There’s only one Caltech.
The mission of the California Institute of Technology is to expand human knowledge and benefit society through research integrated with education.

We investigate the most challenging, fundamental problems in science and technology in a singularly collegial, interdisciplinary atmosphere, while educating outstanding students to become creative members of society.
On the evening of October 25, 2002, I had the pleasure of participating in the public kickoff of the Institute’s latest fund-raising campaign. Besides having an ambitious goal—$1.4 billion—this campaign also has a rather provocative slogan: “There’s only one. Caltech.” I suspect that most, if not all, of our peer institutions also believe that they are unique; but I would argue that Caltech can defend this claim better than any of them. No other research university has our distinctive blend of attributes. We are small—not even a quarter of the size of MIT, for example, in terms of faculty and student body. Our primary focus is basic research, but we also have a deep and long-standing commitment to both graduate and undergraduate education. Other institutions claim to conduct some amount of cross-disciplinary research; such collaboration has long been the norm for our faculty. And finally—as projects like the Keck Observatories, the Laser Interferometer Gravitational-Wave Observatory, and the proposed California Extremely Large Telescope illustrate—we have the capability and the confidence to pursue some of the most daring research in the scientific world, despite our small size.

Caltech’s distinctiveness has been characterized over the years in a variety of ways. We have been called “the best little research center in America,” “the
small school with the big reputation,” “a national treasure,” and “a gem.” I think the last two descriptions are especially apt. Not only do they convey our value, they also remind us of why initiatives like our present campaign are so necessary. There are many examples in life, and in business, of treasures becoming tarnished over time, through either complacency or neglect. It is my charge, as well as the Board’s and the administration’s, to make sure that Caltech does not share that fate.

Fortunately, I have the best of help in carrying out this charge. The Caltech Board is a matchless source of counsel and expertise. That body was made even stronger this past year with the addition of three new members: Richard M. Kovacevich, the chairman, president, and CEO of Wells Fargo & Company; Charles R. Trimble, the cofounder of Trimble Navigation, Inc.; and Henry Yuen, the chairman and CEO of Gemstar–TV Guide International, Inc. My fellow trustees and I also have a close and productive working relationship with President Baltimore and his administrative team. What’s more, the Institute has faculty, staff, and friends who are committed to spreading the word about why Caltech’s uniqueness is worthy of support. We are confident that together we can reach our campaign goal, and keep the treasure that is Caltech shining brightly.

Benjamin M. Rosen
Chairman, Caltech Board of Trustees
Whatever other descriptions might apply, the academic and fiscal year 2001–02 could certainly be called eventful. Its prologue was the horrific terrorist attacks of September 11, and its epilogue the celebratory launch of the most ambitious fund-raising campaign in Caltech’s history. In between came an especially impressive array of scientific accomplishments, including the 30th Nobel Prize awarded to a Caltech faculty member or alumnus; intensive scrutiny and discussion of the state of Caltech student life; and much planning to position the Institute for the challenging economic times ahead.

Although the campaign kickoff event on October 25, 2002, did seem to be the year’s postscript, preparation for the campaign had been in process for much of the preceding two years. We have a new vice president for development and alumni relations, Gary Dicovitsky, to oversee this five-year, $1.4 billion
effort, which will target funding priorities gathered from all campus constituencies. Those priorities are divided into three broad areas—people and their programs; buildings; and equipment—but all of them have the same goal: **helping Caltech stay Caltech.**

It is no secret that the poor performance of the financial markets over the past year has adversely affected university endowments across the nation. This trend has hit Caltech particularly hard. Our endowment, at approximately $1.1 billion, is a fraction of the size of most of our competitors’. Yet, lacking income from a medical, law, or business school, and obtaining only 4 percent of our revenues from tuition, we rely more heavily than our competitors on endowment income to meet our general budget needs. Moreover, almost half of Caltech’s total revenues come from sponsored-research grants—money that is earmarked for specific research projects, yet does not cover the overhead expenses associated with those projects. The campaign’s importance in supplementing our endowment and sponsored-research revenues cannot be overstated. Its success is critical to maintaining our ability to recruit the world’s best scientists and engineers and to give them the labs, offices, equipment, and staff they need to do their work.

