Cover: Caltech’s commencement ceremony, 
by Joseph Stoddard. 
© 2000, California Institute of Technology

This program is produced by the Public Relations Office. 
Editor: Babra Alice Akmal
Contributors: Michael Farquhar, Natalie Gilmore, Linda J. King
CALIFORNIA INSTITUTE of TECHNOLOGY

One Hundred and Sixth
Annual Commencement

Friday Morning at Ten O’Clock
June Ninth, Two Thousand
In his diary entry of September 1, 1891, Pasadena philanthropist Amos Throop wrote, “Planted potatoes, cleaned a water pipe, husked the corn . . . In afternoon, saw Mr. Wooster and rented his block for five years . . . and hope I have made no mistake.” Were he here today, Throop could rest assured in his decision. For the building of which he wrote, the Wooster Block, was rented for the purpose of establishing Throop University—the forerunner of Caltech.

In November of that year, Throop opened its doors to 31 students and a six-member faculty. Could anyone have imagined then that the school would become a world center for science and engineering research and education? Perhaps . . . for in the first year, the board of trustees began to reconsider the mission of the school. In 1892, they decided to emphasize industrial training, and in 1893, reflecting this new focus, renamed the school Throop Polytechnic Institute.

Throop might have remained just a good local school had it not been for the arrival in Pasadena of George Ellery Hale. A faculty member at the University of Chicago and a noted astronomer, Hale settled here in 1903. From that time until his death in 1938, he made significant contributions to Pasadena and Southern California: he established the Mount Wilson Observatory, raised funds for Palomar Observatory and its 200-inch telescope, participated in the creation of the Huntington Library and Art Gallery, helped design the Civic
Center in downtown Pasadena, and—perhaps his single greatest achievement—set the course for the development of Throop into the California Institute of Technology, a school he envisioned as a scientific institution of the highest rank.

In 1913, Hale convinced Arthur Amos Noyes, professor of chemistry and former president of the Massachusetts Institute of Technology, to join him in Pasadena. With the arrival in 1917 of Robert Andrews Millikan, professor of physics at the University of Chicago, Hale had assembled the founders of the new institution. The world center of scientific and engineering research and education he had imagined soon took shape under a new name, the California Institute of Technology, administered by Millikan and enriched with the scientific talents of Noyes and his faculty colleagues.

Caltech today has a 124-acre campus and operates seven off-campus astronomical, seismological, and marine biological facilities, and administers NASA's Jet Propulsion Laboratory as well. At present, the Institute has an enrollment of some 2,000 students, more than half of whom are in graduate studies; about 280 professorial faculty members, including four Nobel laureates and four Crafoord laureates; and more than 200 research faculty members. Today, Caltech will award 202 students the B.S. degree; 112 students the M.S. degree; 1 scholar the Engineer's degree; and 127 doctoral candidates the Ph.D. degree, for a total of 442 graduates—quite a leap from the one man and one woman who constituted the first collegiate graduating class of Throop Polytechnic Institute.

Please note:
Video footage of Commencement may be viewed on the Caltech Web site at http://www.caltech.edu/commencement/. Broadcast is scheduled to begin after 2:30 p.m. and will be available throughout the year.
Widely regarded as a key figure in the development of science fiction as a literary genre, Ray Bradbury is the author of more than 500 short stories, novels, plays, screenplays, television scripts, and poems. His writings grapple with some of the thorniest issues of our age—racism, censorship, environmental pollution, nuclear war—while celebrating the senses, the emotions, and the imagination.

Bradbury was born in Waukegan, Illinois, on August 22, 1920. At age 11 he began writing stories on butcher paper. In 1934 his family relocated to Los Angeles, where he graduated from high school in 1938. Although finished with his formal schooling, Bradbury continued to educate himself by spending his evenings in the library and his days at the typewriter. That same year, while working as a sidewalk newspaper vendor, Bradbury published his first story, “Hollerbochen’s Dilemma,” in Imagination! magazine. His first paid publication, “Pendulum,” followed in 1941. By 1943, he had given up selling newspapers and was writing full time. Two years later, “The Big Black and White Game” was selected for inclusion in Best American Short Stories. The appearance of The Martian Chronicles in 1950 confirmed his growing reputation as an important science fiction author. Many other works followed, including such classics of the genre as The Illustrated Man, Fahrenheit 451, and Something Wicked This Way Comes.

Since 1985, Bradbury has adapted 42 of his short stories for “The Ray Bradbury Television Theater” on the USA cable television channel. His nonliterary pursuits have included acting as creative consultant for various architectural
design projects, including the Spaceship Earth exhibition at Epcot Center, the Orbitron space ride at EuroDisney, and the Glendale Galleria, Westside Pavilion, and Horton Plaza shopping malls. Bradbury is the recipient of numerous awards and honors, including the O. Henry Memorial Award, the Benjamin Franklin Award, the World Fantasy Award for Lifetime Achievement, and the Grand Master Award from the Science Fiction Writers of America. Perhaps his most unusual accolade is the moon’s Dandelion Crater, named in honor of his novel *Dandelion Wine*.

Of himself, Bradbury says he “writes every day with joy.” If there is a theme to his life, it is this: “Don’t criticize; offer alternatives; build up, don’t tear down.”
THE COMMENCEMENT CEREMONY

These tribal rites have a very long history. They go back to the ceremony of initiation for new university teachers in mediaeval Europe. It was then customary for students, after an appropriate apprenticeship to learning and the presentation of a thesis as their masterpiece, to be admitted to the Guild of Masters of Arts and granted the license to teach. In the ancient University of Bologna this right was granted by authority of the Pope and in the name of the Holy Trinity. We do not this day claim such high authority.

As in any other guild, whether craft or merchant, the master's status was crucial. In theory at least, it separated the men from the boys, the competent from the incompetent. On the way to his master's degree, a student might collect a bachelor's degree in recognition of the fact that he was half-trained, or partially equipped. The doctor's degree was somewhat different. Originally indistinguishable from the master's, the doctor's gradually emerged by a process of escalation into a super magisterial role—first of all in the higher faculties of theology, law, and medicine. It will come as no surprise that the lawyers had a particular and early yen for this special distinction.

These graduations and distinctions are reflected in the quaint and colorful niceties of academic dress.

Of particular interest is the cap or mortarboard. In the form of the biretta it was the peculiar sign of the master. Its use has now spread far beyond
that highly select group to school girls and choir boys and even to the nursery school. *Sic transit* . . .

The gown, of course, is the basic livery of the scholar, with its clear marks of rank and status—the pointed sleeves of the bachelor, the oblong sleeves of the master, the full sleeves and velvet trimmings of the doctor. The doctors, too, may depart from basic black and break out into many colors—Harvard crimson or Yale blue or the scarlet splash of Oxford.

Color is the very essence of the hood: color in the main body to identify the university; color perhaps in the binding to proclaim the subject of the degree—orange for engineering, gold for science, the baser copper for economics, white for arts and letters, green for medicine, purple for law, scarlet for theology, and so on. Size is a further variable, as the hoods tend to lengthen from the three feet of the bachelor to the four of the doctor. So the birds are known by their plumage.

With this color and symbolism, which is mediaeval though mutated, we stage our brief moment of pageantry, paying homage to that ancient community of scholars in whose shadow we stand, and acknowledging our debt to the university as one of the great institutional constructs of the Middle Ages. While looking back, however, we also celebrate the achievements of this present generation of students and look forward to the future of these our younger colleagues, whom we now welcome to our midst.

*David C. Elliot*

*Professor of History, Emeritus*
A C A D E M I C P R O C E S S I O N

Chief Marshal
Gary A. Lorden, Ph.D.

Marshals
Arden L. Albee, Ph.D.
Melany L. Hunt, Ph.D.
Christoph Koch, Ph.D.
Rudolph A. Marcus, Ph.D.
Jean-Paul Revel, Ph.D.
Alison Winter, Ph.D.

Faculty Officers
Kim C. Border, Ph.D.
Paul H. Patterson, Ph.D.
Ward Whaling, Ph.D.

