops, and eateries, Caltech may feel like a village or small town, at times separate and distinct from the city of Pasadena. So it makes sense that town-hall meetings may provide a means for improving communications across the campus.

Other possibilities include using surveys to tap into students' concerns, developing a handbook for graduate students, and improving distribution of campus periodicals, including *Caltech 336*.

These were a few of the ideas that were developed last month at a meeting of the Campus Communications Task Force, a group comprising members representing the student body, staff, postdocs, and faculty.

The Graduate Student Council has taken the lead on producing the graduate student handbook. Mike Fleming, an electrical engineering grad student and a member of the task force, said that the essential information that is out there is divided between different publications like the catalog and the online version of the *Technique*, and should be united into an accessible reference book.

"We aim to bring this information together to make graduate students more aware of what can and can't be done on campus, what resources are available to them, what they can expect from Caltech, and what Caltech expects from them," Fleming said. The publication will be in development this year.

Besides such basics as the Institute's policies regarding housing and alcohol, the publication would include degree requirements, calendars, and information about maternity leave. Caltech's graduate student population numbers about 1,100.

In the past, the campus group more likely to be overlooked when it comes to communication is Caltech's postdoctoral scholars. Although their stay at Caltech may be as long as six years, their ties to the Institute can seem slight.

"We're no more transient than anyone else," said Elizabeth Haswell, a third-year biology postdoc. "But maybe since we work more independently, we're not as tied to such things as aesthetic changes," like the Serra sculpture controversy.

Haswell pointed out that an e-mail list of all the postdocs on campus didn't even exist until the Caltech Postdoctoral Association compiled it last year.

"The main goal originally was to feel more of a connection to each other and the administration," she said. "We want communication to go both ways." Now the database is one of the primary channels the administration uses to reach the postdocs.

The task force also discussed Caltech's Web site and changes that would improve its role as an information outlet. A revamped version of the home page has been in development through the summer and will be enhanced by a Google search engine. It will be launched at the beginning of the school year.

"We felt we needed to hear from all constituents on all issues," said Bob O'Rourke, vice president for public relations and chair of the task force. The task force includes graduate students Ileana Carpen, Cynthia Collins, and Matthew Sumner and undergrad Janet Zhou.

The task force agreed that quality-of-life issues like health care, parking, and child-care services would be pertinent topics for discussion at town-hall meetings, which will be scheduled on an as-needed basis.

see Task force, page 5

September 23–October 6, 2002

M T W T F S S

Monday, September 23

Thesis Seminar

106 Spalding Lab, Hartley Memorial Seminar Room, 10 a.m.—“Engineering Galactose Oxidase to Increase Expression Level in *E. coli*, Enhance Thermostability, and Introduce Novel Activities,” Lianhong Sun, graduate student in chemistry, Caltech.

Thesis Seminar

250 Watson Labs, 2 to 3:30 p.m.—“Microfluidic Technologies for High Throughput Screening Applications,” Todd Thorsen, graduate student in biochemistry, Caltech.

Friday, September 27

Thesis Seminar

147 Noyes, Sturdivant Lecture Hall, 1 p.m.—“Investigations into the Enzymology and Biotechnology of the Extremozyme Pfu from *Pyrococcus furiosus*,” Timothy Cheng, graduate student in chemistry, Caltech.

Monday, September 30

Geology and Planetary Sciences Seminar

155 Arms, Robert Sharp Lecture Hall, 4 p.m.—“Mineralogy of the Earth’s Mantle,” Professor Denis Andrault, Institut de Physique du Globe, Paris. Information: <http://www.gps.caltech.edu>.

Inorganic-Electrochemistry Seminar Series

147 Noyes, Sturdivant Lecture Hall, 4 p.m.—Topic to be announced. Christopher B. Murray, manager, nanoscale materials and devices, IBM Thomas J. Watson Research Center.

Tuesday, October 1

Caltech Library System Presents: Quick Overview of Information Resources

Sherman Fairchild Library, multimedia conference room, noon—Learn the most effective ways to use library services and resources. No reservations are required. Information: 395-6713 or <http://library.caltech.edu/learning/default.htm>. Open to Caltech community members only.

General Biology Seminar

119 Kerckhoff, 4 p.m.—“Intracellular Calcium Oscillation and Behavioral Rhythms in *C. elegans*,” Kouichi Iwasaki, Neuroscience Research, National Institutes of Advanced Industrial Science and Technology, Japan.