**And spectacular work it is.**
Here, drawn from each of our six academic divisions, are a few examples of the projects that made headlines last year:

- Astronomy professor **Anthony Readhead**, the principal investigator of the Cosmic Background Imager project, announced that that instrument had uncovered the finest detail yet seen in the cosmic microwave background. These new images reveal the cosmos as it was before stars and galaxies existed, and give us our first look at the seeds from which clusters of galaxies grew. Also in astronomy, postdoc **David Charbonneau** and his coinvestigator at the National Center for Atmospheric Research used NASA’s Hubble Space Telescope to make the first direct detection of the atmosphere of a planet orbiting a star outside our solar system.

- Chemical engineer **Julia Kornfield**, in collaboration with other Caltech scientists and a UC San Francisco eye surgeon, developed new silicone-based synthetic lenses that can be adjusted noninvasively after they are surgically implanted in the eye.

- Using special HIV-derived viruses stripped of their disease-causing potential, the **Baltimore lab group** devised a more efficient method for breeding transgenic mice. The technique, which makes it easier for investigators to introduce a heritable gene from one species into the genome of another, promises to be a useful new tool in biotechnology and experimental biology. Elsewhere in the biology division, **Paul Patterson** and his colleagues used antibodies to block the
effects of Huntington’s disease in cultured cells, an important step toward understanding how that disease develops, and James Strauss and his collaborators at Purdue determined the fine-detail structure of the virus that causes dengue fever.

→ Historian Diana Kormos-Buchwald, director of the Einstein Papers Project, oversaw the release of the seventh volume of Einstein’s collected papers, *The Berlin Years: Writings, 1918–1921*, which includes many previously unknown political articles and drafts.

→ Professor of Political Science Michael Alvarez and his collaborators on the Caltech–MIT Voting Technology Project found that Florida’s election reform efforts over the past year had resulted in a 35 percent improvement in the performance of the state’s new voting equipment.

→ Applied physicist Steve Quake and his colleagues announced that their new techniques for the large-scale integration of microfluidic devices have allowed them to build chips that can hold up to 6,000 microvalves and 1,000 tiny individual chambers.

→ Planetary scientist Mike Brown and postdoc Chad Trujillo discovered a planetlike object, dubbed Quaoar, in the region beyond the orbit of Pluto known as the Kuiper belt.

→ Geophysicist Mark Simons and his graduate student Matt Pritchard demonstrated that four “dormant” volcanoes in the central Andes are in fact active, using as evidence ground-motion data gathered by the European Space Agency’s ERS 1 and ERS 2 satellites.

To top off this remarkable year of scientific achievement, two of our faculty—Paul Wennberg, who holds a joint appointment in atmospheric chemistry and environmental engineering science, and Charles Steidel, an astronomer whose specialty is cosmology—were awarded prestigious MacArthur Foundation “genius” fellowships in September, and alumnus Vernon L. Smith (BS ’49) won the Nobel Prize in economics in October 2002.
Besides ensuring that our investigators can continue to do this kind of groundbreaking work, campaign funds will also help us address another important research issue: the need to maintain small science in the face of increasing science budgets. There is a trend for the government to award ever-larger amounts of money to high-profile research projects. This is not to say that these kinds of projects are unworthy of support; in fact, Caltech has chosen to be involved in several of them over the years—the Keck Telescopes, the Laser Interferometer Gravitational-Wave Observatory, and most recently the California Extremely Large Telescope. There is some danger, however, that these enormous undertakings will receive so much emphasis that important smaller projects will get lost in the shuffle.

But supporting faculty research is not the only objective of the campaign. Funding priorities like undergraduate and graduate financial aid, the renovation of the student houses, and the construction of a new campus center building will help us address the needs of another important constituency: our students. Educating the next generation of scientists and engineers is an essential part of our mission. They are the new pioneers, the people who will extend our knowledge of the natural world to frontiers we can only imagine. Caltech has a long-standing commitment to giving them the best possible preparation for their future roles. Lately, however, I have found myself wondering whether our focus on that end has caused us to lose perspective about the means.

For the past 80 years, we have believed—not without justification—that Caltech’s unusually rigorous curriculum constitutes that “best possible preparation.” But it is possible that we demand so much of our undergraduates academically that we are shortchanging them in other areas of their lives. We need to reexamine our curriculum in the context of the larger Caltech student culture, along with such other elements as student government, the housing system, and the Honor Code. How do these parts interrelate? How would changing one affect the others? Of course, we want to be sure that these examinations, and any changes they prompt, in no way diminish the quality of education for which Caltech is renowned.

