

# Trustees, Administration, Faculty



## OFFICERS

David L. Lee, *Chair*  
Ronald K. Linde, *Vice Chair*

Thomas F. Rosenbaum, *President*  
David A. Tirrell, *Provost*

Matthew Brewer  
*Controller*

Diana Jergovic  
*Vice President for Strategy  
Implementation*

Brian K. Lee  
*Vice President for Development and  
Institute Relations*

Sharon E. Patterson  
*Treasurer*

Scott H. Richland  
*Chief Investment Officer*

Joseph E. Shepherd  
*Vice President for Student Affairs*

Margo Steurbaut  
*Vice President of Administration and  
Chief Financial Officer*

Victoria D. Stratman  
*General Counsel*

Michael M. Watkins  
*Vice President and Director,  
Jet Propulsion Laboratory*

Mary L. Webster  
*Secretary*

## BOARD OF TRUSTEES

### Trustees

(with date of first election)

Spencer Abraham (2016)  
*Chairman and Chief Executive Officer  
The Abraham Group LLC*

William H. Ahmanson (2017)  
*President  
The Ahmanson Foundation*

Sean Bailey (2015)  
*President  
Walt Disney Studios Motion Picture  
Production*

Barbara M. Barrett (2014)  
*Ambassador*

Rebecka Belldegrun (2016)  
*President and Chief Executive Officer  
Belco Capital, LLC*

Sabeer Bhatia (2016)  
*Chief Executive Officer and Co-Founder  
Sabse Technologies, Inc.*

Brigitte M. Bren (2009)  
*President and Chief Executive Officer  
International Strategic Planning*

Janet C. Campagna (2017)  
*Chief Executive Officer  
QS Investors, LLC*

David E. Chavez (2017)

John S. Chen (2008)  
*Executive Charman of the Board and  
Chief Executive Officer  
BlackBerry*

Wenchi Chen (2012)  
*President and Chief Executive Officer  
VLA Technologies Inc.*

Peggy T. Cherng (2012)  
*Co-Chairman  
Panda Restaurant Group*

Robert B. Chess (2006)  
*Chairman  
Nektar Therapeutics*

David T. Dreier (2013)  
*Chairman  
Annenberg-Dreier Commission*

Lounette M. Dyer (1998)  
*Entrepreneur*

Joshua S. Friedman (2011)  
*Co-Founder, Co-Chairman and  
Co-Chief Executive Officer  
Canyon Partners, LLC*

William T. Gross (1994)  
*Founder and CEO  
Idealab*

Narendra K. Gupta (2010)  
*Managing Director  
Nexus Venture Partners*

David D. Ho (1997)  
*Scientific Director and Chief Executive  
Officer  
Aaron Diamond AIDS Research Center*

Ann Stimmler Johnson (2016)  
*Chief Executive Officer and Founder  
Intevana, Inc.*

G. Bradford Jones (2014)  
*Founding Partner  
Redpoint Ventures*

Peter D. Kaufman (2008)  
*Chairman and Chief Executive Officer  
Glenair, Inc.*

Louise Kirkbride (1995)  
*Entrepreneur*

Walter G. Kortschak (2012)  
*Senior Advisor and Former  
Managing Partner  
Summit Partners, L.P.*

Jon B. Kutler (2005)  
*Chairman and Chief Executive Officer  
Admiralty Partners, Inc.*

- Taylor W. Lawrence (2017)  
*President*  
*Raytheon Missile Systems*  
*Raytheon Company*
- David Li Lee (2000)  
*Managing General Partner*  
*Clarity Partners, L.P.*
- Li Lu (2018)  
*Founder and Chairman*  
*Himalaya Capital Management, LLC*
- Alexander Lidow (1998)  
*Chief Executive Officer*  
*EPC Corporation*
- Andrew N. Liveris (2013)  
*Former Chairman and CEO*  
*The Dow Chemical Company*
- Mich J. Mathews-Spradlin (2016)
- Deborah D. McWhinney (2007)  
*Former Chief Executive Officer*  
*Citi Enterprise Payments*  
*Citi Bank*
- Mr. Alexander R. Mehran, Sr. (2017)  
*Chairman of the Board*  
*Sunset Development Company*
- Kenneth G. Moore (2014)  
*Director of Bay Area Portfolio and*  
*Trustee*  
*Gordon and Betty Moore Foundation*
- Philip M. Neches (1995)
- Pedro J. Pizarro (2009)  
*President and Chief Executive Officer*  
*Edison International*
- David E. I. Pyott, M.D. (2018)  
*Former Chairman and*  
*Chief Executive Officer*  
*Allergan*
- Eduardo A. Repetto (2015)  
*Former Co-Chief Executive Officer*  
*and Co-Chief Investment Officer*  
*Dimensional Fund Advisors*
- Thomas F. Rosenbaum (2014)  
*President*  
*Sonja and William Davidow*  
*Presidential Chair*  
*and Professor of Physics*  
*California Institute of Technology*
- Richard H. Scheller (2014)  
*Chief Scientific Officer and*  
*Head of Therapeutics*  
*23andMe, Inc.*
- Timothy J. Sloan (2016)  
*President and Chief Executive Officer*  
*Wells Fargo & Company*
- Donald W. Tang (2005)  
*Founding Partner*  
*Tang Media Partners*
- Kevin M. Taweel (2012)  
*Chairman*  
*Asurion*
- David W. Thompson (2012)  
*President and Chief Executive Officer*  
*(Retired)*  
*Orbital ATK*
- Richmond A. Wolf (2018)  
*Partner*  
*Capitol World Investors*
- Senior Trustees**  
*(with date of first election and date of*  
*election as Senior Trustee)*
- Gordon M. Binder (1995, 2007)  
*Managing Director*  
*Coastview Capital*
- Robert C. Bonner (2008, 2014)  
*Senior Partner*  
*Sentinel HS Group, LLC*
- Lynn A. Booth (2011)  
*The Otis Booth Foundation*
- Milton M. Chang (2005, 2015)  
*Managing Director*  
*Incubic Venture Capital*
- William H. Davidow (1996, 2007)  
*Founding Partner*  
*Mohr Davidow Ventures*
- Thomas E. Everhart (1998, 2004)  
*President Emeritus*  
*California Institute of Technology*
- B. Kipling Hagopian (2012, 2013)  
*Managing Partner*  
*Apple Oaks Partners*
- Frederick J. Hameetman (2006, 2012)  
*Chairman*  
*Cal-American*
- Maria D. Hummer-Tuttle (2012, 2016)  
*Chair of the Board of Trustees*  
*J. Paul Getty Trust*
- Bobby R. Inman (1989, 2003)  
*Professor, Lyndon B. Johnson Centennial*  
*Chair in National Policy*  
*The University of Texas at Austin*
- Robert T. Jenkins (2005, 2015)
- Kent Kresa (1994, 2010)  
*Chair Emeritus*  
*Chairman Emeritus*  
*Northrop Grumman Corporation*
- Ronald K. Linde (1989, 2012)  
*Independent Investor;*  
*Chair, The Ronald and Maxine Linde*  
*Foundation;*  
*Founder/Former Chief Executive Officer,*  
*Envirodyne Industries, Inc.*

- A. Michael Lipper (2005, 2007)  
*President and Chief Executive Officer*  
*Lipper Advisory Services*
- Shirley M. Malcom (1999, 2018)  
*Director, Education and Human Resources Programs*  
*American Association for the Advancement of Science*
- Richard N. Merkin, M.D. (2007, 2018)  
*Founder and Chief Executive Officer*  
*Heritage Provider Network*
- Patrick H. Nettles, Jr. (1998, 2015)  
*Executive Chairman*  
*Ciena Corporation*
- Peter Norton (2006, 2015)  
*Norton Family Office*
- Ronald L. Olson (1998, 2013)  
*Senior Partner*  
*Munger, Tolles & Olsen LLP*
- Stephen R. Onderdonk (1986, 2016)  
*President and Chief Executive Officer*  
*(Retired)*  
*Econolite Control Products, Inc.*
- Stewart A. Resnick (2005, 2008)  
*Chairman and President*  
*The Wonderful Company*
- Nelson C. Rising (2006, 2013)  
*Chairman*  
*Rising Realty Partners*
- Charles R. Trimble (2002, 2013)  
*Founder and Former Chief Executive Officer*  
*Trimble Navigation Ltd.*
- Lewis W. van Amerongen (2004, 2012)  
*LeA Enterprises, Inc.*
- Walter L. Weisman (1988, 2007)  
*Former Chairman and Chief Executive Officer*  
*American Medical International, Inc.*
- Gayle E. Wilson (1995, 2014)  
*Nonprofit Consultant*
- Suzanne H. Woolsey (2006, 2013)  
*Corporate Governance Consultant*
- Life Members**  
*(with date of first election and date of election as Life Member)*
- George L. Argyros (1992, 2008)  
*Chairman and Chief Executive Officer*  
*Arnel and Affiliates*
- Stephen D. Bechtel, Jr. (1967, 1997)  
*Senior Director of Bechtel Group, Inc.*  
*Bechtel Group, Inc.*
- Donald L. Bren (1983, 2004)  
*Chairman of the Board*  
*Irvine Company*
- Eli Broad (1993, 2007)  
*Founder*  
*The Eli and Edythe Broad Foundation*
- Harold Brown (1969, 2010)  
*President Emeritus*  
*Counselor*  
*Center for Strategic and International Studies (CSIS)*
- John E. Bryson (2005, 2017)
- Walter Burke (1975, 2009)  
*Treasurer*  
*Sherman Fairchild Foundation, Inc.*
- Harry M. Conger (1985, 2006)  
*Chairman & Chief Executive Officer, Emeritus*  
*Homestake Mining Company*
- Camilla C. Frost (1977, 2007)  
*Trustee of the Chandler Trust*  
*(Retired)*
- Arthur L. Goldstein (1995, 2012)  
*Chairman and Chief Executive Officer*  
*(Retired)*  
*Iomics, Incorporated*
- Philip M. Hawley (1975, 1997)  
*Chairman*  
*P. M. Hawley, Inc.*
- York Liao (1997, 2018)  
*Managing Director*  
*Winbridge Company Ltd.*
- Gordon E. Moore (1983, 2009)  
*Chair Emeritus*  
*Chairman Emeritus*  
*Intel Corporation*
- Sidney R. Petersen (1980, 2007)  
*Chairman and Chief Executive Officer*  
*(Retired)*  
*Getty Oil Company*
- Arthur Rock (1988, 1998)  
*Principal*  
*Arthur Rock and Company*
- Benjamin M. Rosen (1986, 2005)  
*Chair Emeritus*  
*Chairman Emeritus*  
*Compaq Computer Corporation*
- Richard M. Rosenberg (1989, 2007)  
*Chairman and Chief Executive Officer*  
*(Retired)*  
*Bank of America Corporation*
- Robert J. Schultz (1991, 2002)  
*Vice Chairman (Retired)*  
*General Motors Corporation*
- Dennis Stanfill (1976, 1999)  
*Private Investor*
- Marc I. Stern (2004, 2017)  
*Chairman*  
*The TCW Group, Inc.*

Virginia V. Weldon (1996, 2010)  
*Senior Vice President for Public Policy  
(Retired)*  
*Monsanto Company*

#### Honorary Life Member

Betty I. Moore (2009)  
*Co-Founder*  
*Gordon and Betty Moore Foundation*

#### Standing Committees

**Executive Committee**—D. L. Lee\*,  
*Chair*; R. K. Linde\*, *Vice Chair*; R. C.  
Bonner\*, B. M. Bren\*, R. B. Chess\*, W. H.  
Davidow\*, J. S. Friedman\*, J. B. Kutler\*,  
S. M. Malcom\*, P. M. Neches\*, N. C.  
Rising\*, T. F. Rosenbaum\*, S. H. Woolsey\*;  
Consulting Members: G. E. Moore, B. M.  
Rosen; *Advisory Members*: D. Jergovic, B.  
K. Lee, S. H. Richland, J. E. Shepherd, M.  
Steurbaut, V. D. Stratman, D. A. Tirrell, M.  
M. Watkins

**Audit and Compliance Committee**—R.  
C. Bonner, *Chair*; P. M. Neches, *Vice  
Chair*; W. H. Ahmanson, A. S. Johnson,  
L. Kirkbride, D. L. Lee\*, A. Lidow, R. K.  
Linde, A. M. Lipper, D. D. McWhinney, S.  
R. Onderdonk, D. W. Thompson; *Advisory  
Members*: M. W. Brewer, R. Fradet, L. D.  
James, D. Jergovic, P. D. Koyzis, B. K. Lee,  
J. T. Lum, S. E. Patterson, S. H. Richland,  
T. F. Rosenbaum, M. Steurbaut, V. D.  
Stratman, D. A. Tirrell, M. M. Watkins

**Conflict Review Subcommittee**—R.  
C. Bonner, *Chair ex officio*; R. B. Chess,  
J. B. Kutler, R. K. Linde, P. M. Neches,  
P. Norton, S. R. Onderdonk; *Advisory  
Member*: V. D. Stratman

**Buildings and Grounds Committee**—N.  
C. Rising, *Chair*; R. T. Jenkins, *Vice Chair*;  
L. M. Dyer, T. E. Everhart, D. L. Lee\*,  
A. R. Mehran, Sr., K. G. Moore, S. R.  
Onderdonk, T. F. Rosenbaum\*, L. W.  
van Amerongen; *Consulting Member*: S.  
D. Bechtel, Jr.; *Advisory Members*: J. W.  
Cowell, K. Hargreaves, D. Jergovic, B. K.  
Lee, S. H. Richland, J. E. Shepherd, M.  
Steurbaut, V. D. Stratman, D. A. Tirrell

**Business and Finance Committee**—  
S. H. Woolsey, *Chair*; P. D. Kaufman, *Vice  
Chair*; T. E. Everhart, W. G. Kortschak, K.

Kresa, D. L. Lee\*, A. Lidow, R. K. Linde,  
A. M. Lipper, A. N. Liveris, S. M. Malcom,  
D. D. McWhinney, K. G. Moore, P. M.  
Neches, T. F. Rosenbaum\*, D. W. Tang,  
L. W. van Amerongen, W. L. Weisman,  
; *Consulting Member*: H. M. Conger;  
*Advisory Members*: R. Fradet, D. Jergovic, B.  
K. Lee, J. M. McCallin, S. E. Patterson, S.  
H. Richland, M. Steurbaut, V. D. Stratman,  
D. A. Tirrell

#### Development Committee—W. H.

Davidow, *Chair*; D. T. Dreier, *Vice Chair*; L.  
A. Booth, P. T. Cherng, M. D. Hummer-  
Tuttle, R. T. Jenkins, P. D. Kaufman, W.  
G. Kortschak, K. Kresa, D. L. Lee\*, M. J.  
Mathews-Spradlin, D. D. McWhinney,  
T. F. Rosenbaum\*, E. A. Repetto, W. L.  
Weisman; *Advisory Members*: D. M. Binney,  
T. A. Davis, M. E. Haggerty, D. Jergovic, B.  
K. Lee, V. A. Otten, S. H. Richland, V. D.  
Stratman, D. A. Tirrell

#### Executive Compensation Committee—R.

K. Linde, *Chair*; A. Lidow, *Vice Chair*; T.  
W. Lawrence, D. L. Lee\*, S. M. Malcom,  
P. M. Neches, W. L. Weisman; *Advisory  
Members*: J. M. McCallin, T. F. Rosenbaum

#### Institute and Alumni Relations

**Committee**—S. M. Malcom, *Chair*; D.  
T. Dreier, *Vice Chair*; W. H. Davidow, L.  
M. Dyer, W. T. Gross, R. T. Jenkins, A.  
S. Johnson, L. Kirkbride, D. L. Lee\*, M.  
J. Mathews-Spradlin, P. M. Neches, S. R.  
Onderdonk, T. F. Rosenbaum\*; *Advisory  
Members*: D. M. Binney, T. A. Davis, M.  
E. Haggerty, K. Hargreaves, D. Jergovic,  
F. Khadem, B. K. Lee, V. A. Otten, S. H.  
Richland, J. E. Shepherd, M. Steurbaut,  
V. D. Stratman, D. A. Tirrell; *Ex Officio  
Standing Attendees*: Alumni Association  
President, Caltech Fund Chair, Caltech  
Associates President, Faculty Chair

**Investment Committee**—J. S. Friedman,  
*Chair*; R. K. Linde, *Vice Chair*; B. K.  
Hagopian, G. B. Jones, D. L. Lee\*, Li  
Lu, A. M. Lipper, T. F. Rosenbaum\*, T. J.  
Sloan; *Advisory Members*: S. H. Richland, S.  
Schnabel, M. Steurbaut, D. A. Tirrell, P. I.  
Wang, L. N. West

**Jet Propulsion Laboratory Committee**—J.  
B. Kutler, *Chair*; B. M. Barrett, *Vice Chair*;  
S. Abraham, S. Bailey, R. C. Bonner, D.  
E. Chavez, D. T. Dreier, L. M. Dyer, T. E.

\* *ex officio member*

Everhart, J. S. Friedman, F. J. Hameetman, B. R. Inman, L. Kirkbride, T. W. Lawrence, D. L. Lee\*, Li Lu, M. J. Mathews-Spradlin, D. D. McWhinney, A. R. Mehran, Sr., R. N. Merkin, P. M. Neches, P. Norton, R. L. Olson, S. R. Onderdonk, S. A. Resnick, T. F. Rosenbaum\*, D. W. Thompson, C. R. Trimble, W. L. Weisman, G. E. Wilson, S. H. Woolsey; *Consulting Members*: H. Brown, G. E. Moore; *Advisory Members*: D. B. Gallagher, K. Hargreaves, L. D. James, D. Jergovic, B. K. Lee, J. T. Lum, S. H. Richland, M. Steurbaut, V. D. Stratman, D. A. Tirrell, M. M. Watkins

**JPL Governance Subcommittee** [A subcommittee of the JPL Committee]—J. B. Kutler, *Chair ex officio*; S. Abraham, B. M. Barrett\*, R. C. Bonner\*, B. R. Inman, K. Kresa, D. L. Lee\*, T. F. Rosenbaum\*, D. W. Thompson; *Advisory Members*: L. D. James, D. Jergovic, P. D. Koyzis, M. Steurbaut, V. D. Stratman, D. A. Tirrell, M. M. Watkins

*Nominating Committee*—B. M. Bren, *Chair*; A. Lidow, *Vice Chair*; S. Bailey, R. Belledegrun, L. A. Booth, J. S. Chen, N. K. Gupta, D. D. Ho, M. D. Hummer-Tuttle, B. R. Inman, G. B. Jones, L. Kirkbride, D. L. Lee\*, R. K. Linde, M. J. Mathews-Spradlin, D. D. McWhinney, R. N. Merkin, R. L. Olson, T. F. Rosenbaum\*, D. W. Tang, W. L. Weisman, G. E. Wilson, S. H. Woolsey; *Consulting Members*: V. V. Weldon; *Advisory Members*: D. Jergovic, B. K. Lee, S. H. Richland, V. D. Stratman, D. A. Tirrell

*Student Experience Committee*—P. M. Neches, *Chair*; D. D. McWhinney, *Vice Chair*; D. E. Chavez, R. B. Chess, L. M. Dyer, R. T. Jenkins, A. S. Johnson, L. Kirkbride, D. L. Lee\*, S. M. Malcom; P. H. Nettles Jr., P. Norton, T. F. Rosenbaum\*, R. H. Scheller, D. W. Thompson, C. R. Trimble, S. H. Woolsey; *Consulting Member*: V. V. Weldon; *Advisory Members*: K. L. Gilmartin, D. Jergovic, B. K. Lee, D. C. Rees, S. H. Richland, J. E. Shepherd, V. D. Stratman, D. A. Tirrell, C. A. Weinstein; *Student Advisory Members*: C. Johnstone, M. E. Orr, K. Sreedhar, A. C. Thompson

*Technology Transfer Committee*—R. B. Chess, *Chair*, K. M. Taweel, *Vice Chair*; R. Belledegrun, S. Bhatia, M. M. Chang, D. E. Chavez, W. Chen, P. T. Cherng, L. M. Dyer, N. K. Gupta, B. K. Hagopian, D. D. Ho, R. T. Jenkins, A. S. Johnson, L. Kirkbride, W. G. Kortschak, J. B. Kutler, D. L. Lee\*, P. M. Neches, P. H. Nettles, Jr., P. Norton, S. A. Resnick, T. F. Rosenbaum\*, R. H. Scheller, D. W. Tang, C. R. Trimble, L. W. van Amerongen; *Consulting Members*: H. Brown, A. L. Goldstein; *Advisory Members*: K. Bhattacharya, F. Farina, D. Jergovic, B. K. Lee, S. H. Richland, M. Steurbaut, V. D. Stratman, D. A. Tirrell

\* *ex officio member*

## ADMINISTRATIVE OFFICERS



Thomas F. Rosenbaum  
*President*



David A. Tirrell  
*Provost*

Kaushik Bhattacharya  
*Vice Provost*  
Jin Chang  
*Chief Information Officer*  
James W. Cowell, Jr.  
*Associate Vice President for Facilities*  
Frederic Farina  
*Chief Innovation and Corporate Partnerships Officer*  
Richard F. Flagan  
*Chair of the Faculty*  
Kevin M. Gilmartin  
*Dean of Undergraduate Students*  
Kenneth Hargreaves  
*Assistant Vice President Strategy Implementation*  
Larry D. James  
*Deputy Director*  
*Jet Propulsion Laboratory*

Diana Jergovic  
*Vice President for Strategy  
Implementation*  
Farnaz Khadem  
*Chief Strategic Communications  
Officer*  
Pamela D. Koyzis  
*Associate Vice President of Audit  
Services and Institute Compliance*  
Brian K. Lee  
*Vice President for Development and  
Institute Relations*

Jennifer T. Lum

*Deputy General Counsel*

Julia M. McCallin  
*Associate Vice President for  
Human Resources*

Valerie A. Otten  
*Associate Vice President of  
Development*

Sharon E. Patterson  
*Associate Vice President for Finance  
and Treasurer*

Douglas C. Rees  
*Dean of Graduate Studies*

Scott H. Richland  
*Chief Investment Officer*

Carol J. Schuil  
*Executive Assistant to the President,  
and Assistant Secretary, Board of  
Trustees*

Richard P. Seligman  
*Associate Vice President, Research  
Administration*

Joseph E. Shepherd  
*Vice President for Student Affairs*

Margo Steurbaut  
*Vice President of Administration  
and Chief Financial Officer*

Victoria D. Stratman  
*General Counsel*

Michael M. Watkins  
*Vice President and Director, Jet  
Propulsion Laboratory*

Mary L. Webster  
*Secretary, Board of Trustees*

Cindy A. Weinstein  
*Vice Provost*

#### Chairs of Divisions

Jacqueline K. Barton  
*Chemistry and Chemical  
Engineering*

John P. Grotzinger  
*Geological and Planetary Sciences*

Fiona A. Harrison  
*Physics, Mathematics and  
Astronomy*

Stephen L. Mayo  
*Biology and Biological Engineering*

Guruswami Ravichandran  
*Engineering and Applied Science*

Jean-Laurent Rosenthal  
*Humanities and Social Sciences*

#### Administrative Committees

**Animal Care and Use** [fills the role of Caltech's Institutional Animal Care and Use Committee—IACUC]—(Reports to the Vice Provost for Research)—R. A. Andersen, *Chair*, M. Meister, *Vice Chair*, J. Brackman, J. Gumer (alternate), L. C. Hsieh-Wilson, K. C. Lencioni\*, C. Lois (alternate), D. J. Mayo\*, A. Ondrus (alternate), L. E. Quence\*, J. Scapa\*, C. W. Scislowicz\* (alternate), R. P. Seligman\* (alternate), P. Vaishampayan, Advisor: V. D. Stratman (or her designee)

**Benefits** (Reports to the Vice President of Administration and Chief Financial Officer)—P. T. Hoffman, *Chair*, A. Boladian, K. Bradshaw\*, B. Clemons, R. Fadet, C. Hart\*, M. Jaross\*, A. Leonard, L. Livesay, J. M. McCallin\*, L. Moffit\*, S. E. Patterson\*, R. M. Roessler\*, A. I. Sargent, S. Scoville

**Biosafety** [fills the role of Caltech's Institutional Biosafety Committee—IBC] (Reports to the Provost)—J. D. Leadbetter, *Chair*; S. Chatterjee, C. K. Cortese, G. Fisher-Adams\*, F. Hanner, R. Ismagilov, K. Lencioni\*, D. Mayo (alternate), S. Mazmanian, L. Quence\*, J. Scapa\* (alternate), C. Scislowicz\*, R. P. Seligman\*, P. Vaishampayan, Advisor: V. D. Stratman (or her designee)

#### Committee on Classified Research and Publication Restrictions at JPL

(Reports to the President)—D. I. Meiron, *Chair*, S. L. Mayo, T. A. Prince, M. Simons, J. J. van Zyl, P. O. Wennberg, J. Zmuidzinas

#### Computing Advisory Committee

(Reports to the Provost and the Vice President of Administration and Chief

Financial Officer)—M. Spiropulu, *Chair*; K. Bhattacharya\*, G. K. Chan, J. Chang\*, T. Colonius, M. Goulet†, G. J. Jensen, S. E. Patterson, T. Port‡, M. S. Shum, A. F. Thompson

**Committee on Undergraduate Education** (Reports to the Provost)—A. Weinstein\*, *Interim Chair*; P. D. Asimow\*, K. M. Gilmartin\*, B. Hay, C. Jurca, M. Okumura, C. Parker, G. Refael, C. Salinas\*, E. Salzman\*, J. E. Shepherd\*, M. Spiropulu, K. Sreedhar, A. Tang, D. P. Weitekamp\*

**Environmental Health and Safety** (Reports to the President)—D. A. Tirrell, *Chair*; K. Bhattacharya, J. W. Cowell\*, P. D. Koyzis\*, C. Scislowicz\*, J. E. Shepherd, M. Steurbaut

**Institute Academic Council (IACC)**—David A. Tirrell, *Chair*; J. K. Barton, J. P. Grotzinger, F. Harrison, S. L. Mayo, G. Ravichandran, T. F. Rosenbaum, J-L Rosenthal

**Institute Administrative Council (IAC)**—T. F. Rosenbaum, *Chair*; J. K. Barton, K. Bhattacharya, J. Chang, J. W. Cowell, F. Farina, K. M. Gilmartin, J. P. Grotzinger, K. Hargreaves, F. A. Harrison, L. James, D. Jergovic, F. Khadem, P. D. Koyzis, B. K. Lee, J. Lum, S. L. Mayo, J. M. McCallin, V. A. Otten, S. E. Patterson, G. Ravichandran, D. C. Rees, S. H. Richland, J-L Rosenthal, R. P. Seligman, J. E. Shepherd, M. Spiropulu, M. Steurbaut, V. D. Stratman, D. A. Tirrell, M. M. Watkins, M. L. Webster, C. A. Weinstein (on sabbatical)

**Institute Art** (Reports to the President)—T. Schneider, *Chair*, J-P Avouac, J. Buchwald, E. Chuan, P. Collopy\*, T. Davis\*, M. Elowitz, K. T. Faber, K. Hargreaves\*, D. Kremers, M. Lewis, S. Mu, D. Nelson, P. Perona

**President's Diversity Council**—(Reports to the President through the Provost)—B. Stoltz\*, *Interim Chair*; J. Barton, W. M. Clemons, Jr., A. Emami, V. J. Orphan, G. Refael, J-L Rosenthal, N. Wey-Gomez, B. Wold

**Protection of Human Subjects** [fills the role of Caltech's Institutional Review Board—IRB] (Reports to the Vice Provost for Research)—R. Adolphs, *Chair*; R. A. Andersen, Vice Chair, M. E. Csete, J. Ensminger, M. J. Gibson, L. Lettieri, P. Perona, L. Quenee\*, K. Reimer, C. W. Scislowicz\*, R. P. Seligman\*, J. M. Tyszk\*, P. Vaishampayan, Advisor: V. D. Stratman (or her designee); Observer: G. Fisher-Adams

**Radiation Safety** (Reports to the Vice President of Administration and Chief Financial Officer)—D. S. Burnett, *Chair*; B. W. Filippone, Vice Chair: H. Issaian\*, W. L. Johnson, A. Kumagai, C. Scislowicz\*, S. Shan

**SURF** (Reports to the Provost)—R. Murray, *Chair*, G. Blake, M. Bronner, D. Crewell\*, K. M. Gilmartin\*, M. Gonzalez\*, E. Mantovan, A. Ponce, M. B. Robbins\*, C. Rypisi\*, B. Stolz, T. Tisch\*

\* *ex officio member*

† *representing graduate students*

‡ *representing undergraduate students*

§ *representing postdoctoral scholars*

## FACULTY OFFICERS AND COMMITTEES 2018–19

### Officers

Chair: M. Spiropulu, 2020

Vice Chair: G. A. Blake, 2020

Secretary: R. M. Murray, 2019

### Faculty Board

D. Asimaki, 2019

P. D. Asimow, 2019

J. M. Austin, 2020

S. Bordoni, 2020

T. K. Dennison, 2021

M. H. Dickinson, 2021

C. Jurca, 2020

J. N. Katz, 2020

H. A. Knutson, 2020

J. A. Kornfield, 2021

T. F. Miller, 2019



O. J. Painter, 2019  
D. Ramakrishnan, 2020  
G. R. Rossman, 2019  
E. Rothenberg, 2021  
B. M. Stoltz, 2021  
D. Y. Tsao, 2019  
A. Wierman, 2021

#### **Ex Officio:**

J. K. Barton  
K. M. Gilmartin  
J. P. Grotzinger  
F. A. Harrison  
S. L. Mayo  
G. Ravichandran  
D. C. Rees  
T. F. Rosenbaum  
J-L. Rosenthal  
J. E. Shepherd  
D. A. Tirrell

#### **Steering**

M. Spiropulu, Chair, 2020  
G. A. Blake, Vice Chair, 2020  
R. M. Murray, Secretary, 2019  
P. D. Asimow, 2019  
K. Bhattacharya\*  
T. K. Dennison, 2019  
E. Rothenberg, 2019  
B. M. Stoltz, 2019  
D. A. Tirrell\*  
C. A. Weinstein\*  
A. Wierman, 2019

#### **Academic Freedom and Tenure**

L. Hillenbrand, 2019  
C. Jurca, 2020  
H. A. Lester, 2019  
E. Mantovan, 2020  
A. J. Minnich, 2020  
J. M. Stock, 2020

#### **Academic Policies**

C. S. Parker, Chair, 2021  
M. Agranov, 2021  
B. Hassibi, 2021  
E. Meyerowitz, 2020  
A. L. Sessions, 2020

#### **Athletics and Physical Education**

T. K. Dennison, Chair, 2019  
J. C. Doyle, 2020  
B. W. Filippone, 2020  
P. T. Hoffman, 2019  
J. Kirschvink, 2019  
T. F. Miller, 2021  
B. Mitchell\*  
D. Y. Tsao, 2021  
J. Whitney\*

#### **Convocations**

W. C. Brown, Chair, 2020  
K. M. Gilmartin\*  
L. C. Hsieh-Wilson, 2021  
D. Prober, 2019  
D. C. Rees\*  
P. Schroeder, 2019  
N-C. Yeh, 2020

#### **Core Curriculum Steering**

M. Okumura, Chair, 2021  
F. M. Echenique, 2020  
M. Flach, 2020  
K. M. Gilmartin\*  
M. L. Hunt, 2021  
N. R. Hutzler, 2021  
C. Jurca, 2020  
C. Salinas\*  
A. Wierman, 2021  
K. G. Zinn, 2019

#### **Curriculum**

A. J. Weinstein, Chair, 2019  
T. Agapie, 2021  
R. W. Clayton, 2019  
K. M. Gilmartin\*  
D. I. Meiron, 2020  
L. S. Pachter, 2020  
E. S. Phinney, 2019  
C. Salinas\*

#### **Committee on Exchange Programs and Study Abroad (CEPSA)**

H. B. Newman, Chair, 2021  
J. F. Adkins, 2021  
T. Agapie, 2021  
C. Daraio, 2020  
M. Desbrun, 2019  
M. D. Dykstra, 2021  
J. P. O'Doherty, 2019

I. Peter, 2020  
C. Salinas\*  
L. B. Stolper\*

### **Foreign Students and Scholars**

A. Hoelz, Chair, 2021  
Y. Abu-Mostafa, 2021  
S. Bordoni, 2019  
C. Daraio, 2021  
A. Rangel, 2020  
A. G. Siapas, 2020  
I. Smith\*

### **Freshman Admissions**

P. D. Asimow, Chair, 2019  
M. Aschbacher, 2019  
D. C. Chan, 2020  
G. A. George, 2019  
N. H. Katz, 2020  
J. A. Kornfield, 2021  
J. R. Leadbetter, 2021  
K. G. Libbrecht, 2020  
S. R. Quartz, 2019  
S. Shimojo, 2020  
P. P. Vaidyanathan, 2021  
D. P. Weitekamp, 2021  
J. Whitney\*