Wednesday, October 2

Thesis Seminar

151 Crellin, 2 p.m.—“Structure-Function Analysis of the Mechanosensitive Channel of Large Conductance,” Joshua Maurer, graduate student in chemistry, Caltech.

Thursday, October 3

Caltech Library System Presents: Quick Overview of Information Resources

Sherman Fairchild Library, multimedia conference room, 2 p.m.—Learn the most effective ways to use library services and resources. No reservations are required. Information: 395-6713 or <http://library.caltech.edu/learning/default.htm>. Open to Caltech community members only.

Ulric B. and Evelyn L. Bray Seminar

25 Baxter, 4 p.m.—“Cultural Capital,” Roland Fryer, postdoctoral scholar, department of economics, University of Chicago. Refreshments.

Chemical Engineering Seminar

106 Spalding Lab, Hartley Memorial Seminar Room, 4 p.m.—“Atomistic Simulations of Surface Chemical Reactions for Growing High-K Gate Stacks,” Charles B. Musgrave, assistant professor of chemical engineering and materials science and engineering, Stanford University. 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.—“There’s Something About SUSY,” Maria Spiropulu, Enrico Fermi Fellow, Enrico Fermi Institute, University of Chicago. Refreshments, 108 E. Bridge, 3:45 p.m. Information: www.pma.caltech.edu/~physcoll/PhysColl.html.

Friday, October 4

Fluid Mechanics Seminar

101 Guggenheim Lab, Lees-Kubota Lecture Hall, 3 p.m.—Topic to be announced. Amit Agrawal, department of mechanical engineering, University of Delaware. Information: www.galcit.caltech.edu/Seminars/Fluids/CurrentFluids/index.html.

General Biology Seminar

119 Kerckhoff, 4 p.m.—“Modeling Blood Disease in Cancer Using the Zebrafish,” Leonard Zon, Howard Hughes Medical Institute, Children’s Hospital, Boston.

Caltech featured in “Universe” exhibit

From 1889, when the first telescope arrived on Mount Wilson’s summit, to the present launching of the Hubble Space Telescope, Pasadena has defined—and been defined by—astronomy. Now the public can learn about the city’s relationship with science at the Pasadena Museum of History.

The *Pasadena Looks at the Universe* exhibit promises visitors a world of information about the cosmos, beginning with a look at how astronomy was taught in the 1890s and concluding with today’s discoveries through the Hubble Telescope and the Palomar and Keck Observatories.

On a local level, Caltech, the Huntington Library and Art Gallery, and the Pasadena Civic Center can trace their development to the vision of astronomer George Ellery Hale, who convinced the Carnegie Institution and others to invest in the city and support the observatory on Mount Wilson. Astronomy played a major role in transforming Pasadena from a wealthy resort to a cosmopolitan city.

Pasadena has always been at the theoretical as well as technological forefront of astronomy, with Edwin Hubble’s discovery of the expanding universe leading to the Big Bang theory and modern cosmology. The legacy continues today at Mount Wilson, where research is taking place using new technologies such as adaptive optics and interferometry, and at JPL, which continues exploring the solar system with the Hubble Telescope and other instruments.

The exhibit includes numerous artifacts, some of which have never before been publicly displayed, ranging from hand-painted Victorian lantern slides for teaching schoolchildren to photos of the birth of new galaxies.

Pasadena Looks at the Universe is curated by Beth Werling of the Los Angeles County Natural History Museum, assisted by an advisory committee led by retired JPL director William Pickering and including JPL’s James Arnett, mission assurance manager and a museum trustee; Fred Felberg, retired associate director; Robert Mackin Jr., retired technical manager; Judith Goodstein, Caltech archivist; and Ray Owen, Caltech professor of biology, emeritus.

The exhibit, supported by the Pasadena Hall of Science and the Paloheimo Foundation, runs through November 24. The museum is located at 470 West Walnut Street, at Orange Grove Boulevard. Hours are Wednesday through Sunday, noon to 5 p.m. Admission is \$6; senior and student discounts are available, and children under 12 are free. For more information, call (626) 577-1660 or visit www.pasadenahistory.org.



OVRO opens house

The Owens Valley Radio Observatory, operated by Caltech, will hold its annual open house on Saturday, October 5, from 10 a.m. to 2 p.m.