M A R C H I N G O R D E R

Candidates for the Degree of Bachelor of Science
Candidates for the Degree of Master of Science
Candidates for the Degree of Engineer
Candidates for the Degree of Doctor of Philosophy
Faculty Officers
The Faculty
The Chairs of the Divisions
The Deans
The Provost
The Trustees
The Commencement Speaker
The President
The Chair of the Board of Trustees
PROGRAM

Organ Prelude
Leslie J. Deutsch, Ph.D.

Processional
The Caltech Convocations Brass and Percussion Ensemble
William Bing, M.M., Conductor

Presiding
Gordon E. Moore, Ph.D.
Chair of the Board of Trustees
California Institute of Technology

Commencement Speaker
"The Great Years Ahead"
Ray Bradbury, Futurist and Science Fiction Author

Choral Selection
The Caltech Glee Clubs
Donald G. Caldwell, D.M.A., Conductor

"Hallelujah," from Messiah
George Frideric Handel

Conferring of Degrees
David Baltimore, Ph.D.
President
California Institute of Technology

Presentation of Candidates for Degrees
For the Degree of Bachelor of Science
Jean-Paul Revel, Ph.D.
Dean of Students

For the Degree of Master of Science
Christopher E. Brennen, Ph.D.
Vice President for Student Affairs

For the Degree of Engineer
Arden L. Albee, Ph.D.
Dean of Graduate Studies

For the Degree of Doctor of Philosophy
Dr. Albee

Biology
Paul H. Patterson, Ph.D.
Professor of Biology

Chemistry and Chemical Engineering
David A. Tirrell, Ph.D.
Division Chair
Engineering and Applied Science  
Richard M. Murray, Ph.D.  
Division Chair

Geological and Planetary Sciences  
Edward M. Stolper, Ph.D.  
Division Chair

The Humanities and Social Sciences  
John O. Ledyard, Ph.D.  
Division Chair

Physics, Mathematics and Astronomy  
Thomas A. Tombrello, Ph.D.  
Division Chair

ANNOUNCEMENT OF AWARDS  
AND CONCLUDING REMARKS

President Baltimore

ALMA MATER

“Caltech Alma Mater”  
By Manton Barnes, BS ’21 EE  
(The audience may join in;  
lyrics are found on page 43.)

RECESSIONAL

The Caltech Convocations Brass and Percussion Ensemble, and Organ

Organ Postlude  

The Caltech Convocations Brass and Percussion Ensemble  

Dr. Deutsch

You are invited to attend a reception on the  
Athenaeum West Lawn following the program.
CANDIDATES FOR DEGREES

Bachelor of Science

Daniel Michael Abrams* Houston, Texas Applied Physics
Viktor Yuryevich Alekseyev* Santa Monica, California Chemistry
Rafed Amin Al-Huq Farwaniza, Kuwait Engineering and Applied Science
Michelle Elle Armond* Redondo Beach, California Electrical Engineering and History
Gabriel Kanile'a Au Honolulu, Hawaii Electrical Engineering
Matthew Paul Bachmann Spokane, Washington Geochemistry
Xiaoyan Robert Bao* Atlanta, Georgia Biology
Amy Courtright Barr Palo Alto, California Planetary Science
Tobias Keith Bartels Lincoln, Nebraska Mathematics
Margaret Elizabeth Belska Oakdale, California Geology
Vidya M. Bhalodia East Hanover, New Jersey Biology
Amanda Lynn Blasius* Boca Raton, Florida Biology
Kevin Blake Bradley Ventura, California Engineering and Applied Science
Benjamin David Brantley Columbia, South Carolina Engineering and Applied Science
Nicholas Fraser Breen Webster Groves, Missouri Chemistry
James Alexis Bresson* Yakima, Washington Chemical Engineering
Christopher Allen Breen* Media, Pennsylvania Engineering and Applied Science
    (Mechanical Engineering)
Christopher Jay Brown Lincoln, Nebraska Chemistry
Gina Marie Buccolo Columbus, Nebraska Planetary Science
Damian Nathaniel Burch* Missouri City, Texas Engineering and Applied Science and Mathematics
Corey Edward Burke West Palm Beach, Florida Engineering and Applied Science
John Russell Burke* Spartanburg, South Carolina Physics
Kurt Andrew Campbell Tenino, Washington Electrical Engineering
Steven Andrew Cashion Winchester, Tennessee Engineering and Applied Science
    (Mechanical Engineering)
Andrew Manning Casteel Los Angeles, California Economics
Richard Agustin Castro Garland, Texas Electrical Engineering
Juancarlos Nakamura Chan Chasworth, California Engineering and Applied Science
    (Mechanical Engineering)
Candace C. Chang* La Cañada, California Chemistry
Ming Ming Chen* Reisterstown, Maryland Chemistry
Andrew MacGregor Childs* Chagrin Falls, Ohio Physics

Students whose names are followed by an asterisk are being graduated with honor in accordance with a vote of the faculty.
Bachelor of Science continued

George Chung  Memphis, Tennessee  Engineering and Applied Science (Mechanical Engineering)
Samuel Hue-Kay Chung*  Wheaton, Illinois  Applied Physics
Louis Cisnero, Jr.  Jourdanton, Texas  Engineering and Applied Science
Garth R. Conrad*  Harrisonburg, Virginia  Engineering and Applied Science
Andrew Steere Cotter  East Greenwich, Rhode Island  Engineering and Applied Science
Jeffrey Alan Custer  Corona, California  Engineering and Applied Science
Keshav Moreshwar Dani*  Cincinnati, Ohio  Mathematics
Sandip Prakash Darji  Athens, Alabama  Chemical Engineering
Heather Lee Dean*  San Antonio, Texas  Electrical Engineering
Aaron Jafar Denney  Idyllwild, California  Physics
Gregory Lee Detweiler  Palatine, Illinois  Engineering and Applied Science (Mechanical Engineering)
David Jeffers Devault  Tulsa, Oklahoma  Engineering and Applied Science
Ronald Cabaltica Dollete  Oceanside, California  Electrical Engineering
Kjerstin Irja Easton  Dana Point, California  Electrical Engineering
Christopher Mark Eppstein  Visalia, California  Engineering and Applied Science
Rui Fan*  Nashua, New Hampshire  Engineering and Applied Science and Mathematics
Marc Favata*  Elmwood Park, New Jersey  Physics
Michael Patrick Fitzgerald  Dallas, Texas  Engineering and Applied Science
Charless Christopher Fowlkes*  Bozeman, Montana  Engineering and Applied Science
E. Marie Fox  Greenwood, Indiana  Chemistry
Kevin Michael Franklin*  Brighton, Michigan  Applied Physics and History
Peter Ian Frazier*  Rhinebeck, New York  Engineering and Applied Science and Physics
Gregory Kealoha Fricke  Kahului, Hawaii  Engineering and Applied Science (Mechanical Engineering)
Carrie Jean Garner  Seattle, Washington  Engineering and Applied Science (Aeronautics)
Catelyn Murphy Gifford  Waterville, Ohio  Electrical Engineering
Rachel Florence Gray  Arcadia, California  Biology
Marc Emil Gustafson  Dallas, Texas  Engineering and Applied Science
Joseph William Haas  Grand Rapids, Michigan  Physics
Eric Lawrence Hale*  Eureka, California  Engineering and Applied Science (Mechanical Engineering) and Economics
Mark Isaac Hammond  Federal Way, Washington  Engineering and Applied Science
Angela Han  Southfield, Michigan  Physics
Hou-En Han  Monterey Park, California  Engineering and Applied Science
Kimberly Kelly Harle  Baltimore, Maryland  Economics
John William Hatfield*  Festus, Montana  Mathematics and Physics
John Lewis Henderson, Jr.  Atlanta, Georgia  Engineering and Applied Science (Mechanical Engineering)
Bachelor of Science continued