We have already taken several significant steps to address these concerns. Foremost among them was the appointment in October 2002 of Margo Marshak
as Caltech’s first full-time vice president for student affairs. Margo brings a wealth of experience from her previous positions at the University of Chicago and NYU, and has already begun to give us a fresh perspective on our unique student culture. With her help, we will examine in detail the recently compiled recommendations of the Task Force on Undergraduate Residence Life, which conducted a study last year. She will also help us explore the possibility of creating a new position, dean of undergraduate studies, to be filled on a part-time basis by a Caltech faculty member. This position would oversee undergraduate curriculum issues, much as the dean of graduate studies does graduate issues. Two other new faculty-administrators—the master of student houses, literature professor Catherine Jurca, and the dean of graduate studies, environmental scientist Michael Hoffmann—also have many innovative ideas for improving communication both among students and between students, faculty, and administration. We welcome, and will continue to solicit, input from all campus constituencies as to how to make our students’ lives more balanced and satisfying. We want them to flourish, not simply survive.

Clearly, we have some challenges to meet in the months ahead. Fortunately, we are in a strong position to meet them. We have alumni, trustees, and friends who have made supporting Caltech one of their top priorities, the most recent evidence of which is the beautiful new Eli and Edythe Broad Center for the Biological Sciences dedicated last September. We have faculty and students whose brilliant work keeps Caltech at the pinnacle of the scientific world. We have some of the most capable administrators and staff in higher education to oversee the business of doing science. Perhaps most important, we have an utterly clear understanding of who we are and where we’re going. Our campaign slogan says, “There’s only one. Caltech.” To that I would add, “There must be one Caltech.” The future of discovery and invention cannot do without us.

David Baltimore
President
Educating the next generation of scientists and engineers is an essential part of our mission. They are the new pioneers, the people who will extend our knowledge of the natural world to frontiers we can only imagine. — David Baltimore
STUDENT AWARDS

**Amasa Bishop Fellowships:**
Mayanka Prasad (class of 2003)
Dana Sadava (class of 2003)

**Churchill Scholarship:**
Michael Shulman

**Fulbright Fellowship:**
Kristen Cook

**Hertz Fellowship:**
Elizabeth Hong

**Howard Hughes Predoctoral Fellowship:**
Andrew Medina-Marino (graduate student)

**National Defense Science and Engineering Fellowships:**
Thomas Snyder
Molly Swanson
Neal Scruggs (graduate student)

**National Science Foundation Fellowships:**
Zhaosheng Bao
Wendy Ching
Michael Hochberg
Elizabeth Hong
Timothy Raub
Erik Rodriguez
Thomas Snyder
Lakshminar Srinivasan

*graduate students:*
Jason Keith
Peter Kekenes-Huskey
Michael Mackel
Ian Mangion
Christian Reichardt (class of 2001)
Stephen Waydo

*alumni:*
Charless Fowlkes (class of 2000)
Arjun Mendiratta (class of 2000)
Sam Wilcke (class of 2000)

**Thomas J. Watson Fellowship:**
Robb Rutledge

*(members of the class of 2002, unless otherwise noted)*
reviewing the year
11.7.01 First gamma-ray burst detected by new NASA satellite is pinpointed at Palomar Observatory.
11.14.01 Sound alters the activity of visual areas in the human brain.
11.27.01 Astronomers detect atmosphere of planet outside solar system.
1.10.02 Caltech biologists invent newer, better method for making transgenic animals.
1.15.02 Caltech scientists block effects of Huntington’s disease protein in cultured cells.
2.7.02 Caltech scientists...

**October 2001**
- 1996 Nobel Peace Prize winner Jose Ramos-Horta speaks on campus as part of the Caltech Y’s 2001–02 Social Activism Speaker Series.

**November 2001**
- 1998 Nobel Peace Prize winner John Hume is the featured guest at the third DuBridge Distinguished Lecture.

**December 2001**
- The Committee on the Status of Women Faculty at Caltech, commissioned in 1999 to investigate possible gender inequities among faculty, issues its report.