### **Graduate Studies**

B. Fultz, Chair  
A. D. Ames\*  
R. W. Clayton\*  
W. M. Clemons\*  
T. Colonius\*  
K. P. Giapis\*  
N. Gilmore (non-voting)  
B. A. Hay\*  
L. Hillenbrand\*  
N. Lapusta\*  
D. I. Meiron\*  
M. Meister\*  
Y. Ni\*  
O. J. Painter\*  
T. R. Palfrey\*  
A. Rangel\*  
D. C. Rees\*  
P. Schroeder\*  
A. G. Siapas\*  
B. M. Stoltz\*  
A. F. Thompson\*  
T. G. Vidick\*

E. Winfree\*  
C. Yang\*  
Y. Yue\*  
J. Zmuidzinas\*  
*\*ex officio member*

### **Health**

H. A. Lester, Chair, 2019  
A. Barr, 2019  
F. Eberhardt, 2020  
K. M. Gilmartin\*  
S. Golwala, 2021  
J. L. Howes\*  
J. M. McCallin\*  
B. Mitchell\*  
N. A. Pierce, 2019  
D. C. Rees\*  
J. Y. Tsai\*

### **Institute Programs**

J. R. Greer, Chair, 2020  
B. Brophy\*  
C. A. Hunter, 2019  
A. P. Ingersoll, 2019  
J. M. Jackson, 2019  
B. K. Lee\*  
A. J. Minnich, 2021

### **Library**

V. C. Tsai, Chair, 2020  
W. A. Goddard, 2019  
A. N. Kapustin, 2021  
A. J. Minnich, 2020  
L. S. Pachter, 2020  
N. Wey-Gomez, 2019

### **Membership and Bylaws**

G. A. Blake, Chair, 2020  
K. C. Border, 2019  
D. C. Chan, 2019  
M. Effros, 2021  
N. S. Lewis, 2019  
R. M. Murray\*  
B. P. Wernicke, 2021

### **Nominating**

T. F. Miller, Chair, 2019  
J. F. Alicea, 2019  
C. Jurca, 2019  
H. A. Knutson, 2019  
R. M. Murray\*

N. A. Pierce, 2019  
S. Shan, 2019  
J. A. Tropp, 2019

#### **Patents and Relations with Industry**

M. L. Roukes, Chair, 2021  
K. P. Giapis, 2019  
R. F. Ismagilov, 2021  
S. H. Low, 2019  
S. Mazmanian, 2020  
N. A. Pierce, 2020  
K. J. Vahala, 2020

#### **Scholarships and Financial Aid**

F. Eberhardt, Chair, 2021  
P. D. Asimow\*  
G. Blanquart, 2020  
D. Crewell\*  
K. M. Gilmartin\*  
C. S. Parker, 2021  
S. Shimojo, 2019  
J. Whitney\*

#### **Student Life and Housing**

K. C. Border, Chair, 2021  
A. Aravin, 2020  
A. H. Barr, 2020  
J. L. Beauchamp, 2019  
K. M. Gilmartin\*  
T. N. Mannion (non-voting)  
B. Mitchell\*  
R. B. Patterson, 2021  
D. C. Rees\*  
V. C. Tsai, 2020

#### **Undergraduate Academic Standards and Honors**

D. P. Weitekamp, Chair, 2019  
J. P. Ampuero Saenz, 2019  
P. M. Bellan, 2019  
J. F. Brady, 2019  
W. C. Brown, 2020  
X. Chen, 2021  
M. Desbrun, 2021  
K. M. Gilmartin\*  
R. B. Patterson, 2021  
C. Salinas\*

#### **Upperclass Admissions**

D. Asimaki, Chair, 2019  
B. W. Filippone, 2021  
J. A. Jahner, 2019  
M. P. Lamb, 2019  
S. H. Low, 2019  
B. J. McKeon, 2019  
T. F. Miller, 2019  
C. Salinas\*  
J. Whitney\*

*\*ex officio member*

## STAFF OF INSTRUCTION AND RESEARCH

### Division of Biology and Biological Engineering

Stephen L. Mayo, *William K. Bowes Jr. Leadership Chair*  
Dianne Newman, *Executive Officer for Molecular Biology*  
Markus Meister, *Executive Officer for Neurobiology*  
Michael Elowitz, *Executive Officer for Biological Engineering*  
Thanos Siapas, *Executive Officer for Computation and Neural Systems*

#### Professors Emeriti

John N. Abelson, Ph.D.  
*George Beadle Professor of Biology*  
Charles J. Brokaw, Ph.D.  
*Biology*  
John J. Hopfield, Ph.D.  
*Roscoe G. Dickinson Professor of Chemistry and Biology*  
Masakazu Konishi  
*Bing Professor of Behavioral Biology*  
Jean-Paul Revel, Ph.D.  
*Albert Billings Ruddock Professor of Biology*  
Melvin I. Simon, Ph.D.  
*Anne P. and Benjamin F. Biaggini Professor of Biological Sciences*  
James H. Strauss, Ph.D.  
*Ethel Wilson Bowles and Robert Bowles Professor of Biology*

#### Professors

Ralph Adolphs, Ph.D.  
*Bren Professor of Psychology, Neuroscience, and Biology; Allen V. C. Davis and Lenabelle Davis Leadership Chair, Caltech Brain Imaging Center; Director, Caltech Brain Imaging Center*  
John M. Allman, Ph.D.  
*Frank P. Hixon Professor of Neurobiology*

Richard A. Andersen, Ph.D.  
*James G. Boswell Professor of Neuroscience; T&C Brain-Machine Interface Leadership Chair; Director, T&C Brain-Machine Interface Center*  
David J. Anderson, Ph.D.1  
*Seymour Benzer Professor of Biology; Tianqiao and Chrissy Chen Institute for Neuroscience Leadership Chair; Director, Tianqiao and Chrissy Chen Institute for Neuroscience*  
Alexei A. Aravin, Ph.D.  
*Biology*  
Frances H. Arnold, Ph.D.  
*Linus Pauling Professor of Chemical Engineering, Bioengineering, and Biochemistry; Director, Donna and Benjamin M. Rosen Bioengineering Center*  
David Baltimore, Ph.D., D.Sc.h.c., D.Phil.h.c., Nobel Laureate  
*Robert Andrews Millikan Professor of Biology*  
Pamela Bjorkman, Ph.D.  
*Centennial Professor of Biology*  
Marianne Bronner, Ph.D.  
*Albert Billings Ruddock Professor of Biology*  
Long Cai, Ph.D.  
*Biology and Biological Engineering*  
Judith L. Campbell, Ph.D.  
*Chemistry and Biology*  
David C. Chan, M.D., Ph.D.  
*Biology*  
Michael H. Dickinson, Ph.D.  
*Esther M. and Abe M. Zarem Professor of Bioengineering and Aeronautics*  
William G. Dunphy, Ph.D.  
*Grace C. Steele Professor of Biology*  
Michael Elowitz, Ph.D.<sup>1</sup>  
*Biology and Bioengineering; Executive Officer for Biological Engineering*  
Morteza Gharib, Ph.D.  
*Hans W. Liepmann Professor of Aeronautics and Bioinspired Engineering; Director, Graduate Aerospace Laboratories; Director, Center for Autonomous Systems and Technologies*

<sup>1</sup> Joint appointment with Howard Hughes Medical Institute

- Lea Goentoro, Ph.D.  
*Biology*
- Viviana Gradinaru, Ph.D.  
*Neuroscience and Biological Engineering; Investigator, Heritage Medical Research Institute; Director, Center for Molecular and Cellular Neuroscience*
- Bruce A. Hay, Ph.D.  
*Biology*
- Rustem F. Ismagilov, Ph.D.  
*Ethel Wilson Bowles and Robert Bowles Professor of Chemistry and Chemical Engineering; Director of the Jacobs Institute for Molecular Engineering for Medicine*
- Grant J. Jensen, Ph.D.<sup>1</sup>  
*Biophysics and Biology*
- Mary B. Kennedy, Ph.D.  
*Allen and Lenabelle Davis Professor of Biology*
- Henry A. Lester, Ph.D.  
*Biology*
- Stephen L. Mayo, Ph.D.  
*Bren Professor of Biology and Chemistry; William K. Bowes Jr. Leadership Chair, Division of Biology and Biological Engineering*
- Sarkis Mazmanian, Ph.D.  
*Luis B. and Nelly Soux Professor of Microbiology; Investigator, Heritage Medical Research Institute*
- Markus Meister, Ph.D.  
*Anne P. and Benjamin F. Biaggini Professor of Biological Sciences; Executive Officer for Neurobiology*
- Elliot M. Meyerowitz, Ph.D.<sup>1</sup>  
*George W. Beadle Professor of Biology*
- Richard Murray, Ph.D.  
*Thomas E. and Doris Everhart Professor of Control and Dynamical Systems and Bioengineering*
- Dianne K. Newman, Ph.D.  
*Gordon M. Binder/Amgen Professor of Biology and Geobiology; Allen V.C. Davis and Lenabelle Davis Leadership Chair, Center for Environmental Microbial Interactions; Executive Officer for Molecular Biology*
- Lior S. Pachter, Ph.D.  
*Bren Professor of Computational Biology and Computing and Mathematical Sciences*
- Robert B. Phillips, Ph.D.  
*Fred and Nancy Morris Professor of Biophysics, Biology, and Physics*
- Niles A. Pierce, Ph.D.  
*Professor of Applied and Computational Mathematics and Bioengineering*
- David Prober, Ph.D.  
*Biology*
- Ellen Rothenberg, Ph.D.  
*Albert Billings Ruddock Professor of Biology*
- Michael L. Roukes, Ph.D.  
*Frank J. Rosbek Professor of Physics, Applied Physics, and Bioengineering*
- Shinsuke Shimojo, Ph.D.  
*Gertrude Baltimore Professor of Experimental Psychology*
- Athanassios G. Siapas, Ph.D.  
*Computation and Neural Systems; Executive Officer for Computation and Neural Systems*
- Angelike Stathopoulos, Ph.D.  
*Biology*
- Paul W. Sternberg, Ph.D.  
*Bren Professor of Biology*
- Doris Ying Tsao, Ph.D.<sup>1</sup>  
*Biology; T&C Chen Center for Systems Neuroscience Leadership Chair; Director, T&C Chen Center for Systems Neuroscience*
- Alexander J. Varshavsky, Ph.D.  
*Thomas Hunt Morgan Professor of Cell Biology*
- Erik Winfree, Ph.D.  
*Professor of Computer Science, Computation and Neural Systems, and Bioengineering*
- Barbara J. Wold, Ph.D.  
*Bren Professor of Molecular Biology*
- Changhui Yang, Ph.D.  
*Thomas G. Myers Professor of Electrical Engineering, Bioengineering, and Medical Engineering*
- Kai Zinn, Ph.D.  
*Howard and Gwen Laurie Smits Professor of Biology*

<sup>1</sup> Joint appointment with Howard Hughes Medical Institute

## Assistant Professors

- Mitchell Guttman, Ph.D.  
*Biology; Investigator, Heritage  
Medical Research Institute*
- Elizabeth J. Hong, Ph.D.  
*Clare Boothe Luce Assistant  
Professor of Neuroscience*
- Yuki Oka, Ph.D.  
*Biology*
- Joseph Parker, Ph.D.  
*Biology and Biological Engineering*
- Lulu Qian, Ph.D.  
*Bioengineering*
- Matt Thomson, Ph.D.  
*Computational Biology;  
Investigator, Heritage Medical  
Research Institute*
- David Van Valen, Ph.D.  
*Biology and Biological Engineering*
- Rebecca M. Voorhees, Ph.D.  
*Biology and Biological Engineering;  
Investigator, Heritage Medical  
Research Institute*
- Kaihang Wang, Ph.D.  
*Biology and Biological Engineering*

<sup>1</sup> Joint appointment with Howard Hughes  
Medical Institute

## Senior Research Associate Emeriti

- Anne Chomyn, Ph.D.  
Ellen G. Strauss, Ph.D.  
R. Andrew Cameron, Ph.D.

## Lecturers

- Brooke Anderson, M.S., M.A.  
Justin Bois, Ph.D.  
Lindsay Bremner, Ph.D.  
Andres Collazo, Ph.D.  
Julie Hoy, Ph.D.  
Danny Petrasek, M.D., Ph.D.  
Carol Chace Tydell, D.V.M.

## Research Professors

- Katalin Fejes Toth, M.D., Ph.D.  
Akiko Kumagai, Ph.D.  
Carlos Lois, M.D., Ph.D.  
Isabelle S. Peter Lashgari Faghani,  
Ph.D.  
Daniel A. Wagenaar, Ph.D.  
Mary An-yuan Yui, Ph.D.

## Senior Faculty Associate

- Alice S. Huang, Ph.D.

## Moore Distinguished Scholar

- Arup K. Chakraborty, Ph.D.

## Visiting Associates

- Takuya Akashi, Ph.D.  
Clare Baker, Ph.D.  
Elaine L. Bearer, Ph.D., M.D.  
William L. Caton III, M.D.  
Raymond Deshaies, Ph.D.  
Scott Fraser, Ph.D.  
Jordi Garcia-Ojalvo, Ph.D.  
Elizabeth E. Glater, Ph.D.  
Ingileif Bryndis Hallgrimsdottir,  
Ph.D.  
Elaine Hsiao, Ph.D. Brian Lee, M.D.,  
Ph.D.  
Carmel Levitan, Ph.D.  
Charles Liu, M.D., Ph.D.  
John P. McCutcheon, Ph.D.  
Eric Mjolsness, Ph.D.  
Norman R. Pace, Ph.D.  
Animesh Ray, Ph.D.  
Carol W. Readhead, Ph.D.  
Carmie Puckett Robinson, M.D.  
Ian Ross, M.D.  
Ueli Rutishauser, Ph.D.  
Mohammad Hassan Abdelrahman  
Shehata, Ph.D.  
Tsu-Te Judith Su, Ph.D.  
Takashi Suegami, Ph.D.  
Armand R. Tanguay, Ph.D.  
Tarciso Velho, Ph.D.  
Wei-Li Wu, Ph.D.  
Shekufeh Zareian, Ph.D.

## Members of the Professional Staff

- Tyson Aflalo, Ph.D.  
Igor Antoshechkin, Ph.D.  
L. Elizabeth Bertani, Ph.D.  
Stijn Cassenaer, Ph.D.  
Siyu Chen, Ph.D.  
Vasileios N. Christopoulos, Ph.D.  
Bruce Cohen, Ph.D.  
Andres Collazo, Ph.D.  
Rochelle A. Diamond, B.A.  
Spencer Kellis, Ph.D.  
Ali Khoshnan, Ph.D.  
Evgueniy V. Lubenov, Ph.D.

Kaushiki Menon, Ph.D.  
Annie Moradian, Ph.D.  
Hans-Michael Muller, Ph.D.  
Ker-hwa Ou, M.S.  
Jost Vielmetter, Ph.D.  
Anthony P. West, Jr., Ph.D.

### Senior Postdoctoral Scholars

Sreeram Balasubramanian, Ph.D.  
Megan Bergkessel, Ph.D.  
Shun Jia Chen, Ph.D.  
Brian J. Duistermars, Ph.D.  
Stephen A. Green, Ph.D.  
Hiroyuki Hosokawa, Ph.D.  
Collin Kieffer, Ph.D.  
Daniel Allen Lee, Ph.D.  
Devdoot Majumdar, Ph.D.  
Mati Mann, Ph.D.  
Lam Nguyen, Ph.D.  
Grigorios Oikonomou, Ph.D.  
Maria Papadopoulou, Ph.D.  
Hillel Schwartz, Ph.D.  
Gil Sharon, Ph.D.  
Chun-Shik Shin, Ph.D.  
Chanpreet Singh, Ph.D.  
Beth Stadtmueller, Ph.D.  
Grigory Tikhomirov, Ph.D.  
Moriel Zelikowsky, Ph.D.

### Postdoctoral Scholars

Michael Abrams, Ph.D.  
Eldad Afik, Ph.D.  
Zsuzsa Akos, Ph.D.  
Maria Ashaber, Ph.D.  
Amjad Askary, Ph.D.<sup>1</sup>  
Stefan Badelt, Ph.D.  
Namrata Bali, Ph.D.  
Pinglei Bao, Ph.D.<sup>1</sup>  
Christopher Barnes, Ph.D.  
Luke Bashford, Ph.D.  
Selvan Bavan, Ph.D.  
Amir H. Behbahani, Ph.D.  
Brittany Belin, Ph.D.  
Nathan M. Belliveau, Ph.D.  
Kallol Bera, Ph.D.  
Christopher Charles Berger, Ph.D.  
Mario Blanco, Ph.D.  
Adrian Brueckner, Ph.D.  
Mark Budde, Ph.D.  
Elsy C. Buitrago Delgado, Ph.D.  
Mengyi Cao, Ph.D.  
Stephen Carter, Ph.D.  
Yogaditya Chakrabarty, Ph.D.

Collin Challis, Ph.D.  
Rosemary Challis, Ph.D.  
Chun-Hao Chen, Ph.D.  
Anjalika Chongtham, Ph.D.  
George Chreifi, Ph.D.  
Matthew Q. Clark, Ph.D.  
Aaron Thomas Coey, Ph.D.  
Roman A. Corfas, Ph.D.  
Kurt M. Dahlstrom, Ph.D.  
Rajib Das-Gupta Schubert, Ph.D.  
Sarah J.K. Denny, Ph.D.  
William DePas, Ph.D.  
Gilberto Desalvo, Ph.D.  
Bradley Dickerson, Ph.D.  
Fangyuan Ding, Ph.D.  
Gregory Donaldson, Ph.D.  
Kristina Verena Dylla, Ph.D.  
Haruka Ebisu, Ph.D.  
Christopher J. Fiorese, Ph.D.  
Katherine Irene Fisher, Ph.D.  
Andrew Flyak, Ph.D.  
Kirsten Frieda, Ph.D.  
Xiaojing Gao, Ph.D.  
Cody Geary, Ph.D.  
Jase Andrew Gehring, Ph.D.  
Ysabel Giraldo, Ph.D.  
Nicholas Scott Goeden, Ph.D.  
Walter Gabriel Gonzalez, Ph.D.  
Alejandro Adrian Granados Castro,  
Ph.D.  
Leopold N. Green, Ph.D.  
Alon Grinbaum, Ph.D.  
Harry Gristick, Ph.D.  
Livia Hecke Morais, Ph.D.  
Graham Heimberg, Ph.D.  
Ulrich Herget, Ph.D.  
Shao-Min Hung, Ph.D.  
Erica Hutchins, Ph.D.  
Joanna Jachowicz, Ph.D.  
Min Jee Jang, Ph.D.  
Shuai Jiang, Ph.D.  
Alok Jogekar, Ph.D.  
Anat Kahan, Ph.D.  
Mohammed Kaplan, Ph.D.  
Tomomi Karigo, Ph.D.  
Ann Kennedy, Ph.D.  
Theodora Koromila, Ph.D.  
Ezgi Kunttas-Tatli, Ph.D.  
Katherine J. Leitch, Ph.D.  
Guideng Li, Ph.D.  
Lingyun Li, Ph.D.<sup>1</sup>  
Pulin Li, Ph.D.  
Ting Li, Ph.D.<sup>1</sup>  
Wei Li, Ph.D.  
Yatang Li, Ph.D.  
Yuwei Li, Ph.D.  
Yihan Lin, Ph.D.

Theodore Lindsay, Ph.D.  
 Lu Liu, Ph.D.  
 Francisco Luongo, Ph.D.  
 Ke Lyu, Ph.D.  
 Frank Macabenta, Ph.D.  
 Shrawan Mageswaran, Ph.D.  
 Vishal Maingi, Ph.D.  
 Megan Martik, Ph.D.  
 Tara Mastro, Ph.D.  
 Artem V. Menykov, Ph.D.  
 Lauren Ann Metskas, Ph.D.<sup>1</sup>  
 Erick Moen, Ph.D.  
 Georg Mountoufaris, Ph.D.  
 Matthew J. Mulcahy, Ph.D.  
 Brittany D. Needham, Ph.D.  
 Simon Neubauer, Ph.D.  
 Susan Newcomb, Ph.D.  
 Hon Man Alex Ng, Ph.D.  
 Thang Van Nguyen, DVM, Ph.D.  
 William Nicolas, Ph.D.<sup>1</sup>  
 Aaron L. Nichols, Ph.D.  
 Maria Ninova, Ph.D.  
 Sumner Norman, Ph.D.  
 Vasileios Ntranos, Ph.D.  
 Georg Oberhofer, Ph.D.  
 Noah Ollikainen, Ph.D.  
 Saidhbhe L. O'Riordan, Ph.D.  
 Davi Ortega Ribeiro, Ph.D.  
 Nicolas Pelaez Restrepo, Ph.D.  
 Michael Louis Piacentino, Ph.D.  
 Tino Pleiner, Ph.D.  
 Michal Polonsky, Ph.D.  
 Allan Herman Pool, Ph.D.  
 Ignat Printsev, Ph.D.  
 Mu Qiao, Ph.D.  
 Lisa Racki, Ph.D.  
 Gustavo Rios, Ph.D.  
 John Elliott Robinson, Ph.D.,M.D.  
 Ivo Ros, Ph.D.  
 Yuan Ruan, Ph.D.<sup>1</sup>  
 Satya Prakash Rungta, Ph.D.  
 Sofia Sakellardi, Ph.D.  
 Timothy Sampson, Ph.D.  
 Luis Oscar Sanchez Guardado, Ph.D.  
 Henry L. Schreiber IV, Ph.D.  
 Liang She, Ph.D.  
 Anil Kumar Shukla, Ph.D.  
 Melanie A. Spero, Ph.D.  
 Vincent Andrew Stepanik, Ph.D.  
 Poorna Subramanian, Ph.D.<sup>1</sup>  
 Jingjing Sun, Ph.D.  
 Sai Sun, Ph.D.  
 Calle Valentine Svensson, Ph.D.  
 Akshay Tambe, Ph.D.  
 Qing Tang, Ph.D.  
 Yusuke Tomina, Ph.D.  
 Huy Ngoc Steven Tran, Ph.D.  
 Jennifer Treweek, Ph.D.  
 Jonathan Exiquio Valencia, Ph.D.  
 Bo Wang, Ph.D.  
 Han Wang, Ph.D.  
 Brandon Weissbourd, Ph.D.<sup>1</sup>  
 Joseph Wekselblatt, Ph.D.  
 Jin Xu, Ph.D.  
 Takako Yamamoto (Ichiki),D.D.S,  
 Ph.D.  
 Qing Yao, Ph.D.  
 Hanako Yashiro, Ph.D.  
 An Zhang, Ph.D.  
 Carey Zhang, Ph.D.  
 Jun Zhang, Ph.D.  
 Lujia Zhang, Ph.D.  
 Rong Wei Zhang, Ph.D.  
 Wei Zhao, Ph.D.  
 Yuan Zhao, Ph.D.

### Visitors

Libera Berghella, Ph.D.  
 Andrea Cerase, Ph.D.  
 Daria Esyunina, Ph.D.  
 Constantine Evans, Ph.D.  
 Danielle Grotjahn, Ph.D.  
 Jan Kaminski, Ph.D.  
 Rajan Kulkarni, Ph.D.  
 Anton Kuzmenko, Ph.D.  
 John Brian McManus, Ph.D.  
 Jasna Markovac, Ph.D.  
 Alex Nisthal, Ph.D.  
 David J. Sherman, Ph.D.  
 Amol V. Shivange, Ph.D.  
 Noelle Stiles, Ph.D.  
 Julius Tsu-Li Su, Ph.D.  
 Wei Yuan Yang, Ph.D.



## Division of Chemistry and Chemical Engineering

- Jacqueline K. Barton, *Norman Davidson Leadership Chair*  
John F. Brady, *Executive Officer for Chemical Engineering*  
Sarah Reisman, *Executive Officer for Chemistry*  
Shu-ou Shan, *Executive Officer for Biochemistry and Molecular Biophysics*

### Professors Emeriti

- Fred C. Anson, Ph.D., D.h.c.  
*Elizabeth W. Gilloon Professor of Chemistry*  
John D. Baldeschwieler, Ph.D.  
*J. Stanley Johnson Professor and Professor of Chemistry*  
John E. Berceaw, Ph.D.  
*Centennial Professor of Chemistry*  
Sunney I. Chan, Ph.D.  
*George Grant Hoag Professor of Biophysical Chemistry*  
George R. Gavalas, Ph.D.  
*Chemical Engineering*  
Vincent McKoy, Ph.D.  
*Theoretical Chemistry*

### Professors

- Theodor Agapie, Ph.D.  
*Chemistry*  
Frances H. Arnold, Ph.D.  
*Linus Pauling Professor of Chemical Engineering, Bioengineering, and Biochemistry, Director of the Donna and Benjamin M. Rosen Bioengineering Center*  
Jacqueline K. Barton, Ph.D., D.Sc.h.c., D.L.h.c.  
*John G. Kirkwood and Arthur A. Noyes Professor of Chemistry; Norman Davidson Leadership Chair, Division of Chemistry and Chemical Engineering*  
Jesse L. Beauchamp, Ph.D.  
*Mary and Charles Ferkel Professor of Chemistry*  
Geoffrey A. Blake, Ph.D.  
*Cosmochemistry and Planetary Sciences and Chemistry*

- John F. Brady, Ph.D.  
*Chevron Professor of Chemical Engineering and Mechanical Engineering, Executive Officer for Chemical Engineering*  
Judith L. Campbell, Ph.D.  
*Chemistry and Biology*  
Garnet K. Chan, Ph.D.  
*Bren Professor of Chemistry*  
William C. Clemons, Ph.D.  
*Biochemistry*  
Mark E. Davis, Ph.D.  
*Warren and Katharine Schlinger Professor of Chemical Engineering*  
Peter B. Dervan, Ph.D., D.Sc.h.c.  
*Bren Professor of Chemistry*  
Dennis A. Dougherty, Ph.D.  
*George Grant Hoag Professor of Chemistry, Director of the Beckman Institute*  
Richard C. Flagan, Ph.D.  
*Irma and Ross McCollum-William H. Corcoran Professor of Chemical Engineering and Environmental Science and Engineering*  
Gregory C. Fu, Ph.D.  
*Altair Professor of Chemistry*  
Konstantinos P. Giapis, Ph.D.  
*Chemical Engineering*  
William A. Goddard III, Ph.D.  
*Charles and Mary Ferkel Professor of Chemistry, Materials Science, and Applied Physics*  
Harry B. Gray, Ph.D., D.Sc.h.c., Laurea h.c., Fil.Dr.h.c., D.L.h.c.  
*Arnold O. Beckman Professor of Chemistry and Founding Director of the Beckman Institute*  
Robert H. Grubbs, Ph.D., Nobel Laureate  
*Victor and Elizabeth Atkins Professor of Chemistry*  
Andre Hoelz, Ph.D.<sup>1</sup>  
*Chemistry*  
Linda C. Hsieh-Wilson, Ph.D.  
*Chemistry*  
Rustem F. Ismagilov, Ph.D.  
*Ethel Wilson Bowles and Robert Bowles Professor of Chemistry and Chemical Engineering, Director of the Jacobs Institute for Molecular Engineering for Medicine*  
Julia Kornfield  
*Chemical Engineering*  
Nathan S. Lewis, Ph.D.  
*George L. Argyros Professor and Professor of Chemistry*

Rudolph A. Marcus, Ph.D., D.Sc.h.c.,  
 Fil.Dr.h.c., D.h.c., Nobel Laureate  
*Chemistry*

Stephen L. Mayo, Ph.D.  
*Bren Professor of Biology and  
 Chemistry, William K. Bowles Jr.  
 Leadership Chair, Division of  
 Biology and Biological Engineering*

Thomas F. Miller III, Ph.D.  
*Chemistry*

Mitchio Okumura, Ph.D.  
*Chemical Physics*

Carl S. Parker, Ph.D.  
*Biochemistry*

Jonas C. Peters, Ph.D.  
*Bren Professor of Chemistry,  
 Director of the Resnick  
 Sustainability Institute*

Douglas C. Rees, Ph.D.<sup>1</sup>  
*Roscoe Gilkey Dickinson Professor of  
 Chemistry, Dean of Graduate  
 Studies*

Sarah E. Reisman, Ph.D.  
*Chemistry, Executive Officer for  
 Chemistry*

John H. Seinfeld, Ph.D., D.Sc.h.c.  
*Louis E. Nobl Professor and  
 Professor of Chemical Engineering*

Shu-ou Shan, Ph.D.  
*Chemistry, Executive Officer for  
 Biochemistry and Molecular Biology*

Brian M. Stoltz, Ph.D.  
*Chemistry*

David A. Tirrell, Ph.D., D.h.c.  
*Ross McCollum–William H.  
 Corcoran Professor and Professor of  
 Chemistry and Chemical  
 Engineering, Provost*

Zhen-Gang Wang, Ph.D.  
*Lawrence A. Hanson Jr. Professor of  
 Chemical Engineering*

Daniel P. Weitekamp, Ph.D.  
*Chemical Physics*

<sup>1</sup> Joint appointment with Howard Hughes  
 Medical Institute

### Assistant Professors

Scott K. Cushing, Ph.D.  
*Chemistry*

Ryan G. Hadt, Ph.D.  
*Chemistry*

Alison E. Ondrus, Ph.D.  
*Chemistry*

Maxwell J. Robb, Ph.D.  
*Chemistry*

Kimberly A. See, Ph.D.  
*Chemistry*

Mikhail G. Shapiro, Ph.D.  
*Chemical Engineering*

Lu Wei, Ph.D.  
*Chemistry*

### Lecturers

Kevin Barraza, Ph.D.  
*Chemistry*

Kathryn Bikle, M.A.  
*Chemistry*

Jeffrey Mendez, Ph.D.  
*Chemistry*

Michael Takase, Ph.D.  
*Chemistry*

Scott Virgil, Ph.D.  
*Chemistry*

Michael Vivic, Ph.D.  
*Chemical Engineering*

Jay Winkler, Ph.D.  
*Chemistry*

### Faculty Associates

Jay A. Labinger, Ph.D.  
*Chemistry*

Jay R. Winkler, Ph.D.  
*Chemistry*

### Visiting Associates

Nayef Masned Alsaifi, Ph.D.  
*Chemical Engineering*

Peng Bao, Ph.D.  
*Chemistry*

Yi-Chun Chen, Ph.D.  
*Chemical Engineering*

Alessandro Fortunelli, Ph.D.  
*Chemistry*

Zeev Gross, Ph.D.  
*Chemistry*

Zheng Guo, Ph.D.  
*Chemical Engineering*

Michael Hill, Ph.D.  
*Chemistry*

James B. Howard, Ph.D.  
*Chemistry*

Yousung Jung, Ph.D.  
*Chemistry*

Paul La Porte, Ph. D.  
*Chemical Engineering*

Leon Reubsact, Ph.D.  
*Chemistry*

Xin Wen, Ph.D.  
*Chemistry*

Pernilla Wittung-Stafshede, Ph.D.  
*Chemistry*

Shaocai Yu, Ph.D.  
*Chemical Engineering*

### **Members of the Beckman Institute**

Bruce S. Brunschwig, Ph.D.

Jay R. Winkler, Ph.D.

### **Members of the Professional Staff**

Suresha Guptha, M.S.  
*Chemical Engineering*

Lawrence R. Henling, M.S.  
*Chemistry*

Sonjong Hwang, Ph.D.  
*Chemistry*

Jay Labinger  
*Chemistry*

Boris Merinov, Ph.D.  
*Chemistry*

Mona Shahgholi, Ph.D.  
*Chemistry*

David Vander Velde, Ph.D.  
*Chemistry*

### **Senior Postdoctoral Scholar**

Christopher Bley

### **Postdoctoral Scholars**

Tonia Ahmed, Ph.D.

Stavros Amanatidis, Ph.D.

Joshua Baccile, Ph.D.

Gwendolyn Bailey, Ph.D.

Emma Baker-Tripp, Ph.D.

Phillip Bartels, Ph.D.

Avinoram Bar Zion, Ph.D.

Suzanne Batiste, Ph.D.

Christina Boville, Ph.D.

Oliver F. Brandenburg, Ph.D.

Katharina Brinkert, Ph.D.

Trixia Buscagan, Ph.D.

Miguel Caban-Acevedo, Ph.D.

Zhi Chao Cao, Ph.D.

Marchello Cavitt, Ph.D.

Huikuan Chao, Ph.D.

Caiyou Chen, Ph.D.

Leanne Chen, Ph.D.

Hyun Ju Cho, Ph.D.

Cooper Citek, Ph.D.

Yingxin Deng, Ph.D.

Markus Dick, Ph.D.

Feizhi Ding, Ph.D.

Jaika Doerfler, Ph.D.

Walter Marcus Drover, Ph.D.

Julian Edwards, Ph.D.

Levi Ekanger, Ph.D.

Irina Geibel, Ph.D.

Anna Gres, Ph.D.

Reza Haghshenas, Ph.D.

Sangil Han, Ph.D.

Luke E. Hanna, Ph.D.

Jian He, Ph.D.

Po Hung Hsieh, Ph.D.

Xiaoran Hu, Ph.D.