Clifford William Hicks* Yorba Linda, California  Physics
William Eliot Hiestand* Kenmore, Washington  Engineering and Applied Science
  (Mechanical Engineering)
David Andrew Hiller Mattapoisett, Massachusetts  Chemistry
Anthony Wei-Cheun Ho Rochester, Minnesota  Applied Physics
Russel Howe Hayden, Colorado  Applied Mathematics
Albert Hsiao* Poway, California  Biology and Engineering and Applied Science
Sue Ju-Shan Hsieh Walnut, California  Engineering and Applied Science
  (Mechanical Engineering)
Zhao Huang* Palo Alto, California  Physics
Lisa Litun Hung Edison, New Jersey  Engineering and Applied Science
Adrienne Marie Hyldahl Brandon, Florida  Engineering and Applied Science
Tanim Shahriar Islam* Richmond, Virginia  Physics
Anna Iwaniec* Princeton Junction, New Jersey  Engineering and Applied Science
  (Mechanical Engineering)
Eike Hans Jens* Neuss, Germany  Engineering and Applied Science
Alan Wesley Jones Sunnyvale, Texas  Physics
Nathan Mark Russell Jones Lafayette, California  Applied Physics
Moo Kwang Jounig Bethesda, Maryland  Physics
Kanwarpal Singh Kahlon Azusa, California  Biology
Stefan Georgiev Kazachki Sofia, Bulgaria  Mathematics and Economics
Elizabeth Christine Kelley Hollis, New Hampshire  Engineering and Applied Science
  (Mechanical Engineering)
Matthew Brennan Kennedy* Kingwood, Texas  Engineering and Applied Science
  (Mechanical Engineering)
Hanna Kim La Crescenta, California  Biology
Jessie Yeon Ji Kim* Upland, California  Chemistry
Brent Michael Kious* Kerrville, Texas  Biology and Science, Ethics, and Society
Juna Ariele Kollmeier* Huntington, New York  Physics
Hosein Kouros-Mehr* Hacienda Heights, California  Biology
Amit Ghanashyam Kshatriya* Katy, Texas  Mathematics
Michael Kuhlen* Konstanz, Germany  Physics
Max Peter Kullberg Anchorage, Alaska  Physics
Christopher Eric Kurtz* Idaho Falls, Idaho  Chemistry
Aaron Austen Kuzin* Sheridan, Wyoming  Biology
Jacob Paul Lacouture Newington, Connecticut  Electrical Engineering
Christopher Ian Leapley Bakersfield, California  Biology
Ja-Chen Audrey Lee West Covina, California  Applied Physics
Jui-Ting Patty Lee* Ithaca, New York  Physics
Bachelor of Science continued

Renee Guiyon Lee* La Cañada, California Engineering and Applied Science
Sueanne Lee* Los Angeles, California Engineering and Applied Science (Mechanical Engineering)
Troy Jeffrey Lee* Makawao, Hawaii Mathematics
Melvin Boon-Tiong Leok* Singapore, Singapore Mathematics
Daniel Leon Levy* Los Gatos, California Biology and Chemistry
Huimou Li* Fairbanks, Alaska Electrical Engineering
Caroline Lim* Alhambra, California Biology
Xin Liu* Tian Jin, P.R. China Electrical Engineering
Yi-Ping Liu* Thornton, Colorado Engineering and Applied Science
Corydon Murray Loomis III Columbus, Georgia Engineering and Applied Science
Nicklaus Frederick Lorenzen Arvada, Colorado Chemical Engineering
Dominic George Lucchetti Ypsilanti, Michigan Engineering and Applied Science
Chiyan Luo* Changsha, P.R. China Physics
Sam Mandegaran* Tehran, Iran Electrical Engineering and Economics
Peter Henry Maresh Farmington, Connecticut Electrical Engineering
Damian Scott Martinez Pasco, Washington Engineering and Applied Science
Jaime Francisco Martinez Burbank, California Electrical and Computer Engineering
Vivek C. Mathrani Flushing, New York Chemistry
Kevin Bryce McCarty* Indiana, Pennsylvania Physics
Jason Stuart McIlhaney Albuquerque, New Mexico Engineering and Applied Science
(Engineering)
John William Meacham Westminster, California Engineering and Applied Science
Pankaj Mehta* Miami, Florida Mathematics
James Madison Melnyk Laguna Hills, California Science, Ethics, and Society
Aron Jeffrey Meltzner* Santa Monica, California Geology
Arjun Mendiratta Oak Brook, Illinois Chemistry
Sarah Mary Milkovich Ithaca, New York Planetary Science
Christopher Terrell Miller Fairfax, Virginia Physics
Svjeta Miocinovic* Zagreb, Croatia Biology and Engineering and Applied Science
Adam Mocarski Garfield, New Jersey Engineering and Applied Science
Benjamin Mok Claremont, California Economics
Ivan Andriyovych Mokhmal Velyky Berezy, Ukraine Mathematics
Wren Bowlan Montgomery Washington, D.C. Physics and Geophysics
Kudah Christopher Mushambi Harare, Zimbabwe Engineering and Applied Science
(Engineering)
Matthew Allen Musick Houston, Texas Engineering and Applied Science
Max Narovlyansky Swampscott, Massachusetts Chemistry
Kwong Man Ng* Hong Kong Biology
Martin Anh Nguyen* Houston, Texas Engineering and Applied Science
Kristine Elizabeth Nielson Salt Lake City, Utah Geology
Bachelor of Science continued

Nik Haliza Nik Hassan Kota Bharu, Malaysia Electrical Engineering
Katherine Triplett Noyes Sunland, California Biology
William Leonard Ofstad Portland, Oregon Chemical Engineering
Satoshi Ohtake La Jolla, California Chemical Engineering
Alejandro Antonio Ortega, Jr. Aurora, Colorado Mathematics
Melissa Claire Parish Glendale, Arizona Electrical Engineering
Eleanor Jeesung Park* Skokie, Illinois Chemical Engineering
Dale Alan Parkes Loveland, Colorado Engineering and Applied Science (Mechanical Engineering)
Ryan Benton Patterson* Picayune, Mississippi Physics
Brian R. Patton* St. Louis, Missouri Physics
Matthew Russell Paul Newbury Park, California Engineering and Applied Science
Keith Alexander Peters Hampton Bays, New York Engineering and Applied Science
Anh D. Pham* San Jose, California Electrical Engineering and Economics
Karen Lynn Rantamaki Mason, New Hampshire Engineering and Applied Science
Timothy S. Reed La Crescenta, California Engineering and Applied Science
Kevin Patrick Richberg* Memphis, New York Chemistry
Mohammed Husain Rizvi Lahore, Pakistan Engineering and Applied Science
Daniel Kenneth Rogstad Monrovia, California Biology
Alan Miller Rosenwinkel Philadelphia, Pennsylvania Engineering and Applied Science (Mechanical Engineering)
Baldeep Singh Sadhal Yorba Linda, California Electrical Engineering
Robert Michael Saliba Camarillo, California Economics
Veronica Savu* Bucharest, Romania Physics
Rory Abbott Sayres* Bogota, New Jersey Biology
Amanda Marie Schaffer Luthersburg, Pennsylvania Engineering and Applied Science
Nathan Jon Schara Fresno, California Engineering and Applied Science (Mechanical Engineering)
Selwyn Sean Scharnhorst* Singapore, Singapore Physics
Kevin Matthew Schulz Talent, Oregon Physics
Adrian Provost Seymour* Tuolumne, California Planetary Science
Devang Ashok Shah Missouri City, Texas Engineering and Applied Science and Economics
Ian Ross Shapiro* San Francisco, California Chemistry
William Edward Sharp Mission Viejo, California Engineering and Applied Science
Kacie Elise Shelton Corvallis, Oregon Physics
Stephen Vincent Shepherd Morgan Hill, California Biology
Angela J. L. Shum Arcadia, California Electrical Engineering
Jaideep Singh San Diego, California Physics
Aleksandr Lev Slivkins* Riga, Latvia Mathematics
Jeremiah James Smith* Battle Creek, Michigan Electrical Engineering
Bachelor of Science continued