Located near Bishop, California, in the eastern Sierra Nevada, OVRO is the largest university-operated radio observatory in the world. Its various radio telescopes, which read radio emissions from space, are helping researchers to learn more about the sun, the birth of stars, and the beginnings of the universe. Guests will be able to tour the facility and see state-of-the-art instruments, talk with astronomers, and enjoy complimentary hamburgers, hot dogs, and beverages. Visors and T-shirts will be available for purchase.

“It’s a fun day with lots of local enthusiasm,” said OVRO staff member Debbie Juliff, who noted that last year’s event attracted close to 300 people throughout the day.

OVRO is approximately 250 miles north of Los Angeles, about four to four and a half hours by car. To reach the site, take Highway 395 north to Big Pine, turn right (east) on Highway 168, and left (north) on Leighton Lane. For more information, call Mark Hodges at (760) 938-2075, ext. 109, or Debbie Juliff, ext. 129.

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CampusEvents

Monday, September 23

Men's Soccer
vs. Chapman University, 4 p.m.

Tuesday, September 24

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: 792-7808 or julia@astro.caltech.edu.

Caltech Tai Chi Club
Winnett lounge, 7:15 p.m.—Meets Tuesdays and Fridays weekly. Sessions are free. Information: www.its.caltech.edu/~taichi.

Caltech Folk-Dancing Club
Dabney Lounge, 7:30 p.m.—Meets until mid-night. Drop-ins are welcome. Donations accepted.

Volleyball
at Pomona-Pitzer Colleges, 7:30 p.m.

Wednesday, September 25

Wednesdays in the Park
Tournament Park, 10 a.m. to noon—Conversation and coffee for parents and caregivers, and playtime for children. Information: 355-3874 or lcklavins@hotmail.com.

Men's Soccer
at University of Redlands, 4 p.m.

Thursday, September 26

Video Compression for Presentations, Web, and CD/DVD
New Media Classroom, 363 S. Hill Avenue, 10 a.m. to noon—Learn why and how video is compressed for playback on a computer. There will be hands-on exercises with Cleaner 5 software and demonstrations of other compression software, such as Premiere and Sorenson Squeeze. Reservations: carolynp@caltech.edu. Information: http://morel.caltech.edu/classes/workshops.html.

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.

Caltech Concert Band, Jazz Band, and Swing Band Auditions
Student Activities Center, room 15, 1 to 3 p.m.—Sign up for an audition time on the sheet posted on the door. If you need to borrow an instrument, please contact the band director, William Bing, at wbing@caltech.edu. Information: www.music.caltech.edu/band-intro.html.

Chamber Music Auditions
Student Activities Center, room 12, 4 to 6 p.m.—Sign up for an audition time on the sheets posted on the door. Auditions are informal, and no chamber music experience is necessary. Open to Caltech students only. Information: 395-6198 or dbing@caltech.edu.

Amnesty International Monthly Meeting
Caltech Y lounge, 7:30 to 9 p.m.—Amnesty International 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.

Chamber Music Auditions
Student Activities Center, room 12, 7:30 to 10 p.m.—Sign up for an audition time on the sheets posted on the door. Auditions are informal, and no chamber music experience is necessary. Open to Caltech students only. Information: 395-6198 or dbing@caltech.edu.

Friday, September 27

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

Volleyball
at Cal Lutheran University, 7:30 p.m.

Saturday, September 28

Men's Soccer
vs. Whittier College, 11 a.m.

Men's Water Polo
vs. alumni, 11 a.m.

Volleyball
vs. Claremont-Mudd-Scripps, 7:30 p.m.

Sunday, September 29

Caltech Concert Band, Jazz Band, and Swing Band Auditions
Student Activities Center, room 15, 12:30 to 3 p.m.—Sign up for an audition time on the sheet posted on the door. If you need to borrow an instrument, please contact the band director, William Bing, at wbing@caltech.edu. Information: www.music.caltech.edu/band-intro.html.

Chamber Music Auditions for Pianists
Student Activities Center, room 10, 12:30 to 2:30 p.m.—Sign up for an audition time on the sheets posted on the door of SAC room 12. Auditions are informal, and no chamber music experience is necessary. Open to Caltech students only. Information: 395-6198 or dbing@caltech.edu.