**January 2002**
- Filmmaker Ken Burns discusses his documentaries *Baseball, The Civil War*, and *Jazz* at the James Michelin Distinguished Visitor Lecture on January 7.
- Professor of Mechanical Engineering Christopher Brennen steps down as vice president for student affairs. Gary Lorden, professor of mathematics, becomes acting vice president.
- Freeman Hrabowski, president of the University of Maryland, Baltimore County, gives the first lecture in a series on diversity on January 15.
Caltech alumnus Henry Yuen (PhD ’73), chairman and chief executive officer of Gemstar-TV Guide International, Inc., is elected to the Board of Trustees.

February 2002

→ J. Ernest Nunnally steps down as vice president for development and alumni relations. Vice President for Public Relations Robert L. O’Rourke assumes his duties on an interim basis.

→ Caltech’s popular Watson Lecture Series marks its 80th year of presenting science to the Pasadena community.

→ The Caltech Y celebrates its 85th birthday.

March 2002

→ Professor of Anthropology Jean Ensminger is named chair of the Division of the Humanities and Social Sciences. She is the first woman to head a Caltech academic division.

→ Former astronaut and Caltech trustee Sally Ride holds her Science Festival for Girls on the Caltech campus on March 23.

April 2002

→ Caltech’s annual Biology Forum, this year entitled “Gray Matters: Perception, Intention, Memory, and Dysfunction in the Brain,” takes place on April 25.

→ U.S. News & World Report’s graduate program rankings are announced. Caltech places first in the nation for its PhD programs in physics (tied with MIT) and geology; second in chemistry; third in applied mathematics; fifth in biological sciences; and eighth in mathematics. Caltech’s overall graduate engineering program is ranked seventh in the nation.

demonstrate compact silica laser 2.19.02 Caltech author publishes new novel 3.6.02 Caltech astronomer to search for “hot Jupiters” with off-the-shelf camera lens 3.8.02 Caltech and Purdue scientists determine structure of the dengue fever virus 3.20.02 Researchers find new clue why Martian water is found on the north pole, not the south 4.11.02 Researchers find evidence for mechanism that creates near-Earth binary asteroids 5.9.02 JPL, Caltech, Smithsonian scientists improve
May 2002
→ William A. Jenkins resigns as executive vice president for administration. Albert G. Horvath, vice president for business and finance, assumes his duties.

June 2002
→ Alan Alda is the speaker at Caltech’s 108th commencement on June 14. Degrees awarded: BS, 248; MS, 125; PhD, 140.

→ D. Roderick Kiewiet, professor of political science, steps down as dean of graduate studies. He is succeeded by Michael Hoffmann, James Irvine Professor of Environmental Science.
→ Charles R. Trimble, co-founder of Trimble Navigation, Ltd., is elected to the Board of Trustees.

August 2002
→ Associate Professor of Literature Catherine Jurca is named Master of Student Houses, the first female faculty member to hold the position.

September 2002
→ The Broad Center for the Biological Sciences is dedicated on September 10.
Renovation of the second wing of the Center for Student Services is completed.
Caltech ranks fourth in the Best National Universities category in U.S. News & World Report's annual "America's Best Colleges" issue.
The redesigned Caltech home-page debuts on the World Wide Web.
Richard M. Kovacevich, chairman, president, and chief executive officer of Wells Fargo & Company, is elected to the Board of trustees.

October 2002
Caltech alumnus Vernon L. Smith (BS ’49) is awarded the Nobel Prize in economics, bringing to 30 the number of Nobel Prizes won by faculty and alumni.
Erica O’Neal joins Caltech as associate dean and director of minority student education.
Margo Marshak is named vice president for student affairs, becoming the first full-time, non-faculty member to hold that position, as well as Caltech’s first female vice president.
Gary Dicovitsky is appointed vice president for development and alumni relations.
“There’s Only One. Caltech,” the Institute’s $1.4 billion fund-raising campaign, is publicly launched on October 25.
JPL Highlights
The Jet Propulsion Laboratory was very busy in 2002 managing 14 spacecraft stationed at various outposts around the solar system. Mars Odyssey settled into orbit and delivered data suggesting a vast store of water ice under the red planet’s surface, a discovery that may have profound consequences for exploring Mars. The Galileo spacecraft made its final flybys of Jupiter’s moons before a crash-dive into the giant planet’s atmosphere planned for September 2003. Meanwhile, Cassini started its final approach toward Saturn, and the Stardust spacecraft flew by an asteroid on its way to a comet.