Daniel Song* Torrance, California  Biology
Kartik Srinivasan* El Paso, Texas  Applied Physics
Joshua Matthew Strahan Denver, Colorado  Physics
Eric Robert Strom* Thousand Oaks, California  Physics
Zhendi Su* Beijing, P.R. China  Chemical Engineering
Matthew Thomas Sullivan* Baton Rouge, Louisiana  Physics
Erika Ray Swanson* Salem, Missouri  Chemistry
Ian Douglas Swett* Bangor, Maine  Economics and Engineering and Applied Science
John Russell Teifel* Aloha, Oregon  Electrical Engineering
Ricky Tong* Spring, Texas  Chemical Engineering
Kamran Vakili* Laguna Niguel, California  Physics
Francisco Eduardo Valles Lakeview Terrace, California  Chemical Engineering
Phuong Kim Vu Sugar Land, Texas  Biology
Sam Lewis Wilcke* Bellevue, Idaho  Chemical Engineering
Matthew Frederic Wilhelm Palos Verdes, California  Engineering and Applied Science
Steven Ryan Wolf Salem, Oregon  Engineering and Applied Science
Jim Yuk-Fai Wong* San Gabriel, California  Biology
Sophia Sy-Hann Xiang* Cerritos, California  Biology
Xiaolin Xie* Shanghai, P.R. China  Physics
Kaiwen Xu* Nanjing, P.R. China  Physics and Engineering and Applied Science
Jennifer Chuen-Hsien Yang Davenport, Iowa  Chemistry
Yifan Yang Baltimore, Maryland  Engineering and Applied Science (Aeronautics)
  (Mechanical Engineering)
Haitao Yu* Xi-An, P.R. China  Physics
Jingyi Yu* Shanghai, P.R. China  Applied Mathematics and Engineering and Applied Science
Hanhui Yuan* Guangdong Province, P.R. China  Engineering and Applied Science
Ke-Jia Carl Zha Carmel, Indiana  Electrical Engineering
Hao Zhang* Shanghai, P.R. China  Engineering and Applied Science
Jianhui Zhang* Changchun, P.R. China  Engineering and Applied Science

Master of Science

Mark Lee Adams (Electrical Engineering) B.S.E.E., Auburn University 1997.
John King-Tai Au (Applied Physics) B.Sc., Queen's University 1999.
Master of Science continued

David Eugene Beckman (Physics) B.S., (Electrical Engineering), B.S. (Engineering Physics), University of Illinois at Urbana-Champaign 1992.
Emily Kirsten Bell (Materials Science) A.B., Bryn Mawr College 1998.
Gwendolyn Rae Bell (Astronomy) B.S., Harvey Mudd College 1998.
Jeffrey Myles Berghorson (Aeronautics) B.Sc., University of Manitoba 1999.
Samuel Case Bradford V (Civil Engineering) B.S., University of California, Berkeley 1999.
Philippe Chatelain (Aeronautics) Ingénieur Civil Mécanicien, Université Catholique de Louvain 1999.
Zie Wei Susan Chen (Biology) B.S., The University of Texas at Austin 1998.
Wonchae Choe (Biology) B.S., Kyung Hee University 1992; M.S., 1994.
Marcia Ann Cooper (Mechanical Engineering) B.S., Purdue University 1999.
Lars Brör Crenean (Mechanical Engineering) B.S., Cornell University 1999.
Georgia Pauline Buenaventura Cua (Civil Engineering) B.S., Harvey Mudd College 1998.
Michael Ivor Davies (Electrical Engineering) B.S., California Institute of Technology 1998.
Jason Patrick Davis (Computation and Neural Systems) S.B., Massachusetts Institute of Technology 1998.
Heather Lee Dean (Computation and Neural Systems) B.S., California Institute of Technology 2000.
Tao Feng (Materials Science) B.E., Tsinghua University 1998.
Pedro Gonzalez (Aeronautics) Ingeniero Tecnico Aeronautico, Universidad Politecnica de Madrid; B.S., Embry-Riddle Aeronautical University 1996.
Jason Allan Graetz (Materials Science) A.B., Occidental College 1998.
Master of Science continued

Martin Griffiths (Geophysics) B.Sc., University College London 1997.
Matthew Strentzel Hanna (Computer Science) B.S., University of Washington 1997.
Sarah Christine Heilshorn (Chemical Engineering) B.S., Georgia Institute of Technology 1998.
Nien-Show Ho (Electrical Engineering) B.S., National Taiwan University 1995; M.S., 1997.
Xianglei Huang (Planetary Science) B.S., University of Science and Technology of China 1997.
Anxiao Jiang (Electrical Engineering) B.E., Tsinghua University 1999.
Yindi Jing (Electrical Engineering) B.E., University of Science and Technology of China 1996; M.E., 1999.
Michael Bernard Johnson (Aeronautics) B.Sc., Queen’s University 1999.
Melinda Jane Kellogg (Physics) B.S., University of California, Santa Barbara 1993; M.S. (Astronomy), California Institute of Technology 1999.
David Thomas Kewley (Computation and Neural Systems) B.S., University of Rochester 1990.
Martha Kirouac (Biology) B.S., Union College 1996.
Savvas Koudounas (Electrical Engineering) B.Eng., Imperial College of Science, Technology, and Medicine, University of London 1999.
Andrew John Landahl (Physics) B.S., (Mathematics), B. S. (Physics), Virginia Polytechnic Institute and State University 1996.
Patrick Shawn Lang (Chemistry) B.S., University of California, Davis 1988; B.S., University of California, Irvine 1992.
Peter Byungho Lee (Physics) B.S., University of California, Berkeley 1998.
Melvin Boon-Tiong Leok (Mathematics) B.S., California Institute of Technology 2000.
Yi Li (Applied Physics) B.S., California Institute of Technology 1998.
Carolina Becker Livi (Biology) B.Sc., Universidade Federal do Rio Grande do Sul 1996.
Dal Lu (Electrical Engineering) B.Eng., Zhejiang University 1996.
Miao-Ling Lu (Environmental Engineering Science) B.S., National Taiwan University 1996; M.S., 1998.
Mehrdad Mahmoudi Zarandi (Chemical Engineering) B.Sc., Isfahan University of Technology 1985.
Irena Maravic (Electrical Engineering) B.Sc., University of Belgrade 1997.
Kimberly Anne Mertz (Environmental Engineering Science) B.S., Northwestern University 1998.
Mark Meyer (Computer Science) B.S. (Computer Engineering), B.S. (Computer Science), Northwestern University 1997.
Mark O’Dell (Computation and Neural Systems) B.S. (Electrical Engineering), B.S. (Physics), Rutgers University 1989.
Tina Pavlin (Physics) A.B., Princeton University 1997.
Byron Jacob Philhour (Physics) B.A., University of California, Berkeley 1995.
Ian Robert Sammis (Physics) B.S. (Computer Science), B.S. (Mathematics), B.S. (Creative Studies), University of California, Santa Barbara 1995.
Marcus Christopher Sarofim (Chemistry) S.B., Massachusetts Institute of Technology 1996.
Brian Kirk Savage (Geophysics) B.A., University of California, Berkeley 1998.
Kevin Anthony Scaldeferri (Physics) B.S. (Mathematics), B.S. (Physics), University of Maryland at College Park 1997.
Huazhang Shen (Biology) B.S., University of Science and Technology of China 1994.
William Bryan Smith (Biology) B.S., University of Southern California 1995.
Ann Marie Stimmier (Electrical Engineering) B.S., California Institute of Technology 1999.
Han Wui Then (Electrical Engineering) B.Sc., University of Illinois at Urbana-Champaign 1999.
Amber Lynn Thweatt (Control and Dynamical Systems) B.S., The University of Michigan 1997.
Thomas Davison Tubman (Biology) B.A., University of Arizona 1993.
Marion Walter Vance (Mechanical Engineering) B.S.E., Arizona State University 1998.
Luis Enrique Vázquez (Biology) B.A., University of Puerto Rico, Mayagüez 1998.
Stephanie Yeager Vernooy (Biology) B.A., Pomona College 1994.
Pin Wang (Chemical Engineering) B.S., University of Science and Technology of China 1997.
Nathan El Ray Whitlock (Chemical Engineering) B.S., University of Wyoming 1998.
Julie Anne Wolf (Civil Engineering) B.S., University of California, San Diego 1999.
Catherine Grace Wong (Computer Science) B.A.Sc., University of Toronto 1998.
Zoë Justine Wood (Computer Science) B.S., University of California, Santa Cruz 1997.
Xinkai Wu (Physics) B.S., Peking University 1998.
Kaiwen Xia (Geophysics) B.S., University of Science and Technology of China 1995; M.E., 1998.
Lan Yang (Materials Science) B.S., University of Science and Technology of China 1996.
Richard Ming-Chun Yang (Aeronautics) B.S., California State Polytechnic University Pomona 1997.
Ya-Tang Yang (Applied Physics) B.S., National Taiwan University 1996.
Hanhui Yuan (Mathematics) B.S., California Institute of Technology 2000.
Junhua Yuan (Physics) B.S., University of Science and Technology of China 1998.
Kathryn Marie Zeiler (Social Science) B.S., Indiana University 1991; M.S., Golden Gate University 1995.
Lingsen Zeng (Geology) B.S., Nanjing University 1987; M.S., Chinese Academy of Geological Sciences 1994.
Qingsong Zhang (Materials Science) B.E., Tsinghua University 1996.
Engineer