Huiqian Huang, Ph.D.

Xiongvi Huang, Ph.D.

Haohua Huo, Ph.D.

Zhijun Jia, Ph.D.

Jian Jiang, Ph.D.

Amelie Joffrin, Ph.D.

Sek-Bik Jennifer Kan, Ph.D.

Nirit Kantor Uriel, Ph.D.

Eugenia Khorosheva, Ph.D.

Patrycja Kielb, Ph.D.

Jeong Hoon Ko, Ph.D.

Sandra Koenig, Ph.D.

Joshua Kretchmer, Ph.D.

Sankarganesh Krishnamoorthy, Ph.D.

Martin Kunth, Ph.D.

Sebastian Lackner, Ph.D.

Carolyn Ladd, Ph.D.

Henrik Larsson, Ph.D.

Joanne Yee Jin Lau, Ph.D.

HeeJun Lee, Ph.D.

Dana Levine, Ph.D.

Zhendong Li, Ph.D.

Meng Lin, Ph.D.

Xiaoyu, Liu, Ph.D.

Yumeng Liu, Ph.D.

Jiaozhi Lu, Ph.D.

Marcella Lusardi, Ph.D.

James McClain, Ph.D.

Xiang Ma, Ph.D.

Amirhossein Mafi, Ph.D.

Ioan Bogdan Magdau, Ph.D.

Stewart Mallory, Ph.D.

David Maresca, Ph.D.

Andrew Martinolich, Ph.D.

David Miller, Ph.D.

George Mobbs, Ph.D.  
Octavio Mondragon Palomino, Ph.D.  
Mario Motta, Ph.D.  
Stephen Munoz, Ph.D.  
Yasuaki Nakayama, Ph.D.  
Adela Nano, Ph.D.  
Saber Naserifar, Ph.D.  
Si Nie, Ph.D.  
Michiel Niesen, Ph.D.  
Elizabeth O'Brien, Ph.D.  
Nitin Jalindar Pawar, Ph.D.  
Thibaud Perriches, Ph.D.  
Artem Pulkin, Ph.D.  
Rahul Purohit, Ph.D.  
Chenxi Qian, Ph.D.  
Ushnish Ray, Ph.D.  
Carlos Gabriel Read Rodriguez,  
Ph.D.  
Matthias Richter, Ph.D.  
Nadia Riera Faraone, Ph.D.  
Michael Rombola, Ph.D.  
David Kingsland Romney, Ph.D.  
Jorge Alonso Rosas Hernandez,  
Ph.D.  
Dipanjan Samanta, Ph.D.  
Brian Sanders, Ph.D.  
Henry Schurkus, Ph.D.  
Carl Sedgeman, Ph.D.  
Naima G. Sharaf, Ph.D.  
Linhan Shen, Ph.D.  
Hyeyoung Shin, Ph.D.  
Manar Shoshani, Ph.D.  
Philip Shushkov, Ph.D.  
Alexander Rigel Siegel, Ph.D.  
Seunghyun Sim, Ph.D.  
Burton Simpson, Ph.D.  
Chang Yun Son, Ph.D.  
Justin Yun-Pin Su, Ph.D.  
Hidehiro Suematsu, Ph.D.  
Jerzy Olgierd Szablowski, Ph.D.  
Arnaud Thevenon, Ph.D.  
Aye Thinn, Ph.D.  
Lei Wang, Ph.D.  
Zhaobin Wang, Ph.D.  
Matthew Welborn, Ph.D.  
Eric Welin, Ph.D.  
Julian West, Ph.D.  
Alec White, Ph.D.  
William Wolf, Ph.D.  
Yan Xu, Ph.D.  
Kumiko Yamamoto, Ph.D.  
Yang Yang, Ph.D.  
Zepeng Yang, Ph.D.  
Haolin Yin, Ph.D.  
Sangjin Yoo, Ph.D.  
Pengfei Zhang, Ph.D.  
Xinxing Zhang, Ph.D.

Aoshu Zhong, Ph.D.  
Tianyu Zhu, Ph.D.

## Visitors

Michael Bartberger, Ph.D.  
*Chemistry*  
Wei-Chen Chen, Ph.D.  
*Chemistry*  
Masanari Hirahara, Ph.D.  
*Chemistry*  
Bryan Hunter, Ph.D.  
*Chemistry*  
Zuleikha Kurji, Ph.D.  
*Chemistry*  
Smaranda Marinescu, Ph.D.  
*Chemistry*  
Ricardo Matute, Ph.D.  
*Chemistry*  
Joshua Palmer, Ph.D.  
*Chemistry*  
Shunsuke Sato, Ph.D.  
*Chemistry*  
Valerie Scott, Ph.D.  
*Chemistry*  
Karn Sorasaenee, Ph.D.  
*Chemistry*  
Eric Stemp, Ph.D.  
*Chemistry*  
Jau Huei Tang, Ph.D.  
*Chemistry*  
Andrew Udit, Ph.D.  
*Chemistry*  
Mitsutaro Umehara, Ph.D.  
*Chemistry*  
Yun Yen, Ph.D.  
*Chemistry*  
Keiko Yokoyama, Ph.D.  
*Chemistry*  
Changjun Yu, Ph.D.  
*Chemistry*  
Ted Yu, Ph.D.  
*Materials Science*

## Division of Engineering and Applied Science

Guruswami Ravichandran, *Otis Booth Leadership Chair*

Christopher M. Umans, *EAS Division Deputy Chair*

José E. Andrade, *Cecil and Sally Drinkward Leadership Chair, Executive Officer for Mechanical and Civil Engineering*

Azita Emami, *Executive Officer for Electrical Engineering*

Morteza Gharib, *Director, Graduate Aerospace Laboratories*

Yu-Chong Tai, *Andrew and Peggy Cherng Medical Engineering Leadership Chair, Executive Officer for Medical Engineering*

Kerry J. Vahala, *Executive Officer for Applied Physics and Materials Science*

Paul O. Wennberg, *Executive Officer for Environmental Science and Engineering*

Adam C. Wierman, *Executive Officer for Computing and Mathematical Sciences*

### Professors Emeriti

Allan J. Acosta, Ph.D.  
*Richard L. and Dorothy M. Hayman Professor of Mechanical Engineering*

James L. Beck, Ph.D.  
*George W. Housner Professor of Engineering and Applied Science*

Christopher E. Brennen, D.Phil.  
*Richard L. and Dorothy M. Hayman Professor of Mechanical Engineering*

William B. Bridges, Ph.D.  
*Carl F Braun Professor of Engineering*

Norman H. Brooks, Ph.D.  
*James Irvine Professor of Environmental and Civil Engineering*

K. Mani Chanday, Ph.D.  
*Simon Ramo Professor of Computer Science*

Donald S. Cohen, Ph.D.  
*Charles Lee Powell Professor of Applied Mathematics*

Noel R. Corngold, Ph.D.

*Applied Physics*  
Fred E. C. Culick, Ph.D.  
*Richard L. and Dorothy M. Hayman Professor of Mechanical Engineering and Professor of Jet Propulsion*

James P. Eisenstein, Ph.D.  
*Frank J. Rosbek Professor of Physics and Applied Physics*

Charles Elachi, Ph.D.  
*Electrical Engineering and Planetary Science*

Thomas E. Everhart, Ph.D., D.L.h.c., D.h.c.

*Electrical Engineering and Applied Physics*

David L. Goodstein, Ph.D.  
*Frank J. Gilloon Distinguished Teaching and Service Professor and Professor of Physics and Applied Physics*

Roy W. Gould, Ph.D.  
*Simon Ramo Professor of Engineering*

Hans G. Hornung, Ph.D., D.h.c.  
*C. L. Kelly Johnson Professor of Aeronautics*

Wilfred D. Iwan, Ph.D.  
*Applied Mechanics*

Paul C. Jennings, Ph.D.  
*Civil Engineering and Applied Mechanics*

Wolfgang G. Knauss, Ph.D.  
*Theodore von Kármán Professor of Aeronautics and Applied Mechanics*

Anthony Leonard, Ph.D.  
*Theodore von Kármán Professor of Aeronautics*

E. John List, Ph.D.  
*Environmental Engineering Science*

Alain J. Martin, Ing.  
*Computer Science*

Robert J. McEliece, Ph.D.  
*Allen E. Puckett Professor and Professor of Electrical Engineering*

Carver A. Mead, Ph.D., D.Sc.h.c., D.h.c.

*Gordon and Betty Moore Professor of Engineering and Applied Science*

James J. Morgan, Ph.D., D.Sc.h.c.  
*Marvin L. Goldberger Professor of Environmental Engineering Science*

Marc-Aurele Nicolet, Ph.D.  
*Electrical Engineering and Applied Physics*

David B. Rutledge, Ph.D.  
*Kiyo and Eiko Tomiyasu Professor  
of Engineering*

Theodore Y. Wu, Ph.D.  
*Engineering Science*

### Professors

Yaser S. Abu-Mostafa, Ph.D.  
*Electrical Engineering and  
Computer Science*

Jess F. Adkins, Ph.D.  
*Smits Family Professor of  
Geochemistry and Global  
Environmental Science*

Aaron D. Ames, Ph.D.  
*Bren Professor of Mechanical and  
Civil Engineering and Control and  
Dynamical Systems*

Animashree Anandkumar, Ph.D.  
*Bren Professor of Computing and  
Mathematical Sciences*

José E. Andrade, Ph.D.  
*George W. Housner Professor of  
Civil and Mechanical Engineering*

Domniki Asimaki, Ph.D.  
*Mechanical and Civil Engineering*

Harry A. Atwater, Ph.D.  
*Howard Hughes Professor of  
Applied Physics and Materials  
Science, JCAP Director*

Joanna M. Austin, Ph.D.  
*Aerospace*

Jean-Philippe Avouac, Ph.D.  
*Earle C. Anthony Professor of  
Geology and Mechanical and Civil  
Engineering*

Alan H. Barr, Ph.D.  
*Computer Science*

Paul M. Bellan, Ph.D.  
*Applied Physics*

Kaushik Bhattacharya, Ph.D.  
*Howell N. Tyson, Sr., Professor of  
Mechanics and Materials Science,  
Vice Provost*

Guillaume Blanquart, Ph.D.  
*Mechanical Engineering*

Simona Bordoni, Ph.D.  
*Environmental Science and  
Engineering*

John F. Brady, Ph.D.  
*Chevron Professor of Chemical  
Engineering and Mechanical  
Engineering*

Jehoshua Bruck, Ph.D.  
*Gordon and Betty Moore Professor  
of Computation and Neural Systems  
and Electrical Engineering*

Oscar P. Bruno, Ph.D.  
*Applied and Computational  
Mathematics*

Joel W. Burdick, Ph.D.  
*Richard L. and Dorothy M.  
Hayman Professor of Mechanical  
Engineering and Bioengineering,  
JPL Research Scientist*

Venkat Chandrasekaran, Ph.D.  
*Computing and Mathematical  
Sciences and Electrical Engineering*

Timothy E. Colonius, Ph.D.  
*Frank and Ora Lee Marble  
Professor of Mechanical Engineering*

Chiara Daraio, Ph.D.  
*Mechanical Engineering and  
Applied Physics*

Mathieu Desbrun, Ph.D.  
*Carl F Braum Professor of  
Computing and Mathematical  
Sciences*

Michael H. Dickinson, Ph.D.  
*Esther M. and Abe M. Zarem  
Professor of Bioengineering and  
Aeronautics*

Paul E. Dimotakis, Ph.D.  
*John K. Northrop Professor of  
Aeronautics and Professor of Applied  
Physics*

John C. Doyle, Ph.D.  
*Jean-Lou Chameau Professor of  
Control and Dynamical Systems,  
Electrical Engineering, and  
Bioengineering*

Michelle Effros, Ph.D.  
*George Van Osdol Professor of  
Electrical Engineering*

Michael B. Elowitz, Ph.D.<sup>1</sup>  
*Biology and Bioengineering, HHMI  
Investigator*

Azita Emami, Ph.D.  
*Andrew and Peggy Cherng  
Professor of Electrical Engineering  
and Medical Engineering, HMRI  
Investigator*

Katherine T. Faber, Ph.D.  
*Simon Ramo Professor of Materials  
Science*

Andrei Faraon, Ph.D.  
*Applied Physics*

- Richard C. Flagan, Ph.D.  
*Irma and Ross McCollum—William H. Corcoran Professor of Chemical Engineering and Environmental Science and Engineering*
- Brent T. Fultz, Ph.D.  
*Barbara and Stanley R. Rawen, Jr., Professor of Materials Science and Applied Physics*
- Morteza Gharib, Ph.D.  
*Hans W. Liepmann Professor of Aeronautics and Bioinspired Engineering, Director, Center for Autonomous Systems and Technologies*
- William A. Goddard, Ph.D.  
*Charles and Mary Ferkel Professor of Chemistry, Materials Science, and Applied Physics*
- Julia R. Greer, Ph.D.  
*Materials Science, Mechanics, and Medical Engineering*
- Ali Hajimiri, Ph.D.  
*Bren Professor of Electrical Engineering and Medical Engineering, Co-Director, Space-Based Solar Power Project*
- John F. Hall, Ph.D.  
*Civil Engineering*
- Babak Hassibi, Ph.D.  
*Mose and Lillian S. Bohn Professor of Electrical Engineering*
- Thomas H. Heaton, Ph.D.  
*Engineering Seismology*
- Michael R. Hoffmann, Ph.D.  
*John S. and Sherry Chen Professor of Environmental Science*
- Yizhao Thomas Hou, Ph.D.  
*Charles Lee Powell Professor of Applied and Computational Mathematics*
- Melany L. Hunt, Ph.D.  
*Dotty and Dick Hayman Professor of Mechanical Engineering*
- William L. Johnson, Ph.D.  
*Ruben F. and Donna Mettler Professor of Engineering and Applied Science*
- Dennis M. Kochmann, Dr.-Ing.  
*Aerospace*
- Nadia Lapusta, Ph.D.  
*Mechanical Engineering and Geophysics*
- Jared R. Leadbetter, Ph.D.  
*Environmental Microbiology*
- Steven H. Low, Ph.D.  
*Frank J. Gilloon Professor of Computer Science and Electrical Engineering*
- Beverly J. McKeon, Ph.D.  
*Theodore von Kármán Professor of Aeronautics*
- Daniel I. Meiron, Sc.D.  
*Fletcher Jones Professor of Aeronautics and Applied and Computational Mathematics*
- Austin J. Minnich, Ph.D.  
*Mechanical Engineering and Applied Physics*
- Richard M. Murray, Ph.D.  
*Thomas E. and Doris Everhart Professor of Control and Dynamical Systems and Bioengineering*
- Michael Ortiz, Ph.D.  
*Frank and Ora Lee Marble Professor of Aeronautics and Mechanical Engineering*
- Houman Owhadi, Ph.D.  
*Applied and Computational Mathematics and Control and Dynamical Systems*
- Lior S. Pachter, Ph.D.  
*Bren Professor of Computational Biology and Computing and Mathematical Sciences*
- Oskar J. Painter, Ph.D.  
*John G. Braun Professor of Applied Physics and Physics, Fletcher Jones Foundation Co-Director of the Kavli Nanoscience Institute*
- Sergio Pellegrino, Ph.D.  
*Joyce and Kent Kresa Professor of Aerospace and Civil Engineering, Co-Director, Space-Based Solar Power Project, JPL Senior Research Scientist*
- Pietro Perona, D.Eng., Ph.D.  
*Allen E. Puckett Professor of Electrical Engineering*
- Robert B. Phillips, Ph.D.  
*Fred and Nancy Morris Professor of Biophysics, Biology and Physics*
- Niles A. Pierce, D.Phil.  
*Applied and Computational Mathematics and Bioengineering*
- Dale I. Pullin, Ph.D.  
*Robert H. Goddard Professor of Aeronautics*
- Guruswami Ravichandran, Ph.D., D.h.c.  
*John E. Goode, Jr., Professor of Aerospace and Mechanical Engineering*

- Ares J. Rosakis, Ph.D.  
*Theodore von Kármán Professor of Aeronautics and Mechanical Engineering*
- Michael L. Roukes, Ph.D.  
*Frank J. Rosbek Professor of Physics, Applied Physics, and Bioengineering*
- Axel Scherer, Ph.D.  
*Bernard Neches Professor of Electrical Engineering, Applied Physics, and Physics*
- Tapio Schneider, Ph.D.  
*Theodore Y. Wu Professor of Environmental Science and Engineering, JPL Senior Research Scientist*
- Peter Schröder, Ph.D.  
*Shaler Arthur Hanisch Professor of Computer Science and Applied and Computational Mathematics*
- Leonard J. Schulman, Ph.D.  
*Computer Science*
- Keith C. Schwab, Ph.D.  
*Applied Physics*
- John H. Seinfeld, Ph.D., D.Sc.h.c.  
*Louis E. Nohl Professor of Chemical Engineering*
- Joseph E. Shepherd, Ph.D.  
*C. L. Kelly Johnson Professor of Aeronautics and Mechanical Engineering, Allen V. C. Davis and Lenabelle Davis Leadership Chair, Student Affairs, Vice President for Student Affairs*
- Athanassios G. Siapas, Ph.D.  
*Computation and Neural Systems*
- Andrew M. Stuart, Ph.D.  
*Bren Professor of Computing and Mathematical Sciences*
- Yu-Chong Tai, Ph.D.  
*Anna L. Rosen Professor of Electrical Engineering and Medical Engineering*
- Sandra M. Troian, Ph.D.  
*Applied Physics, Aeronautics, and Mechanical Engineering*
- Joel A. Tropp, Ph.D.  
*Steele Family Professor of Applied and Computational Mathematics*
- Christopher M. Umans, Ph.D.  
*Computer Science*
- Kerry J. Vahala, Ph.D.  
*Ted and Ginger Jenkins Professor of Information Science and Technology and Applied Physics*
- P. P. Vaidyanathan, Ph.D.  
*Kiyo and Eiko Tomiyasu Professor of Electrical Engineering*
- Thomas G. Vidick, Ph.D.  
*Computing and Mathematical Sciences*
- Lihong Wang, Ph.D.  
*Bren Professor of Medical Engineering and Electrical Engineering*
- Michael M. Watkins, Ph.D.  
*Aerospace and Geophysics, Vice President and Director of the Jet Propulsion Laboratory*
- Paul O. Wennberg, Ph.D.  
*R. Stanton Avery Professor of Atmospheric Chemistry and Environmental Science and Engineering*
- Adam C. Wierman, Ph.D.  
*Computing and Mathematical Sciences, Director, Information Science and Technology*
- Erik Winfree, Ph.D.  
*Computer Science, Computation and Neural Systems, and Bioengineering*
- Changhui Yang, Ph.D.  
*Thomas G. Myers Professor of Electrical Engineering, Bioengineering and Medical Engineering*
- Amnon Yariv, Ph.D.  
*Martin and Eileen Summerfield Professor of Applied Physics and Electrical Engineering*

#### Associate Professors

- Soon-Jo Chung, Sc.D.  
*Aerospace and Bren Scholar; JPL Research Scientist*

#### Assistant Professors

- Marco Bernardi, Ph.D.  
*Applied Physics and Materials Science*
- Wei Gao, Ph.D.  
*Cherng Department of Medical Engineering*
- Victoria Kostina, Ph.D.  
*Electrical Engineering*
- Alireza Marandi, Ph.D.  
*Electrical Engineering*



Stevan Nadj-Perge, Ph.D.

*Applied Physics and Materials  
Science*

Yisong Yue, Ph.D.

*Computing and Mathematical  
Sciences*

<sup>1</sup>*Joint with the Howard Hughes Medical  
Institute*

## Instructors

Franca Hoffmann, Ph.D.

*von Kármán Instructor in  
Computing and Mathematical  
Sciences*

Ka Chun Lam, Ph.D.

*von Kármán Instructor in  
Computing and Mathematical  
Sciences*

## Lecturers

Channing Ahn, Ph.D.\*

*Applied Physics and Materials  
Science*

Oscar Alvarez-Salazar, Ph.D.

*Aerospace*

Dimitrios Antsos, Ph.D.

*Electrical Engineering*

John D. Baker, B.S.

*Aerospace*

Christina Birch, Ph.D.

*Engineering*

Adam Blank, M.S.

*Computing and Mathematical  
Sciences*

James B. Breckinridge, Ph.D.\*

*Aerospace*

Erin R. Burkett, Ph.D.\*

*Engineering*

Stefano Campagnola, Ph.D.\*

*Computing and Mathematical  
Sciences*

Bruce J. Dominguez, B.F.A.

*Mechanical and Civil Engineering*

Antony R. H. Fender, B.S.

*Engineering*

Glen A. George, M.S.

*Electrical Engineering*

Alireza Ghaffari, M.S.

*Applied Physics and Materials  
Science*

Douglas C. Hofmann, Ph.D.

*Applied Physics and Materials  
Science*

Rajeev Joshi, Ph.D.\*

*Computing and Mathematical  
Sciences*

Andrew T. Klesh, Ph.D.

*Aerospace*

Eugene Lavretsky, Ph.D.\*

*Computing and Mathematical  
Sciences*

Arnaud Marsiglietti, Ph.D.\*

*Computing and Mathematical  
Sciences*

Barry B. Megdal, Ph.D.

*Electrical Engineering*

Michael Mello, Ph.D.

*Mechanical and Civil Engineering*

Shouleh Nikzad, Ph.D.

*Cherng Department of Medical  
Engineering*

Danny Petrasek, Ph.D.

*Cherng Department of Medical  
Engineering*

Kenneth A. Pickar, Ph.D.

*Engineering*

Gillian Pierce, B.A.\*

*Engineering*

Donald Pinkston III, B.S.

*Computing and Mathematical  
Sciences*

Scott R. Ploen, Ph.D.\*

*Aerospace*

James E. Polk, Ph.D.

*Aerospace*

Trity Pourbahrami, M.S.W.\*

*Engineering*

Damon Russell, Ph.D.

*Electrical Engineering*

Daniel Scharf, Ph.D.

*Aerospace*

John P. Van Deusen, B.S.

*Mechanical and Civil Engineering*

Michael C. Vanier, Ph.D.

*Computing and Mathematical  
Sciences*

Jakob J. Van Zyl, Ph.D.

*Electrical Engineering*

Jennifer Weaver, Ph.D.

*Engineering*

Nathan M. Wilson, Ph.D.\*

*Engineering*

Konstantin M. Zuev, Ph.D.

*Computing and Mathematical  
Sciences*

\**In residence 2017-18*

## Research Professors

- Monica D. Kohler, Ph.D.  
*Mechanical and Civil Engineering*
- Hillary Mushkin, MFA  
*Art and Design*
- Paul W. K. Rothmund, Ph.D.  
*Bioengineering, Computing  
& Mathematical Sciences, and  
Computation and Neural Systems*
- Manuel Soriaga, Ph.D.  
*Applied Physics and Material Science*

## Senior Faculty Associate

- Jakob J. Van Zyl, Ph.D.  
*Electrical Engineering and  
Aerospace*

## Moore Distinguished Scholar

- Stephen H. Davis, Ph.D.  
*Aerospace*
- Peter W. Voorhees, Ph.D.  
*Applied Physics and Materials  
Science*

## Visiting Professors

- Volnei Pedroni, Ph.D.  
*Electrical Engineering*
- Laurent F. M. Stainier, Ph.D.  
*Clark B. Millikan Visiting Professor  
of Aerospace*

## Visiting Associates

- Daniel Arthur, Ph.D.  
*Mechanical and Civil Engineering*
- Josette Bellan, Ph.D.  
*Mechanical and Civil Engineering*
- James B. Breckinridge, Ph.D.  
*Aerospace*
- Alaina Brinley, M.D., Ph.D.  
*Electrical Engineering*
- Wan Cheng, Ph.D.  
*Aerospace*
- Hyuck Choo, Ph.D.  
*Electrical Engineering*
- R. Dale Conner, Ph.D.  
*Applied Physics and Materials  
Science*
- Marie Cssete, Ph.D.  
*Cherng Department of Medical  
Engineering*

- Marios D. Demetriou, Ph.D.  
*Applied Physics and Materials  
Science*
- Robert A. Desharnais, Ph.D.  
*Computing and Mathematical  
Sciences*
- M. Houman Fekrazad, Ph.D.  
*Cherng Department of Medical  
Engineering*
- Yuman Fong, M.D.  
*Cherng Department of Medical  
Engineering*
- Emmanuel Gdoutos, Ph.D.  
*Mechanical and Civil Engineering*
- Sossina M. Haile, Ph.D.  
*Applied Physics and Materials  
Science*
- Douglas C. Hofmann, Ph.D.  
*Applied Physics and Materials  
Science*
- Gerard J. Holzmann, Ph.D.  
*Computing and Mathematical  
Sciences*
- Philip Hon, Ph.D.  
*Applied Physics and Materials  
Science*
- Tzung K. Hsiai, Ph.D, M.D.  
*Cherng Department of Medical  
Engineering*
- Mark S. Humayun, Ph.D.  
*Cherng Department of Medical  
Engineering*
- Karanjit Kalsi, Ph.D.  
*Computing and Mathematical  
Sciences*
- Emil Kartalov, Ph.D.  
*Electrical Engineering*
- Hans Joachim Lewerenz, Ph.D.  
*Applied Physics and Materials  
Science*
- Scott Mark Lewis, Ph.D.  
*Applied Physics and Materials  
Science*
- Chen Li, Ph.D.  
*Applied Physics and Materials  
Science*
- Dong Li, Ph.D.  
*Medical Engineering*
- Katrina A. Ligett, Ph.D.  
*Computing and Mathematical  
Sciences*
- Alexis C. Livanos, Ph.D.  
*Aerospace*
- Joerg Loeffler, Dr. sc. nat.  
*Applied Physics and Materials  
Science*
- Xiaoyu Lyu, Ph.D.  
*Electrical Engineering*

Douglas G. MacMartin, Ph.D.  
*Computing and Mathematical Sciences*

Sami F. Masri, Ph.D.  
*Mechanical and Civil Engineering*

Hossein Mosallaei, Ph.D.  
*Applied Physics and Materials Science*

Ralph Nuzzo, Ph.D.  
*Applied Physics and Materials Science*

Hyunwoong Park, Ph.D.  
*Environmental Science and Engineering*

Leora Peltz, Ph.D.  
*Applied Physics and Materials Science*

Peter A. Petillo, Ph.D.  
*Applied Physics and Materials Science*

Danny Petrasek, Ph.D.  
*Cherng Department of Medical Engineering*

Kenneth A. Pickar, Ph.D.  
*Mechanical and Civil Engineering*

Hendrik Postma, Ph.D.  
*Applied Physics and Materials Science*

Damien Rodger, Ph.D.  
*Cherng Department of Medical Engineering*

Aditya Rajagopal, Ph.D.  
*Electrical Engineering*

Alton Romig, Ph.D.  
*Applied Physics and Materials Science*

Phoebus Rosakis, Ph.D.  
*Aerospace*

Brian Ross, Ph.D.  
*Cherng Department of Medical Engineering*

Konrad H. Samwer, Ph.D.  
*Applied Physics and Materials Science*

Daniel Scharf, Ph.D.  
*Aerospace*

Peter C. Sercel, Ph.D.  
*Applied Physics and Materials Science*

Andrew A. Shapiro-Scharlotta, Ph.D.  
*Aerospace*

Peter H. Siegel, Ph.D.  
*Electrical Engineering*

G. Jeffrey Snyder, Ph.D.  
*Applied Physics and Materials Science*

Mark Stalzer, Ph.D.  
*Computing and Mathematical Sciences*

Shervin Taghavi Larigani, Ph.D.  
*Mechanical and Civil Engineering*

Lincoln A. Wallen, Ph.D.  
*Computing and Mathematical Sciences*

Chong Wang, Ph.D.  
*Applied Physics and Materials Science*

Sander Weinreb, Ph.D.  
*Electrical Engineering*

### **Members of the Professional Staff**

Xenia Amashukeli, Ph.D.  
Joint Center for Artificial Photosynthesis

Nathan F. Dalleska, Ph.D.  
Global Environmental Center

Guy A. DeRose, Ph.D.  
Applied Physics and Materials Science

Alireza Ghaffari, M.S.  
Applied Physics and Materials Science

Joel A. Haber, Ph.D.  
Joint Center for Artificial Photosynthesis

Michael Hucka, Ph.D.  
Computing and Mathematical Sciences

Chengxiang Xiang, Ph.D.  
Joint Center for Artificial Photosynthesis

### **Senior Postdoctoral Scholars**

James D. Anderson, Ph.D.  
*Computing and Mathematical Sciences*

Mohammed Hashemi, Ph.D.  
*Electrical Engineering*

Georgios Rigas, Ph.D.  
*Mechanical and Civil Engineering*

Christopher Thachuk, Ph.D.  
*Computing and Mathematical Sciences*

## Postdoctoral Scholars

- Muhammad Arslan Ahmed, Ph.D.  
*Aerospace*
- Muhammad Z. Alam, Ph.D.  
*Applied Physics and Materials Science*
- Zakaria Al Balushi, Ph.D.  
*Resnick Sustainability Institute Prize Postdoctoral Scholar in Applied Physics and Materials Science*
- Joong Hwan Bang, Ph.D.  
*Electrical Engineering*
- Chengying Bao, Ph.D.  
*Resnick Sustainability Institute Prize Postdoctoral Scholar in Applied Physics and Materials Science*
- John Glen Bartholomew, Ph.D.  
*Applied Physics and Materials Science*
- Pathikrit Basu, Ph.D.  
*Computing and Mathematical Sciences*
- Raffaello Bianco, Ph.D.  
*Applied Physics and Materials Science*
- Osama Ramadan Ahmed Abdelrahman Bilal, Ph.D.  
*Mechanical and Civil Engineering*
- Luca Bonanomi, Ph.D.  
*Mechanical and Civil Engineering*
- Stella Brach, Ph.D.  
*Mechanical and Civil Engineering*
- Spencer Harrison Bryngelson, Ph.D.  
*Mechanical and Civil Engineering*
- Philip Camayd-Munoz, Ph.D.  
*Applied Physics and Materials Science*
- Vincenzo Capuano, Ph.D.  
*Aerospace*
- Paolo Celli, Ph.D.  
*Mechanical and Civil Engineering*
- Jinwoong Cha, Ph.D.  
*Mechanical and Civil Engineering*
- Chi Shing Chan, Ph.D.  
*Electrical Engineering*
- Yulu L. Chen, Ph.D.  
*Aerospace*
- Yuxin Chen, Ph.D.  
*Computing and Mathematical Sciences*
- Zhongtao Cheng, Ph.D.  
*Cherng Department of Medical Engineering*
- Scott Dawson, Ph.D.  
*Aerospace*
- Benedikt Leon Dorschner, Ph.D.  
*Mechanical and Civil Engineering*
- Joseph DuChene, Ph.D.  
*Applied Physics and Materials Science*
- Jin Ge, Ph.D.  
*Computing and Mathematical Sciences*
- Swarnava Ghosh, Ph.D.  
*Mechanical and Civil Engineering*
- Pilar Espinet Gonzalez, Ph.D.  
*Applied Physics and Materials Science*
- Bamdad Hosseini, Ph.D.  
*Computing and Mathematical Sciences*
- Ognjen Ilic, Ph.D.  
*Applied Physics and Materials Science*
- Julio Agustin Garcia Isla, Ph.D.  
*Cherng Department of Medical Engineering*
- Wilfried Jahn, Ph.D.  
*Aerospace*
- Taeyoon Jeon, Ph.D.  
*Applied Physics and Materials Science*
- Pankaj Kumar Jha, Ph.D.  
*Applied Physics and Materials Science*
- Joseph Jing, Ph.D.  
*Cherng Department of Medical Engineering*
- Andrew Joseph Keller, Ph.D.  
*Applied Physics and Materials Science*
- Jeannette Inge Kemmer, Ph.D.  
*Applied Physics and Materials Science*
- Anjul Khadria, Ph.D.  
*Cherng Department of Medical Engineering*
- Bohoon Kim, Ph.D.  
*Aerospace*
- Kyunam Kim, Ph.D.  
*Aerospace*
- Tae Hyun Kim, Ph.D.  
*Mechanical and Civil Engineering*
- Tae Woo Kim, Ph.D.  
*Cherng Department of Medical Engineering*
- Avinash Kumar, Ph.D.  
*Cherng Department of Medical Engineering*