Caltech-Occidental Chamber Orchestra
Ramo Auditorium, 3:30 to 6 p.m.—Allen Robert Gross, conductor, and Tim Emmons, double bass, in a concert featuring *Fables, Farewells, and Flashbacks*, a concerto for double bass and chamber orchestra by Dave Kopplin. Admission is free. Information: 395-4652, 1 (888) 2CALTECH, or events@caltech.edu. Individuals with a disability: 395-4688 (voice) or 395-3700 (TDD). Visit Public Events at www.events.caltech.edu.

Family Potluck
Tournament Park, 4 to 7 p.m.—The Caltech Women's Club will provide plates, cups, utensils, and drinks. Just bring yourself, your family, and a potluck dish. Entertainment includes a clown and a bounce house. Information: 355-3874 or lcklavins@hotmail.com. Open to Caltech and JPL community members only.

Monday, September 30

Baby Furniture and Household Equipment Pool
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 community. Information: 584-9773.

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Thursday, October 3

Scanning and Resolution
New Media Classroom, 363 S. Hill Avenue, 10 a.m. to noon—Learn how to scan correctly the first time for great-looking images for publications and presentations. The workshop will cover resolution for different outputs, Photoshop tips, and hands-on practice with photos, journals, and line art. Reservations: carolynp@caltech.edu. Information: http://morel.caltech.edu/classes/workshops.html.

Skeptics Society Lecture
Baxter Lecture Hall, 7 p.m.—"Seeing in the Dark," Dr. Timothy Ferris, author and emeritus professor, UC Berkeley. 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. Book signing to follow the lecture.

Friday, October 4

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

Volleyball
vs. University of Redlands, 7:30 p.m.

Dance Under the Stars with Michael Andrew and Swingerhead
Beckman Mall, 8 p.m.—Led by bandleader-singer-songwriter Michael Andrew, Swingerhead plays swing, mambo, cha-cha, lounge, and surf music reminiscent of the 1940s and '50s. The Pasadena Ballroom Dance Association will be on hand to give dance instruction. Bring picnic dinners, dance, and listen to the music. 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 5

Men's Soccer
vs. University of La Verne, 11 a.m.

Dance Under the Stars with the Paris Combo
Beckman Mall, 8 p.m.—A celebration of contemporary Paris, this retro-cabaret quintet presents the rich diversity of the city through blues, swing, Gypsy, flamenco, and North African music. A dance floor will be set up. Bring picnic dinners, dance, and listen to the music. Tickets and information: 395-4652, 1 (888) 2CALTECH, or events@caltech.edu. Individuals with a disability: 395-4688 (voice) or 395-3700 (TDD). Visit Public Events at www.events.caltech.edu.

Sunday, October 6

Men's Water Polo
vs. Cal Maritime, 11 a.m.

Skeptics Society Lecture
Baxter Lecture Hall, 2 p.m.—"Darwin's Cathedral: Evolution, Religion, and the Nature of Science," David Sloan Wilson, professor of biology and anthropology, Binghamton University, New York. 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. Book signing to follow the lecture.

News Briefs, from page 2

Honors and awards

Yaser Abu-Mostafa, professor of electrical engineering and computer science, and **Oscar Bruno**, professor of applied and computational mathematics, are recipients of the 2002 Graduate Student Council Teaching Awards.

James Arvo, associate professor of computer science, **Vladimir Baranovsky**, Taussky-Todd Instructor in Mathematics, **Niles Pierce**, assistant professor of applied and computational mathematics, **John Preskill**, MacArthur Professor of Theoretical Physics, **John Sutherland**, visiting professor of literature, and **Darryl Yong**, von Kármán Instructor in Applied and Computational Mathematics, are recipients of the 2002 ASCIT (Associated Students of Caltech) Teaching Awards. At the same time, **Michael Shumate**, lecturer in applied physics, has been honored with the 2002 ASCIT Lifetime Achievement Award.

Christopher Brennen, professor of mechanical engineering, has been selected to receive the Fluids Engineering Award, the highest award given by the Fluids Engineering Division of the Japan Society of Mechanical Engineers. In 1992 he received the equivalent U.S. prize, the Fluids Engineering Award of the American Society of Mechanical Engineers.

Peter Dervan, Bren Professor of Chemistry, has been chosen by the Technion—Israel Institute of Technology as the recipient of the 2002 Harvey Prize in Science and Technology, in recognition of his “pioneering studies that have laid down the foundations for gene regulation by small molecules.” He has also been elected to the American Philosophical Society. Founded by Benjamin Franklin in 1743, the society is the oldest learned society in the United States devoted to the advancement of scientific and scholarly inquiry.