Keith Scott Haberman (Aeronautics) B.S., New Mexico State University 1991; M.S., 1993.
Doctor of Philosophy

DIVISION OF BIOLOGY

Thesis: Biochemical Characterization of Two Cytomegalovirus MHC Class I Homologs.
Christine Wai Jun Chee-Ruiter (Computation and Neural Systems) B.S., Harvey Mudd College 1985. 
Thesis: The Biological Sense of Smell: Olfactory Search Behavior and a Metabolic View for Olfactory Perception.
Wen Chen (Biology) B.S., University of Science and Technology of China 1994. 
Chiou-Fen Chuang (Biology) B.S., Chung Shan Medical and Dental College 1990; M.S., National Yang-Ming Medical College 1992. 
Thesis: Molecular Genetics of Floral Patterning in Arabidopsis thaliana.
Marie Elizabeth Csete (Biology) A.B., Princeton University 1975; M.D., Columbia University 1979; M.S., California Institute of Technology 1998. 
Thesis: Less is More: Oxygen and Stem Cell Regeneration.
Susan Elizabeth Roian Egnor (Integrative Neurobiology) A.B., Bryn Mawr College 1990. 
Thesis: The Role of Spectral Cues in Sound Localization by the Barn Owl.
Thesis: Life is Degrading: SCF Ubiquitin Ligases—Their Components and Functions.
Aidyl Sofia Gonzalez-Serricchio (Biology) B.S., Rensselaer Polytechnic Institute 1993. 
Amy Lynn Greenwood (Biology) B.A., Pomona College 1992. 
Mitra Jennifer Hartmann (Integrative Neurobiology) B.S., Cornell University 1990. 
Ching Elizabeth Ho (Computation and Neural Systems) B.Sc., The Chinese University of Hong Kong 1992; M.A., University of Virginia 1994. 
Thesis: Multiple Mechanisms of Apparent Motion Perception.

When more than one field of study is listed, the first is the major, and the second and others are minors.
Tina Michelle Iverson (Biochemistry) B.S., St. John's University 1995.

Clara L. Kielkopf (Biology and Chemistry) B.S., University of Louisville 1992; B.S.,
Thesis: Structural Basis of DNA Recognition by Synthetic Ligands.

Chantal Smith Morgan (Biochemistry) A.B., Princeton University 1994.
Thesis: Full Sequence Design of an Alpha-Helical Protein and Investigation of the
Importance of Helix Dipole and Capping Effects in Helical Protein Design.

Alice Jean Paquette (Biology) S.B., Massachusetts Institute of Technology 1989; M.S.,
University of California, San Diego 1993.
Thesis: The Role of the Neuron-Restrictive Silencer Factor during Vertebrate
Embryogenesis.

John Stylianos Pezaris (Computation and Neural Systems) S.B., Massachusetts Institute of
Thesis: Responses of Multiple Simultaneously Recorded Macaque Area LIP Neurons
in a Memory Saccade Task.

Micah Seth Siegel (Computation and Neural Systems) B.S., Yale University 1992.

Qi Sun (Biology) B.S., Fudan University 1989; M.S., Shanghai Institute of Plant

Glenn Cameron Turner (Biology) B.Sc., University of Alberta 1992.
Thesis: Functions of the Ubiquitin-Proteasome System in Saccharomyces cerevisiae:
Cotranslational Protein Degradation and Regulation of the UBRI Pathway.

Minqin Wang (Biology) B.S., Fudan University 1991; M.S., 1994.

Thesis: Turning on Death in the Fly: Regulation of Apoptosis in Drosophila
melanogaster.

Patricia M. White (Developmental Biology) B.S., California Institute of Technology 1989.
Thesis: Cellular and Molecular Mechanisms in Autonomic Neuronal Differentiation.
DIVISION OF CHEMISTRY AND CHEMICAL ENGINEERING

Erika Bellmann (Chemistry) Vordiplom, Humboldt University 1992; Diplom, 1995.

Thesis: Inhibition of DNA Major Groove Binding Proteins by Hairpin Polyamides.

Matt Jeffrey Carlson (Chemistry) B.S., California Institute of Technology 1992.

Paul James Chirik (Chemistry) B.S., Virginia Polytechnic and State University 1995.
Thesis: Ancillary Ligand Effects on Fundamental Transformations in Metalloocene Catalyzed Olefin Polymerization.

Thesis: Probing Cytochrome P450 with Sensitizer-linked Substrates.


Thesis: The Copper Centers of Particulate Methane Monooxygenase: Differentiation of C- and E-Clusters.

Kathryn Elizabeth Erkkila (Chemistry) A.B., Bryn Mawr College 1992.
Thesis: Chemical and Structural Characterization of 9,10-phenanthrenequinone Diimine Complexes of Iridium(III) and Rhodium(III) Bound to DNA.

Justin Patrick Gallivan (Chemistry) B.S., University of Illinois at Urbana-Champaign 1994.
Thesis: Electrostatic Interactions in Chemistry and Biology.

David Benjamin Gordon (Chemistry) S.B., Massachusetts Institute of Technology 1994.
Thesis: Combinatorial Optimization in Computational Protein Design.

Robert John Griffin (Chemical Engineering and Environmental Engineering Science) B.S., Tufts University 1993; M.S., California Institute of Technology 1997.

Hui-Ming Hung (Chemistry) B.S., National Taiwan University 1993; M.S., 1995.

Thesis: Photorearrangement of Tricyclic 2,5-Cyclohexadienones in a Synthetic Route Toward the Natural Product Resiniferatoxin.

Thomas Andrew Kirkland (Chemistry) B.S., California Polytechnic State University, San Luis Obispo 1993.
Thesis: Expanding the Applications of Transition Metal Alkylidenes and Alkylidyynes to Organic Synthesis.
Dmitri Alexandrovich Kossakovski (Chemistry) M.S., Moscow Institute of Physics and Technology 1993.
Thesis: Scanning Probe Chemical and Topographical Microanalysis.

Guruswamy Kumaraswamy (Chemical Engineering and Chemistry) B.Tech., Indian Institute of Technology, Bombay 1994; M.S., California Institute of Technology 1996.
Thesis: The Effect of Flow History on the Crystallization of Semicrystalline Polymers.

Thesis: Fundamental Studies of the Structures and Reaction Dynamics of Gas Phase Biomolecules and Solvated Ions Using FT-ICR.


Mehrdad Mahmoudi Zarandi (Chemical Engineering) B.Sc., Isfahan University of Technology 1985. M.S., California Institute of Technology 2000.


Adrian Ponce (Chemistry) B.S., Michigan State University 1993.

Stephanie Monn Rogers (Chemistry) B.S., The College of William and Mary 1992.
Thesis: Reaction Dynamics of the Lowest $^1A'$ and $^3A''$ States of $O(^3P)+H_2$.

Shelly Elese Sakiyama-Elbert (Chemical Engineering) S.B. (Biology), S.B. (Chemical Engineering), Massachusetts Institute of Technology 1996; M.S., California Institute of Technology 1998.