- Shailabh Kumar, Ph.D.  
*Cherng Department of Medical Engineering*
- Angeliki Laskari, Ph.D.  
*Aerospace*
- Chengmingyue Li, Ph.D.  
*Cherng Department of Medical Engineering*
- Lijie Li, Ph.D.  
*Environmental Science and Engineering*
- Yang Li, Ph.D.  
*Aerospace*
- Jonghun Lim, Ph.D.  
*Environmental Science and Engineering*
- Xingyu Lin, Ph.D.  
*Environmental Science and Engineering*
- Anqi Liu Ph.D.  
*Computing & Mathematical Sciences*
- Kai Liu, Ph.D.  
*Environmental Science and Engineering*
- Quanying Liu, Ph.D.  
*James Boswell Postdoctoral Scholar in Computing and Mathematical Sciences*
- Yan Liu, Ph.D.  
*Electrical Engineering*
- Yuan Luo, Ph.D.  
*Cherng Department of Medical Engineering*
- Oisin Mac Aodha, Ph.D.  
*Electrical Engineering*
- Michaelle Mayalu, Ph.D.  
*Computing & Mathematical Sciences*
- Tewodros Mekonnen, Ph.D.  
*Computing & Mathematical Sciences*
- Juan Pedro Mendez Granado, Ph.D.  
*Aerospace*
- Seyed Mohammad Mirhosseini Niri, Ph.D.  
*KNI Postdoctoral Scholar in Applied Physics and Materials Science*
- Utkarsh Mital, Ph.D.  
*Mechanical and Civil Engineering*
- Kami Mohammadi, Ph.D.  
*Mechanical and Civil Engineering*
- Shuai Na, Ph.D.  
*Cherng Department of Medical Engineering*
- Joanna Nassar, Ph.D.  
*Cherng Department of Medical Engineering*
- Lars Petter Nilsson, Ph.D.  
*Mechanical and Civil Engineering*
- Antonio Palermo, Ph.D.  
*Cecil and Sally Drinkward Postdoctoral Scholar in Mechanical and Civil Engineering*
- Ambuj Pandey, Ph.D.  
*Computing & Mathematical Sciences*
- Jagabandhu Paul, Ph.D.  
*Computing & Mathematical Sciences*
- Alireza Ramezani, Ph.D.  
*Aerospace*
- Brian Ramirez, Ph.D.  
*Mechanical and Civil Engineering*
- Netanel Raviv, Ph.D.  
*Wally Baer and Jeri Weiss Postdoctoral Scholar in Computing and Mathematical Sciences*
- Hechen, Ren, Ph.D.  
*Applied Physics and Materials Science*
- Kevin Thomas Rosenberg, Ph.D.  
*Aerospace*
- Eleftheria Roumeli, Ph.D.  
*Mechanical and Civil Engineering*
- Korhan Sahin, Ph.D.  
*Aerospace*
- Erick Alvarez Salcedo, Ph.D.  
*Mechanical and Civil Engineering*
- Kevin Raymond Daniel Schmidmayer, Ph.D.  
*Mechanical and Civil Engineering*
- Byonghoon Seo, Ph.D.  
*Applied Physics and Materials Science*
- Elnaz Esmaeilzadeh Seylabi, Ph.D.  
*Mechanical and Civil Engineering*
- Sahil Shah, Ph.D.  
*Electrical Engineering*
- Nek Sharan, Ph.D.  
*Mechanical and Civil Engineering*
- Junhui Shi, Ph.D.  
*Cherng Department of Medical Engineering*
- Ye Shi, Ph.D.  
*Applied Physics and Materials Science*
- Radwanul H. Siddique, Ph.D.  
*Cherng Department of Medical Engineering*

- Alp Sipahigil, Ph.D.  
*Applied Physics and Materials Science*
- Melike Tuysuzoglu Sirlanci, Ph.D.  
*Computing & Mathematical Sciences*
- Jaimie Marie Stewart, Ph.D.  
*Computing & Mathematical Sciences*
- Myoung Gyun Suh, Ph.D.  
*Applied Physics and Materials Science*
- Giulia Tagliabue, Ph.D.  
*Applied Physics and Materials Science*
- Daniel Alexander Turk, Ph.D.  
*Aerospace*
- Katharina Urmann, Ph.D.  
*Environmental Science and Engineering*
- Nina Vaidya, Ph.D.  
*Applied Physics and Materials Science*
- Srikanth Venkata Tenneti, Ph.D.  
*Electrical Engineering*
- Benjamin Tommy Vest, Ph.D.  
*Applied Physics and Materials Science*
- Peng Wang, Ph.D.  
*Chemng Department of Medical Engineering*
- Yifan Wang, Ph.D.  
*Mechanical and Civil Engineering*
- Xiaoming Wei, Ph.D.  
*Chemng Department of Medical Engineering*
- Pin Chieh Wu, Ph.D.  
*Applied Physics and Materials Science*
- Zhiguang Wu, Ph.D.  
*Chemng Department of Medical Engineering*
- Heng Yang, Ph.D.  
*Applied Physics and Materials Science*
- Jiamiao Yang, Ph.D.  
*Chemng Department of Medical Engineering*
- Xu Yi, Ph.D.  
*Applied Physics and Materials Science*
- You Yu, Ph.D.  
*Chemng Department of Medical Engineering*
- Behrooz Yousefzadeh, Ph.D.  
*Mechanical and Civil Engineering*
- Qi Yu, Ph.D.  
*Computing and Matbematical Sciences*
- Xiaomei Zeng, Ph.D.  
*Resnick Sustainability Institute Prize Postdoctoral Scholar in Applied Physics and Materials Science*
- Jinjian Zhou, Ph.D.  
*Applied Physics and Materials Science*
- Zhun Zhou, Ph.D.  
*Mechanical and Civil Engineering*
- Alessandro Zocca, Ph.D.  
*Computing and Mathematical Sciences*

## Division of Geological and Planetary Sciences

John P. Grotzinger, *Ted and Ginger Jenkins Leadership Chair*  
Robert W. Clayton, *Divisional Academic Officer*  
Michael C. Gurnis, *Director, Seismological Laboratory*  
Paul O. Wennberg, *Director, Linde Center for Global Environmental Science*

### Professors Emeriti

Arden L. Albee, Ph.D.  
*Geology and Planetary Science*  
Clarence R. Allen, Ph.D.  
*Geology and Geophysics*  
Donald S. Burnett, Ph.D.  
*Nuclear Geochemistry*  
Charles Elachi, Ph.D.  
*Electrical Engineering and Planetary Science*  
Peter Goldreich, Ph.D.  
*Lee A. DuBridge Professor of Astrophysics and Planetary Physics*  
Donald V. Helmburger, Ph.D.  
*Smits Family Professor of Geophysics*  
Hiroo Kanamori, Ph.D.  
*John E. and Hazel S. Smits Professor of Geophysics*  
Duane O. Muhleman, Ph.D.  
*Planetary Science*  
Jason B. Saleeby, Ph.D.  
*Geology*  
Leon T. Silver, Ph.D.  
*W. M. Keck Foundation Professor for Resource Geology*  
Hugh P. Taylor Jr., Ph.D.  
*Robert P. Sharp Professor of Geology*  
Peter J. Wyllie, Ph.D., D.Sc.h.c.  
*Geology*

### Professors

Jess F. Adkins, Ph.D.  
*Smits Family Professor of Geochemistry and Global Environmental Science*  
Jean-Paul Ampuero Saenz, Ph.D.  
*Seismology*

Paul D. Asimow, Ph.D.  
*Eleanor and John R. McMillan Professor of Geology and Geochemistry*  
Jean-Philippe Avouac, Doctorat  
*Earle C. Anthony Professor of Geology and Mechanical and Civil Engineering*  
Geoffrey A. Blake, Ph.D.  
*Cosmochemistry and Planetary Science and Chemistry*  
Simona Bordoni, Ph.D.  
*Environmental Science and Engineering*  
Michael E. Brown, Ph.D.  
*Richard and Barbara Rosenberg Professor of Planetary Astronomy*  
Robert W. Clayton, Ph.D.  
*Geophysics*  
Bethany L. Ehlmann, Ph.D.  
*Planetary Science; Jet Propulsion Laboratory Research Scientist*  
John M. Eiler, Ph.D.  
*Robert P. Sharp Professor of Geology and Geochemistry*  
Kenneth A. Farley, Ph.D.  
*W. M. Keck Foundation Professor of Geochemistry*  
Woodward W. Fischer, Ph.D.  
*Geobiology*  
Christian Frankenberg, Ph.D.  
*Environmental Science and Engineering; Jet Propulsion Laboratory Research Scientist*  
John P. Grotzinger, Ph.D.  
*Fletcher Jones Professor of Geology*  
Michael C. Gurnis, Ph.D.  
*John E. and Hazel S. Smits Professor of Geophysics*  
Thomas H. Heaton, Ph.D.  
*Engineering Seismology*  
Andrew P. Ingersoll, Ph.D.  
*Planetary Science*  
Jennifer M. Jackson, Ph.D.  
*Mineral Physics*  
Joseph L. Kirschvink, Ph.D.  
*Nico and Marilyn Van Wingen Professor of Geobiology*  
Heather A. Knutson, Ph.D.  
*Planetary Science*  
Shrinivas R. Kulkarni, Ph.D.  
*George Ellery Hale Professor of Astronomy and Planetary Science; Director, Caltech Optical Observatories*

Michael P. Lamb, Ph.D.  
*Geology*

Nadia Lapusta, Ph.D.  
*Mechanical Engineering and Geophysics*

Jared R. Leadbetter, Ph.D.  
*Environmental Microbiology*

Dianne K. Newman, Ph.D.  
*Gordon H. Binder/Amgen Professor of Biology and Geobiology*

Victoria Orphan, Ph.D.  
*James Irvine Professor of Environmental Science and Geobiology*

George R. Rossman, Ph.D.  
*Professor of Mineralogy*

Tapio Schneider, Ph.D.  
*Theodore Y. Wu Professor of Environmental Science and Engineering; JPL Senior Research Scientist*

Alex L. Sessions, Ph.D.  
*Geobiology*

Mark Simons, Ph.D.  
*John W. and Herberta M. Miles Professor of Geophysics; Jet Propulsion Laboratory Chief Scientist*

David J. Stevenson, Ph.D.  
*Marvin L. Goldberger Professor of Planetary Science*

Joann M. Stock, Ph.D.  
*Geology and Geophysics*

Edward M. Stolper, Ph.D., D.Sc.h.c.  
*William E. Leonhard Professor of Geology*

Andrew F. Thompson, Ph.D.  
*Environmental Science and Engineering*

Victor C. Tsai, Ph.D.  
*Geophysics*

Michael M. Watkins, Ph.D.  
*Aerospace and Geophysics; Director of JPL*

Paul O. Wennberg, Ph.D.  
*R. Stanton Avery Professor of Atmospheric Chemistry and Environmental Science and Engineering*

Brian P. Wernicke, Ph.D.  
*Chandler Family Professor of Geology*

Yuk L. Yung, Ph.D.  
*Planetary Science; Jet Propulsion Laboratory Senior Research Scientist*

## Assistant Professors

Konstantin Batygin, Ph.D.  
*Planetary Science and Van Nuys Page Scholar*

Claire Bucholz, Ph.D.  
*Geology*

Jörn Callies, Ph.D.  
*Environmental Science and Engineering*

Francois Tissot, Ph.D.  
*Geochemistry*

Zhongwen Zhan, Ph.D.  
*Geophysics*

## Lecturers

Nathan Dalleska  
*Environmental Science and Engineering*

Stan Sander, Ph.D.  
*Environmental Science and Engineering*

## Research Professor

Egill Hauksson, Ph.D.  
*Geophysics*

## Visiting Associates

Piyush Agram, Ph.D.  
*Geophysics*

Oded Aharonson, Ph.D.  
*Planetary Science*

Jaehung Cho, Ph.D.  
*Geobiology*

Elizabeth Cochran, Ph.D.  
*Geophysics*

Abigail Fraeman, Ph.D.  
*Planetary Science*

Matthew Golombek, Ph.D.  
*Planetary Science*

Robert W. Graves, Ph.D.  
*Geophysics*

John M. Harris, Ph.D.  
*Geology*

Renyu Hu, Ph.D.  
*Planetary Science*

Kenneth W. Hudnut, Ph.D.  
*Geophysics*

Lucile M. Jones, Ph.D.  
*Geophysics*



Younghee Kim, Ph.D.  
*Geophysics*

Patrice Klein, Ph.D.  
*Environmental Science and Engineering*

Fan-Chi Lin, Ph.D.  
*Geophysics*

Junjie Liu, Ph.D.  
*Environmental Science and Engineering*

Yang Liu, Ph.D.  
*Geochemistry*

Daniel J. McCleese, Ph.D.  
*Planetary Science*

Charles Miller, Ph.D.  
*Environmental Science and Engineering*

Paul Nerenberg  
*Planetary Science*

Dimitri A. Papanastassiou, Ph.D.  
*Geochemistry*

Paul Rosen, Ph.D.  
*Geophysics*

Stanley P. Sander, Ph.D.  
*Planetary Science and Environmental Engineering Science*

Mark Swain, Ph.D.  
*Planetary Science*

Joao Teixeira, Ph.D.  
*Environmental Science and Engineering*

Geoffrey Toon, Ph.D.  
*Planetary Science*

Joan Valentine, Ph.D.  
*Geobiology*

Duane Waliser, Ph.D.  
*Planetary Science*

Kenneth Williford, Ph.D.  
*Geobiology*

Josh Willis, Ph.D.  
*Environmental Science and Engineering*

#### Members of the Professional Staff

Michael B. Baker, Ph.D.  
*Geology*

John R. Beckett, Ph.D.  
*Geology*

Yunbin Guan, Ph.D.  
*Geochemistry*

Chi Ma, Ph.D.  
*Geochemistry*

Sally Newman, Ph.D.  
*Planetary Science*

#### Postdoctoral Scholars

Elena Amador, Ph.D.  
*Planetary Science*

Stuart Bartlett, Ph.D.  
*Geochemistry*

Flavien Beaud, Ph.D.  
*Geology*

Alexander Beer, Ph.D.  
*Geology*

Quentin Brissaud, Ph.D.  
*Geophysics*

Johannes Buchen, Ph.D.  
*Geophysics*

Yair Cohen, Ph.D.  
*Environmental Science and Engineering*

Antoine Cremiere, Ph.D.  
*Geobiology*

Daniel Dar, Ph.D.  
*Geobiology*

Katherine de Kleer, Ph.D.  
*Planetary Science*

Jan de Leeuw, Ph.D.  
*Geology*

Joseph Fitzgerald, Ph.D.  
*Foster and Coco Stanback Postdoctoral Scholar in Global Environmental Science*

Valerie Fox, Ph.D.  
*Planetary Science*

Yonaton Goldsmith, Ph.D.  
*Geochemistry*

Christopher Grose, Ph.D.  
*Geophysics*

Spencer Hill, Ph.D.  
*Foster and Coco Stanback Postdoctoral Scholar in Global Environmental Science*

Jiashun Hu, Ph.D.  
*Geophysics*

Jinping Hu, Ph.D.  
*Geochemistry*

Vincent Humphrey, Ph.D.  
*Environmental Science and Engineering*

Miquela Ingalls, Ph.D.  
*Barr Foundation Postdoctoral Scholar in Geology*

Yamini Jangir, Ph.D.  
*Geobiology*

James Keane, Ph.D.  
*JCPA Prize Fellow in Planetary Science*

Matthaus Kiel, Ph.D.  
*Environmental Science and Engineering*

- Philipp Koehler, Ph.D.  
*Environmental Science and Engineering*
- Yang Lei, Ph.D.  
*Planetary Science*
- Cheng Li, Ph.D.  
*Planetary Science*
- Gen Li, Ph.D.  
*Geology*
- Zefeng Li, Ph.D.  
*Geophysics*
- Tien-Hao Liao, Ph.D.  
*Geochemistry*
- Yen Yu Lin, Ph.D.  
*Geophysics*
- Ke Liu, Ph.D.  
*Geochemistry*
- Xi Liu, Ph.D.  
*Geophysics*
- Simon Lock, Ph.D.  
*Planetary Science*
- Xavier Mangenot, Ph.D.  
*Geochemistry*
- Georgy Manucharyan, Ph.D.  
*Environmental Science and Engineering*
- Brad Markle, Ph.D.  
*Foster and Coco Stanback  
Postdoctoral Scholar in Global  
Environmental Science*
- Marco Mastrogiuseppe, Ph.D.  
*Planetary Science*
- Maria Paula Mateo  
Fernandez Caso, Ph.D.  
*Geology*
- Darcy McRose, Ph.D.  
*Geobiology*
- Ranjani Murali, Ph.D.  
*Geobiology*
- Sharon Newman, Ph.D.  
*Geology*
- Emily Newsom, Ph.D.  
*Environmental Science and Engineering*
- Lenka Novakova, Ph.D.  
*Environmental Science and Engineering*
- Sunyoung Park, Ph.D.  
*Texaco Prize Postdoctoral Scholar in  
Geophysics*
- Mary Peterson, Ph.D.  
*Geology*
- Alon Philoso, Ph.D.  
*Geobiology*
- Danielle Potocek, Ph.D.  
*Geobiology*
- Ted Present, Ph.D.  
*Geochemistry*
- Maria Raguso, Ph.D.  
*Planetary Science*
- William Rapin, Ph.D.  
*Planetary Science*
- Barbara Ratschbacher, Ph.D.  
*Geology*
- Zachary Ross, Ph.D.  
*Geophysics*
- Zhaoyi Shen, Ph.D.  
*Environmental Science and Engineering*
- Daan Speth, Ph.D.  
*Geobiology*
- Zhan Su, Ph.D.  
*Environmental Science and Engineering*
- Yuval Tal, Ph.D.  
*Geophysics*
- Xingchen Wang, Ph.D.  
*Geobiology*
- Daniel Weidendorfer, Ph.D.  
*Geochemistry*
- Reto Wijker, Ph.D.  
*Geobiology*
- Elise Wilkes, Ph.D.  
*Geobiology*
- James Worthington, Ph.D.  
*Barr Foundation Postdoc in Geology*
- Fabai Wu, Ph.D.  
*Geobiology*
- Wenbo Wu, Ph.D.  
*Geophysics*
- Lu Xu, Ph.D.  
*Environmental Science and Engineering*
- Chunquan Yu, Ph.D.  
*Geophysics*
- Hank Yu, Ph.D.  
*Geobiology*
- Zhaocheng Zeng, Ph.D.  
*Planetary Science*
- Xiyue Zhang, Ph.D.  
*Environmental Science and Engineering*
- Zhimeng Zhang, Ph.D.  
*Planetary Science*

#### Visitors

- Hao Cao, Ph.D.  
*Planetary Science*
- Haichao Chen, Ph.D.  
*Geophysics*
- Max Coleman, Ph.D.  
*Geochemistry*
- Katherine Dawson, Ph.D.  
*Geobiology*

Shana Goffredi, Ph.D.  
*Geobiology*

Murthy Gudipati, Ph.D.  
*Planetary Science*

Jessica Hinojosa, Ph.D.  
*Geochemistry*

Amy Hofmann, Ph.D.  
*Geochemistry*

Martha House, Ph.D.  
*Geology*

Robert Housley, Ph.D.  
*Geochemistry*

Chao Liu, Ph.D.  
*Planetary Science*

Zhu Liu, Ph.D.  
*Environmental Science and  
Engineering*

Devin McPhillips, Ph.D.  
*Geology*

Vijay Natraj, Ph.D.  
*Planetary Science*

Christopher Parkinson, Ph.D.  
*Planetary Science*

Alexis Pasulka, Ph.D.  
*Geobiology*

Uri Ryb, Ph.D.  
*Geochemistry*

Haley Sapers, Ph.D.  
*Geobiology*

Kunio Sayanagi, Ph.D.  
*Planetary Science*

Brandon Schmandt, Ph.D.  
*Geophysics*

Wolfgang Sturhahn, Ph.D.  
*Geophysics*

## Division of the Humanities and Social Sciences

Jean-Laurent Rosenthal, *Ronald and Maxine Linde Leadership Chair*  
Colin F. Camerer, *Executive Officer for the Social Sciences*  
Christopher R. Hitchcock, *Executive Officer for the Humanities*

### Professors Emeriti

Louis Breger, Ph.D.  
*Psychoanalytic Studies*  
John Brewer, Ph.D.  
*Eli and Edythe Broad Professor of History and Literature*  
David M. Grether, Ph.D.  
*Frank J. Gilloon Professor of Economics*  
Daniel J. Kevles, Ph.D.  
*J. O. and Juliette Koepfli Professor of the Humanities*  
Jenijoy La Belle, Ph.D.  
*English*  
John O. Ledyard, Ph.D., D.Lit.h.c.  
*Allen and Lenabelle Davis Professor of Economics and Social Sciences*  
Oscar Mandel, Ph.D.  
*Literature*  
Robert A. Rosenstone, Ph.D.  
*History*  
Thayer Scudder, Ph.D.  
*Anthropology*  
Annette J. Smith, Ph.D.  
*Literature*  
James F. Woodward, Ph.D.  
*J. O. and Juliette Koepfli Professor of the Humanities*

### Associate Professor Emeritus

Heinz E. Ellersieck, Ph.D.  
*History*

### Lecturers Emeriti

Lee F. Browne, M.S.  
*Education*  
Shirley A. Marneus, M.A.  
*Theater Arts*

### Professors

Ralph Adolphs, Ph.D.  
*Bren Professor of Psychology, Neuroscience, and Biology; Allen V. C. Davis and Lenabelle Davis Leadership Chair, Caltech Brain Imaging Center; Director, Caltech Brain Imaging Center*  
Marina Agranov, Ph.D.  
*Economics*  
R. Michael Alvarez, Ph.D.  
*Political Science*  
Kim C. Border, Ph.D.  
*Economics*  
Warren C. Brown, Ph.D.  
*History*  
Jed Z. Buchwald, Ph.D.  
*Doris and Henry Dreyfuss Professor of History*  
Colin F. Camerer, Ph.D.  
*Robert Kirby Professor of Behavioral Economics; T&C Chen Center for Social and Decision Neuroscience Leadership Chair; Director, T&C Chen Center for Social and Decision Neuroscience*  
Fiona Cowie, Ph.D.  
*Philosophy*  
Jaksa Cvitanic, Ph.D.  
*Richard N. Merkin Professor of Mathematical Finance; Director, Ronald and Maxine Linde Institute of Economic and Management Sciences*  
Tracy K. Dennison, Ph.D.  
*History*  
Frederick Eberhardt, Ph.D.  
*Philosophy*  
Federico M. Echenique, Ph.D.  
*Allen and Lenabelle Davis Professor of Economics*  
Jean E. Ensminger, Ph.D.  
*Edie and Lew Wasserman Professor of Social Sciences*  
Mordechai Feingold, Ph.D.  
*History*  
Kevin M. Gilmartin, Ph.D.  
*William R. Kenan, Jr., Professor of English; Dean of Undergraduate Students*  
Dehn Gilmore, Ph.D.  
*English*  
Kristine L. Haugen, Ph.D.  
*English*

Alexander V. Hirsch, Ph.D.  
*Political Science*

Christopher R. Hitchcock, Ph.D.  
*J. O. and Juliette Koepfli Professor of  
Philosophy*

Philip T. Hoffman, Ph.D.  
*Rea A. and Lela G. Axline Professor  
of Business Economics and Professor  
of History*

Jocelyn Holland, Ph.D.  
*German Studies*

Catherine Jurca, Ph.D.  
*English*

Jonathan N. Katz, Ph.D.  
*Kay Sugabara Professor of Social  
Sciences and Statistics*

D. Roderick Kiewiet, Ph.D.  
*Political Science*

Diana L. Kormos-Buchwald, Ph.D.  
*Robert M. Abbey Professor of  
History*

J. Morgan Kousser, Ph.D.  
*Professor of History and Social  
Science*

John P. O'Doherty, Ph.D.  
*Psychology*

Peter C. Ordeshook, Ph.D.  
*Political Science*

Thomas R. Palfrey III, Ph.D.  
*Flintridge Foundation Professor of  
Economics and Political Science*

George Pigman III, Ph.D.  
*English*

Charles R. Plott, Ph.D.  
*Doctor of Letters, honoris causa  
William D. Hacker Professor of  
Economics and Political Science*

Steven R. Quartz, Ph.D.  
*Philosophy*

Antonio Rangel, Ph.D.  
*Bing Professor of Neuroscience,  
Behavioral Biology, and Economics*

Richard W. Roll, Ph.D.  
*Linde Institute Professor of Finance*

Jean-Laurent Rosenthal, Ph.D.  
*Rea A. and Lela G. Axline Professor  
of Business Economics; Ronald  
and Maxine Linde Leadership  
Chair, Division of the Humanities  
and Social Sciences*

Kota Saito, Ph.D.  
*Economics*

Robert P. Sherman, Ph.D.  
*Economics and Statistics*

Matthew S. Shum, Ph.D.  
*J. Stanley Johnson Professor of  
Economics*

Cindy A. Weinstein, Ph.D.  
*Eli and Edythe Broad Professor of  
English*

Nicolas Wey-Gomez, Ph.D.  
*History*

#### **Associate Professor**

Michael J. Ewens, Ph.D.  
*Economics*

#### **Assistant Professors**

Laura Doval, Ph.D.  
*Economics*

Maura D. Dykstra, Ph.D.  
*History*

Michael B. Gibilisco, Ph.D.  
*Political Science*

Jennifer A. Jahner, Ph.D.  
*English*

Lawrence J. Jin, Ph.D.  
*Finance*

Gabriel Lopez-Moctezuma, Ph.D.  
*Political Science*

Dean Mobbs, Ph.D.  
*Psychology*

Luciano Pomatto, Ph.D.  
*Economics*

Charles T. Sebens, Ph.D.  
*Philosophy*

Omer Tamuz, Ph.D.  
*Economics*

Yi Xin, Ph.D.  
*Economics*

#### **Ahmanson Postdoctoral Instructor**

Michael Savage, Ph.D.  
*History*

#### **Jessen Postdoctoral Instructor**

Melanie M. Sherazi, Ph.D.  
*English*

#### **Weisman Postdoctoral Instructor**

Boris Babic, Ph.D.  
*Philosophy*

**Postdoctoral Instructor in the Humanities**

Leah Klement, Ph.D.  
*Comparative Literature*

**Lecturers**

Andreas Aebi, Ph.D.  
*German*  
Gloria Arjona, Ph.D.  
*Spanish*  
Christine M. Daley, Ph.D.  
*English*  
Jennifer L. Factor, M.A.  
*English*  
Megumi Fujio, M.A.  
*Japanese*  
Daniel A. Garcia, M.A.  
*Spanish*  
Merrill Joan Gerber, M.A.  
*Creative Writing*  
Susanne E. Hall, Ph.D.  
*English*  
Ritsuko Hirai Toner, Ph.D.  
*Japanese*  
Richard E. Kipling, M.A.  
*Journalism*  
Daniel Lewis, Ph.D.  
*History*  
Trevor C. Merrill, Ph.D.  
*French*  
Feng-Ying Ming, Ph.D.  
*Chinese*  
Thomas A. Neenan, M.F.A.  
*Music*  
Christiane H. Orcel, Ph.D.  
*French*  
Xiangyun Wang, Ph.D.  
*Chinese*  
Kenneth J. Winston, Ph.D.  
*Economics*  
Juliann K. Wolfgram, Ph.D.  
*Art History*

**Moore Distinguished Scholars**

Paolo Galluzzi, Ph.D.  
*History of Science*  
Joseph Y. Halpern, Ph.D.  
*Mathematics*

**Eleanor Searle Visiting Professor**

Gabriel Motzkin, Ph.D.  
*History*

**Research Assistant Professor**

Cindy Hagan, Ph.D.  
*Psychology*

**Visiting Professors**

Bradford Cornell, Ph.D.  
*Finance*  
Steve Hindle, Ph.D.  
*History*

**Visiting Associates**

Jasmina Arifovic, Ph.D.  
*Economics*  
Peter L. Bossaerts, Ph.D.  
*Finance*  
Odilon Camara, Ph.D.  
*Economics*  
Eric de Bodt, Ph.D.  
*Finance*  
John L. Heilbron, Ph.D.  
*History*  
Jinhee Jo, Ph.D.  
*Political Science*  
Anne J. Kox, Ph.D.  
*History*  
Robert C. Ritchie, Ph.D.  
*History*  
Mary Elise Sarotte, Ph.D.  
*History*  
Mark J. Schiefsky, Ph.D.  
*Philosophy*  
Wolfram Schultz, Ph.D.  
*Neuroscience*  
Kyoungwon Seo, Ph.D.  
*Economics*  
Erik Snowberg, Ph.D.  
*Economics and Political Science*  
Damian Stanley, Ph.D.  
*Neuroeconomics*  
Noel M. Swerdlow, Ph.D.  
*History*  
Ann Tank, Ph.D.  
*Economics*  
Haiyan Wu, Ph.D.  
*Psychology*

### Visitors

Julien Dubois, Ph.D.

*Neuroscience*

Laura Harrison, Ph.D.

*Neuroscience*

Uri M. Maoz, Ph.D.

*Neural Computation*

### Member of the Professional Staff

Ze'ev Rosenkranz, M.L.S.

### Postdoctoral Scholars

Miguel Artola-Blanco, Ph.D.

*Economic History*

Devdepta Bose, Ph.D.

*Psychology and Economics*

Caroline J. Charpentier, Ph.D.

*Neuroscience*

Jeffrey A. Cockburn, Ph.D.

*Neuroscience*

Jaron T. Colas, Ph.D.

*Neuroscience*

Qian Cui, Ph.D.

*Social and Affective Neuroscience*

Bowen J. Fung, Ph.D.

*Computational Affective*

*Neuroscience*

Kiyohito Iigaya, Ph.D.

*Neuroscience*

Umit Keles, Ph.D.

*Neuroscience*

Jeongbin Kim, Ph.D.

*Economics*

Dorit Kliemann, Ph.D.

*Cognitive Neuroscience*

Vincent Y. Man, Ph.D.

*Neuroscience*

Maxwell Mansolf, Ph.D.

*Psychology*

Tanaz Molapour, Ph.D.

*Computational Affective*

*Neuroscience*

Sven Nolte, Ph.D.

*Neuroscience*

Omar D. Perez, Ph.D.

*Neuroscience*

Anita Tusche, Ph.D.

*Neuroeconomics*

Danielle L. Wiggins, Ph.D.

*History*

Tomislav D. Zbozinek, Ph.D.

*Affective Neuroscience*

## Division of Physics, Mathematics and Astronomy

Fiona A. Harrison, *Kent and Joyce Kresa Leadership Chair*  
 S. George Djorgovski, *Executive Officer for Astronomy; Director, Center for Data Driven Discovery*  
 Elena Mantovan, *Executive Officer for Mathematics*  
 Gil Refael, *Executive Officer for Physics*  
 Sunil Golwala, *Director, Caltech Submillimeter Observatory*  
 Hiroshi Ooguri, *Director, Burke Institute for Theoretical Physics*  
 Thomas A. Prince, *Director, W.M. Keck Institute for Space Studies; Allen V.C. Davis and Lenabelle Davis Leadership Chair, Keck Institute for Space Studies*  
 Anthony C. S. Readhead, *Director, Owens Valley Radio Observatory*  
 B. Thomas Soifer, *Director, Spitzer Science Center*  
 Nai-Chang Yeh, *Fletcher Jones Foundation Codirector, Kavli Nanoscience Institute*  
 George Helou, *Executive Director, Infrared Processing and Analysis Center*  
 David H. Reitze, *Executive Director, LIGO Laboratory (Laser Interferometer Gravitational-Wave Observatory)*  
 John P. Preskill, *Allen V.C. Davis and Lenabelle Davis Leadership Chair, Institute for Quantum Science and Technology*  
 Jonas Zmuidzinas, *Director, Caltech Optical Observatories*

### Professors Emeriti

Michael Aschbacher, Ph.D.  
*Shaler Arthur Hanisch Professor of Mathematics*  
 Barry C. Barish, Ph.D., Laurea h.c., Nobel Laureate  
*Ronald and Maxine Linde Professor of Physics*  
 Felix H. Boehm, Ph.D.  
*William L. Valentine Professor of Physics*

Judith G. Cohen, Ph.D.  
*Kate Van Nuys Page Professor of Astronomy*  
 Marshall H. Cohen, Ph.D.  
*Astronomy*  
 Michael C. Cross, Ph.D.  
*Theoretical Physics*  
 Richard A. Dean, Ph.D.  
*Mathematics*  
 James P. Eisenstein, Ph.D.  
*Frank J. Roshek Professor of Physics and Applied Physics*  
 Steven C. Frautschi, Ph.D.  
*Theoretical Physics*  
 Murray Gell-Mann, Ph.D., Sc.D.h.c., D.Sc.h.c., Nobel Laureate  
*Robert Andrews Millikan Professor of Theoretical Physics*  
 Peter M. Goldreich, Ph.D.  
*Lee A. DuBridge Professor of Astrophysics and Planetary Physics*  
 David L. Goodstein, Ph.D.  
*Frank J. Gilloon Distinguished Teaching and Service Professor and Professor of Physics and Applied Physics*  
 Gary A. Lorden, Ph.D.  
*Mathematics*  
 W. A. J. Luxemburg, Ph.D.  
*Mathematics*  
 Thomas G. Phillips, D.Phil.  
*John D. MacArthur Professor of Physics*  
 Anthony C. Readhead, Ph.D.  
*Robinson Professor of Astronomy*  
 Anneila I. Sargent, Ph.D., D.Sc.h.c.  
*Ira S. Bowen Professor of Astronomy*  
 Maarten Schmidt, Ph.D., Sc.D.  
*Francis L. Moseley Professor of Astronomy*  
 John H. Schwarz, Ph.D.  
*Harold Brown Professor of Theoretical Physics*  
 Nicholas Z. Scoville, Ph.D.  
*Francis L. Moseley Professor of Astronomy*  
 Barry M. Simon, Ph.D., D.Sc.h.c.  
*IBM Professor of Mathematics and Theoretical Physics*  
 B. Thomas Soifer, Ph.D.  
*Harold Brown Professor of Physics*  
 Kip S. Thorne, Ph.D., D.Sc.h.c., D.h.c., L.H.D.h.c., Nobel Laureate  
*Richard P. Feynman Professor of Theoretical Physics*



Rochus E. Vogt, Ph.D.  
*R. Stanton Avery Distinguished  
Service Professor and Professor of  
Physics*  
David B. Wales, Ph.D.  
*Mathematics*  
Ward Whaling, Ph.D.  
*Physics*  
Richard M Wilson, Ph.D.  
*Mathematics*

#### Senior Research Associate Emeritus

Petr Vogel, Ph.D.  
*Physics*

#### Professors

Rana Adhikari, Ph.D.  
*Physics*  
Jason Alicea, Ph.D.  
*Theoretical Physics*  
James J. Bock, Ph.D.  
*Physics*  
Fernando Guadalupe Dos Santos  
Lins Brandão, Ph.D.  
*Bren Professor of Theoretical Physics*  
Yanbei Chen, Ph.D.  
*Physics*  
S. George Djorgovski, Ph.D.  
*Astronomy*  
Bradley W. Filippone, Ph.D.  
*Francis L. Moseley Professor of  
Physics*  
Matthias Flach, Ph.D.  
*Mathematics*  
Rupert Frank, Ph.D.  
*Mathematics*  
Sunil Golwala, Ph.D.  
*Physics*  
Thomas Graber, Ph.D.  
*Mathematics*  
Sergei Gukov, Ph.D.  
*Theoretical Physics and  
Mathematics*  
Fiona A. Harrison, Ph.D.,  
D.techn.h.c.  
*Benjamin M. Rosen Professor of  
Physics*  
Lynne Anne Hillenbrand, Ph.D.  
*Astronomy*  
David G. Hitlin, Ph.D.  
*Physics*  
Philip F. Hopkins, Ph.D.  
*Theoretical Astrophysics*

Andrew W. Howard, Ph.D.