Mory Gharib has been named the Hans W. Liepmann Professor of Aeronautics and Bioengineering. A professor at Caltech since 1992, he received his PhD from the Institute in 1983.

Michael Hoffmann, Irvine Professor of Environmental Science and dean of graduate studies, was honored as the Dodge Distinguished Lecturer in Chemical Engineering at Yale last April; the title of his lecture was “Kinetics, Mechanisms, and Reactor Design for Aqueous Phase Sonochemistry.”

Wolfgang Knauss, von Kármán Professor of Aeronautics and Applied Mechanics, and **Anatol Roshko**, von Kármán Professor of Aeronautics, Emeritus, were recently honored with special symposia at the 14th U.S. National Congress of Theoretical and Applied Mechanics, held June 24–28. Knauss was recognized for his “leadership and many contributions to the mechanics of structures and materials,” and Roshko for his “seminal contributions to our knowledge of separated flows and shear-layer turbulence.”

Oral Histories Online, a project of the Caltech Archives under university archivist **Judith Goodstein** and associate archivist **Shelley Erwin**, has been awarded \$20,000 by the Gladys Krieble Delmas Foundation.

Matthew Porteus, postdoctoral scholar in biology, has received a Burroughs Wellcome Fund Career Award in the Biomedical Sciences. The five-year, \$500,000 grant consists of two parts, a two-year postdoctoral portion and a three-year faculty portion; the program is intended to develop biomedical researchers early in their careers as they make the transition to becoming independent investigators. Currently a researcher in the lab of Caltech president **David Baltimore**, Porteus focuses on developing techniques to increase the efficiency and specificity of gene targeting in human somatic cells, gene targeting representing one possible way to cure diseases such as sickle-cell anemia, which are caused by a single mutation in a cell.

Kerry Vahala has been named the Ted and Ginger Jenkins Professor of Information Science and Technology. He joined Caltech’s faculty in 1985, having earned all his degrees at the Institute, including his PhD. He will retain his current title of professor of applied physics.

Theodore Yao-Tsu Wu, professor of engineering science, emeritus, has been elected a foreign member by the Chinese Academy of Sciences at its 11th Annual Meeting, concluded on June 1; he was recognized for his “distinguished contributions to fluid mechanics.” A fellow of the American Physical Society (APS) and a member of the National Academy of Engineering, he was the recipient of the APS’s 1993 Fluid Dynamics Prize.

O’Neal, from page 1

closely with faculty and students to create and implement academic enrichment programs for underrepresented students. She has conducted research on the effectiveness of focused academic programs and has published articles on issues of diversity and academic preparation. A cum laude graduate of Harvard, O’Neal holds an MS and a PhD from the University of Pennsylvania.

Lorden expressed his appreciation to the search committee, in particular chairs Bill Deverell, associate professor of history, and April White, comanager of the Staff and Faculty Consultation Center. He also gave special thanks to Brandi Jones and Milton Mitchell, assistant directors in the office of multicultural education and student affairs (formerly Minority Student Affairs), “for carrying on the programs and activities of the office enthusiastically and effectively during the search.”

Task force, from page 2

The task force membership also includes Hall Daily, assistant vice president and director of government and community relations; Jean Grinols, GPS division administrator; Helen Hasenfeld, director of the Ombuds Office; Tom Mannion, director of campus auxiliary and business services; Margo Marshak, the new vice president of student affairs; Dan Meiron, associate provost for information and information technology; Tom Schmitt, assistant vice president for human resources; and Debra Dison Hall, president of the Alumni Association board and a Caltech alumna.

Student Services offices move

Student Affairs is pleased to announce that the remaining Student Services offices have now moved into the south wing of the Center for Student Services, 414 South Holliston Avenue. Please note the new locations and mail codes for these offices:

First floor	
Bursar’s Office	120-87
Financial Aid	110-87
Registrar’s Office	125-87
Second floor	
Dean of Students	210-87
Graduate Office	230-87
VP for Student Affairs	210-87
Third floor	
Undergraduate Admissions	328-87
Fellowships Advising/	
Study Abroad	319-87
Student Information Systems	305-87

A campuswide open house is planned for fall quarter; details will be forthcoming. In the meantime, Student Affairs invites the campus community to visit the center and tour the newly renovated south wing.