A new ocean satellite, the U.S.–French Jason 1, began science observations, and was joined in Earth orbit by a pair of spacecraft measuring our home planet’s gravity field under the GRACE [Gravity Recovery and Climate Experiment] mission. In addition, JPL Earth science instruments were launched on NASA and Japanese satellites. Two major missions, the Space Infrared Telescope Facility and the twin Mars Exploration rovers, were readied for launches in 2003.

The year marked the 40th anniversary of the first successful planetary mission, Mariner 2, which flew by Venus in 1962. Celebrations of the 25th anniversaries of the launches of Voyagers 1 and 2 also took place. Our first envoys to reach the boundaries of the solar system, these two remarkable spacecraft are still flying.
Development Highlights

The Institute received a total of $113,259,958 in cash and securities in fiscal year 2002, including more than $40 million from the estates of 35 individuals. Thirty-one percent of all alumni gave gifts to the Alumni Fund in support of current-use projects. Members of the Caltech Associates gave more than $15.9 million in restricted and unrestricted gifts.

Caltech received 28 gifts in the form of charitable remainder trusts, annuities, and other life-income agreements with a total value in excess of $5.3 million. Our alumni and friends made a number of notable charitable trust gifts. Trustee Stanley R. Rawn (BS ’52) joined Caltech’s planned giving program by establishing three charitable gift annuities. Life-income donor George W. Van Osdl, Sr. (BS ’34), who passed away in March 2002, established three testamentary unitrusts to benefit his children and a friend. Mrs. Fred W. Morris funded a charitable gift annuity. James H. Drake (BS ’45) also joined the planned giving program by establishing a charitable remainder unitrust.

Caltech gratefully acknowledges the following individuals and organizations for their generous support. (Donors whose names are followed by an asterisk are members of the Associates of the California Institute of Technology.)

- The estate of Mrs. Marjorie L. Alden to establish the Howard H. and Marjorie L. Alden Scholarship and Fellowship Endowment Fund
- The estate of Earle C. Anthony for support of students, faculty, and scientific research
- The estate of John D. Bascom (BS ’32) for the Caltech Alumni Association
- Donald L. Bren toward the Bren Professorship Endowment Fund
- The James G. Boswell Foundation to support the Anderson laboratory
- Eli and Edythe L. Broad Foundation to establish the Eli and Edythe L. Broad Professorship in Humanities and Social Sciences
- Burroughs Wellcome Fund for the Career Award in the Biomedical Sciences
- Compaq Computer Corporation to endow a professorship in honor of Benjamin M. Rosen (BS ’54)
- William (MS ’59) and Sonja Davidow* toward the Davidow Endowment Fund
- Allen V.C. Davis* Foundation to establish the Allen and Lenabelle Davis Professorship in Economics and Social Sciences
- Richard Raymond (BS ’52) and Barbara Jean Morrison Dickinson* to provide equipment for the undergraduate chemistry laboratories and to fund a scholarship for a student in chemistry and chemical engineering
- Sherman Fairchild Foundation toward the Sherman Fairchild Prize Postdoctoral Scholars Program in Theoretical Physics, Theoretical Astrophysics, and Mathematics
- The estate of John N. Fehrer to establish the John and Ellamae Fehrer Endowed Biomedical Discovery Fund
- Marie Carter Goode* to endow the John E. Goode Jr. Professorship in Aeronautical Engineering
- The estate of Ruth E. Haskell to establish the Ruth E. Haskell Research Endowment Fund
- Howard Hughes Medical Institute for undergraduate biological science education
- The estate of Nelle P. Hunt for general education and research programs
- Intel Corporation donated equipment to the computer science department, research grants to individual faculty, and a gift for scholarship support
- Robert Theodore (BS ’65, MS ’66) and Ginger Jenkins* to establish the Ted and Ginger Jenkins Professorship in Information Science and Technology
- Fred Kavli to establish the Fred Kavli Professorship Fund and to support the Cosmic Background Imager project
- The estate of May Keighley to establish the Dr. Geoffrey L. and May Keighley Endowment Fund for Biology
- Alexander Lidow (’75) and Janet K. Hart toward the Lidow Discovery Fund and for undergraduate housing
- The estate of J. Richard Love (BS ’49) for the Caltech Alumni Fund
- John D. and Catherine T. MacArthur Foundation in honor of Caltech Trustee Shirley Hufstedler, to establish the Hufstedler Fund for Student Life, an endowed president’s discretionary fund
- The estate of Bruce Timoney McKeever (BS ’58, MS ’59) to benefit Caltech’s undergraduate program
- The estate of Mrs. Mary Jane Mohr to the Milton and Jane Mohr Student Aid Endowment Fund
- Gordon (PhD ’54) and Betty Moore* Foundation to support the Center for Analysis of Higher Brain Function
- David and Lucille Packard Foundation for an Interdisciplinary Research Award and a Packard Fellow for Engineering and Science
- Charles Lee Powell Foundation to support faculty and students in the Division of Engineering and Applied Science
- Henry C. Yuen (BS ’73) to establish the Henry C. Yuen Professorship
National awards and honors