*Astronomy*  
David Hsieh, Ph.D.  
*Physics*

Anton Kapustin, Ph.D.  
*Earle C. Anthony Professor  
of Theoretical Physics and  
Mathematics*

Nets Katz, Ph.D.  
*International Business Machines  
Professor of Mathematics*

Alexander S. Kechris, Ph.D., D.h.c.  
*Mathematics*

H. Jeff Kimble, Ph.D., D.Sc.h.c.  
*William L. Valentine Professor of  
Physics*

Alexei Kitaev, Ph.D.  
*Ronald and Maxine Linde  
Professor of Theoretical Physics &  
Mathematics*

Shrinivas R. Kulkarni, Ph.D.  
*George Ellery Hale Professor of  
Astronomy and Planetary Science*

Kenneth G. Libbrecht, Ph.D.  
*Physics*

Nikolai G. Makarov, Ph.D.  
*Richard Merkin Distinguished  
Professor of Mathematics*

Elena Mantovan, Ph.D.  
*Mathematics*

Matilde Marcolli, Ph.D.  
*Mathematics*

Vladimir Markovic, Ph.D.  
*John D. MacArthur Professor of  
Mathematics*

D. Christopher Martin, Ph.D.  
*Physics*

Olexei Motrunich, Ph.D.  
*Theoretical Physics*

Harvey B. Newman, Sc.D, D.h.c.,  
*Marvin L. Goldberger Professor of  
Physics.*

Yi Ni, Ph.D.  
*Mathematics*

Hiroshi Ooguri, Ph.D.  
*Fred Kavli Professor of Theoretical  
Physics and Mathematics*

Oskar J. Painter, Ph.D.  
*John G. Braun Professor of Applied  
Physics and Physics*

Ryan Patterson, Ph.D.  
*Physics*

Robert B. Phillips, Ph.D.  
*Fred and Nancy Morris Professor  
of Biophysics, Biology and Physics*

E. Sterl Phinney, Ph.D.  
*Theoretical Astrophysics*

H. David Politzer, Ph.D., Nobel  
*Laureate*  
*Richard Chace Tolman Professor of  
Theoretical Physics*

Frank C. Porter, Ph.D.  
*Physics*

John P. Preskill, Ph.D.  
*Richard P. Feynman Professor of  
Theoretical Physics*

Thomas A. Prince, Ph.D.  
*Ira S. Bowen Professor of Physics*

Maksym Radziwill, Ph.D.  
*Mathematics*

Eric M. Rains, Ph.D.  
*Mathematics*

Dinakar Ramakrishnan, Ph.D.  
*Taussky-Todd-Lonergan Professor  
of Mathematics*

Gil Refael, Ph.D.  
*Taylor W. Lawrence Professor of  
Theoretical Physics*

Thomas F. Rosenbaum, Ph.D.  
*Physics*

Michael L. Roukes, Ph.D.  
*Frank J. Roshek Professor of Physics,  
Applied Physics and Bioengineering*

Axel Scherer, Ph.D.  
*Bernard A. Neches Professor of  
Electrical Engineering, Applied  
Physics and Physics*

Maria Spiropulu, Ph.D.  
*Shang-Yi Ch'en Professor of Physics*

Charles C. Steidel, Ph.D.  
*Lee A. DuBridge Professor of  
Astronomy*

Edward C. Stone, Ph.D., D.Sc.h.c.  
*David W. Morrisroe Professor of  
Physics*

Saul Teukolsky, Ph.D.  
*Robinson Professor of Theoretical  
Astrophysics*

Alan J. Weinstein, Ph.D.  
*Physics*

Mark B. Wise, Ph.D.  
*John A. McCone Professor of High  
Energy Physics*

Nai-Chang Yeh, Ph.D.  
*Physics*

Xinwen Zhu, Ph.D.  
*Mathematics*

Jonas Zmuidzinas, Ph.D.  
*Merle Kingsley Professor of Physics*

## Associate Professors

Dimitri P.Q. Mawet, Ph.D.  
*Astronomy*

Xie Chen, Ph.D.  
*Theoretical Physics*

## Assistant Professors

Clifford Cheung, Ph.D.  
*Theoretical Physics*

Manuel A. Endres, Ph.D.  
*Physics*

James Fuller, Ph.D.  
*Theoretical Astrophysics*

Gregg W. Hallinan, Ph.D.  
*Astronomy*

Nicholas R. Hutzler, Ph.D.,  
*Physics*

Philip Isett, Ph.D.  
*Mathematics*

Mansi Kasliwal, Ph.D.  
*Astronomy*

Evan Kirby, Ph.D.  
*Astronomy*

David Simmons-Duffin, Ph.D.  
*Theoretical Physics*

Omer Tamuz, Ph.D.  
*Economics & Mathematics*

## Instructors

Zavosh Amir-Khosravi, Ph.D.  
*Olga Taussky & John Todd,  
Mathematics*

Justin Campbell, Ph.D.  
*Harry Bateman, Mathematics*

Lei Chen, Ph.D.  
*Noether, Mathematics*

Polona Durcik, Ph.D.  
*Harry Bateman, Mathematics*

Oleg Ivrii, Ph.D.  
*Olga Taussky & John Todd,  
Mathematics*

Kirill Lazebnik, Ph.D.  
*Harry Bateman, Mathematics*

Aristotelis Panagiotopoulos, Ph.D.  
*Harry Bateman, Mathematics*

Sarthak Parikh, Ph.D.  
*Olga Taussky & John Todd,  
Mathematics*

Peter Smillie, Ph.D.  
*Harry Bateman, Mathematics*

Daxin Xu, Ph.D.  
*Harry Bateman, Mathematics*

Alexander Yom Din, Ph.D.  
*Olga Taussky and John Todd,*  
*Mathematics*

### Lecturers

Eric D. Black, Ph.D.  
*Physics*  
Ashay Burungale, Ph.D.  
*Mathematics*  
Sergi R. Hildebrandt, Ph.D.  
*Physics*  
Benjamin Krause, Ph.D.  
*Mathematics*  
Hien T. Nguyen, Ph.D.  
*Physics*  
You Qi, Ph.D.  
*Mathematics*  
Frank Rice, M.S.  
*Physics*

### Research Professors/ Senior Research Associates

Sean Carroll, Ph.D.  
*Physics*  
Bertrand Echenard, Ph.D.  
*Physics*  
Matthew Graham, Ph.D.  
*Astronomy*  
George Helou, Ph.D.  
*Physics*  
Richard A. Mewaldt, Ph.D.  
*Physics*  
David H. Reitze, Ph.D.  
*Physics*  
Mark Scheel, Ph.D.  
*Physics*  
Daniel M. Silevitch, Ph.D.  
*Physics*

### Research Assistant Professors/ Senior Research Fellows

Ashay Burungale, Ph.D.  
*Scott Russell Johnson, Mathematics*  
You Qi, Ph.D.  
*Sberman Fairchild, Mathematics*  
Jack Sayers, Ph.D.  
*Physics*

### Senior Faculty Associates

Charles Beichman, Ph.D.  
*Astronomy*  
Curt Cutler, Ph.D.  
*Physics*

### Faculty Associate

Todd Gaier, Ph.D.  
*Physics*

### Visiting Associates

Jie Bao, Ph.D.  
*Physics*  
James Bartlett, Ph.D.  
*Physics*  
Charles Matt Bradford, Ph.D.  
*Physics*  
Asantha Cooray, Ph.D.  
*Physics*  
Stanley Deser, Ph.D.  
*Theoretical Physics*  
Clive Dickinson, Ph.D.  
*Astronomy*  
Olivier Doré, Ph.D.  
*Theoretical Astrophysics*  
Richard Ellis, Ph.D.  
*Astronomy*  
Yejun Feng, Ph.D.  
*Physics*  
Chad Galley, Ph.D.  
*Physics*  
Paul Goldsmith, Ph.D.  
*Physics*  
Sergi R. Hildebrandt, Ph.D.  
*Astronomy*  
Christopher Hirata, Ph.D.  
*Physics*  
Roy J. Holt, Ph.D.  
*Theoretical Physics*  
Joseph W. Lazio, Ph.D.  
*Astronomy*  
Dariusz Lis, Ph.D.  
*Physics*  
Martino Lupini, Ph.D.  
*Mathematics*  
Walid Majid, Ph.D.  
*Experimental Astrophysics*  
Simona Mei, Ph.D.  
*Physics*  
David Meier  
*Astronomy*  
Hien T. Nguyen, Ph.D.  
*Physics*

Shouleh Nikzad, Ph.D.  
*Astrophysics*  
 Roger O'Brien, Ph.D.  
*Physics*  
 David Poland, Ph.D.  
*Theoretical Physics*  
 Anamparambu N. Ramaprakash,  
 Ph.D.  
*Astrophysics*  
 Michael Ramsey-Musolf, Ph.D.  
*Physics*  
 Vikram Ravi, Ph.D.  
*Physics*  
 Jason Rhodes, Ph.D.  
*Astronomy*  
 Graca Rocha, Ph.D.  
*Physics*  
 Ira Rothstein, Ph.D.  
*Theoretical Physics*  
 John Elie Sader, Ph.D.  
*Physics*  
 Michael Seiffert, Ph.D.  
*Astronomy*  
 Piotr Sulkowski, Ph.D.  
*Physics*  
 Kohji Tsumura, Ph.D.  
*Physics*  
 Michele Vallisneri, Ph.D.  
*Physics*  
 Felix von Oppen, Ph.D.  
*Theoretical Physics*  
 Michael Werner, Ph.D.  
*Astrophysics*  
 Mark E. Wiedenbeck, Ph.D.  
*Physics*

### Members of the Professional Staff

Rachel Akeson, Ph.D.  
 Stuart Anderson, Ph.D.  
 Philip Appleton, Ph.D.  
 Jessica Arlett, Ph.D.  
 Lee Armus, Ph.D.  
 Thomas Barlow, Ph.D.  
 Bruce Berriman, Ph.D.  
 James Kent Blackburn, Ph.D.  
 Andrew Boden, Ph.D.  
 Julian Bunn, Ph.D.  
 Peter L. Capak, Ph.D.  
 Sean J. Carey, Ph.D.  
 Ranga Ram Chary, Ph.D.  
 David R. Ciardi, Ph.D.  
 Kieran A. Cleary, Ph.D.  
 Christina M. S. Cohen, Ph.D.  
 Walter R. Cook, Ph.D.  
 Dennis C. Coyne, M.S.

Alan C. Cummings, Ph.D.  
 Roc Cutri, Ph.D.  
 Richard Dekany, Ph.D.  
 Chung Wah (Warren) Fon, Ph.D.  
 Valery Frolov, Ph.D.  
 Joseph A. Giaime, Ph.D.  
 Carl Grillmair, Ph.D.  
 Eric K. Gustafson, Ph.D.  
 Keita Kawabe, Ph.D.  
 Davy Kirkpatrick, Ph.D.  
 Michael Landry, Ph.D.  
 Albert Lazzarini, Ph.D.  
 Janice Lee, Ph.D.  
 Richard A. Leske, Ph.D.  
 William Mahoney, Ph.D.  
 Keith Matthews, M.S.  
 Joseph Mazzarella, Ph.D.  
 Gregory Mendell, Ph.D.  
 Patrick Morris, Ph.D.  
 J. E. Brian O'Reilly, Ph.D.  
 Fredrick J. Raab, Ph.D.  
 Luisa M. Rebull, Ph.D.  
 Reed Riddle, Ph.D.  
 Norna A. Robertson, Ph.D.  
 Gary H. Sanders, Ph.D.  
 Richard Savage, Ph.D.  
 Patrick Shopbell, Ph.D.  
 David Shupe, Ph.D.  
 Daniel Sigg, Ph.D.  
 Nancy Silbermann, Ph.D.  
 Roger Smith, B.E.  
 Gordon Squires, Ph.D.  
 Harry Teplitz, Ph.D.  
 Schuyler Van Dyk, Ph.D.  
 Yun Wang, Ph.D.  
 David P. Woody, Ph.D.  
 Hiroaki Yamamoto, Ph.D.  
 Lin Yan, Ph.D.  
 Ren-Yuan Zhu, Ph.D.  
 Michael Zucker, Ph.D.  
 John Zweizig, Ph.D.

### Senior Postdoctoral Scholars

Kirk Bays, Ph.D.  
*Physics*  
 Roland de Putter, Ph.D.  
*Physics*  
 Tomonari Miyashita, Ph.D.  
*Physics*  
 Esayas Shume, Ph.D.  
*Astronomy*  
 Si Xie, Ph.D.  
*Physics*

## Postdoctoral Scholars

- Scott Adams, Ph.D.  
*Astronomy*
- Anahita Alavi, Ph.D.  
*Astronomy*
- Victor Albert, Ph.D.  
*Lee DuBridge, Theoretical Physics*
- Igor Andreoni, Ph.D.  
*Astronomy*
- Ana Asenjo-Garcia, Ph.D.  
*Physics*
- Yuntao Bai, Ph.D.  
*Sherman Fairchild, Theoretical Physics*
- Ritoban Basu Thakur, Ph.D.  
*Physics*
- Yuval Baum, Ph.D.  
*Theoretical Physics*
- Jean-Baptiste Béguin, Ph.D.  
*Physics*
- Nadejda Blagorodnova Mujortova, Ph.D.  
*Astronomy*
- Carl Blair, Ph.D.  
*Physics*
- Clément Bonnerot, Ph.D.  
*Theoretical Astrophysics*
- Murray Brightman, Ph.D.  
*Physics*
- Michael Buchhold, Ph.D.  
*Physics*
- Maria Charisi, Ph.D.  
*Astronomy*
- Elodie Choquet, Ph.D.  
*Hubble, Astronomy*
- Riley Connors, Ph.D.  
*Physics*
- David Cook, Ph.D.  
*Astrophysics*
- Alexander Cooper-Roy, Ph.D.  
*Physics*
- Michael Coughlin, Ph.D.  
*David and Ellen Lee, Physics*
- Jacob Covey, Ph.D.  
*Richard Chace Tolman, Physics*
- Abigail Tinney Crites, Ph.D.  
*NSF, Physics*
- Behnam Darvish Sarvestani, Ph.D.  
*Physics*
- Iary Davidzon, Ph.D.  
*Astronomy*
- Mykola Dedushenko, Ph.D.  
*Sherman Fairchild, Theoretical Physics*
- Fabien Defrance, Ph.D.  
*Physics*
- Jacques Robert Delorme, Ph.D.  
*Astronomy*
- Jennifer Driggers, Ph.D.  
*Physics*
- Alberto de la Torre Duran, Ph.D.  
*Physics*
- Hannah Earnshaw, Ph.D.  
*Physics*
- Johannes Eichholz, Ph.D.  
*Physics*
- Andreas Faisst, Ph.D.  
*Astronomy*
- Philippe Faist, Ph.D.  
*Theoretical Physics*
- Kevin Fogarty, Ph.D.  
*Troesb, Astronomy*
- Ulf Christoffer Fremling, Ph.D.  
*Astronomy*
- Javier Garcia, Ph.D.  
*Physics*
- Shea Garrison-Kimmel, Ph.D.  
*Einstein, Theoretical Astrophysics*
- Davide Gerosa, Ph.D.  
*Einstein, Theoretical Astrophysics*
- Daniel Goldstein, Ph.D.  
*Hubble, Physics*
- Arbel Haim, Ph.D.  
*Sherman Fairchild, Theoretical Physics*
- Erika Hamden, Ph.D.  
*R.A. & G.B. Millikan, Physics*
- Matthew Hankins, Ph.D.  
*Astronomy*
- Kevin Hardegree-Ullman, Ph.D.  
*Astronomy*
- François Hebert, Ph.D.  
*Theoretical Astrophysics*
- Marianne Heida, Ph.D.  
*Astrophysics*
- Shoubaneh Hemmati, Ph.D.  
*Astrophysics*
- Nina Hernitschek, Ph.D.  
*Astronomy*
- Keri Hoadley, Ph.D.  
*David & Ellen Lee, Physics*
- Po-Shen Hsin, Ph.D.  
*Theoretical Physics*
- Yichen Huang, Ph.D.  
*Physics*
- Cameron Hummels, Ph.D.  
*NSF, Astronomy*
- Suoqing Ji, Ph.D.  
*Sherman Fairchild, Theoretical Astrophysics*
- Shenghan Jiang, Ph.D.  
*Theoretical Physics*

- Tomas Jochym O'Connor, Ph.D.  
*Theoretical Physics*
- Brittany Kamai, Ph.D.  
*Physics*
- Kohtaro Kato, Ph.D.  
*Theoretical Physics*
- Benjamin Krause, Ph.D.  
*NSF, Mathematics*
- Richard Kueng, Ph.D.  
*Physics*
- Michael Kuhn, Ph.D.  
*Astronomy*
- Rahul Kumar, Ph.D.  
*Physics*
- Gillian Kyne, Ph.D.  
*Physics*
- Astrid Lamberts, Ph.D.  
*Theoretical Astrophysics*
- Nicholas Laurita, Ph.D.  
*Physics*
- Bomee Lee, Ph.D.  
*Astronomy*
- Eve Lee, Ph.D.  
*Sherman Fairchild, Theoretical Physics*
- Xiang Li, Ph.D.  
*Physics*
- Dexu Lin, Ph.D.  
*Physics*
- Ying-Hsuan Lin, Ph.D.  
*Theoretical Physics*
- Nan Lu, Ph.D.  
*Richard Chace Tolman, Physics*
- Wenbin Lu, Ph.D.  
*David & Ellen Lee, Theoretical Astrophysics*
- Angelo Lucia, Ph.D.  
*Sherman Fairchild, Theoretical Physics*
- Yiqiu Ma, Ph.D.  
*Theoretical Astrophysics*
- Thomas Massinger, Ph.D.  
*Physics*
- Anne Marie Medling, Ph.D.  
*Hubble, Astronomy*
- David Meltzer, Ph.D.  
*Sherman Fairchild, Theoretical Physics*
- Sean Mills, Ph.D.  
*Astronomy*
- Kunal Mooley, Ph.D.  
*Astronomy*
- Jordan Moxon, Ph.D.  
*Theoretical Astrophysics*
- Charles McElroy, Ph.D.  
*Astronomy*
- Jessica McIver, Ph.D.  
*Physics*
- Lina Necib, Ph.D.,  
*Sherman Fairchild, Theoretical Physics*
- Natalie Paquette, Ph.D.  
*Sherman Fairchild, Theoretical Physics*
- Cristian Peña Herrera, Ph.D.  
*Lederman, Physics*
- Yang Peng, Ph.D.  
*Sherman Fairchild, Theoretical Physics*
- Eric Perlmutter, Ph.D.  
*Theoretical Physics*
- Eric Petigura, Ph.D.  
*Sagan, Astronomy*
- Abhishek Prakash, Ph.D.  
*Astronomy*
- Zhongzhong Qin, Ph.D.  
*Physics*
- Ewa Rej, Ph.D.  
*Troesh, Physics*
- Jonathan Richardson, Ph.D.  
*Physics*
- Alon Ron, Ph.D.  
*Troesh, Physics*
- Arpita Roy, Ph.D.  
*R.A. & G.B. Millikan, Astronomy*
- Garreth Ruane, Ph.D.  
*NSF, Astronomy*
- Wesley Sacher, Ph.D.  
*Physics*
- Mehmet Burak Sahinoglu, Ph.D.  
*Theoretical Physics*
- Grant Salton, Ph.D.  
*Theoretical Physics*
- Prashant Saraswat, Ph.D.  
*Theoretical Physics*
- Alessandro Schillaci, Ph.D.  
*Physics*
- Kyle Seyler, Ph.D.  
*R.A. & G.B. Millikan, Physics*
- Neil Sinclair, Ph.D.  
*Physics*
- Kevin Slagle, Ph.D.  
*Sherman Fairchild, Theoretical Physics*
- Simon Slutsky, Ph.D.  
*Physics*
- Mikhail Solon, Ph.D.  
*McCone, Theoretical Physics*
- Bryan Steinbach, Ph.D.  
*Physics*
- Josephine Suh, Ph.D.  
*Theoretical Physics*

- Ling Sun, Ph.D.  
*Physics*
- Christopher M. Swank, Ph.D.  
*Physics*
- Stephen Taylor, Ph.D.  
*Physics*
- Alex Thomson, Ph.D.  
*Sherman Fairchild, Theoretical  
Physics*
- Everard Van Nieuwenburg, Ph.D.  
*Theoretical Physics*
- Joannes van Roestel, Ph.D.  
*Physics*
- Jean-Roch Vlimant, Ph.D.  
*Physics*
- Andrew Wade, Ph.D.  
*Physics*
- Coral Wheeler, Ph.D.  
*Astronomy*
- Quanzhi Ye, Ph.D.  
*Astronomy*
- Marie Ygouf, Ph.D.  
*Astronomy*
- Zhongxu Zhai, Ph.D.  
*Astronomy*
- Michael Greene  
*Director for Communications and  
Education*
- Cozette M. Hart  
*Director for Human Resources*
- Sammy A. Kayali  
*Director for Office of Safety and  
Mission Success*
- Fuk K. Li  
*Manager, Mars Exploration  
Program Office and Director for  
Mars Exploration*
- Leslie L. Livesay  
*Director for Astronomy and Physics*
- Mark Simons  
*Chief Scientist*
- Suzanne Dodd  
*Director for Interplanetary Network*
- James J. Rinaldi  
*Chief Information Officer and  
Director for Information Technology*
- Victoria D. Stratman  
*Caltech General Counsel*
- Jakob van Zyl  
*Director for Solar System  
Exploration*
- Fred Hadaegh  
*Chief Technologist*

## Jet Propulsion Laboratory

*Administered by Caltech for the  
National Aeronautics and Space  
Administration*

Michael Watkins, *Director*  
Larry D. James, *Deputy Director*

### Executive Council

- Janis L. Chodas  
*Director for Engineering and  
Science*
- Richard Cook  
*Associate Director for Flight Projects  
and Mission Success*
- Diane L. Evans  
*Director for Earth Science and  
Technology*
- René Fradet  
*Chief Financial Officer and  
Director for Business Operations*
- David Gallagher  
*Associate Director for Strategy,  
Technology and Formulation*

## OFFICERS AND FACULTY

University of California = UC Berkeley  
California State University = Cal State L.A.

**Thomas F Rosenbaum, Ph.D.,**  
*President; Sonja and William Davidow  
Presidential Chair; Professor of Physics*  
A.B., Harvard College, 1977; M.A.,  
Princeton University, 1979; Ph.D.,  
1982. Caltech, 2014-; President,  
2014-.

.....

**John N Abelson, Ph.D.,** *George  
Beadle Professor of Biology, Emeritus*  
B.S., Washington State University,  
1960; Ph.D., Johns Hopkins  
University, 1965. Professor, Caltech,  
1982-91; Beadle Professor, 1991-  
2002; Beadle Professor Emeritus,  
2002-. Chair, Division of Biology,  
1989-95.

**Yaser Abu-Mostafa, Ph.D.,** *Professor  
of Electrical Engineering and Computer  
Science*  
B.Sc., Cairo University, 1979;  
M.S.E.E., Georgia Institute of  
Technology, 1981; Ph.D., Caltech,  
1983. Garrett Research Fellow  
in Electrical Engineering, 1983;  
Assistant Professor, 1983-89;  
Associate Professor, 1989-94;  
Professor, 1994-.

**Allan J Acosta, Ph.D.,** *Richard L.  
and Dorothy M. Hayman Professor of  
Mechanical Engineering, Emeritus*  
B.S., Caltech, 1945; M.S., 1949;  
Ph.D., 1952. Assistant Professor,  
1954-58; Associate Professor, 1958-  
66; Professor, 1966-90; Hayman  
Professor, 1990-93. Hayman  
Professor Emeritus, 1993-. Executive  
Officer for Mechanical Engineering,  
1988-93.

**Fred C Adams,** *Visiting Associate in  
Planetary Science*  
B.S., Iowa State University, 1983  
; Ph.D., University of California  
(Berkeley), 1988. Visiting Associate,  
Caltech, 2011, 2018; Visiting  
Professor, 2018.

**Rana Adhikari, Ph.D.,** *Professor of  
Physics*  
B.S., University of Florida  
(Gainesville), 1998; Ph.D.,  
Massachusetts Institute of  
Technology, 2004. Assistant  
Professor, Caltech, 2006-12;  
Professor, 2012-.

**Jess F Adkins, Ph.D.,** *Smits Family  
Professor of Geochemistry and Global  
Environmental Science*  
B.S., Haverford College, 1990;  
Ph.D., Massachusetts Institute  
of Technology, 1998. Assistant  
Professor, Caltech, 2000-06;  
Associate Professor, 2006-10;  
Professor, 2010-16; Smits Professor,  
2017-.

**Ralph Adolphs, Ph.D.,** *Bren Professor  
of Psychology, Neuroscience, and Biology;  
Allen V. C. Davis and Lenabelle  
Davis Leadership Chair, Caltech Brain  
Imaging Center; Director, Caltech  
Brain Imaging Center*  
B.S., Stanford University, 1986;  
M.S., 1986; Ph.D., Caltech,  
1993. Professor of Psychology  
and Neuroscience, 2004-05; Bren  
Professor, 2005-; Professor of  
Biology, 2005-17; Davis Leadership  
Chair, 2017-; Director, Caltech Brain  
Imaging Center, 2008-13 and 2017-.

**Andreas Aebi,** *Lecturer in German*  
M.A., University of Southern  
California, 1970; Ph.D., 1974.  
Lecturer in French, Caltech, 1978;  
Lecturer in German, 1978-83; 1986-;  
Instructor in German, 1983-1986.

**Theodor Agapie, Ph.D.,** *Professor of  
Chemistry*  
B.S., Massachusetts Institute of  
Technology, 2001; Ph.D., Caltech,  
2007. Assistant Professor, Caltech,  
2009-14; Professor, 2014-.

**Piyush S Agram,** *Visiting Associate in  
Geophysics*  
B.Tech., Indian Institute of  
Technology of Madras, 2004; M.S.,  
Stanford University, 2006; Ph.D.,  
2010. Caltech, 2014-19.



**Marina Agranov, Ph.D.**, *Professor of Economics*

B.A., St. Petersburg State Technical University, 1999; M.A., Tel Aviv University, 2004; Ph.D., New York University, 2010. Assistant Professor, Caltech, 2010-17; Professor, 2017-.

**Oded Aharonson**, *Visiting Associate in Planetary Science*

B.S., Cornell University, 1994; M.Eng., 1995; Ph.D., Massachusetts Institute of Technology, 2002. Assistant Professor, Caltech, 2002-08; Associate Professor, 2008-10; Professor, 2010-11. Visiting Associate, 2013-20.

**Channing C Ahn**, *Lecturer in Applied Physics and Materials Science*

B.S., University of California, 1979; M.S., 1981; Ph.D., University of Bristol, 1985. Senior Research Fellow, Caltech, 1987-92; Senior Research Associate, 1992-2014; Lecturer, 1988; 1990-2009; 2010; 2016; 2017; 2018 .

**Takuya Akashi**, *Visiting Associate in Biology and Biological Engineering*

B.E., Kyoto Songyo University, 2001; M.E., The University of Tokushima, 2003; Ph.D., 2006. Caltech, 2018.

**Arden L Albee, Ph.D.**, *Professor of Geology and Planetary Science, Emeritus*

A.B., Harvard College, 1950; A.M., Harvard University, 1951; Ph.D., 1957. Visiting Assistant Professor, Caltech, 1959-60; Associate Professor of Geology, 1960-66; Professor, 1966-99; Professor of Geology and Planetary Science, 1999-2002; Professor Emeritus, 2002-. Academic Officer, Geological and Planetary Sciences, 1971-79; Chief Scientist, Jet Propulsion Laboratory, 1979-84; Dean of Graduate Studies, 1984-2000.

**Jason F Alicea, Ph.D.**, *Professor of Theoretical Physics*

B.S., University of Florida, 2001; M.A., University of California (Santa Barbara), 2005; Ph.D., 2007. Associate Professor, Caltech, 2012-15; Professor, 2015-.

**Clarence R Allen, Ph.D.**, *Professor of Geology and Geophysics, Emeritus*

B.A., Reed College, 1949; M.S., Caltech, 1951; Ph.D., 1954. Assistant Professor, 1955-59; Associate Professor, 1959-64; Professor, 1964-90; Professor Emeritus, 1990-. Interim Director, Seismological Laboratory, 1965-67; Acting Chairman, Division of Geology, 1967-68.

**John M Allman, Ph.D.**, *Frank P.*

*Hixon Professor of Neurobiology*  
B.A., University of Virginia, 1965; A.M., University of Chicago, 1968; Ph.D., 1971. Assistant Professor, Caltech, 1974-77; Associate Professor, 1977-84; Professor, 1984-89; Hixon Professor, 1989-.

**Nayef Masned Alsaifi**, *Visiting Associate in Chemical Engineering*

B.S., King Fahd University, 1999; M.S., 2004; Ph.D., University of British Columbia, 2011. Caltech, 2017-18.

**R M (Michael) Alvarez, Ph.D.**,

*Professor of Political Science*  
B.A., Carleton College, 1986; M.A., Duke University, 1990; Ph.D., 1992. Assistant Professor, Caltech, 1992-95; Associate Professor, 1995-2002; Professor, 2002-.

**Oscar S Alvarez-Salazar**, *Lecturer in Aerospace*

B.S., University of California Los Angeles, 1991; M.S., 1993; Ph.D., 2000. Caltech 2016-19.

**Aaron D Ames, Ph.D.**, *Bren Professor of Mechanical and Civil Engineering and Control and Dynamical Systems*

B.S., University of St. Thomas, 2001; B.A., University of St. Thomas, 2001; M.A., University of California, Berkeley, 2006; Ph.D., 2006. Lecturer, Caltech, 2007; Professor, 2017; Bren Professor, 2017-.

**Zavosh Amir Khosravi**, *Olga Tausky and John Todd Instructor in Mathematics*

B.Sc, University of Toronto, 2008; M.Sc, 2009; Ph.D., 2013. Caltech, 2016-19.

**Jean Paul (Pablo) Ampuero Saenz, Ph.D.**, *Professor of Seismology*  
B.S., University of Paris, VII; 1997;  
M.S., 1998; Ph.D., 2002. Assistant  
Professor, Caltech, 2008-16;  
Professor, 2016-.

**Animashree (Anima Anandkumar) Anandkumar, Ph.D.**, *Bren Professor of Computing and Mathematical Sciences*  
B.S., Indian Institutes of Technology, 2004; Ph.D., Cornell University, 2009; Visiting Associate, Caltech, 2017; Bren Professor, 2017-.

**Richard A Andersen, Ph.D.**, *James G. Boswell Professor of Neuroscience*  
*T&C Chen Brain-Machine Interface Center Leadership Chair; Director, T&C Brain-Machine Interface Center*  
B.S., University of California (Davis), 1973; Ph.D., University of California (San Francisco), 1979. Boswell Professor, Caltech, 1993-; Chen Brain-Machine Interface Center Leadership Chair, 2017-; Director, 2017-.