Parking registration continues

The Parking Office is reregistering cars for the 2002–03 school year. New parking permits will automatically be sent out to current permit holders shown as active in the parking database, and should arrive in campus mailboxes by Tuesday, October 1. If you have not received your permit by Monday, October 7, please contact the Parking Office at ext. 8877. You will also receive a registration confirmation; please verify the information and make any necessary changes. For more information, contact Irma at ext. 4702.

Summer scenes at Caltech

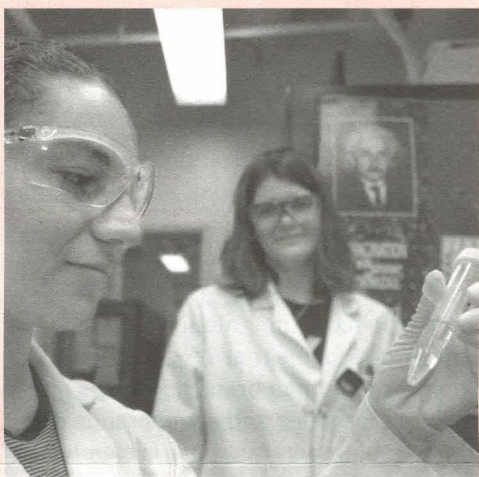
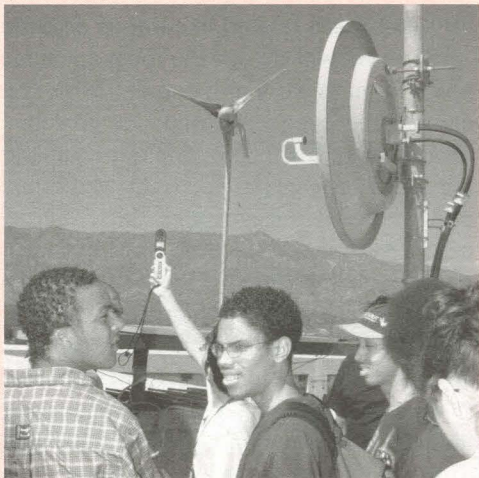
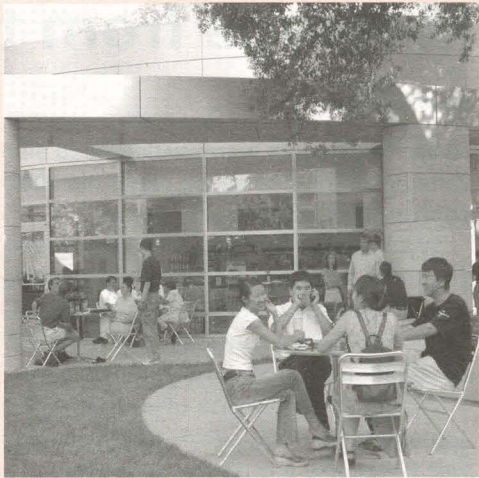
Clockwise from right:

Patrons enjoyed refreshments alfresco at The Cafe at Broad following the dedication of the Broad Center on September 10.

Thomas Scotton, Steven Stevenson, and Michael Maindi were among 27 promising high school students who spent three weeks at Caltech this summer experiencing the scientific life with the Young Engineering and Science Scholars (YESS) program.

Eunice Rivas, left, a student at Mount St. Mary’s College, conducted research in the lab of Professor Jackie Barton during July as a Minority Undergraduate Research Fellow. Assisting her was Caltech graduate student in chemistry Sarah Delaney.

Caltech Associates Mark (alum, 1977) and Rose Sturza viewed Caltech student art featured at a garden party honoring members of the President’s Circle of The Associates. The gathering took place in June at the home of President David Baltimore and Alice Huang.



Credit Union, Campus Security, Parking migrate

The campus branch of the Caltech Employees Federal Credit Union and the Campus Security and Parking Offices have all moved to 515 South Wilson Avenue. The credit union’s new campus mail stop is 100-63, and its phone number will remain the same, ext. 6300. Campus Security and Parking are on the second floor and can be reached by using the staircase at the back. The phone numbers also remain the same, ext. 4701 (Security) and ext. 8877 (Parking), and the new mail code is 200-63.

New name, new look

The Office of Public Events has officially changed its name to Caltech Public Events (CPE). Explaining the reason for the change, director Denise Nelson Nash says, “The majority of Public Events’ work is focused on activities providing links between campus and the community. The name Caltech Public Events will serve as a self-explanatory ‘brand’ when approaching the public via print, Web, and in person.” Along with its identity, CPE also has revamped its Web site, where bold orange and blue graphics accompany a clean, easily navigated interface. Visit the site at www.events.caltech.edu.