Matthias Scholl (Chemistry) S.B., Massachusetts Institute of Technology 1996.
Thesis: Expanding the Scope of Ruthenium-Based Olefin Metathesis Catalysts.


Michael Ulman (Chemistry) B.S., Harvey Mudd College 1995.
Thesis: Selectivity, Activity and Stability of Ruthenium-Carbene Based Olefin Metathesis Initiators.
DIVISION OF ENGINEERING AND APPLIED SCIENCES

Brad Thomas Aagaard (Civil Engineering) B.S., Harvey Mudd College 1994; M.S., California Institute of Technology 1995.
Ali Adibi (Electrical Engineering) B.S., Shiraz University 1990; M.S., Georgia Institute of Technology 1993.
Thesis: Graphical Models and Iterative Decoding.
Thesis: Intelligent Control Using Generalizing Case-Based Reasoning with Neural Networks.
Mark Adrian Brady (Aeronautics and Computer Science) B.S., University of California, San Diego 1993.
Goutam Chattopadhyay (Electrical Engineering) B.E., University of Calcutta 1987; M.S., University of Virginia 1994.
Thesis: Dual Polarized and Balanced Receivers at Millimeter and Submillimeter Wavelengths.
Cynthia Evors Daniell (Electrical Engineering) B.S., University of Southern Alabama 1985; M.S., California Institute of Technology 1988.
John Frank Davis (Electrical Engineering) B.S.E., Arizona State University 1993; M.S., California Institute of Technology 1995.
Blythe Chadwick Deckman (Electrical Engineering) B.S., California State Polytechnic University, Pomona 1996; M.S., California Institute of Technology 1997.
Thesis: Active Quasi-Optics and Measurements.
Amish S. Desai (Electrical Engineering) B.S., University of California, Los Angeles 1993; M.S., California Institute of Technology 1996.
Thesis: Micromachined Devices for an Airborne Bio-Particle Analysis System.

Ognjen Djekic (Electrical Engineering) B.S., University of Maryland at College Park 1994; M.S., California Institute of Technology 1995.
Thesis: Optimization and Miniaturization of Microprocessor Power Supplies.


Thesis: Automatic Observation and Synthesis of Human Motion.

Thesis: An Analog VLSI Motion Sensor Based on the Fly Visual System.


Ayhan Irfanoglu (Civil Engineering) B.S., Middle East Technical University 1993; M.S., California Institute of Technology 1994.

Thesis: Modeling Chemical Vapor Deposition of Thin Solid Films.


Anna Karion (Mechanical Engineering) B.S., Yale University 1994; M.S., California Institute of Technology 1995.

Sanza Nkashama Tsilobo Kazadi (Computation and Neural Systems) B.S., California Institute of Technology 1995.
Thesis: Swarm Engineering.


Lifang Li (*Electrical Engineering*) B.S., Tsinghua University 1993; M.S., 1996; M.S., California Institute of Technology 1998.  

Ying Li (*Mechanical Engineering*) B.S., Tsinghua University 1994; M.S., California Institute of Technology 1996.  


Kyu Sung Min (*Materials Science*) B.S., University of California, Los Angeles 1994; M.S., California Institute of Technology 1996.  


Thesis: Micromechanical Aspects of Failure in Unidirectional Fiber Reinforced Composites.


Pablo A. Parrilo (*Control and Dynamical Systems*) Ingeniero Electronico, Universidad de Buenos Aires 1994.  
Thesis: Structured Semidefinite Programs and Semialgebraic Geometry Methods in Robustness and Optimization.
Doctor of Philosophy continued

Sergey Pekarsky  (*Control and Dynamical Systems*)  B.Sc., Tomsk State University 1992;  
M.Sc., Weizmann Institute of Science 1996.  
Thesis: Discrete Reduction of Mechanical Systems and Multisymplectic Geometry of  
Continuum Mechanics.

Eva Maria Peral Sanchez  (*Electrical Engineering*)  Ingeniero Superior de  
Telecomunicaciones, Universidad Politecnica de Valencia 1995; M.S., California  
Institute of Technology 1998.  
Thesis: Some Issues Relevant to Affecting Propagation of Lightwave Signals in  
Optical Fibers.

Wendong Qu  (*Engineering Science*)  B.S., Ocean University of Qingdao; M.S., 1995;  
M.S., California Institute of Technology 1997.  

Stefan Schlamp  (*Aeronautics and Computation and Neural Systems*)  B.S., Stuttgart  
University 1994; M.S., California Institute of Technology 1996.  
Thesis: Laser-Induced Thermal Acoustic Velocimetry.

M.S., University of Washington 1997.  
Thesis: Detonation Diffraction through an Abrupt Area Expansion.

Thesis: Numerical Study of Interfacial Flow with Surface Tension in Two and Three  
Dimensions.

James Norman Smith  (*Environmental Engineering Science and Chemistry*)  B.S., Harvey  
Mudd College 1984.  
Thesis: A. Computational Chemistry Applied to the Analysis of Air Pollution  
Reaction Mechanisms. B. Fundamental Studies of Droplet Evaporation and  
Discharge Dynamics in Electrospray Ionization.

Grant Douglas Swenson  (*Aeronautics and Chemistry*)  B.S., University of Southern  
California 1993; M.S., California Institute of Technology 1994.  
Thesis: Numerical Simulations of Combustion Instabilities in Gas Turbine  
Combustors, with Applications.

Tobias Voelkl  (*Aeronautics and Applied Mathematics*)  Vordiplom, Technische Universität  
München 1993; M.S., California Institute of Technology 1996.  
Thesis: A Physical-Space Version of the Stretched-Vortex Subgrid-Stress Model for  
Large-Eddy Simulation of Incompressible Flow.
Doctor of Philosophy continued

Xu Wang (Electrical Engineering) B.S., Zhejiang University 1990; M.S., Tsinghua University 1993; M.S., Syracuse University 1995; M.S., California Institute of Technology 1997.
Thesis: Optoelectronic Devices for Optical Memory Systems.

Xuan-Qi Wang (Electrical Engineering) B.S., Tsinghua University 1989; M.S., California Institute of Technology 1996.

Yong Wang (Control and Dynamical Systems) B.S., Peking University 1991; M.S., 1994.
Thesis: Effects of Actuator Limits in Bifurcation Control with Applications to Active Control of Fluid Instabilities in Turbomachinery.


Jiajun Wen (Computation and Neural Systems) B.S., University of Science and Technology of China 1993.


Joyce Yuen-Wah Wong (Electrical Engineering) B.S., California Institute of Technology 1995; M.S., 1996.

Shuyun Wu (Electrical Engineering) B.S., Shanghai jiao Tong University 1987; M.S., California Institute of Technology 1995.


Xiaoyun Zhu (Electrical Engineering) B.S., Tsinghua University 1994; M.S., California Institute of Technology 1995.
DIVISION OF GEOLOGICAL AND PLANETARY SCIENCES

Elizabeth Warner Holt (Geochemistry) B.S., California Institute of Technology 1991; M.S., Stanford University 1993.


DIVISION OF HUMANITIES AND SOCIAL SCIENCES

Frederick Jason Boehmke (Social Science) B.A., Washington University 1995.


Anthony Mark Kwasnica (Social Science) B.A., University of Arizona 1994; M.S., California Institute of Technology 1997.
Thesis: Asymmetric Information and Cooperation.

Roberto Antonio Weber (Social Science) B.A., Texas A&M University 1994; M.S., California Institute of Technology 1996.
Thesis: Interdependence in Laboratory Groups and Organizations.

DIVISION OF PHYSICS, MATHEMATICS AND ASTRONOMY

Tihomir Zlatev Asparouhov (Mathematics) M.S., University of Sofia 1995.
Thesis: Sequential Fixed Width Confidence Intervals.

Thesis: Molecular Gas in Nearby Active Galactic Nuclei.

Doctor of Philosophy continued

Eugene Chiang (Astronomy) S.B., Massachusetts Institute of Technology 1995.
Thesis: Circumstellar and Circumplanetary Disks.

Teviet David Creighton (Physics) B.S., University of Calgary 1994.

Andrea Paulina Dvoredsky (Physics) B.S., University of Maryland at College Park 1993.