**Brooke Anderson**, *Lecturer in Biology and Biological Engineering*  
M.S., University of Nebraska, 2014. Caltech, 2015; 2016; 2017; 2018.

**David J Anderson, Ph.D.**, *Seymour Benzer Professor of Biology; Tianqiao and Chrissy Chen Institute for Neuroscience Leadership Chair; Investigator, Howard Hughes Medical Institute; Director, Tianqiao and Chrissy Chen Institute for Neuroscience*  
A.B., Harvard University, 1978; Ph.D., Rockefeller University, 1983. Assistant Professor, Caltech, 1986-92; Associate Professor, 1992-96; Professor, 1996-2004; Roger W. Sperry Professor, 2004-09; Benzer Professor, 2009-; Chen Institute for Neuroscience Leadership Chair, 2017-; HHMI Investigator, 1989-; Director, 2017-.

**Jose E Andrade, Ph.D.**, *George W. Housner Professor of Civil and Mechanical Engineering; Cecil and Sally Drinkward Leadership Chair, Department of Mechanical and Civil*

*Engineering; Executive Officer for Mechanical and Civil Engineering*  
B.S., Florida Institute of Technology, 2001; M.S., Stanford University, 2003; PhD, 2006. Assistant Professor, Caltech, 2010; Associate Professor, 2010-13; Professor, 2013-17; Housner Professor, 2017-; Drinkward Leadership Chair, Department of Mechanical and Civil Engineering, 2017-; Executive Officer, 2016-.

**Fred C Anson Ph.D., D.h.c.**, *Elizabeth W. Gilloon Professor of Chemistry, Emeritus*  
B.S., Caltech, 1954; Ph.D., Harvard University, 1957; D.h.c., University of Paris VII, 1993. Instructor, Caltech, 1957-58; Assistant Professor, 1958-62; Associate Professor, 1962-68; Professor, 1968-95; Gilloon Professor Emeritus 2001-. Executive Officer for Chemistry, 1973-77; Chairman, Division of Chemistry and Chemical Engineering, 1984-94.

**Dimitrios Antsos**, *Lecturer in Electrical Engineering*  
B.S., Caltech, 1990; M.S., 1991; Ph.D., 1994. Lecturer, 1994-99; 2004-10; 2012; 2013; 2014; 2015; 2016; 2017, 2018.

**Alexei Aravin, Ph.D.**, *Professor of Biology*  
B.S., University of Moscow, 1997; M.Sc., 1998; Ph.D., 2002. Assistant Professor, Caltech, 2009-16; Professor, 2016-.

**Philip Argyres**, *Visiting Associate in Theoretical Physics*  
B.A., Harvard University, 1984; Ph.D., Princeton University, 1989; Visiting Associate in Theoretical Physics, Caltech, 2017-18.

**Jasmina Arifovic**, *Visiting Associate in Economics*  
B.A., University of Sarajevo, 1981; M.A., University of Chicago, 1988; Ph.D., 1991. Professor, Simon Fraser University (Canada), 2002-. Visiting Associate Professor, Caltech, 1999-2001; Visiting Associate, 2002-18.

**Maria del Pilar (Pilar Ariza) Ariza Moreno**, *Visiting Associate in Aerospace* M.S., University of Seville, 1997; Ph.D., 2002. Assistant Professor, 2003-. Caltech, 2003-06; 2007; 2009; 2010-13; 2018.

**Gloria Arjona**, *Lecturer in Spanish* B.A., California State University, 1993; M.A., University of Southern California, 1997; Ph.D., 2002. Caltech, 2000-20.

**Frances H Arnold Ph.D., D.h.c.**, *Linus Pauling Professor of Chemical Engineering, Bioengineering and Biochemistry; Director, Donna and Benjamin M. Rosen Bioengineering Center* B.S., Princeton University, 1979; Ph.D., University of California, 1985; D.h.c., Stockholm University. Visiting Associate, Caltech, 1986; Assistant Professor, 1987-92; Associate Professor, 1992-96; Professor, 1996-99; Professor of Chemical Engineering and Biochemistry, 1999-2000. Dickinson Professor, 2000-17; Pauling Professor, 2017-; Director, Rosen Bioengineering Center, 2013-.

**Daniel T Arthur**, *Visiting Associate in Mechanical and Civil Engineering* M. Eng., Cardiff University, 2007; Ph.D., Curtin University, 2014. Caltech, 2017-20.

**Michael Aschbacher, Ph.D.**, *Shaler Arthur Hanisch Professor of Mathematics, Emeritus* B.S., Caltech, 1966; Ph.D., University of Wisconsin, 1969. Bateman Research Instructor, Caltech, 1970-72; Assistant Professor, 1972-74; Associate Professor, 1974-76; Professor, 1976-96; Hanisch Professor, 1996-2013; Hanisch Professor, Emeritus, 2013-; Executive Officer for Mathematics, 1991-94.

**Domniki Asimaki, Ph.D.**, *Professor of Mechanical and Civil Engineering* Dipl., National Technical University of Athens, 1998; M.S., Massachusetts Institute of Technology, 2000; Ph.D., 2004. Caltech, 2014-.

**Paul D Asimow Ph. D.**, *Eleanor and John R. McMillan Professor of Geology and Geochemistry* A.B., Harvard University, 1991; M.S., Caltech, 1993; Ph.D., 1997. Assistant Professor, 1999-2005; Associate Professor, 2005-2010; Professor, 2010-; McMillan Professor, 2016-.

**Harry A Atwater, Ph.D.**, *Howard Hughes Professor of Applied Physics and Materials Science; Director, Joint Center for Artificial Photosynthesis* B.S., Massachusetts Institute of Technology, 1982; M.S., 1983; Ph.D., 1987. Assistant Professor, Caltech, 1988-94; Associate Professor, 1994-99; Professor of Applied Physics and Materials Science, 1999-2002; Howard Hughes Professor, 2002-. Director of Resnick Sustainability Institute, 2009-15; Director of Joint Center for Artificial Photosynthesis, 2014-.

**Basile G Audoly, Ph.D.**, *Moore Distinguished Scholar* B.S., Ecole Normale Supérieure, 1997; M.Sc., 1997; Ph.D. 2000. Caltech, 2017-18.

**Joanna M Austin, Ph.D.**, *Professor of Aerospace* B.E., University of Queensland, 1996; B.S., 1996; M.S., California Institute of Technology, 1998; Ph.D., 2003. Caltech, 2014-.

**Jean-Philippe Avouac, Ph.D.**, *Earle C. Anthony Professor of Geology and Mechanical and Civil Engineering* M.E., Ecole Polytechnique, 1987; Ph.D., Institut de Physique du Globe, 1991; Habil., 1992. Professor, Caltech, 2003-11; Earle C. Anthony Professor, 2012-; Director, Tectonic Observatory, 2004-13.

**Boris Babic**, *Weisman Postdoctoral Instructor in Philosophy of Science* B.A., York University, 2007; J.D., Harvard Law School, 2010; M.S., University of Michigan, 2017; Ph.D., 2017. Caltech, 2017-19.

**Clare V Baker**, *Visiting Associate in Biology and Biological Engineering* B.A., University of Cambridge, 1991;

Ph.D., 1994. Lecturer, 2002-. Senior Research Fellow, Caltech, 2000-02; Visiting Associate, 2002-03; 2008-09; 2013-15; 2015-17.

**Mark J Balas**, *Visiting Associate in Aerospace*

B.S., University of Akron; M.S., University of Maryland, 1970; M.S., University of Denver, 1974; Ph.D., 1974. Caltech, 2011-14; 2017; 2018-19.

**John D Baldeschwieler, Ph.D., J.**

*Stanley Johnson Professor and Professor of Chemistry, Emeritus*

B.Chem.E., Cornell University, 1956; Ph.D., University of California, 1959. Professor, Caltech, 1973-96; Johnson Professor and Professor of Chemistry, 1996-99; Johnson Professor and Professor Emeritus, 1999-. Chairman, Division of Chemistry and Chemical Engineering, 1973-78.

**David Baltimore Ph.D., D.Sc.h.c., D.Phil.h.c., Nobel Laureate,**

*President Emeritus; Robert Andrews Millikan Professor of Biology*

B.A., Swarthmore College, 1960; Ph.D., Rockefeller University, 1964; D.Sc.h.c., Swarthmore College; Mount Holyoke College; Mount Sinai Medical Center; Bard College; University of Helsinki; Cold Spring Harbor Laboratory; University of Alabama; California Polytechnic State University; Columbia University; Yale University; Rockefeller University; Harvard University; D.Phil.h.c., Weizmann Institute of Science. Professor, Caltech, 1997-2006; Millikan Professor, 2006-. President, 1997-2006, President Emeritus, 2006-.

**Jie Bao**, *Visiting Associate in Physics*

B.S., Tsinghua University, 2006; Ph.D., Brown University, 2010. Caltech, 2014-19.

**Peng Bao**, *Visiting Associate in Chemistry*

B.A., Tsinghua University, 1996; M.A., Lanzhou University, 1999; Ph.D., Chinese Academy of Sciences, 2007. Caltech, 2018-19.

**Barry C Barish Ph.D., Laureate h.c., Nobel Laureate,** *Ronald and Maxine Linde Professor of Physics, Emeritus*

B.A., University of California, 1957; Ph.D., 1962; Laurea, h.c., University of Bologna. Research Fellow, Caltech, 1963-66; Assistant Professor, 1966-69; Associate Professor, 1969-72; Professor, 1972-91; Linde Professor, 1991-2005; Linde Professor Emeritus, 2005-. Principal Investigator of LIGO, 1994-97; Director, LIGO, 1997-2006.

**Alan H (Al) Barr, Ph.D.,** *Professor of Computer Science*

B.S., Rensselaer Polytechnic Institute, 1973; M.S., 1976; Ph.D., 1983. Research Fellow, Caltech, 1984; Assistant Professor, 1984-90; Associate Professor, 1990-98; Professor, 1998-; Executive Officer for Computer Science, 2000-01.

**James G Bartlett**, *Visiting Associate in Physics*

Ph.D., University of California, Berkeley, 1992. Caltech, 2017-20.

**Jacqueline K Barton Ph.D., D.Sc.h.c., D.L.h.c., John G.**

*Kirkwood and Arthur A. Noyes Professor of Chemistry; Norman Davidson Leadership Chair, Division of Chemistry and Chemical Engineering* A.B., Barnard College, 1974; Ph.D., Columbia University, 1978; D.Sc.h.c., New Jersey Institute; Kenyon College; Yale University; Hamilton College; Williams College; Lawrence University; Columbia University; D.L.h.c., Skidmore College. Visiting Associate, Caltech, 1989; Professor, 1989-97; Hanisch Professor, 1997-17; Kirkwood-Noyes Professor, 2017-; Division Chair, 2009-; Davidson Leadership Chair, 2016-.

**Frank S Bates Sc.D., Moore Distinguished Scholar**

B.S., University of New York, 1976; S.M., Massachusetts Institute of Technology, 1979; Sc.D., 1982. Assistant Professor, Caltech, 1984-85; Moore Distinguished Scholar, 2018.

**Konstantin Batygin, Ph.D.**, *Assistant Professor of Planetary Science and Van Nuys Page Scholar*  
B.S., UC Santa Cruz, 2008; M.S., California Institute of Technology, 2010; Ph.D., 2012. Caltech, 2014-; Van Nuys Page Scholar, 2017-.

**Elaine L Bearer, Visiting Associate in Biology**  
B.M., Manhattan School of Music, 1970; M.A., New York University, 1973; M.D., University of California (San Francisco), 1983; Ph.D., 1983. Professor, Brown University, 2004-. Visiting Associate in Biology, Caltech, 2004; 2005-18; Moore Distinguished Scholar, 2004-05.

**Jesse L (Jack) Beauchamp, Ph.D.**, *Mary and Charles Ferkel Professor of Chemistry*  
B.S., Caltech, 1964; Ph.D., Harvard University, 1967. Noyes Research Instructor, Caltech, 1967-69; Assistant Professor, 1969-71; Associate Professor, 1971-74; Professor, 1974-2000; Ferkel Professor, 2000-.

**James L (Jim) Beck, Ph.D.**, *George W. Housner Professor of Engineering and Applied Science, Emeritus*  
B.Sc., University of Auckland, 1969; M.Sc., 1970; Ph.D., Caltech, 1979. Assistant Professor of Civil Engineering, 1981-87; Associate Professor, 1987-96; Professor, 1996-2011; Housner Professor, 2012-17; Housner Professor, Emeritus, 2017-; Executive Officer for Applied Mechanics and Civil Engineering, 1993-98.

**Josette Bellan, Visiting Associate in Mechanical and Civil Engineering**  
B.S., Lycee Jules Ferry, 1964; M.S., University of Sciences (Paris), 1969; M.S., Princeton University, 1972; Ph.D., 1974. Senior Research Scientist, Jet Propulsion Laboratory, 1997-. Lecturer in Jet Propulsion, Caltech, 1992-93; Visiting Associate in Aeronautics, 1995-2006; Visiting Associate in Mechanical and Civil Engineering, 2006-19.

**Paul M Bellan, Ph.D.**, *Professor of Applied Physics*  
B.Sc., University of Manitoba, 1970; M.A., Princeton University, 1972; Ph.D., 1976. Assistant Professor, Caltech, 1977-83; Associate Professor, 1983-89; Professor, 1990-.

**John E Bercaw, Ph.D.**, *Centennial Professor of Chemistry, Emeritus*  
B.S., North Carolina State University, 1967; Ph.D., University of Michigan, 1971. Arthur Amos Noyes Research Fellow, Caltech, 1972-74; Assistant Professor, 1974-77; Associate Professor, 1977-79; Professor, 1979-93; Shell Distinguished Professor, 1985-90; Centennial Professor, 1993-15; Centennial Professor, Emeritus, 2015-. Executive Officer for Chemistry, 1999-2002.

**Helen M Bermudez, Lecturer in Biology**  
B.S., California Institute of Technology, 2009; Ph.D., University of Southern California, 2016. Caltech 2010-18.

**Marco Bernardi, Ph.D.**, *Assistant Professor of Applied Physics and Materials Science*  
B.S., University of Rome La Sapienza, 2004; M.S., University of Rome Tor Vergata, 2008; Ph.D., Massachusetts Institute of Technology, 2013. Caltech, 2015-.

**Kaushik Bhattacharya Ph. D.**, *Howell N. Tyson, Sr., Professor of Mechanics and Materials Science; Vice Provost*  
B.Tech., Indian Institute of Technology, 1986; Ph.D., University of Minnesota, 1991. Assistant Professor, Caltech, 1993-99; Associate Professor, 1999-2000; Professor, 2000-10; Tyson, Sr., Professor, 2010-; Executive Officer, 2007-16; Vice Provost, 2016-.

**Kathryn Bikle, Lecturer in Chemistry**  
B.A., University of California (Santa Cruz), 1981; M.A., University of California, 1984. Lecturer in Chemistry, Caltech, 2000-17;

Lecturer in Geology, 2000-14; 2015; 2016; 2017; 2018.

**Pamela J Bjorkman, Ph.D.,**  
*Centennial Professor of Biology*  
B.A., University of Oregon, 1978;  
Ph.D., Harvard University, 1984.  
Assistant Professor, Caltech,  
1989-95; Associate Professor,  
1995-98; Professor, 1998-2004;  
Delbruck Professor, 2004-15;  
Centennial Professor, 2015-; HHMI  
Investigator, 1989-2015; Executive  
Officer for Biology, 2000-06.

**Eric Black, Lecturer in Physics**  
B.S., University of Tennessee, 1991;  
M.S., University of Colorado, 1994;  
Ph.D., 1996. Caltech, 2001-18.

**Geoffrey A (Geoff) Blake, Ph.D.,**  
*Professor of Cosmochemistry and  
Planetary Sciences and Professor of  
Chemistry*  
B.S., Duke University, 1981;  
Ph.D., Caltech, 1986. Assistant  
Professor of Cosmochemistry,  
1987-93; Associate Professor of  
Cosmochemistry and Planetary  
Sciences, 1993-97; Professor, 1997-  
99; Professor of Cosmochemistry  
and Planetary Sciences and  
Professor of Chemistry, 1999-.  
Deputy Director, Owens Valley  
Radio Observatory, 2000-06;  
Master of Student Houses, 2009-  
14.

**Adam Blank, Lecturer in Computing  
and Mathematical Sciences**  
B.S., Carnegie Mellon University,  
2012; M.S., 2014. Caltech, 2018-21.

**Guillaume Blanquart, Ph.D.,**  
*Professor of Mechanical Engineering*  
B.S., M.S., Ecole Polytechnique,  
2002; M.S., Stanford University,  
2004; Ph.D., 2008; Assistant  
Professor, Caltech, 2009-15;  
Professor, 2015-.

**Alexander S Blum, Visiting Associate  
in History of Science**  
VorDiplom, University of Leipzig,  
2004; MSc, Michigan State  
University, 2005; Ph.D., University of  
Heidelberg, 2009. Caltech, 2017.

**James J (Jamie) Bock, Ph.D.,**  
*Professor of Physics; Jet Propulsion  
Laboratory Senior Research Scientist*  
B.S., Duke University, 1987; M.A.,  
University of California, Berkeley,  
1990; Ph.D., 1994. Jet Propulsion  
Laboratory Research Scientist,  
1994-2012; Visiting Associate,  
Caltech, 1994-2008; Senior Faculty  
Associate, 2008-12; Professor, 2012-;  
Jet Propulsion Laboratory Senior  
Research Scientist, 2012-.

**Felix H Boehm, Ph.D.,** *William L.  
Valentine Professor of Physics, Emeritus*  
Dipl., Federal Institute of  
Technology (Zurich), 1948; Ph.D.,  
1951. Research Fellow, Caltech,  
1953-55; Senior Research Fellow,  
1955-58; Assistant Professor, 1958-  
59; Associate Professor, 1959-61;  
Professor, 1961-85; Valentine  
Professor, 1985-95; Valentine  
Professor Emeritus, 1995-.

**Justin S Bois, Lecturer in Biology and  
Biological Engineering**  
B.S., University of Illinois (Urbana-  
Champaign), 1999; Ph.D., Caltech,  
2007. Caltech, 2014-19.

**Kim C Border, Ph.D.,** *Professor of  
Economics*  
B.S., Caltech, 1974; Ph.D.,  
University of Minnesota, 1979.  
Assistant Professor, Caltech, 1979-  
83; Associate Professor, 1983-95;  
Professor, 1995-. Executive Officer  
for the Social Sciences, 1995-99.

**Simona Bordoni, Ph.D.,** *Professor  
of Environmental Science and  
Engineering*  
Dipl., University of Rome Tor  
Vergata, 1996; M.S., University  
of California (Los Angeles), 2003;  
Ph.D., 2007. Moore Postdoctoral  
Fellow, Caltech, 2007; Assistant  
Professor, 2009-17; Professor, 2017-.

**Peter L Bossaerts, Visiting Associate  
in Finance**  
Doctorandus, Universitaire Faculteiten  
Sint Ignatius (Belgium), 1982; Ph.D.,  
University of California (Los Angeles),  
1986. Assistant Professor of Finance,  
Caltech, 1990-94; Associate Professor,

1994-98; Professor, 1998-2013; Hacker Professor, 2003-2013. Executive Officer for the Social Sciences, 2002-05; Chair, Division of the Humanities and Social Sciences, 2006-07. Visiting Associate in Finance, 2013-18.

**Charles M (Matt) Bradford**, *Visiting Associate in Physics*  
B.S., Stanford University, 1994; Ph.D., Cornell University, 2001. Research Scientist, Jet Propulsion Laboratory, 2003-. Caltech, 2004-20.

**John F Brady, Ph.D.**, *Chevron Professor of Chemical Engineering and Mechanical Engineering; Executive Officer for Chemical Engineering*  
B.S., University of Pennsylvania, 1975; M.S., Stanford University, 1977; Ph.D., 1981. Associate Professor, Caltech, 1985-89; Professor, 1990-99; Chevron Professor, 1999-; Professor of Mechanical Engineering, 2005-. Executive Officer for Chemical Engineering, 1993-99; 2013-.

**Fernando Brandao, Ph.D.**, *Bren Professor of Theoretical Physics*  
B.Sc., Universidade Federal de Minas Gerais, 2004; M.Sc., 2005; Ph.D. Imperial College London, 2008. Bren Professor, Caltech, 2016-.

**James B (Jim) Breckinridge**, *Visiting Associate in Aerospace*  
B.Sc., Case Institute of Technology, 1961; M.Sc., University of Arizona, 1970; Ph.D., 1976. Lecturer in Applied Physics, Caltech, 1982; 1984-1991; 1993-96; 1998; Lecturer in Aeronautics, 2007, 2008, 2009, 2012, 2014, 201; Lecturer in Aerospace, 2018; Visiting Associate, 2009-2020.

**Louis Breger, Ph.D.**, *Professor of Psychoanalytic Studies, Emeritus*  
B.A., University of California (Los Angeles), 1957; M.A., Ohio State University, 1959; Ph.D., 1961. Visiting Associate Professor of Psychology, Caltech, 1970-71; Associate Professor, 1971-80; Associate Professor of Psychology and the Humanities, 1980-83; Professor of Psychoanalytic Studies, 1983-94; Professor Emeritus, 1994-.

**Lindsay R Bremner**, *Lecturer in Biology and Biological Engineering*  
B.A., St. Catherines College, 2000; Ph.D., University College London, 2007. Caltech, 2013-18.

**Christopher E Brennen D.Phil.**, *Richard L. and Dorothy M. Hayman Professor of Mechanical Engineering, Emeritus*  
B.A., University of Oxford, 1963; M.A., D.Phil., 1966. Research Fellow, Caltech, 1969-72; Senior Research Fellow, 1972-75; Research Associate, 1975-76; Associate Professor, 1976-82; Professor, 1982-2005; Hayman Professor, 2005-10; Hayman Professor, Emeritus, 2010-. Master of Student Houses, 1983-87; Dean of Students, 1988-92; Executive Officer for Mechanical Engineering, 1993-97; Vice President for Student Affairs, 1997-2002.

**John Brewer, Ph.D.**, *Eli and Edythe Broad Professor of History and Literature, Emeritus*  
B.A., University of Cambridge, 1968; M.A., 1972; Ph.D., 1973; M.A. Honorary Degree, Harvard University. Moore Distinguished Scholar, Caltech, 2001; Professor, 2002-; Broad Professor, 2003-16; Broad Professor, Emeritus, 2017-.

**William B Bridges, Ph.D.**, *Carl F Braun Professor of Engineering, Emeritus*  
B.S., University of California, 1956; M.S., 1957; Ph.D., 1962. Sherman Fairchild Distinguished Scholar, Caltech, 1974-75; Professor of Electrical Engineering and Applied Physics, 1977-83; Braun Professor, 1983-2002; Braun Professor Emeritus, 2002-. Executive Officer for Electrical Engineering, 1978-81.

**Alaina A Brinley**, *Visiting Associate in Electrical Engineering*  
B.A., Kalamazoo College, 2007; Ph.D., University of Texas Southwestern Medical Center, 2012; MD., 2016; Caltech, 2016-18.

**Charles J Brokaw, Ph.D.**, *Professor of Biology, Emeritus*  
B.S., Caltech, 1955; Ph.D.,

University of Cambridge, 1958. Visiting Assistant Professor, Caltech, 1960; Assistant Professor, 1961-63; Associate Professor, 1963-68; Professor, 1968-2000; Professor Emeritus, 2000-. Executive Officer for Biology, 1976-80; 1985-89; Associate Chairman of the Division of Biology, 1980-85.

**Marianne Bronner, Ph.D.**, *Albert Billings Ruddock Professor of Biology* Sc.B., Brown University, 1975; Ph.D., Johns Hopkins University, 1979. Professor, Caltech, 1996-2000; Ruddock Professor, 2000-; Executive Officer, 2013-16.

**Norman H Brooks, Ph.D.**, *James Irvine Professor of Environmental and Civil Engineering, Emeritus* A.B., Harvard College, 1949; M.S., Harvard University, 1950; Ph.D., Caltech, 1954. Instructor in Civil Engineering, 1953-54; Assistant Professor, 1954-58; Associate Professor, 1958-62; Professor, 1962-70; Professor of Environmental Science and Civil Engineering, 1970-76; Irvine Professor of Environmental Engineering Science, 1976-77; Irvine Professor of Environmental Engineering and Civil Engineering 1977-95; Irvine Professor Emeritus, 1995-. Academic Officer for Environmental Engineering Science, 1972-74; Director, Environmental Quality Laboratory, 1974-93; Executive Officer for Environmental Engineering Science, 1985-93.

**Alexander L (Alex) Brown, Visiting Associate in Economics** B.S., Ohio State University, 2003; M.S., California Institute of Technology, 2005; Ph.D., 2008. Caltech 2018.

**Michael E (Mike) Brown, Ph.D.**, *Richard and Barbara Rosenberg Professor of Planetary Astronomy* A.B., Princeton University, 1987; M.A., University of California, 1990; Ph.D., 1994. Visiting Associate, Caltech, 1995; Assistant Professor, 1997-2002; Associate Professor, 2002-04; Professor, 2005-2008; Rosenberg Professor, 2008-.

**Warren C Brown, Ph.D.**, *Professor of History* B.S., Tufts University, 1985; M.A., University of Cincinnati, 1993; Ph.D., University of California (Los Angeles), 1997. Assistant Professor, Caltech 1997-2003; Associate Professor, 2003-10; Professor, 2010-.

**Jehoshua (Shuki) Bruck, Ph.D.**, *Gordon and Betty Moore Professor of Computation and Neural Systems and Electrical Engineering* B.Sc., Technion-Israel Institute of Technology, 1982; M.Sc., 1985; Ph.D., Stanford University, 1989. Associate Professor, Caltech, 1994-98; Professor, 1998-2001; Moore Professor, 2001-. Director, Information Science and Technology, 2003-05.

**Oscar P Bruno, Ph.D.**, *Professor of Applied and Computational Mathematics* Lic., University of Buenos Aires, 1982; Ph.D., New York University (Courant Institute of Mathematical Sciences), 1989. Associate Professor, Caltech, 1995-98; Professor, 1998-. Executive Officer for Applied Mathematics, 1998-2000.

**Claire E Bucholz, Ph.D.**, *Assistant Professor of Geology* B.S., Yale University, 2009; Ph.D., Massachusetts Institute of Technology, 2016; Caltech, 2017-.

**Jed Z Buchwald, Ph.D.**, *Doris and Henry Dreyfuss Professor of History* B.A., Princeton University, 1971; M.A., Harvard University, 1973; Ph.D., 1974. Caltech, 2001-.

**Joel W Burdick, Ph.D.**, *Richard L. and Dorothy M. Hayman Professor of Mechanical Engineering and Bioengineering; Jet Propulsion Laboratory Research Scientist* B.S., Duke University, 1981; M.S., Stanford University, 1982; Ph.D., 1988. Assistant Professor, Caltech, 1988-94; Associate Professor, 1994-2000; Professor of Mechanical Engineering, 2000-02; Professor of Mechanical Engineering and Bioengineering, 2002-12; Executive



Officer for Bioengineering, 2006-07; Hayman Professor, 2012-; Jet Propulsion Laboratory Research Scientist, 2014-.

**Erin Burkett**, *Writing Specialist and Lecturer in STEM Writing and Communication; Lecturer in Engineering*  
B.S., University of Delaware, 2004; Ph.D., University of California, Davis, 2010. Caltech, 2018.

**Donald S Burnett, Ph.D.**, *Professor of Nuclear Geochemistry, Emeritus*  
B.S., University of Chicago, 1959; Ph.D., University of California, 1963. Research Fellow in Physics, Caltech, 1963-65; Assistant Professor of Nuclear Geochemistry, 1965-68; Associate Professor, 1968-75; Professor, 1975-2006; Professor Emeritus, 2006-. Academic Officer, Division of Geological and Planetary Sciences, 1979-87.

**Long Cai, Ph.D.**, *Professor of Biology and Biological Engineering*  
B.A., Harvard University, 2001; Ph.D., 2006. Assistant Professor, Caltech, 2010-17; Research Professor, 2017-18; Professor, 2018-.

**Joern Callies, Ph.D.**, *Assistant Professor of Environmental Science and Engineering*  
M.S., University of Hamburg, Germany, 2011; Ph.D., Massachusetts Institute of Technology, 2015. Caltech, 2017-.

**Colin F Camerer, Ph.D.**, *Robert Kirby Professor of Behavioral Economics; T&C Chen Center for Social and Decision Neuroscience Leadership Chair; Executive Officer for the Social Sciences; Director, T&C Chen Center for Social and Decision Neuroscience*  
B.A., Johns Hopkins University, 1976; M.B.A., University of Chicago, 1979; Ph.D., 1981. Visiting Associate, Caltech, 1993; Rea A. and Lela G. Axline Professor of Business Economics, 1994-2008; Kirby Professor of Behavioral Finance and Economics, 2008; Kirby Professor, 2008-; Chen Center for Social and

Decision Neuroscience Leadership Chair, 2017-; Executive Officer, 2017-; Director, Chen Center for Social and Decision Neuroscience, 2017- .

**Robert A (Andy) Cameron**, *Senior Research Associate in Biology, Emeritus*  
B.A., San Jose State College, 1968; Ph.D., University of California (Santa Cruz), 1975. Visiting Associate, Caltech, 1984-85; Senior Research Fellow, 1985-89; Senior Research Associate, 1989-2015; Senior Research Associate, Emeritus, 2015-.

**Stefano Campagnola**, *Lecturer in Computing and Mathematical Sciences*  
M.S., Politecnico Di Milano, 2002; Ph.D., University of Southern California, 2010. Caltech, 2018.

**Judith L Campbell, Ph.D.**, *Professor of Chemistry and Biology*  
B.A., Wellesley College, 1965; Ph.D., Harvard University, 1974. Assistant Professor of Chemistry, Caltech, 1977-83; Associate Professor, 1983-85; Associate Professor of Chemistry and Biology, 1985-89; Professor, 1989-.

**Sean M Carroll**, *Research Professor of Physics*  
B.S., Villanova University, 1988; Ph.D., Harvard University, 1993. Caltech, 2006-.

**William L Caton**, *Visiting Associate in Biology*  
B.S., Massachusetts Institute of Technology, 1967; M.D., University of Southern California, 1971. Chairman of Neurosurgery, Huntington Memorial Hospital, 1996-. Caltech, 1996-2003; 2005-07; 2016-20.

**Arup K Chakraborty, Ph.D.**, *Moore Distinguished Scholar*  
Btech, Indian Institute of Technology, 1983; Ph.D., University of Delaware, 1988. Caltech, 2018.

**Jean-Lou A Chameau Ph.D.**, *D.Sc.h.c., President Emeritus*  
Ing., Ecole Nationale Supérieure

D'Arts et Metiers, 1976; M.S., Stanford University, 1977; Ph.D., 1981; D.Sc.h.c., Occidental College. Professor of Civil Engineering, Environmental Science and Engineering, and Mechanical Engineering, 2006-13; Davidow Presidential Professor, 2013; President, 2006-13; President Emeritus, 2013-.

**David C Chan, Ph.D.**, *Professor of Biology*

A.B., Harvard College, 1988; M.D., Harvard Medical School, 1996; Ph.D., 1996. Assistant Professor, Caltech, 2000-06; Bren Scholar, 2000-06; Associate Professor, 2006-10; Professor, 2010-; HHMI Investigator, 2008-14.

**Garnet K Chan, Ph.D.**, *Bren Professor of Chemistry*

B.A., University of Cambridge, 1996; M.A., 2000; Ph.D., 2000. Moore Distinguished Scholar, Caltech, 2014, 2015; Bren Professor, 2016-.

**Sunney I Chan, Ph.D.**, *George Grant Hoag Professor of Biophysical Chemistry, Emeritus*

B.S., University of California, 1957; Ph.D., 1961. Assistant Professor of Chemical Physics, Caltech, 1963-64; Associate Professor, 1964-68; Professor, 1968-76; Professor of Chemical Physics and Biophysical Chemistry, 1976-92; Hoag Professor, 1992-2001; Hoag Professor Emeritus, 2002-. Acting Executive Officer for Chemistry, 1977-78; Executive Officer, 1978-80; 1989-94; Master of Student Houses, 1980-83.

**Venkat Chandrasekaran, Ph.D.**, *Professor of Computing and Mathematical Sciences and Electrical Engineering*

B.A., Rice University, 2005; B.S., 2005; M.S., Massachusetts Institute of Technology, 2007; Ph.D., 2011. Assistant Professor, Caltech, 2012-17; Professor, 2017-.

**Kanianthra M (Mani) Chandy, Ph.D.**, *Simon Ramo Professor of Computer Science, Emeritus*  
B.Tech., Indian Institute of

Technology, 1965; M.S., Polytechnic Institute of Brooklyn, 1966; Ph.D., Massachusetts Institute of Technology, 1969. Sherman Fairchild Distinguished Scholar, Caltech, 1988; Visiting Professor, 1988-89; Professor, 1989-97; Ramo Professor, 1997-2014; Ramo Professor, Emeritus, 2014-. Executive Officer for Computer Science, 1997-2000; Deputy Chair, 2009-12.