Remembrance, from page 1

“Some people came in and sat down,” she added. “Others talked. Some wanted to look at the artwork.”

The room served as a display space for catastrophe-inspired art. Joan Greenson Aebi’s sculpture, titled *09-01 Shattered Souls*, rested on a table. From a distance, the work appeared to be a random pile of shards, but on closer inspection revealed casts of faces and hands fashioned on rough ceramic slabs.

While the news media were flooded with articles, news programs, documentaries, and specials examining every aspect of the attacks and their aftermath, the Reflection Room served as a welcome yet fleeting haven.

The Caltech Y and the Ombuds Office were cosponsors, and Women in Engineering, Science, and Technology, a campus student organization, provided support.



09/01 Shattered Souls, Joan Greenson Aebi

Message from the president

David Baltimore

I'd like to extend a warm welcome to all members of the Caltech community as we begin the 2002–03 academic year. This promises to be quite a year.

We welcome two new vice presidents, Margo Marshak in Student Affairs and Gary Dicovitsky in Development and Alumni Relations. Both have exceptional backgrounds in their fields, and we are fortunate that they will be joining us. We will all benefit from their energy and wisdom.

We are in the process of considering the first major acquisition of land in many years, the St. Luke Medical Center site in East Pasadena. It is about 10 minutes from the campus and would provide us for the long term with space and buildings for enterprises related to campus activities.

Soon we will kick off the most audacious fund-raising campaign in our history and one of the most ambitious any small campus has ever attempted. Our goal is not set but will likely be from \$1.3 to \$1.5 billion. The remarkable fact is that due to the generosity of Gordon and Betty Moore as well as other trustees and donors, we already have \$820 million promised to the campaign. After the October 25 kickoff, we will have five years to raise the rest. I believe that this campaign and the fruits of all our collective labors in the next years will further the mission of this campus in extraordinary and lasting ways. This will be a very exciting time in the history of the Institute.

Amidst these great opportunities, we continue to face challenges, some familiar and others new. Last year we experienced problems in communication between various groups that make up our community. This year we are committed to increasing the clarity and reach of communication so that everyone will have access to the rationale for actions taken. This is a daunting task because there is no single medium of communication used by the whole community. This paper, 336, will be part of the solution, as will communications to the *Tech* and the *GSC Newsletter*, the online *Tech Today*, and e-mail messages sent

campuswide. Town-hall meetings on specialized topics, similar to those held this past year, may serve as another means for communication and discussion.

One of our foremost challenges will once again be the budget. The downturn in the economy and the stock market has reduced the size of our endowment, resulting in less money for the general budget. Because our budget has been close to breaking even or in the red for some years, this creates a problem that we must address. The exact form or amount that the budget reduction will take has yet to be determined, but it will inevitably be painful. We will work to ensure that all cuts will be taken in consultation with the campus constituencies. It may seem paradoxical that we are raising so much money and yet find ourselves in the red. The reason is that the various forms of money available to us cannot all be used for general budget expenses. On the positive side, we will be able to build a few new buildings, start some exciting new research projects, provide better facilities for students, and provide increased financial support for our students. But we will need to pull in our belt in other areas.

The challenges outside of our campus loom large. We have just passed through the one-year anniversary of the 9/11/2001 assault on the World Trade Center and the Pentagon. While most traces of the physical damage are cleaned up, the psychological and social damage caused by the worst attack on America since Pearl Harbor remains raw. As a country we are still coming to grips with a new equilibrium, balancing the need to counter terrorism with the maintenance of our traditional values of openness and respect for diversity of opinion, lifestyle, and background. I fear that the attack on Iraq now being debated in Washington would seriously compromise the progress we have made toward this equilibrium. Having lived through the trauma of the Vietnam War, I am convinced that an attack on Iraq would inevitably generate a similar climate of divisiveness and suspicion. I deeply hope it can be avoided.

VPs, from page 1

interests. Her responsibilities will include leadership of the administration and budgeting for Student Affairs' 16 offices, including technological infrastructure; strategic planning and assessment; and ensuring that students flourish during their educational experience.

"I'm obviously thrilled to have the opportunity to come to such a great institution," Marshak said. "I'm enormously impressed with the quality of the students, faculty, and administration. The Caltech students I met during the interview process were extremely bright and interesting, and I look forward to getting to know them and working with them on issues that are of interest to them. I'm grateful to the Caltech family for welcoming my husband and me so warmly."