Christina J. Hood (Physics) B.Sc., University of Otago 1993.

Oleg Kovrijkine (Mathematics) B.S., Moscow Institute of Physics and Technology 1993; M.A., 1995.


Thesis: Kinematical Mössbauer Diffraction in $^{57}$Fe.

Tao Li (Mathematics) B.S., Peking University 1995.

Thomas Williams Murphy, Jr. (Physics) B.S., Georgia Institute of Technology 1993; M.S., California Institute of Technology 1997.

Malik Rakhmanov (Physics) M.S., Moscow State University 1989.

Arthur George Street (Physics) B.S., University of Sydney 1994; M.S., California Institute of Technology 1997.
Thesis: Understanding and Designing Protein Beta-Sheets.

David William Vernooy (Physics) B.Sc., Queen's University 1994.

Thesis: Thermodynamic Study of Coadsorption: Kr/CCl$_4$ and CH$_4$/CCl$_4$ on Graphite.
PRIZES AND AWARDS

Prizes and awards are listed primarily for those students receiving degrees in 2000, and include prizes and awards received by them in previous years.

MILTON AND FRANCIS CLAUSER DOCTORAL PRIZE
Awarded to the Ph.D. candidate whose research is judged to exhibit the greatest degree of originality as evidenced by its potential for opening up new avenues of human thought and endeavor as well as by the ingenuity with which it has been carried out.

Recipient to be announced at Commencement.

FREDERIC W. HINRICHS, JR., MEMORIAL AWARD
Awarded to the seniors who, in the opinion of the undergraduate Deans, have made the greatest undergraduate contribution to the welfare of the student body and whose qualities of leadership, character, and responsibility have been outstanding.

2000 Alan Miller Rosenwinkel, Jaideep Singh

MABEL BECKMAN PRIZE
Awarded to an undergraduate woman upon completion of her junior or senior year in recognition of demonstrated academic and personal excellence, contributions to the Institute community, and outstanding qualities of character and leadership.

2000 Eleanor Jeesung Park
ROSALIND W. ALCOTT MERIT SCHOLARSHIP, CALTECH PRIZE SCHOLARSHIP, CARNATION SCHOLARSHIP, AND JOHN STAUFFER MERIT SCHOLARSHIP

Each year Caltech awards these prizes for academic excellence to undergraduates. They are based solely on merit (selection is made on the basis of grades, faculty recommendations, and demonstrated research productivity) with no consideration given to need or any other nonacademic criteria.

1999
- Candace C. Chang
- Ming Ming Chen
- Andrew MacGregor Childs
- Kevin Michael Franklin
- Clifford William Hicks
- Albert Hsiao
- Eike Hans Jens
- Juna Arielle Kollmeter
- Michael Kuhlen
- Christopher Eric Kurtz
- Aaron Austen Kuzin
- Melvin Boon-Tiong Leok

2000
- Xiaoyan Robert Bao
- Amanda Lynn Blasius
- James Alexis Bresson
- Christopher Allen Brooks
- Corey Edward Burke
- Candace C. Chang
- Ming Ming Chen
- Andrew MacGregor Childs
- Albert Hsiao
- Tanim Shahriar Islam
- Eike Hans Jens
- Aaron Austen Kuzin
- Renee Guiyon Lee
- Melvin Boon-Tiong Leok

2001
- Daniel Leon Levy
- Kartik Srinivasan
- Ricky Tong
- Kamran Vakili
- Jim Yuk-Fai Wong
- Haitao Yu
- Hanhui Yuan
- Hao Zhang

2002
- Daniel Leon Levy
- Chiyan Luo
- Selwyn Sean Scharnhorst
- Kartik Srinivasan
- Ian Douglas Swett
- Ricky Tong
- Jim Yuk-Fai Wong
- Sophia Sy-Hann Xiang
- Xiaolin Xie
- Kaiwen Xu
- Haitao Yu
- Jingyi Yu
- Hao Zhang
WILLIAM F. BALLHAUS PRIZE
Awarded to aeronautics students for outstanding doctoral dissertations.
2000  Eric Schultz

ERIC TEMPLE BELL UNDERGRADUATE MATHEMATICS RESEARCH PRIZE
Awarded to one or more juniors or seniors for outstanding original research in mathematics.
1999  Melvin Boon-Tiong Leok
2000  Keshav Moreshwar Dani

ROLF D. BUHLER MEMORIAL AWARD IN AERONAUTICS
Awarded to an aeronautics student for outstanding academic achievement in the Master’s program.
1996  Tobias Voelkl
2000  Philippe Chatelain

FRITZ B. BURNS PRIZE IN GEOLOGY
Awarded to an undergraduate who has demonstrated both academic excellence and great promise of future contributions in the fields represented by the Division of Geological and Planetary Sciences.
1999  Aron Jeffrey Meltzer, Adrian Provost Seymour
2000  Amy Courtright Barr

THE W. P. CAREY & CO., INC., PRIZE IN MATHEMATICS
Awarded to a student receiving a Doctor of Philosophy degree for an outstanding doctoral dissertation in applied mathematics or pure mathematics.
2000  Philip Christopher Love (graduated June 1999)

RICHARD BRUCE CHAPMAN MEMORIAL AWARD
Awarded to a graduate student in hydrodynamics who has distinguished himself or herself in research in the Division of Engineering and Applied Science.
2000  Ying Li, Kamran Mohseni
DONALD S. CLARK MEMORIAL AWARDS
May be awarded to two juniors in recognition of service to the campus community and academic excellence. Preference is given to students in the Division of Engineering and Applied Science and to those in Chemical Engineering.

1998  Heather Lee Dean
1999  Jeremiah James Smith, Ricky Tong

DEANS' CUP AND DIRECTOR OF RESIDENCE LIFE AND MASTER'S AWARD
Two awards, selected by the Deans, the Director of Residence Life, and the Master of Student Houses, presented to undergraduates whose concern for their fellow students has been demonstrated by persistent efforts to improve the quality of undergraduate life and by effective communication with members of the faculty and administration.

1998  Heather Lee Dean, Deans' Cup
1999  Katherine Tripplett Noyes and Jaideep Singh, Residence Life and Master's Award
2000  Kevin Blake Bradley and Aron Jeffrey Meltzner, Deans' Cup

EVERHART DISTINGUISHED GRADUATE STUDENT LECTURER AWARD
Awarded to a graduate student who has demonstrated exemplary presentation ability and graduate research.

1996  Mitra Jennifer Hartmann
1999  Marie Elizabeth Csete, Kamran Mohseni

DORIS EVERHART SERVICE AWARD
Awarded annually to an undergraduate who has actively supported and willingly worked for organizations that enrich not only student life, but also the campus and/or community as a whole, and who has, in addition, exhibited care and concern for the welfare of students on a personal basis. The award was established in 1999 by Martin and Sally Ridge in honor of Doris Everhart.

1999  Alan Miller Rosenwinkel
2000  Kevin Blake Bradley
LAURENCE L. AND AUDREY W. FERGUSON PRIZE
Awarded to the graduating Ph.D. candidate in biology who has produced the outstanding Ph.D. thesis for the past year.

2000  Glenn Cameron Turner

RICHARD P. FEYNMAN PRIZE IN THEORETICAL PHYSICS
Awarded to a senior on the basis of excellence in theoretical physics.

2000  Andrew MacGregor Childs

HAREN LEE FISHER MEMORIAL AWARD IN JUNIOR PHYSICS
Awarded to a junior physics major who demonstrates the greatest promise of future contributions in physics.

1999  Andrew MacGregor Childs

HENRY FORD II SCHOLAR AWARD
Awarded either to the engineering student with the best academic record at the end of the third year of undergraduate study, or to the engineering student with the best first-year record in the graduate program.

1999  Eike Hans Jens

JACK E. FROEHLICH MEMORIAL AWARD
Awarded to a junior in the upper five percent of his or her class who shows outstanding promise for a creative professional career.