**Ying Chau, Visiting Associate in Chemical Engineering**

Ph.D, Massachusetts Institute of Technology, 2005. Caltech, 2017-18.

**Xie Chen, Ph.D.**, *Associate Professor of Theoretical Physics*

B.S., Tsinghua University China, 2006; Ph.D., Massachusetts Institute of Technology, 2012. Assistant Professor, Caltech, 2014-17; Associate Professor, 2017-.

**Yanbei Chen, Ph.D.**, *Professor of Physics*

B.S., Peking University, 1999; Ph.D., Caltech, 2003. Visiting Associate, Caltech, 2005-07; Assistant Professor, 2007-10; Associate Professor, 2010-13; Professor, 2013-.

**Yi-Chun Chen, Visiting Associate in Chemical Engineering**

B.S., National Taiwan University, 2007. Ph.D., California Institute of Technology, 2013. Caltech, 2018-19.

**Wan Cheng, Visiting Associate in Aerospace**

B.S., University of Science and Technology of China, 2006; Ph.D., 2011. Caltech, 2016-19.

**Clifford W Cheung, Ph.D.**, *Assistant Professor of Theoretical Physics*

B.S., Yale University, 2004; M.A., Harvard University, 2006; Ph.D., 2009. Caltech, 2012-.

**Anne Chomyn, Senior Research Associate in Biology, Emeritus**

B.S., Drexel University, 1972; Ph.D., Caltech, 1978. Research Fellow, 1978-82; Senior Research Fellow, 1982-87; Senior Research Associate, 1989-2007; Senior Research

Associate Emeritus, 2007-; Lecturer in Biology, 2007.

**Hyuck Choo**, *Visiting Associate in Electrical Engineering*  
B.S., Cornell University, 1996; M.S., 1998; Ph.D., University of California, Berkeley, 2007. Assistant Professor, Caltech, 2011-2018; HMRI Investigator, 2015-2018. Visiting Associate, 2018.

**Hsiang-Chen Chui**, *Visiting Associate in Medical Engineering*  
B.A., National Tsing Hua University, 1998; M.S., 2000; Ph.D., 2004. Caltech, 2017-18.

**Soon Jo Chung, Ph.D.**, *Associate Professor of Aerospace and Bren Scholar; Jet Propulsion Laboratory Research Scientist*  
B.S., Korea Advanced Institute of Science and Technology, 1998; S.M., Massachusetts Institute of Technology, 2002; Sc.D., 2007. Associate Professor, Caltech, 2016-; Bren Scholar, 2016-; Jet Propulsion Laboratory Research Scientist, 2016-.

**Ara Chutjian**, *Visiting Associate in Chemistry*  
B.S., Brown University, 1962; Ph.D., University of California, 1966. Senior Research Scientist, Jet Propulsion Laboratory, 1990-. Caltech, 1998-2017.

**Robert W Clayton, Ph.D.**, *Professor of Geophysics; Divisional Academic Officer for Geological and Planetary Sciences*  
B.A.Sc., University of Toronto, 1973; M.Sc., University of British Columbia, 1976; Ph.D., Stanford University, 1981. Assistant Professor of Exploration Geophysics, Caltech, 1981-85; Associate Professor, 1985-89; Professor of Geophysics, 1989-. Executive Officer for Geophysics, 1987-94; Acting Director, Seismological Laboratory, 1989; 2008-09; Deputy Director, 1989-90; Academic Officer, 2008-.

**William M (Bil) Clemons, Jr., Ph.D.**, *Professor of Biochemistry*

B.S., Virginia Polytechnic Institute and State University, 1995; Ph.D., University of Utah, 2000. Assistant Professor of Chemistry, Caltech, 2005-07; Assistant Professor of Biochemistry, 2007-13; Professor, 2013-.

**Elizabeth S Cochran**, *Visiting Associate in Geophysics*  
B.S., University of California, Santa Barbara, 2000; M.S., University of California, Los Angeles, 2003; Ph.D., 2005. Caltech, 2011-19.

**Donald S (Don) Cohen, Ph.D.**, *Charles Lee Powell Professor of Applied Mathematics, Emeritus*  
Sc.B., Brown University, 1956; M.S., Cornell University, 1959; Ph.D., New York University (Courant Institute), 1962. Assistant Professor of Mathematics, Caltech, 1965-67; Associate Professor of Applied Mathematics, 1967-71; Professor, 1971-98; Powell Professor, 1998-2003; Powell Professor Emeritus, 2003-. Executive Officer for Applied Mathematics, 1988-93; Chairman, Division of Engineering and Applied Science, 1990.

**Judith G Cohen, Ph.D.**, *Kate Van Nuys Page Professor of Astronomy, Emeritus*  
B.A., Radcliffe College, 1967; M.S., Caltech, 1969; Ph.D., 1971; B.S., University of Arizona, 1978. Associate Professor, Caltech, 1979-88; Professor, 1988-2005; Page Professor, 2005-18; Page Professor, Emeritus, 2018-; Executive Officer for Astronomy, 1995-96.

**Marshall H Cohen, Ph.D.**, *Professor of Astronomy, Emeritus*  
B.E.E., Ohio State University, 1948; M.S., 1949; Ph.D., 1952. Visiting Associate Professor, Caltech, 1965; Professor of Radio Astronomy, 1968-90; Professor of Astronomy, 1990-95; Professor Emeritus, 1995-. Executive Officer for Astronomy, 1981-85.

**Max L Coleman**, *Visiting Associate in Geochemistry*  
B.Sc., University of London: 1966,

M.Sc., University of Leeds, 1967;  
Ph.D., 1970. Caltech, 2013-18.

**Andres Collazo**, *Lecturer in Biology and Biological Engineering*  
B.S., Cornell University, 1985;  
Ph.D., University of California, 1990.  
Scientist II, Section Chief, House Ear  
Institute, 2000-. Research Fellow,  
Caltech, 1991-94; Senior Research  
Fellow, 1994-96; Visiting Associate,  
2005-10; Lecturer, 2015-18.

**Tim Colonius, Ph.D.**, *Frank and  
Ora Lee Marble Professor of Mechanical  
Engineering*  
B.S., University of Michigan (Ann  
Arbor), 1987; M.S., Stanford  
University, 1988; Ph.D., 1994.  
Assistant Professor, Caltech, 1994-  
2000; Associate Professor, 2000-05;  
Professor, 2005-16; Marble Professor,  
2017-.

**David Conlon, Ph.D.**, *Moore  
Distinguished Scholar in Mathematics*  
B.A., University of Dublin Trinity  
College, 2003; Ph.D., University of  
Cambridge, 2009. Caltech, 2018.

**Robert D (Dale) Conner**, *Visiting  
Associate in Applied Physics and  
Materials Science*  
B.S., California State Polytechnic  
University, 1989; M.S., Caltech,  
1994; Ph.D., 1998. Assistant  
Professor, California State University  
(Northridge), 2006-. Visiting  
Associate, Caltech, 2001-02;  
Lecturer, 2002-04; Senior Research  
Fellow, 2003-06; Visiting Associate,  
2006-19.

**Asantha Cooray**, *Visiting Associate  
in Physics*  
B.S., Massachusetts Institute of  
Technology, 1997; M.S., 1997; M.S.,  
University of Chicago, 1998; Ph.D.,  
2001. Assistant Professor, University  
of California (Irvine), 2005-.  
Sherman Fairchild Senior Research  
Fellow, Caltech, 2001-05; Visiting  
Associate, 2005-18.

**Bradford Cornell**, *Visiting Professor  
of Finance*  
A.B., Stanford University, 1970;

M.S., 1974; Ph.D., 1975. Professor,  
Anderson School of Management,  
University of California (Los  
Angeles); Director, Bank of America  
Research Center, University of  
California (Los Angeles), 1987-.  
Visiting Associate Professor, Caltech,  
1984; Visiting Professor, 2006-07;  
2008; 2009; 2010; 2011; 2012; 2013;  
2014; 2015; 2016; 2017; 2018.

**Noel Corngold, Ph.D.**, *Professor of  
Applied Physics, Emeritus*  
A.B., Columbia College, 1949;  
A.M., Harvard University, 1950;  
Ph.D., 1954. Professor of Applied  
Science, Caltech, 1966-74; Professor  
of Applied Physics, 1974-2002;  
Professor Emeritus, 2002-.

**Fiona Cowie, Ph.D.**, *Professor of  
Philosophy*  
B.A., University of Sydney, 1987;  
M.A., Princeton University, 1991;  
Ph.D., 1993. Instructor, Caltech,  
1992-93; Assistant Professor, 1993-  
98; Associate Professor, 1998-2010;  
Professor, 2010-.

**Michael C Cross, Ph.D.**, *Professor of  
Theoretical Physics, Emeritus*  
B.A., University of Cambridge, 1972;  
Ph.D., 1975. Professor, Caltech,  
1984-2016; Professor Emeritus,  
2016-.

**Marie E Csete**, *Visiting Associate in  
Medical Engineering*  
A.B., Princeton University, 1975;  
M.D., Columbia University, 1979;  
Ph.D., California Institute of  
Technology, 2000. Caltech, 1999-  
2002; 2014-18.

**Fred E Culick, Ph.D.**, *Richard L.  
and Dorothy M. Hayman Professor of  
Mechanical Engineering and Professor  
of Jet Propulsion, Emeritus*  
S.B., S.M., Massachusetts Institute of  
Technology, 1957; Ph.D., 1961.  
Research Fellow in Jet Propulsion,  
Caltech, 1961-63; Assistant  
Professor, 1963-66; Associate  
Professor, 1966-71; Professor, 1971-  
78; Professor of Applied Physics and  
Jet Propulsion, 1978-88; Professor  
of Mechanical Engineering and Jet

Propulsion, 1988-1997; Hayman Professor, 1997-2004; Professor of Jet Propulsion, 1997-2004; Hayman Professor and Professor, Emeritus, 2004-.

**Scott Cushing, Ph.D.**, *Assistant Professor of Chemistry*

B.S., West Virginia University, Morgantown, 2011; Ph.D., 2015; Visiting Associate, Caltech, 2018; Assistant Professor, 2018-.

**Curt J Cutler**, *Senior Faculty Associate in Physics*

B.S., Yale University, 1983; Ph.D., 1989. Visiting Associate, Caltech, 1999-2006; Senior Faculty Associate, 2006-.

**Jaksa Cvitanic, Ph.D.**, *Richard N.*

*Merkin Professor of Mathematical Finance; Director, Ronald and Maxine Linde Institute of Economic and Management Sciences*

B.A., University of Zagreb (Croatia), 1985; M.S., 1988; M.Phil., Columbia University, 1991; Ph.D., 1992. Professor, Caltech, 2005-13; Merkin Professor, 2013-; Associate Director, Ronald and Maxine Linde Institute of Economic and Management Sciences, 2015-16; Director, Ronald and Maxine Linde Institute of Economic and Management Sciences, 2016-.

**Christine Daley**, *Lecturer in Writing*

B.A., Boston College, 1991; M.A., Loyola Marymount University, 1997; Ph.D., City University of New York Graduate School, 2006. Caltech, 2007-18.

**Nathan F Dalleska**, *Lecturer in Geochemistry*

M.S., University of Minnesota, 1988; Ph.D., University of Utah, 1993. Lecturer in Environmental Science and Engineering, Caltech, 2003-06; Lecturer in Chemistry, 2008; 2009; 2010; 2011; 2014; 2017-18; Lecturer in Geochemistry, 2016; 2018.

**Chiara Daraio, Ph.D.**, *Professor of Mechanical Engineering and Applied Physics*

B.S.; M.S., University of Ancona (Italy), 2001; M.S., University of California (San Diego), 2003; Ph.D., 2006. Assistant Professor, Caltech, 2006-10; Professor, 2011-.

**Mark E Davis, Ph.D.**, *Warren and Katharine Schlinger Professor of Chemical Engineering*

B.S., University of Kentucky, 1977; M.S., 1978; Ph.D., 1981. Professor, Caltech, 1991-93; Schlinger Professor, 1993-. Executive Officer for Chemical Engineering, 1999-2004.

**Stephen H (Steve) Davis Ph.D.;**

**D.Sc.**, *Moore Distinguished Scholar B.E.E.*, Rensselaer Polytechnic Institute, 1960; M.S., 1962; Ph.D., 1964; D.Sc., University of Western Ontario, 2001; Caltech, 2018-.

**Eric de Bodt**, *Visiting Associate in Finance*

M.A., Catholic University of Louvain, 1987; Ph.D., 1992. Caltech, 2016-19.

**Richard A Dean, Ph.D.**, *Professor of Mathematics, Emeritus*

B.S., Caltech, 1945; A.B., Denison University, 1947; M.S., Ohio State University, 1948; Ph.D., 1953. Harry Bateman Research Fellow, Caltech, 1954-55; Assistant Professor, 1955-59; Associate Professor, 1959-66; Professor, 1966-86; Professor Emeritus, 1987-.

**Marios D Demetriou**, *Visiting Associate in Applied Physics and Materials Science*

B.S., University of Arizona, 1995; M.S., University of California (Los Angeles), 1997; Ph.D., 2001. Caltech, Research Professor 2007-2016; Visiting Associate, 2017-19.

**Tracy K Dennison, Ph.D.**, *Professor of Social Science History*

B.A., Bucknell University, 1992; M.Phil., University of Oxford, 1999; Ph.D., University of Cambridge, 2004. Assistant Professor, Caltech, 2006-09; Associate Professor, 2009-11; Professor, 2011-.

**Peter B Dervan Ph.D., D.Sc.h.c.,** *Bren Professor of Chemistry*  
B.S., Boston College, 1967; Ph.D.,  
Yale University, 1972; D.Sc.h.c.,  
Boston College. Assistant Professor,  
Caltech, 1973-79; Associate  
Professor, 1979-82; Professor, 1982-  
88; Bren Professor, 1988-. Chair,  
Division of Chemistry and Chemical  
Engineering, 1994-99; Vice President  
for Development and Institute  
Relations, 2011-12.

**Mathieu Desbrun, Ph.D.,** *Carl F  
Braun Professor of Computing and  
Mathematical Sciences*  
M.Eng., National Engineering  
School of Computer Science and  
Applied Mathematics (Grenoble),  
1994; M.S., University of Grenoble,  
1994; Ph.D., National Polytechnic  
Institute of Grenoble, 1997. Visiting  
Associate, Caltech, 2000-04; Associate  
Professor, 2004-09; Professor,  
2009-13; Miles Professor, 2013-16;  
Braun Professor, 2017-; Director of  
Information Science and Technology,  
2009-12; Director of Computing and  
Mathematical Sciences, 2009-14;  
Executive Officer for Computing and  
Mathematical Sciences, 2014-15.

**Stanley Deser,** *Visiting Associate in  
Theoretical Physics*  
M.A., Harvard University, 1950;  
Ph.D., 1953. Ansell Professor,  
Brandeis University, 1980-. Caltech,  
2005-20.

**Raymond J (Ray) Deshaies,** *Visiting  
Associate in Biology and Biological  
Engineering*  
B.S., Cornell University, 1983;  
Ph.D., University of California,  
1988. Assistant Professor, Caltech,  
1994-99; Associate Professor, 2000-  
05; Professor, 2005-17; HHMI  
Investigator, 2000-17; Executive  
Officer, 2006-16; Visiting Associate  
2017-19.

**Robert A Desharnais,** *Visiting Associate  
in Computing and Mathematical Sciences*  
B.A., University of Massachusetts,  
1976; M.S., University of Rhode  
Island, 1979; Ph.D., 1982. Caltech,  
2015-19.

**Clive Dickinson,** *Visiting Associate in  
Astronomy*  
M.A., University of Manchester,  
1999; Ph.D., 2002. Caltech, 2018-20.

**Michael H Dickinson, Ph.D.,** *Esther  
M. and Abe M. Zarem Professor of  
Bioengineering and Aeronautics*  
Sc.B., Brown University, 1984;  
Ph.D., University of Washington,  
1989. Visiting Associate, Caltech,  
2001-02; Professor, 2002-03; Zarem  
Professor, 2003-.

**Mladen Dimitrov,** *Visiting Associate  
in Mathematics*  
B.Sc., Ecole Normale Supérieure  
(France), 1997; M.Sc., 1998; Ph.D.,  
University of Paris, 2003. Caltech,  
2005-06, 2017-18.

**Paul Dimotakis, Ph.D.,** *John K.  
Northrop Professor of Aeronautics and  
Professor of Applied Physics*  
B.S., Caltech, 1968; M.S., 1969;  
Ph.D., 1973. Research Fellow, 1973-  
74; Research Fellow and Lecturer,  
1974-75; Assistant Professor,  
1975-81; Associate Professor, 1981-  
85; Professor, 1986-95; Northrop  
Professor, 1995-; Jet Propulsion  
Laboratory Chief Technologist,  
2006-11.

**Stanislav G Djorgovski, Ph.D.,** *Professor of Astronomy; Director, Center  
for Data Driven Discovery; Executive  
Officer for Astronomy*  
B.A., University of Belgrade, 1979;  
M.A., University of California, 1981;  
Ph.D., 1985; Assistant Professor,  
Caltech 1987-90; Associate  
Professor, 1990-97; Professor, 1997-;  
Director, Center for Data Driven  
Discovery, 2014-; Executive Officer  
for Astronomy, 2016-.

**Bruce J Dominguez,** *Lecturer in  
Mechanical and Civil Engineering*  
B.F.A., Pratt Institute, 2003.  
Caltech, 2017-18.

**Patrick W Dondl,** *Visiting Associate  
in Mechanical and Civil Engineering*  
Ph.D., California Institute of  
Technology, 2007. Caltech, 2018.

**Olivier P Dore**, *Visiting Associate in Theoretical Astrophysics*  
Ph.D., Institute d'Astrophysique de Paris, 2001. Caltech 2010-19.

**Dennis A Dougherty, Ph.D.**, *George Grant Hoag Professor of Chemistry; Director, Beckman Institute*  
B.S., M.S., Bucknell University, 1974; Ph.D., Princeton University, 1978. Assistant Professor, Caltech, 1979-85; Associate Professor, 1985-89; Professor, 1989-2001; Hoag Professor, 2002-. Executive Officer for Chemistry, 1994-99; Director, 2018-.

**Maria Laura (Laura) Doval, Ph.D.**, *Assistant Professor of Economics*  
B.A., Universidad Torcuato Di Tella, Buenos Aires, 2009; M.A., 2010; M.A., Northwestern University, 2012; Ph.D., 2016. Research Assistant Professor, Caltech, 2016-17; Assistant Professor, 2017-.

**John C Doyle, Ph.D.**, *Jean-Lou Chameau Professor of Control and Dynamical Systems, Electrical Engineering, and Bioengineering*  
B.S., M.S., Massachusetts Institute of Technology, 1977; Ph.D., University of California, 1984. Visiting Assistant Professor of Electrical Engineering, Caltech, 1985; Visiting Associate Professor, 1986; Visiting Associate in Chemistry, 1986-87; Associate Professor of Electrical Engineering, 1987-91; Professor, 1991-2001; Professor of Control and Dynamical Systems, Electrical Engineering, and Bioengineering, 2002-04; Braun Professor, 2004-08; 2009-13; Jean-Lou Chameau Professor, 2013-.

**William G Dunphy, Ph.D.**, *Grace C. Steele Professor of Biology*  
A.B., Harvard College, 1980; Ph.D., Stanford University, 1985. Assistant Professor, Caltech, 1989-95; Associate Professor, 1995-2001; Professor, 2001-08; Steele Professor, 2008-.

**Polona Durcik, Harry Bateman Instructor in Mathematics  
B.S., University of Ljubljana, 2011; M.S., University of Bonn, 2014; Ph.D., 2017. Caltech, 2017-20.**

**Maura D Dykstra, Ph.D.**, *Assistant Professor of History*  
B.A., California State University, Sacramento, 2004; M.A., University of California, Los Angeles, 2008; Ph.D., 2014. Research Assistant Professor, Caltech, 2015-16; Assistant Professor, 2016-.

**Frederick D Eberhardt, Ph.D.**, *Professor of Philosophy*  
B.S., London School of Economics, 2002; M.S., Carnegie Mellon University, 2005; Ph.D., 2007. Caltech, 2013-.

**Bertrand Echenard**, *Research Professor of High Energy Physics*  
Ph.D., Geneva University, 2005. Caltech, 2009-.

**Federico M Echenique, Ph.D.**, *Allen and Lenabelle Davis Professor of Economics*  
Licenciado, University of the Republic (Uruguay), 1995; Ph.D., University of California, 2000. Instructor, Caltech, 2002-03; Assistant Professor, 2004; Associate Professor, 2004-10; Professor, 2010-16; Davis Professor, 2016-; Executive Officer, 2013-16.

**Michelle Effros, Ph.D.**, *George Van Osdol Professor of Electrical Engineering*  
B.S., Stanford University, 1989; M.S., 1990; Ph.D., 1994. Assistant Professor, Caltech, 1994-2000. Associate Professor, 2000-05; Professor, 2005-13; Van Osdol Professor, 2013-.

**Bethany L Ehlmann, Ph.D.**, *Professor of Planetary Science; Jet Propulsion Laboratory Research Scientist*  
A.B., Washington University in St. Louis, 2004; M.Sc., University of Oxford, 2005; M.Sc., 2007; M.S., Brown University, 2008; Ph.D., 2010. Assistant Professor, Caltech, 2011-17; Professor, 2017-; Jet Propulsion Laboratory Research Scientist, 2011-.

**John M Eiler, Ph.D.**, *Robert P. Sharp Professor of Geology and Geochemistry*  
B.S., University of Iowa, 1989; M.S.,

University of Wisconsin (Madison), 1991; Ph.D., 1994. Research Fellow, Caltech, 1994-97; Senior Research Fellow 1997-98; Assistant Professor, 1998-2003; Associate Professor, 2003-06; Professor, 2006-; Sharp Professor, 2008-.

**James P (Jim) Eisenstein, Ph.D.,** *Frank J. Roshek Professor of Physics and Applied Physics, Emeritus*  
A.B., Oberlin College, 1974; Ph.D., University of California, 1980. Professor of Physics, Caltech, 1996-2004; Roshek Professor, 2004-05; Roshek Professor of Physics and Applied Physics, 2005-17; Roshek Professor, Emeritus, 2017-.

**Charles Elachi Ph.D., D.Sc.h.c.,** *Professor of Electrical Engineering and Planetary Science, Emeritus*  
B.Sc., University of Grenoble, 1968; Dipl. Ing., National Polytechnical Institute (Grenoble), 1968; M.S., Caltech, 1969; Ph.D., 1971; M.B.A., University of Southern California, 1978; D.Sc.h.c., Occidental College. Research Fellow, Caltech, 1971-73; Lecturer in Electrical Engineering, 1982-88; Lecturer in Electrical Engineering and Planetary Science, 1988-2001; Professor, 2002-16. Vice President and Director, 2001-16; Professor Emeritus, 2016-.

**H E Ellersieck, Ph.D.,** *Associate Professor of History, Emeritus*  
A.B., University of California (Los Angeles), 1942; M.A., 1948; Ph.D., 1955. Instructor, Caltech, 1950-55; Assistant Professor, 1955-60; Associate Professor, 1960-88; Associate Professor Emeritus, 1988-.

**Richard S Ellis, Visiting Associate in Astronomy**  
B.Sc., University College (London), 1971; D. Phil., University of Oxford, 1974; D.Sc.h.c., University of Durham. Visiting Associate, Caltech, 1997-98; 2015-2016; 2017-20, Professor, 1999-2002; Steele Professor, 2002-2015. Deputy Director, Palomar Observatory, 1999-2000; Director, 2000-02; Director, Caltech Optical Observatories, 2002-05.

**Thomas M Ellis, Visiting Associate in Computing and Mathematical Sciences**  
B.Sc., Oxford University, 2000; M.Sc., 2000; Ph.D., University of Cambridge, 2004. Caltech, 2018.

**Michael B Elowitz, Ph.D.,** *Professor of Biology and Bioengineering; Investigator, Howard Hughes Medical Institute; Executive Officer for Biological Engineering*  
B.A., University of California, 1992; M.A., Ph.D., Princeton University, 1999. Assistant Professor, Caltech, 2003-09; Bren Scholar, 2003-09; Associate Professor, 2009-10; Professor, 2010-; HHMI Investigator, 2008-; Executive Officer, 2013-.

**Azita Emami, Ph.D.,** *Andrew and Peggy Cherng Professor of Electrical Engineering and Medical Engineering; Investigator, Heritage Medical Research Institute; Executive Officer for Electrical Engineering*  
B.S., Sharif University of Technology, 1996; M.S., Stanford University, 1999; Ph.D., 2004. Assistant Professor, Caltech, 2007-13; Professor, 2013-17; Cherng Professor, 2017-; HMRI Investigator, 2015-; EAS Division Deputy Chair, 2015-18; Executive Officer, 2018-.

**Manuel A Endres, Ph.D.,** *Assistant Professor of Physics*  
M.Sc., Johannes Gutenberg-Universität Munich, 2008; Ph.D., Ludwig-Maximilians-Universität Munich, 2013. Visiting Associate, Caltech, 2015-16; Assistant Professor, 2016-.

**Hermann Engelhardt, Senior Research Associate in Geophysics, Emeritus**  
Dipl., Technical University of Munich, 1960; Dr.rer.Nat., 1974. Senior Research Fellow, Caltech, 1976-79; Visiting Associate, 1981; Senior Research Associate, 1988-2002; Senior Research Associate Emeritus, 2002-.

**Jean E Ensminger, Ph.D.,** *Edie and Lew Wasserman Professor of Social Sciences*  
B.A., Cornell University, 1974; M.A.,



Northwestern University, 1976; Ph.D., 1984. Professor of Anthropology, Caltech, 2000-07; Wasserman Professor of Anthropology, 2007-09; Wasserman Professor, 2009-. Chair, Division of the Humanities and Social Sciences, 2002-06.

**Thomas E (Tom) Everhart Ph.D., D.L.h.c., D.h.c.,** *President Emeritus; Professor of Electrical Engineering and Applied Physics, Emeritus*  
A.B., Harvard College, 1953; M.Sc., University of California (Los Angeles), 1955; Ph.D., University of Cambridge, 1958; D.L.h.c., Illinois Wesleyan University; Pepperdine University; D.h.c., Colorado School of Mines. Professor, Caltech, 1987-99; Professor Emeritus, 1999-. President, 1987-97; President Emeritus, 1997-.

**Pamela L Eversole-Cire,** *Visiting Associate in Biology*  
B.S. (Biology), B.S. (Chemistry), University of California (Irvine), 1982; M.S., 1985; Ph.D., University of Southern California, 1994. Research Fellow, Caltech, 1995-98; Senior Research Fellow, 1998-2001; Visiting Associate, 2008-18.

**Michael J Ewens, Ph.D.,** *Associate Professor of Finance and Entrepreneurship*  
B.A., Washington University in St. Louis, 2004; M.A., University of California, San Diego, 2008; Ph.D., 2010. Caltech, 2014-.

**Katherine T Faber, Ph.D.,** *Simon Ramo Professor of Materials Science*  
B.S., Alfred University, 1975; M.S., The Pennsylvania State University, 1978; Ph.D., University of California, Berkeley, 1982. Ramo Professor, Caltech, 2014-.

**Jennifer L Factor,** *Lecturer in Poetry*  
A.B., Harvard-Radcliffe College, 1991; M.F.A., Bennington College, 2000; M.A., Brandeis University, 2018. Caltech, 2018.

**Andrei Faraon, Ph.D.,** *Professor of Applied Physics*

B.S., California Institute of Technology, 2004; M.S., Stanford University, 2009; Ph.D., 2009. Visiting Associate, Caltech, 2011-12; Assistant Professor, 2012-18; Professor, 2018-.

**Kenneth A Farley, Ph.D.,** *W.M. Keck Foundation Professor of Geochemistry*  
B.S., Yale University, 1986; Ph.D., University of California (San Diego), 1991. Assistant Professor, Caltech, 1993-96; Associate Professor, 1997-98; Professor, 1998-2003; Keck Foundation Professor, 2003-. Director, Tectonic Observatory, 2003-04; Division Chair, 2004-14.

**Mordechai Feingold, Ph.D.,** *Professor of History*  
B.A., Hebrew University of Jerusalem, 1972; M.A., 1976; D.Phil., University of Oxford, 1980. Visiting Associate Professor, Caltech, 1994. Professor, 2002-.

**Katalin (Kata) Fejes Toth,** *Research Professor of Biology and Biological Engineering*  
M.D., Semmelweis University, 2001; Ph.d., University of Heidelberg, 2004. Caltech 2010-21.

**M. Houman Fekrazad,** *Visiting Associate in Medical Engineering*  
M.D., Shiraz University, 1993; I.M., University of Alabama at Birmingham, 2006; Hematology-Oncology, The University of New Mexico, 2009. Caltech, 2016-20.

**Antony R (Tony) Fender,** *Visiting Associate in Engineering*  
B.S., University of California (Los Angeles), 1970. Caltech, Lecturer, 1996-2018; Visiting Associate, 2018.

**Yejun Feng,** *Visiting Associate in Physics*  
B.S., Fudan University, 1996, M.S., City College of New York, 1999, Ph.D., University of Washington, 2003. Caltech 2015-20.

**Bradley W Filippone, Ph.D.,** *Francis L. Moseley Professor of Physics*  
B.S., Pennsylvania State University,

1977; M.S., University of Chicago, 1979; Ph.D., 1982. Research Fellow, Caltech, 1983-84; Assistant Professor, 1984-90; Associate Professor, 1990-95; Professor, 1995-2016; Moseley Professor, 2016-.

**Woodward Fischer Ph.D., D.h.c.,**

*Professor of Geobiology*  
B.A., Colorado College, 2000; Ph.D., Harvard University, 2007; D.h.c., Colorado College. Assistant Professor, Caltech, 2009-14; Professor, 2014-.

**Matthias Flach, Ph.D.,** *Professor of Mathematics*

Dipl., Johann-Wolfgang von Goethe University (Frankfurt), 1986; Ph.D., St. John's College, 1991. Associate Professor, Caltech, 1995-99; Professor, 1999-. Executive Officer for Mathematics, 2006-09.

**Richard C Flagan, Ph.D.,** *Irma and Ross McCollum-William H. Corcoran Professor of Chemical Engineering and Environmental Science and Engineering*

B.S.E., University of Michigan, 1969; S.M., Massachusetts Institute of Technology, 1971; Ph.D., 1973. Assistant Professor of Environmental Engineering Science, Caltech, 1975-81; Associate Professor, 1981-84; Associate Professor of Environmental Engineering and Mechanical Engineering, 1984-85; Professor, 1986-90; Professor of Chemical Engineering, 1990-2000; McCollum Professor of Chemical Engineering, 2000-03; McCollum Professor of Chemical Engineering and Professor of Environmental Science and Engineering, 2003-04; McCollum-Corcoran Professor of Chemical Engineering and Environmental Science and Engineering, 2004-. Acting Executive Officer for Chemical Engineering, 1996; Executive Officer, 1997; 2004-13.

**Yuman Fong,** *Visiting Associate in Medical Engineering*

B.A., Brown University, 1981; M.D., Cornell University, 1984. Caltech, 2015-19.

**Stephen J Forman,** *Visiting Associate in Chemical Engineering*  
B.A., St. John's College, 1970; M.D., University of Southern California, 1974. Staff Physician and Chairman of the Board of Directors, City of Hope, 2001-. Caltech, 2005-18.

**Alessandro Fortunelli,** *Visiting Associate in Chemistry*

M.S., University of Pisa, 1983. First Researcher, Istituto per i Processi Chimico-Fisici, 1984-. Caltech, 2003-04; 2012-18.

**Abigail Fraeman,** *Visiting Associate in Planetary Science*

B.S., Yale University, 2009; M.A., Washington University in St. Louis, 2011; Ph.D., 2014. Caltech, 2016-19.

**Rupert L Frank, Ph.D.,** *Professor of Mathematics*

Dipl., Ludwig-Maximilians-Universität Munich, 2003; Ph.D., Royal Institute of Technology, 2007. Caltech, 2013-.

**Christian Frankenberg, Ph.D.,** *Professor of Environmental Science and Engineering; Jet Propulsion Laboratory Research Scientist*

B.S., University of Bayreuth, 2002; Ph.D., Ruprecht-Karls-Universität Heidelberg, 2005. Assistant Professor, Caltech, 2015-18; Professor, 2018-; Jet Propulsion Laboratory Research Scientist, 2015-.

**Steven C Frautschi, Ph.D.,** *Professor of Theoretical Physics, Emeritus*

Á.B., Harvard College, 1954; Ph.D., Stanford University, 1958. Assistant Professor, Caltech, 1962-64; Associate Professor, 1964-66; Professor, 1966-2006; Professor Emeritus, 2006-. Executive Officer for Physics, 1988-97; Master of Student Houses, 1997-2002.