American Academy of Arts and Sciences, Fellow:
Richard A. Andersen, James G. Boswell Professor of Neuroscience
David J. Anderson, Professor of Biology and Investigator, Howard Hughes Medical Institute
Ronald W. P. Drever, Professor of Physics, Emeritus
Mary B. Kennedy, Allen and Lenabelle Davis Professor of Biology
Mark B. Wise, John A. McCone Professor of High Energy Physics

American Association for the Advancement of Science, Fellow:
Joseph L. Kirschvink, Professor of Geobiology
Richard S. Ellis, Steele Family Professor of Astronomy and Director of the Caltech Optical Observatories

Council on Foreign Relations, Member:
Steven E. Koonin, Provost and Professor of Theoretical Physics

National Academy of Sciences, Member:
Barry C. Barish, Ronald and Maxine Linde Professor of Physics and Director of the Laser Interferometer Gravitational-Wave Observatory Laboratory
Jacqueline K. Barton, Arthur and Marian Hanisch Memorial Professor and Professor of Chemistry

H. Jeff Kimble, William L. Valentine Professor and Professor of Physics
Anatol Roshko, Theodore von Kármán Professor of Aeronautics, Emeritus

National Science Board, Member:
Barry C. Barish, Ronald and Maxine Linde Professor of Physics and Director of the Laser Interferometer Gravitational-Wave Observatory Laboratory

Office of Naval Research, Young Investigator:
Dianne K. Newman, Clare Boothe Luce Assistant Professor of Geobiology and Environmental Science and Engineering

International awards and honors

Chinese Academy of Sciences, Foreign Member:
Theodore Yao-Tsu Wu, Professor of Engineering Science, Emeritus

German Organization of Air and Space Travel, Wernher Von Braun Award:
Charles Elachi, Vice President and Director of the Jet Propulsion Laboratory and Professor of Electrical Engineering and Planetary Science

Alexander von Humboldt Foundation, Humboldt Research Award for Senior U.S. Scientists:
Michael Ortiz, Professor of Aeronautics and Mechanical Engineering

Japan Society of Mechanical Engineers, Fluids Engineering Division, Fluids Engineering Award:
Christopher E. Brennen, Professor of Mechanical Engineering

Manne Siegbahn Institute, Manne Siegbahn Memorial Lecturer:
Andrew E. Lange, Marvin L. Goldberger Professor of Physics

Okawa Foundation for Information and Telecommunications, 2002 Okawa Prize:
Thomas E. Everhart, President Emeritus and Professor of Electrical Engineering and Applied Physics, Emeritus

Technion—Israel Institute of Technology, 2002 Harvey Prize in Science and Technology:
Peter B. Dervan, Bren Professor of Chemistry

Local awards

Los Angeles County Economic Development Corporation, 6th Annual Eddy Award:
David Baltimore, President of Caltech and Professor of Biology
Awards and honors from professional societies

**American Association of Physics Teachers**, 2002 Klopfsteg Award:
Barry C. Barish, *Ronald and Maxine Linde Professor of Physics and Director of the Laser Interferometer Gravitational-Wave Observatory Laboratory*

**American Chemical Society**, 2003 Ronald Breslow Award for Achievement in Biomimetic Chemistry:
Jacqueline K. Barton, *Arthur and Marian Hanisch Memorial Professor and Professor of Chemistry*