Dicovitsky, who will take his position in early October, will be the senior Institute executive responsible for providing leadership for development operations and for Caltech's upcoming capital campaign, including planning; for overseeing the organization of development and related offices; and for establishing relationships with key constituencies. Currently, he is vice president for development and secretary to the board of trustees at Pomona College, where he led a highly successful five-year capital campaign.

"We are delighted that we have been able to find someone with Gary's qualifications, extensive experience, and history of accomplishment," Baltimore said. "With an ambitious campaign coming up, we will need his talents in the key-stone slot in development."

Broad, from page 1

house Caltech's first magnetic resonance imaging machine that's big enough to look at the human brain, as well as electron microscopes and a wide range of other equipment. But there is clearly as much style as substance to the building.

Designed by renowned architect James Ingo Freed of Pei Cobb Freed & Partners, the center features an exterior of stainless steel and Italian travertine marble, also used in the interior lobby. East of the main building is The Cafe at Broad, a New York-style deli featuring espresso and pastries along with matzo-ball soup and corned beef.

Most investigators to be based in the center will be new faculty, according to Elliot Meyerowitz, chair of the biology division. He predicted that two of the "great problems" of biology—how cells work and how the brain works—"may well be solved in the Broad Center in the next 20 years."

The building's top floor focuses on structural biology. Investigators based there include Professor of Biology Pamela Bjorkman, who studies the structure and function of molecules involved in cell sur-

face recognition; Assistant Professor of Biology David Chan, who works to understand the mechanism through which the HIV virus, the agent of AIDS, enters human cells; Professor of Chemistry Douglas Rees, who uses X-ray diffraction to study structure-function relationships in macromolecules; and Assistant Professor of Biology Grant Jensen, who uses cryoelectron microscopy to study protein interactions.

Behavioral biology reigns on the second floor, where Associate Professor of Biology Erin Schuman studies how different types of molecular signals contribute to synaptic transmission and plasticity in the brain. Professor of Biology Kai Zinn, leading another team, is interested in the formation of synaptic connections during neural development.

On the first floor, Niles Pierce, assistant professor of applied and computational mathematics, uses computational algorithms and experimental feedback to design novel molecular machines at the nanometer-length scale. Stephen Mayo, associate professor of biology and chemistry, designs proteins with novel structures and functions, also using computers.

The MRI facility, to be located in the

basement, will house three magnets, one capable of probing the brains of humans. There will also be an X-ray room, two electron microscopes, and lab space for a new faculty member.

Broad is convinced that the new building will yield important new insights and have a positive impact on the California and U.S. economies by fostering biotechnology start-ups. "Biotechnology has the ability to significantly improve the human condition in this century," he said. "Caltech has a culture and a tradition that produces breakthroughs. I believe in Caltech and I believe in David Baltimore."

Baltimore thanked the Broads for their "philanthropic leadership" in making the lead gift, and singled out other donors, including Board Chairman Benjamin Rosen; Chairman Emeritus Gordon Moore and his wife, Betty, for a gift made through the Moore Foundation, part of their \$600 million pledge last year; Senior Trustee Camilla Frost; Life Trustee Arthur Rock and his wife, Toni; Trustee Ronald Linde and his wife, Maxine, for a gift matched by Caltech alumni; Warren and Katharine Schlinger; the Ralph M. Parsons Foundation; and the estate of William Hacker.

Dicovitsky served as director of planned giving at Princeton University for four years prior to joining Pomona in 1995. He also held senior positions at the University of Virginia and Dartmouth College and served as associate athletic director and head coach of men's varsity basketball at Loyola College in Baltimore. He holds a bachelor's degree in economic geography from Dartmouth and a master of education degree from Loyola.

"Caltech's superior reputation as a research and teaching institution with such depth and capacity in interdisciplinary projects and programs was fundamental to my interest," said Dicovitsky. "I am honored to be offered the privilege to help build on the institution's past successes and to interact with such extraordinary faculty, staff, and alumni."

Dicovitsky has served as president of the Dartmouth Alumni Council and of the class of 1972. He is a member of the National Committee on Planned Giving and the Council for the Advancement and Support of Education, and has served on the boards of the International Foundation and the Princeton Area Planned Giving Council, and as a volunteer with a Claremont youth basketball program.



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