1999  Melvin Boon-Tiong Leok, Daniel Leon Levy

GRADUATE DEANS' AWARD FOR OUTSTANDING COMMUNITY SERVICE
Awarded to a Ph.D. candidate who, throughout his or her graduate years at the Institute, has made great contributions to graduate life and whose qualities of leadership and responsibility have been outstanding.

2000  Petrus Joannes Joseph Moeleker, Chantal Smith Morgan
GEORGE W. GREEN MEMORIAL PRIZE
Awarded to the undergraduate student who, in the opinion of the division chairs, has shown outstanding ability and achievement in creative scholarship.

1999 Andrew MacGregor Childs

ARIE J. HAAGEN-SMIT MEMORIAL AWARD
Awarded to a sophomore or junior in biology or chemistry who has shown academic promise and who has made recognized contributions to Caltech.

1999 Ming Ming Chen

BIBI JENTOFF-NILSEN MEMORIAL AWARD
Awarded to an upperclass student who exhibits outstanding qualities of leadership and who actively contributes to the quality of student life at Caltech.

2000 Ian Douglas Swett

D. S. KOTHARI PRIZE IN PHYSICS
Awarded to a graduating senior in physics who has produced an outstanding research project during the year.

2000 Zhao Huang

MARGIE LAURITSEN LEIGHTON PRIZE
Awarded to one or two undergraduate women who are majoring in physics, astrophysics, or astronomy, and who have demonstrated academic excellence.

1997 Kledja Adnan Bega and Emma Elizabeth Goldberg (graduated June 1999)
1998 Juna Ariele Kollmeier

DOROTHY B. AND HARRISON C. LINGLE SCHOLARSHIP
Awarded to an incoming freshman in recognition of interest in a career in science or engineering, outstanding academic record, demonstrated fair-mindedness, and unquestioned integrity.

1996 Amanda Marie Schaffer
THE HERBERT NEWBY McCoy AWARD
Awarded to chemistry doctoral students for outstanding contributions to the science of chemistry.
2000  Paul James Chirik, Ivan Julian Dmochowski,
       Matthias Scholl, James N. Smith

MARY A. EARL McKINNEY PRIZE IN LITERATURE
1998  Eleanor Jeessung Park
2000  Stephen Vincent Shepherd

ROBERT L. NOLAND LEADERSHIP SCHOLARSHIP
Awarded to undergraduate students who exhibit qualities of outstanding leadership, which are most often expressed as personal actions that have helped other people and that have inspired others to fulfill their capabilities.
2000  Candace C. Chang, Matthew Allen Musick, Katherine Triplett Noyes,
       Baldeep Singh Sadhal

RODMAN W. PAUL HISTORY PRIZE
Awarded to a junior or senior who has displayed an unusual interest in and talent for history.
1999  Michelle Elle Armond
2000  Brent Michael Kious

HERBERT J. RYSER MEMORIAL SCHOLARSHIPS
Awarded to undergraduate students for academic excellence, preferably in mathematics.
1999  Damian Nathaniel Burch, Melvin Boon-Tiong Leok

RICHARD P. SCHUSTER MEMORIAL PRIZE
Awarded to one or more juniors or seniors in chemistry or chemical engineering on the basis of financial need and academic promise.
2000  Ming Ming Chen
ELEANOR SEARLE PRIZE IN LAW, POLITICS, AND INSTITUTIONS
The Eleanor Searle Prize was established in 1999 by friends and colleagues to honor Eleanor Searle. The prize is awarded annually to an undergraduate or graduate student whose work in history or the social sciences exemplifies Eleanor Searle's interests in the use of power, government, and law.

2000    Michelle Elle Armond, Sarah Mary Milkovich

ERNEST E. SECHLER MEMORIAL AWARD IN AERONAUTICS
Awarded to an aeronautics student who has made the most significant contribution to the teaching and research efforts of GALCIT (Graduate Aeronautical Laboratories of the California Institute of Technology). Preference is given to students working in structural mechanics.

1999    Tobias Voelkl

DON SHEPARD AWARD
Awarded to students who would find it difficult, without additional financial help, to engage in extracurricular and cultural activities. The recipients are selected on the basis of their capacity to take advantage of and to profit from these activities rather than on the basis of their scholastic standing.

1994    Hou-En Han
1997    Angela Han
1998    Michelle Elle Armond, Gina Marie Buccolo,
        Catelyn Murphy Gifford, Max Peter Kullberg, Huimou Li
2000    Michael Kuhlen

SIGMA XI AWARD
Awarded to a senior selected for an outstanding piece of original scientific research.

2000    Andrew MacGregor Childs
HALLETT SMITH PRIZE
Established in 1997 to commemorate Professor Smith’s long career as one of the 20th century’s most distinguished Renaissance scholars. The cash prize is given annually by the literature faculty to the undergraduate student who writes the finest essay on Shakespeare.

2000     Jim Yuk-Fai Wong

PAUL STUDENSKI MEMORIAL FUND PRIZE
A travel grant awarded to a Caltech undergraduate who would benefit from a period away from the academic community in order to obtain a better understanding of self and his or her plans for the future.

1999     Jessie Yeon Ji Kim, Amit Ghanashyam Kshatriya

ALAN R. SWEEZY PRIZE IN ECONOMICS
Awarded to a graduating senior who has shown unusual interest in and talent for economics.

2000     John Williams Hatfield

FRANK TERRUGGI MEMORIAL AWARD
Awarded to an undergraduate student who honors the spirit of Frank Terruggi’s life through participation “in the areas of Latin American Studies, radical politics, creative radio programming, and other activities aimed at improving the living conditions of the less fortunate.”

2000     Kevin Michael Franklin

CHARLES WILTS PRIZE
Awarded to a graduate student for outstanding independent research in electrical engineering leading to a Ph.D.

2000     Ali Adibi
FREDRICK J. ZEIGLER MEMORIAL AWARD
Awarded to an outstanding sophomore or junior in pure or applied mathematics, for excellence in scholarship as demonstrated in class activities or in the preparation of an original paper or essay in any subject area.

1999 Jingyi Yu
Caltech Alma Mater

by Manton Barnes, BS ’21 EE

In Southern California with grace and splendor bound,
Where the lofty mountain peaks look out to lands beyond,
Proudly stands our Alma Mater, glorious to see;
We raise our voices proudly, hailing, hailing Thee!
Echoes ringing while we’re singing over land and sea;
The halls of fame resound thy name, noble CIT!
SERVICES FOR COMMENCEMENT GUESTS

- PUBLIC TELEPHONES are available in Baxter Hall and Beckman Auditorium.
- RESTROOMS are available in Baxter Hall, Beckman Labs, Dabney Hall, Parsons-Gates Hall of Administration, and Beckman Auditorium.
- FIRST AID SERVICES are available at the Information Center.
- LOST AND FOUND items may be reported and/or claimed at the Information Center.
- Complimentary COFFEE and PUNCH (beginning at 8:30 a.m.)
- Informal cap and gown photographs 8:30 a.m.-9:30 a.m.
- CALTECH BOOKSTORE sells souvenirs, film, and other items. ATHENAEUM luncheon tickets on sale 8 a.m.-10 a.m.

SPECIAL SERVICES FOR PERSONS WITH DISABILITIES

- ASSISTIVE LISTENING DEVICES are available at the Information Center. A driver's license or state-issued ID card is required.
- LARGE-TYPE PROGRAMS (abridged) are available at the Information Center.
- AMERICAN SIGN LANGUAGE (ASL) interpreters are stationed at the west front of the Ceremony seating area.
- PEOPLE WHO USE WHEELCHAIRS, and their guests, will find a special section near the east front of the Ceremony seating area.
- RESTROOMS ACCESSIBLE TO PEOPLE WHO USE WHEELCHAIRS are located on the first floor of Dabney Hall and in the Parsons-Gates Hall of Administration.
- AMPLIFIED TELEPHONE is available in Beckman Auditorium.
ADDITION TO DOCTOR OF PHILOSOPHY LIST, DIVISION OF ENGINEERING AND APPLIED SCIENCE:

Hou-Pu Chou (Electrical Engineering) B.S., National Taiwan University 1993;
M.S., California Institute of Technology 1996.
Thesis: Microfabricated Devices for Rapid DNA Diagnostics