2002 Arthur C. Cope Award:
Robert H. Grubbs, *Victor and Elizabeth Atkins Professor of Chemistry*

**American Chemical Society, Delaware Section**, 2003 Carothers Award:
Frances H. Arnold, *Dick and Barbara Dickinson Professor of Chemical Engineering and Biochemistry*

**American Geophysical Union**, 2002 James B. Macelwane Medal:
John M. Eiler, *Assistant Professor of Geochemistry*

**American Institute of Aeronautics and Astronautics**, Fellow:
Charles Elachi, *Vice President and Director of the Jet Propulsion Laboratory and Professor of Electrical Engineering and Planetary Science*

**American Nuclear Society**, 2002 Wigner Award:
Noel R. Corngold, *Professor of Applied Physics, Emeritus*

**American Philosophical Society**, Member:
Pamela J. Bjorkman, *Professor of and Executive Officer for Biology, and Full Investigator, Howard Hughes Medical Institute*

Peter B. Dervan, *Bren Professor of Chemistry*

**American Physical Society**, Fellow:
Andrew E. Lange, *Marvin L. Goldberger Professor of Physics*

Lee A. Lindblom, *Senior Research Associate in Theoretical Astrophysics*

**American Society for Cell Biology**, *E. B. Wilson Medal, Corecipient:*
Alexander J. Varshavsky, *Howard and Gwen Laurie Smits Professor of Cell Biology*

**American Society of Civil Engineers, Engineering Mechanics Division**, 2002 Theodore von Kármán Medal:
Thomas K. Caughhey, *Richard L. and Dorothy M. Hayman Professor of Mechanical Engineering, Emeritus*

**American Society of Mechanical Engineers**, Warner T. Koiter Medal:
James K. Knowles, *William R. Kenan, Jr., Professor and Professor of Applied Mechanics, Emeritus*

**ASM International**, Fellow:
William L. Johnson, *Ruben F. and Donna Mettler Professor of Engineering and Applied Science*

**History of Science Society**, George Sarton Medal:
Daniel J. Kevles, *J. O. and Juliette Koepfli Professor of the Humanities, Emeritus*

**Institute of Electrical and Electronics Engineers Signal Processing Society**, 2001 Technical Achievement Award:
P. P. Vaidyanathan, *Professor of and Executive Officer for Electrical Engineering*

**National Academy of Engineering**, 2002 Lillian M. Gilbreth Lecturer:
Michael L. Roukes, *Professor of Physics*

**TMS (Minerals, Metals and Materials Society)**, Fellow Award and Robert Franklin Mehl Award:
William L. Johnson, *Ruben F. and Donna Mettler Professor of Engineering and Applied Science*

**Foundation awards**

Arnold and Mabel Beckman Foundation, 2002 Beckman Young Investigator Award:
David C. Chan, *Assistant Professor of Biology and Bren Scholar*

Camille and Henry Dreyfus Foundation, 2002 Camille Dreyfus Teacher-Scholar Award:
Jonas C. Peters, *Assistant Professor of Chemistry*

John Simon Guggenheim Memorial Foundation, Fellow:
Alexander S. Kechris, *Professor of Mathematics*

Haynes Foundation, 2002–03 Haynes Fellow:
William F. Deverell, *Associate Professor of History*

John D. and Catherine T. MacArthur Foundation, Fellowship:
Charles C. Steidel, *Professor of Astronomy*

Paul O. Wennberg, *Professor of Atmospheric Chemistry and Environmental Engineering Science*

March of Dimes Birth Defects Foundation, March of Dimes Prize in Developmental Biology, Corecipient:
Seymour Benzer, *James G. Boswell Professor of Neuroscience, Emeritus*

**David and Lucile Packard Foundation**, Fellowship in Science and Engineering:
Dianne K. Newman, *Clare Boothe Luce Assistant Professor of Geobiology and Environmental Science and Engineering*

Alfred P. Sloan Foundation, Research Fellow:
David W. C. MacMillan, *Associate Professor of Chemistry*

Takeda Foundation, 2002 Takeda Award:
Charles Elachi, *Vice President and Director of the Jet Propulsion Laboratory and Professor of Electrical Engineering and Planetary Science*
Welch Foundation, Scientific Advisory Board, Member:
Ahmed H. Zewail, Linus Pauling Professor of Chemical Physics and Professor of Physics

University honors

Associated Universities, Inc., 2002 Karl G. Jansky Lecturer:
Shrinivas R. Kulkarni, John D. and Catherine T. MacArthur Professor of Astronomy and Planetary Science

Carnegie Mellon University, Dickson Prize in Science:
Carver A. Mead, Gordon and Betty Moore Professor of Engineering and Applied Science, Emeritus

Case Western Reserve University, 2002 Michelson Postdoctoral Prize Lecturer:
Re’em Sari, Sherman Fairchild Senior Research Fellow in Astrophysics and Lecturer in Planetary Science

Columbia University, 2001 Louisa Gross Horwitz Prize, Coreipient:
Alexander J. Varshavsky, Howard and Gwen Laurie Smits Professor of Cell Biology

Cornell University, 2003 Salpeter Lecturer:
Shrinivas R. Kulkarni, John D. and Catherine T. MacArthur Professor of Astronomy and Planetary Science

Harvard University, Morris Loeb Lecturer:
James P. Eisenstein, Professor of Physics

Morehouse College, Martin Luther King Jr. International Chapel and Gandhi Institute for Reconciliation, Gandhi-King-Ikeda Award:
Edwin S. Munger, Professor of Geography, Emeritus

University of Auburn, G. M. Kosolapoff Award:
Ahmed H. Zewail, Linus Pauling Professor of Chemical Physics and Professor of Physics

University of California, Irvine, Distinguished Visitor:
Barry M. Simon, International Business Machines Professor of Mathematics and Theoretical Physics, and Executive Officer for Mathematics

University of California, Los Angeles, Department of Earth and Space Science, 2002 Distinguished Alumnus:
Charles Elachi, Vice President and Director of the Jet Propulsion Laboratory and Professor of Electrical Engineering and Planetary Science

University College, Toronto, Graham Lecturer:
Anneila I. Sargent, Professor of Astronomy; Director, Owens Valley Radio Observatory; and Director, Interferometry Science Center

University of Michigan, Ann Arbor, Walter J. Weber Jr. Distinguished Lecturer in Environmental Engineering:
James J. Morgan, Marvin L. Goldberger Professor of Environmental Engineering, Science, Emeritus

University of Pennsylvania, Distinguished Alumni Award:
Ahmed H. Zewail, Linus Pauling Professor of Chemical Physics and Professor of Physics

Yale University, 2002 Dodge Distinguished Lecturer in Chemical Engineering:
Michael R. Hoffmann, James Irvine Professor of Environmental Science and Dean of Graduate Studies

Institute honors

Endowed Professorships:
Harry Atwater, Howard Hughes Professor and Professor of Applied Physics and Materials Science
Dennis A. Dougherty, George Grant Hong Professor of Chemistry

Richard S. Ellis, Steele Family Professor of Astronomy
Morteza Gharib, Hans W. Liepmann Professor of Aeronautics and Bioengineering
Mary B. Kennedy, Allen and Lenabelle Davis Professor of Biology
John O. Ledyard, Allen and Lenabelle Davis Professor of Economics and Social Sciences
Nathan S. Lewis, George L. Argyros Professor and Professor of Chemistry
John P. Preskill, John D. MacArthur Professor of Theoretical Physics
Kerry E. Sieh, Robert P. Sharp Professor of Geology
Jeroen Tromp, Eleanor and John R. McMillan Professor of Geophysics

Associated Students of the California Institute of Technology (ASCIT), 2002 Teaching Awards:
James R. Arvo, Associate Professor of Computer Science
Vladimir Baranovsky, Olga Taussky and John Todd Instructor in Mathematics
Niles Pierce, Assistant Professor of Applied and Computational Mathematics
John P. Preskill, John D. MacArthur Professor of Theoretical Physics
John A. Sutherland, Visiting Professor of Literature
Darryl H. Yong, von Kármán Instructor in Applied and Computational Mathematics

Lifetime Achievement Award:
Michael S. Shumate, Lecturer in Applied Physics

Graduate Student Council, 2002 Teaching Awards:
Yaser S. Abu-Mostafa, Professor of Electrical Engineering and Computer Science
Oscar P. Bruno, Professor of Applied and Computational Mathematics

Richard P. Feynman Prize for Excellence in Teaching, Recipient:
Joseph L. Kirschvink, Professor of Geobiology