**Gregory C Fu Ph. D.,** *Norman Chandler Professor of Chemistry*

B.S., Massachusetts Institute of Technology, 1985; Ph.D., Harvard University, 1991. Moore Distinguished Scholar, Caltech, 2011;

Altair Professor, 2012-16; Chandler Professor, 2016-.

**Megumi Fujio**, *Lecturer in Japanese* B.A., Yamaguchi University, 1996; M.A., University of Colorado (Boulder), 2004; Ph.D., McGill University, 2017. Caltech, 2017 -18.

**James (Jim) Fuller, Ph.D.**, *Assistant Professor of Theoretical Astrophysics* B.A., Whitman College, 2008; M.S., Cornell University, 2011; Ph.D., 2014. Visiting Associate, Caltech 2017; Assistant Professor, 2017-.

**Brent Fultz, Ph.D.**, *Barbara and Stanley R. Rawon, Jr., Professor of Materials Science and Applied Physics* B.Sc., Massachusetts Institute of Technology, 1975; M.Sc., University of California, 1978; Ph.D., 1982. Assistant Professor, Caltech, 1985-90; Associate Professor, 1990-97; Professor of Materials Science, 1997-2002; Professor of Materials Science and Applied Physics, 2003-13; Rawn Professor, 2013-.

**Todd C Gaier**, *Faculty Associate in Physics* Ph.D., University of California (Santa Barbara), 1993. Principal Staff, Jet Propulsion Laboratory, 1996-. Caltech, 2004-19.

**Chad Galley**, *Visiting Associate in Physics* B.Sc., University of Maryland, 2000; Ph.D., 2007. Caltech, 2016-19.

**Wei Gao, Ph.D.**, *Assistant Professor of Medical Engineering* B.S., Huazhong University of Science & Technology, 2007; M.S., Tsinghua University, 2009; Ph.D., University of California, San Diego, 2014. Caltech, 2017-.

**Daniel A Garcia**, *Lecturer in Spanish* Lic., National University of Columbia, 1988; M.A., University of Southern California, 1991. Caltech, 1996-2018.

**Jorge (Jordi) Garcia-Ojalvo**, *Visiting Associate in Biology and Biological Engineering*

M.Sc., University of Barcelona, 1991; Ph.D., 1995. Associate Professor, Technical University of Catalonia, 2003-. Caltech, 2006-13; 2018-19.

**Stefano Gattei**, *Visiting Associate in History* Ph.D., University of Bristol, 2004. Caltech, 2016-18

**George R Gavalas, Ph.D.**, *Professor of Chemical Engineering, Emeritus* B.S., Technical University of Athens, 1958; M.S., University of Minnesota, 1962; Ph.D., 1964. Assistant Professor, Caltech, 1964-67; Associate Professor, 1967-75; Professor, 1975-2002; Professor Emeritus, 2002-.

**Emmanuel Gdoutos**, *Visiting Associate in Mechanical and Civil Engineering* M.S., National Technical University of Athens, 1971; Ph.D., 1973. Clark B Millikan Visiting Professor of Aerospace, 2013; 2014; 2016. Caltech, 2017-18.

**Murray Gell-Mann Ph.D., Sc.D.h.c., D.Sc.h.c.**, *Robert Andrews Millikan Professor of Theoretical Physics, Emeritus* B.S., Yale University, 1948; Ph.D., Massachusetts Institute of Technology, 1950; Sc.D.h.c., Columbia University; University of Cambridge; University of Chicago; University of Illinois; University of Utah; Wesleyan University; Yale University; D.Sc.h.c., University of Turin (Italy). Associate Professor, Caltech, 1955-56; Professor, 1956-67; Millikan Professor, 1967-93; Millikan Professor Emeritus, 1993-.

**Glen A George**, *Lecturer in Electrical Engineering* B.S. (Engineering and Applied Science), Caltech, 1981; B.S. (Electrical Engineering), 1982; M.S., University of California (Los Angeles), 1984. Lecturer in Applied Science, Caltech, 1986-1991; Lecturer in Computer Science and Electrical Engineering, 1992-2015; Lecturer in Electrical Engineering, 2015-2020.

**Merrill J Gerber**, *Lecturer in Creative Writing*  
B.A., University of Florida, 1959;  
M.A., Brandeis University, 1980.  
Caltech, 1989-2018.

**Alireza Ghaffari**, *Lab Administrator for the Micro/Nano Center; Lecturer in Applied Physics and Materials Science*  
B.S., California State University, 1986; M.S., Caltech, 2008. Lecturer, 2005-09; 2010-18.

**Morteza Gharib, Ph.D.**, *Hans W. Liepmann Professor of Aeronautics and Bioinspired Engineering; Director, Graduate Aerospace Laboratories; Director, Center for Autonomous Systems and Technologies*  
B.S., Teheran University, 1976;  
M.S., Syracuse University, 1978;  
Ph.D., Caltech, 1983. Professor of Aeronautics, 1992-2001; Professor of Aeronautics and Bioengineering, 2001-02; Liepmann Professor of Aeronautics and Bioengineering, 2002-06; Professor of Bioengineering, 2006-09; Professor of Bioinspired Engineering, 2009-13; Liepmann Professor, 2006-; Director, Linde Institute, 2014-15; Vice Provost, 2010-16; Director, Graduate Aerospace Laboratories, 2015-; Director, Center for Autonomous Systems and Technologies, 2017-.

**Konstantinos P Giapis, Ph.D.**, *Professor of Chemical Engineering*  
Dipl., National Technical University of Athens, 1984; Ph.D., University of Minnesota, 1989. Lacey Instructor, Caltech, 1992-93; Assistant Professor, 1993-98; Associate Professor, 1999-2010; Professor, 2010-.

**Michael B Gibilisco, Ph.D.**, *Assistant Professor of Political Science*  
B.A., Creighton University, 2010;  
M.A., University of Rochester, 2014;  
Ph.D., 2017; Caltech, 2017-.

**Kevin M Gilmartin, Ph.D.**, *William R. Kenan, Jr., Professor of English; Dean of Undergraduate Students*  
B.A., Oberlin College, 1985; M.A., University of Chicago, 1986; Ph.D., 1991. Assistant Professor, Caltech, 1991-97; Associate Professor of

Literature, 1997-2004; Associate Professor of English, 2004-07; Professor, 2007-18; Kenan Professor, 2018-. Dean of Undergraduate Students, 2016-.

**Dehn Gilmore, Ph.D.**, *Professor of English*  
B.A., Harvard University, 2002;  
M.Phil., University of Cambridge (Trinity College), 2003; M.Phil., Columbia University, 2005; Ph.D., 2009. Assistant Professor, Caltech, 2009-15; Professor, 2015-.

**Robert M Gingrich**, *Lecturer in Finance*  
B.A., University of California (Santa Cruz), 1996; B.S., 1996; Ph.D., Caltech, 2001. Caltech, 2018.

**Elizabeth E Glater**, *Visiting Associate in Biology and Biological Engineering*  
B.A., Swarthmore College, 1997;  
M.A., Brown University, 2001; Ph.D., Harvard University, 2006. Caltech, 2017-19.

**William A (Bill) Goddard, Ph.D.**, *Charles and Mary Ferkel Professor of Chemistry, Materials Science, and Applied Physics*  
B.S., University of California (Los Angeles), 1960; Ph.D., Caltech, 1965. Noyes Research Fellow in Chemistry, 1964-66; Noyes Research Instructor, 1966-67; Assistant Professor of Theoretical Chemistry, 1967-71; Associate Professor, 1971-74; Professor, 1974-78; Professor of Chemistry and Applied Physics, 1978-84; Ferkel Professor of Chemistry, 1984-2001; Ferkel Professor of Chemistry, Materials Science, and Applied Physics, 2001-.

**Lea A Goentoro, Ph.D.**, *Professor of Biology*  
B.S., University of Wisconsin-Madison, 2001; Ph.D., Princeton University, 2006. Assistant Professor, Caltech, 2011-18; Professor, 2018-.

**Peter Goldreich, Ph.D.**, *Lee A. DuBridge Professor of Astrophysics and Planetary Physics, Emeritus*  
B.S., Cornell University, 1960;

Ph.D., 1963. Associate Professor of Planetary Science and Astronomy, Caltech, 1966-69; Professor, 1969-81; DuBridge Professor of Astrophysics and Planetary Physics, 1981-2002; DuBridge Professor Emeritus, 2002-. Acting Chairman, Division of Geological and Planetary Sciences, 1989.

**Paul F Goldsmith, *Visiting Associate in Astronomy***

A.B., University of California, 1969; Ph.D., 1975. Principal Scientist, Jet Propulsion Laboratory, 2005-. Caltech, 2006-18.

**Matthew Golombek, *Visiting Associate in Planetary Science***

A.B., Rutgers College, 1976; M.S., University of Massachusetts, 1978; Ph.D., 1981. Caltech, 2012-20.

**Sunil Golwala, Ph.D., *Professor of Physics; Director, Caltech Submillimeter Observatory***

B.A., University of Chicago, 1993; M.A., University of California, Berkeley, 1995; Ph.D., 2000. Assistant Professor, Caltech, 2003-10; Associate Professor, 2010; Professor, 2010-; Director, Caltech Submillimeter Observatory, 2013-.

**David L Goodstein, Ph.D., *Frank J. Gilloon Distinguished Teaching and Service Professor, Emeritus; Professor of Physics and Applied Physics, Emeritus***  
B.S., Brooklyn College, 1960; Ph.D., University of Washington, 1965. Research Fellow in Physics, Caltech, 1966-67; Assistant Professor, 1967-71; Associate Professor, 1971-75; Associate Professor of Physics and Applied Physics, 1975-76; Professor, 1976-2009; Gilloon Professor, 1995-2009; Gilloon Professor Emeritus, 2009-. Vice Provost, 1987-2007.

**Judith R Goodstein, Ph.D., *University Archivist, Emeritus***  
B.A., Brooklyn College, 1960; Ph.D., University of Washington, 1969. Faculty Associate, Caltech, 1982-2009; Lecturer, 1989; 2001; 2002; 2007. Registrar, 1989-2003; Institute Archivist, 1968-95; University

Archivist, 1995-2009; University Archivist, Emeritus, 2009-.

**Roy W Gould, Ph.D., *Simon Ramo Professor of Engineering, Emeritus***  
B.S., Caltech, 1949; M.S., Stanford University, 1950; Ph.D., Caltech, 1956. Assistant Professor of Electrical Engineering, 1955-58; Associate Professor, 1958-60; Associate Professor of Electrical Engineering and Physics, 1960-62; Professor, 1962-74; Professor of Applied Physics, 1974-80; Ramo Professor of Engineering, 1980-96; Ramo Professor Emeritus, 1996-. Executive Officer for Applied Physics, 1973-79; Chairman, Division of Engineering and Applied Science, 1979-85.

**Thomas B Graber, Ph.D., *Professor of Mathematics***

A.B., Harvard, 1994; M.A. University of California (Los Angeles), 1995; Ph.D., 1998. Associate Professor, Caltech, 2005-08; Professor, 2008-.

**Viviana Gradinaru, Ph.D., *Professor of Neuroscience and Biological Engineering, Investigator, Heritage Medical Research Institute; Director, Center for Molecular and Cellular Neuroscience***

B.S., California Institute of Technology, 2005; Ph.D., Stanford University, 2010. Visiting Associate, Caltech, 2012; Assistant Professor, 2012-18; Professor, 2018-; HMRI Investigator, 2015-; Director, 2017-.

**Matthew J Graham, *Research Professor of Astronomy***

B.A., Trinity College, University of Oxford, 1993; Ph.D., University of Central Lancashire, 1996. Lecturer, 2017; Research Professor, 2017-19.

**Robert W Graves, *Visiting Associate in Geophysics***

B.S., University of California, Riverside, 1984; M.S., California Institute of Technology, 1988; Ph.D., 1990. Caltech, 2012-14; 2015-20.

**Harry B Gray Ph.D., D.Sc.h.c., D.L.h.c., *Arnold O. Beckman Professor of Chemistry; Founding Director, Beckman Institute***

B.S., Western Kentucky College, 1957; Ph.D., Northwestern University, 1960; D.Sc.h.c., Northwestern University; University of Rochester; University of Chicago; Göteborg University; University of Pennsylvania; Bowling Green State University; University of Arizona; Laurea h.c., University of Florence; D.L.h.c., Illinois Wesleyan University. Visiting Professor of Inorganic Chemistry, Caltech, 1965; Professor of Chemistry, 1966-81; William R. Kenan Professor, 1976-81; Beckman Professor, 1981-. Chairman, Division of Chemistry and Chemical Engineering, 1978-84; Director, Beckman Institute, 1986-2001; Founding Director, 2001-.

**Julia R Greer, Ph.D.**, *Professor of Materials Science, Mechanics and Medical Engineering*  
B.S., Massachusetts Institute of Technology, 1997; M.S., Stanford University, 2000; Ph.D., Stanford University, 2005. Assistant Professor, Caltech, 2007-13; Professor, 2013-.

**David M Grether, Ph.D.**, *Frank J. Gilloon Professor of Economics, Emeritus*  
B.S., University of California, 1960; Ph.D., Stanford University, 1969. Associate Professor, Caltech, 1970-75; Professor, 1975-2009; Gilloon Professor, 2009-10; Gilloon Professor, Emeritus, 2010-. Executive Officer for Social Sciences, 1978-82; Chairman, Division of the Humanities and Social Sciences, 1982-92; Interim Chair, Division of the Humanities and Social Sciences, 2006-07.

**John P Grotzinger, Ph.D.**, *Fletcher Jones Professor of Geology; Ted and Ginger Jenkins Leadership Chair, Division of Geological and Planetary Sciences*  
B.S., Hobart College, 1979; M.S., University of Montana, 1981; Ph.D., Virginia Polytechnic Institute and State University, 1985. Visiting Associate Professor, Caltech, 1996; Moore Distinguished Scholar, 2004; Fletcher Jones Professor, 2005-; Division Chair, 2014-; Jenkins Leadership Chair, 2016-.

**Robert H (Bob) Grubbs, Ph.D.**, *Victor and Elizabeth Atkins Professor of Chemistry*  
B.S., University of Florida, 1963; M.S., 1965; Ph.D., Columbia University, 1968. Professor, Caltech, 1978-90; Atkins Professor, 1990-.

**Niccolo Guicciardini Corsi Salviati**, *Francis Bacon Visiting Professor of History*  
B.A., University of Milan, 1982; B.A., 1992; Ph.D., Council for National Academic Awards (London), 1987. Associate Professor, University of Siena, 2001-. Caltech, 2006-07; 2018.

**Sergei G Gukov, Ph.D.**, *Professor of Theoretical Physics and Mathematics*  
B.S., Moscow Institute of Physics and Technology, 1997; M.S., Princeton University 2001; Ph.D., 2001. Associate Professor, Caltech, 2005-07; Professor, 2007-.

**Zheng Guo**, *Visiting Associate in Chemical Engineering*  
B.S., Tianjin University, 1992; Ph.D., 2004. Caltech, 2018-19.

**Michael C Gurnis, Ph.D.**, *John E. and Hazel S. Smits Professor of Geophysics; Director, Seismological Laboratory*  
B.S., University of Arizona, 1982; Ph.D., Australian National University, 1987. Associate Professor, Caltech, 1994-96; Professor, 1996-2005. Smits Professor, 2005-. Associate Director, Seismological Laboratory, 1995-2003; Director, 2009-.

**Mitchell Guttman, Ph.D.**, *Assistant Professor of Biology; Investigator, Heritage Medical Research Institute*  
B.S., University of Pennsylvania, 2006; M.S., 2006; Ph.D., Massachusetts Institute of Technology, 2012. Visiting Associate, Caltech, 2012-13; Assistant Professor, 2013-; HMRI Investigator, 2015-.

**Ryan G Hadt, Ph.D.**, *Assistant Professor of Chemistry*  
B.S., University of Minnesota, Duluth, 2007; M.S., 2008; Ph.D., Stanford University, 2014; Visiting

Associate, Caltech, 2018; Assistant Professor, 2018-.

**Cindy Hagan**, *Research Assistant Professor of Neuroscience*  
B.A. University of California (Los Angeles), 1999; Ph.D., University of York, 2010. Caltech, 2016-20.

**Sossina M Haile, Ph.D.**, *Visiting Associate in Applied Physics and Materials Science*  
B.S., Massachusetts Institute of Technology, 1986; M.S., University of California, 1988; Ph.D., Massachusetts Institute of Technology, 1992. Assistant Professor, Caltech, 1996-2001; Associate Professor, 2001-06; Professor, 2006-11; Braun Professor, 2012-2016; Visiting Associate, 2017-18.

**S A (Ali) Hajimiri, Ph.D.**, *Bren Professor of Electrical Engineering and Medical Engineering; Co-Director, Space-Based Solar Power Project*  
B.S., Sharif University of Technology, 1994; M.S., Stanford University, 1996; Ph.D., 1998. Assistant Professor, Caltech, 1998-2003; Associate Professor, 2003-06; Professor, 2006-10; Myers Professor, 2010-16; Bren Professor, 2016-; Executive Officer, 2015-18; Director, Information Science and Technology, 2015-16; Co-Director, 2016-.

**John F Hall, Ph.D.**, *Professor of Civil Engineering*  
B.S., West Virginia University, 1972; M.S., University of Illinois, 1973; Ph.D., University of California, 1980. Research Fellow, Caltech, 1980-83; Lecturer, 1981-83; Assistant Professor, 1983-89; Associate Professor, 1989-97; Professor, 1997-. Executive Officer for Civil Engineering and Applied Mechanics, 1998-2005. Dean, 2005-10; Acting Vice President, 2006-07.

**Susanne E Hall**, *Campus Writing Coordinator in the Hixon Writing Center and Lecturer in Writing (long-term)*  
B.A., Wake Forest University, 2001; M.A., University of California,

Irvine, 2003; Ph.D., 2008. Caltech, 2012-20.

**Ingileif B Hallgrímsson**, *Visiting Associate in Statistical Genetics*  
B.Sc., University of Iceland, 1998; M.Sc, Gothenburg University, 1999; Ph.D., University of California, Berkeley, 2005. Caltech, 2017-.

**Gregg W Hallinan, Ph.D.**, *Assistant Professor of Astronomy*  
B.Sc., National University of Ireland, 2002; Ph.D., 2008. Caltech, 2012-.

**John M Harris**, *Visiting Associate in Geology*  
B.Sc., University of Leicester (United Kingdom), 1964; M.A., University of Texas (Austin), 1967; Ph.D., University of Bristol, 1970. Chief Curator, George C. Page Museum, 1993-2014. Caltech, 2001-19.

**Fiona A Harrison Ph.D.**, **D.techn.h.c.**, *Benjamin M. Rosen Professor of Physics; Kent and Joyce Kresa Leadership Chair, Division of Physics, Mathematics and Astronomy*  
A.B., Dartmouth College, 1985; Ph.D., University of California, 1993; D.techn.h.c., Danish Technical University. Robert Millikan Research Fellow, Caltech, 1993-95; Assistant Professor of Physics, 1995-99; Assistant Professor of Physics and Astronomy, 1999-2001; Associate Professor 2001-2005; Professor, 2005-13; Rosen Professor, 2013-; Division Chair; 2015-; Kresa Leadership Chair, 2015-.

**Babak Hassibi, Ph.D.**, *Mose and Lillian S. Bohn Professor of Electrical Engineering*  
B.S., University of Tehran, 1989; M.S., Stanford University, 1993; Ph.D. 1996. Assistant Professor, Caltech, 2001-03; Associate Professor, 2003-2008; Professor, 2008-2013; Binder/Amgen Professor, 2013-16; Executive Officer, 2008-15; Associate Director, 2010-2012; Bohn Professor, 2016-.

**Kristine L Haugen, Ph.D.**, *Professor of English*  
B.A., University of Chicago, 1996;

M.A., Princeton University, 1998; Ph.D., 2001. Assistant Professor, Caltech, 2005-11; Professor, 2011-.

**Egill Hauksson**, *Research Professor of Geophysics*

M.S., University of Trondheim (Norway), 1974; M.A., Columbia University, 1978; M. Phil., 1980; Ph.D., 1981. Research Fellow, Caltech, 1989-92; Senior Research Associate, 1992-2014, Research Professor of Geophysics, 2014-.

**Bruce A Hay, Ph.D.**, *Professor of Biology*

B.A., Claremont McKenna College, 1982; Ph.D., University of California (San Francisco), 1989. Assistant Professor, Caltech, 1996-2002; Associate Professor, 2002-08; Professor, 2008-.

**James R Heath**, *Visiting Associate in Chemistry*

B.Sc., Baylor University, 1984; M.A., Rice University, 1988; Ph.D., 1988; Professor, Caltech, 2003-17; Visiting Associate, 2018.

**Thomas H Heaton, Ph.D.**, *Professor of Engineering Seismology*

B.S., Indiana University, 1972; Ph.D., Caltech, 1978. Visiting Associate in Geophysics, 1980-91; Faculty Associate, 1991-95; Lecturer in Geophysics, 1993-94; Lecturer in Engineering Seismology, 1995; Professor, 1995-.

**John L Heilbron**, *Visiting Associate in History*

A.B., University of California, 1955; M.A., 1958; Ph.D., 1964. Professor, 1994-. Sherman Fairchild Distinguished Scholar, Caltech, 1995; Mellon Visiting Professor, 1997; Eleanor Searle Visiting Professor, 2011; Visiting Associate, 2011-19.

**Thomas Heinze**, *Visiting Associate in History of Science*

M.A., University of Trier, 2000. Ph.D, University of Speyer, 2005. Ph.D./Hab., University of Bamberg, 2010. Caltech, 2018.

**Donald V Helmberger, Ph.D.**, *Smits Family Professor of Geophysics, Emeritus*

B.S., University of Minnesota, 1961; M.S., University of California (San Diego), 1965; Ph.D., 1967. Assistant Professor, Caltech, 1970-74; Associate Professor, 1974-79; Professor, 1979-2000, 2011-17; Smits Family Professor, 2000-11; Smits Family Professor, Emeritus, 2017-. Director, Seismological Laboratory, 1998-2003.

**George Helou**, *Research Professor of Physics; Executive Director of the Infrared Processing and Analysis Center*

B.S., American University of Beirut, 1975; Ph.D., Cornell University, 1980. Senior Research Associate, Caltech, 1998-. Executive Director, 1999-.

**Takuya Higo**, *Visiting Associate in Chemistry*

B.A., University of Tokyo, 2009; M.S., 2011; Ph.D., 2014. Caltech 2016-18.

**Sergi R Hildebrandt**, *Visiting Associate in Astronomy*

Ph.D., University of Barcelona, 2011. Caltech, 2014-19.

**Michael G Hill**, *Visiting Associate in Chemistry*

B.A., Macalester College, 1987; Ph.D., University of Minnesota, 1992. Assistant Professor, Occidental College, 1994-. Research Fellow, Caltech, 1992-94; Visiting Associate, 1995-2010; 2014-19; Lecturer, 2008.

**Lynne Hillenbrand, Ph.D.**, *Professor of Astronomy*

A.B., Princeton University, 1989; M.S., 1989; Ph.D., University of Massachusetts, 1995. Assistant Professor, Caltech, 2000-06; Associate Professor, 2006-10; Professor, 2010-; Executive Officer, 2007-12.

**Steve Hindle**, *Visiting Professor of History*

B.A., University of Cambridge, 1986; M.A., University of Minnesota, 1988;



Ph.D., University of Cambridge, 1993. Caltech, 2012-18.

**Christopher M Hirata**, *Visiting Associate in Physics*

B.S., California Institute of Technology, 2001, Ph.D., Princeton University, 2005. Caltech 2014-16; 2018-20.

**Alexander V (Alex) Hirsch, Ph.D.**,

*Professor of Political Science*

B.A., Yale University, 2003; Ph.D., Stanford University, 2010. Associate Professor, Caltech, 2014-16; Professor, 2016-.

**Christopher R Hitchcock, Ph.D.**,

*J. O. and Juliette Koepfli Professor of Philosophy, Executive Officer for the Humanities*

A.B., Princeton University, 1986; M.A. (Philosophy); M.A. (Mathematics), University of Pittsburgh, 1990; Ph.D., 1993. Associate Professor, Caltech, 1998-2002; Professor, 2002-14; Koepfli Professor, 2014-; Executive Officer, 2018-.

**David G Hitlin, Ph.D.**, *Professor of Physics*

B.A., Columbia University, 1963; M.A., 1965; Ph.D., 1968. Associate Professor, Caltech, 1979-85; Professor, 1986-.

**Andre Hoelz, Ph.D.**, *Professor of Chemistry; Investigator, Heritage Medical Research Institute*

B.Sc., Albert-Ludwigs University of Freiburg, 1993; M.Sc., 1997; Ph.D., Rockefeller University, 2004. Assistant Professor, Caltech, 2010-16; Professor 2016-; HMRI Investigator, 2015-.

**Philip T Hoffman, Ph.D.**, *Rea A. and Lela G. Axline Professor of Business Economics and History*

A.B., Harvard College, 1969; M.A., University of California, 1971; Ph.D., Yale University, 1979. Lecturer, Caltech, 1980-81; Instructor, 1981-82; Assistant Professor, 1982-84; Associate Professor, 1984-95; Professor, 1995-2003; Richard and

Barbara Rosenberg Professor of History and Social Science, 2003-08; Axline Professor, 2008-. Executive Officer for the Humanities, 1995-2000.

**Franca Karoline Olga (Franca)**

**Hoffmann**, *von Karman Instructor in Computing and Mathematical Sciences*

B.S., Imperial College London, 2010; M.S., 2013; Ph.D, University of Cambridge, 2017. Caltech, 2017-18.

**Michael R Hoffmann, Ph.D.**,

*John S. and Sherry Chen Professor of Environmental Science*

B.A., Northwestern University, 1968; Ph.D., Brown University, 1974. Research Fellow, Caltech, 1973-76; Associate Professor, 1980-85; Professor of Environmental Engineering Science, 1986-90; Professor of Environmental Chemistry, 1990-96; James Irvine Professor of Environmental Science, 1996-16; Wu Professor, 2016-18; Chen Professor, 2018-; Executive Officer for Environmental Engineering Science, 1996-2002; Dean of Graduate Studies, 2002-2009.

**Douglas C Hofmann**, *Visiting*

*Associate in Applied Physics and Materials Science; Lecturer in Applied Physics and Materials Science*

B.S., University of California, San Diego, 2003; M.S., 2004; M.S., Caltech, 2006; Ph.D., 2008. Caltech, 2011-19.

**Jocelyn Holland, Ph.D.**, *Professor of Comparative Literature*

B.A., Harvard-Radcliffe College, 1995; M.A., Johns Hopkins University, 1998; Ph.D., 2003. Visiting Associate, Caltech, 2016-17; Professor, 2017-.

**Roy J Holt**, *Visiting Associate in Theoretical Physics*

B.S., Southern Methodist University, 1969; M.Phil., Yale University, 1971; Ph.D., 1972. Professor, University of Illinois, 1994-2001. Visiting Associate in Theoretical Physics, Caltech, 2017; Argonne Distinguished Fellow, 2007-.

**Gerard J Holzmann, Visiting Associate in Computing and Mathematical Sciences**  
B.S., Delft University of Technology (Netherlands), 1973; M.S., 1976; Ph.D., 1979. Lecturer, Caltech, 2003-06; 2008; 2009; 2010; 2013; 2015; 2017; Faculty Associate, 2007-2012; Senior Faculty Associate, 2012-2016; Caltech, 2017-18.

**Philip W Hon, Visiting Associate in Applied Physics and Materials Science**  
B.S., University of California (Los Angeles), 2004; M.S., 2007; Ph.D., 2013. Caltech, 2014-18.

**Elizabeth J (Betty) Hong, Ph.D., Clare Boothe Luce Assistant Professor of Neuroscience**  
B.S., California Institute of Technology, 2002; Ph.D., Harvard University, 2009. Visiting Associate, Caltech, 2014-15; Assistant Professor, 2015; Boothe Luce Assistant Professor, 2015-.

**John J Hopfield, Ph.D., Roscoe G. Dickinson Professor of Chemistry and Biology, Emeritus**  
A.B., Swarthmore College, 1954; Ph.D., Cornell University, 1958. Dickinson Professor, Caltech, 1980-97; Dickinson Professor Emeritus, 1997-.

**Philip F Hopkins, Ph.D., Professor of Theoretical Astrophysics**  
B.A., Princeton University, 2004; M.A., Harvard University, 2005; Ph.D., 2008. Assistant Professor Caltech, 2013-16; Associate Professor, 2016-17; Professor, 2017-.

**Hans G Hornung Ph.D., D.h.c., C. L. Kelly Johnson Professor of Aeronautics, Emeritus**  
B.S., University of Melbourne, 1960; M.S., 1962; Ph.D., University of London (Imperial College), 1965; D.h.c., Swiss Federal Institute of Technology. Johnson Professor, Caltech, 1987-2005; Johnson Professor Emeritus, 2005-. Director, Graduate Aeronautical Laboratories, 1987-2004.

**Yizhao T (Thomas) Hou, Ph.D., Charles Lee Powell Professor of Applied and Computational Mathematics**  
B.S., South China University of Technology, 1982; M.S., University of California (Los Angeles), 1985; Ph.D., 1987. Associate Professor of Applied Mathematics, Caltech, 1993-98; Professor, 1998-2000; Professor of Applied and Computational Mathematics, 2000-04; Powell Professor, 2004-. Executive Officer for Applied and Computational Mathematics, 2000-06.

**Andrew W Howard, Ph.D., Professor of Astronomy**  
B.S., Massachusetts Institute of Technology, 1998; M.A., Harvard University, 2001; Ph.D., 2006. Caltech, 2016-.

**James B Howard, Visiting Associate in Chemistry**  
B.A., DePauw University, 1964; Ph.D., University of California (Los Angeles), 1968. Professor, University of Minnesota, 1982-. Caltech, 1996-2018.

**Julie A Hoy, Lecturer in Biology and Biological Engineering**  
B.S., Wartburg College, 1996; M.S., Iowa State University, 1999; Ph.D., 2006. Caltech 2015-18.

**Tzung K Hsiai, Visiting Associate in Medical Engineering**  
B.S., Columbia University, School of Engineering, 1989; M.D., University of Chicago, 1993; Ph.D., University of California, Los Angeles, 2001. Caltech, 2015-19.

**Elaine Y Hsiao, Visiting Associate in Biology and Biological Engineering**  
B.S., University of California (Los Angeles) 2006; Ph.D., Caltech, 2013. Research Assistant Professor, Caltech, 2014. Caltech, 2014-18.

**David Hsieh, Ph.D., Professor of Physics**  
B.S., Stanford University, 2003; Ph.D., Princeton University, 2009. Assistant Professor, Caltech, 2012-18; Professor, 2018-.

**Linda C Hsieh-Wilson, Ph.D.**,  
*Arthur and Marian Hanisch Memorial  
Professor of Chemistry*  
B.S., Yale University, 1990; Ph.D.,  
University of California, 1996.  
Assistant Professor, Caltech,  
2000-06; Associate Professor,  
2006-10; Professor, 2010-2-17;  
Hanisch Professor, 2017-; HHMI  
Investigator, 2005-14.

**Renyu Hu**, *Visiting Associate in  
Planetary Science*  
B.S., Tsinghua University, 2007; Dip.  
Eng., Ecole Centrale Paris, 2009;  
M.Sc., Tsinghua University, 2009;  
Ph.D., Massachusetts Institute of  
Technology, 2013. Caltech, 2015-19.

**Alice S Huang**, *Senior Faculty  
Associate in Biology*  
B.A., Johns Hopkins University,  
1961; M.S., 1963; Ph.D., 1966.  
M.A. h.c., Harvard University;  
D.Sci.h.c., Wheaton College; Mt.  
Holyoke College; Medical College  
of Pennsylvania. Faculty Associate,  
Caltech, 1997-2007; Senior Faculty  
Associate, 2007-.

**Kenneth W Hudnut**, *Visiting  
Associate in Geophysics*  
A.B., Dartmouth College, 1983;  
M.A., Columbia University, 1986;  
Ph.D., 1989. Geophysicist and  
Project Chief, U.S. Geological  
Survey, 1992-. Research Fellow,  
Caltech, 1989-92; Visiting Associate,  
1997-2019.

**Francisco J Huera Huarte**, *Visiting  
Associate in Aerospace*  
M.E., Universitat Politècnica  
Catalunya, 2003; Ph.D, Imperial  
College, London, 2006. Caltech,  
2014; 2015; 2018.

**Mark S Humayun**, *Visiting Associate  
in Medical Engineering*  
B.S., Georgetown University, 1984;  
M.D., Duke University, 1989; Ph.D.,  
University of North Carolina, 1992.  
Caltech, 2014-19.

**Melany L Hunt, Ph.D.**, *Dotty and  
Dick Hayman Professor of Mechanical  
Engineering*  
B.S., University of Minnesota, 1983;

M.S., University of California, 1985;  
Ph.D., 1987. Assistant Professor,  
Caltech, 1988-95; Associate  
Professor, 1995-2001; Professor,  
2001-2011; Kenan Professor, 2012-  
13; Hayman Professor, 2013-;  
Executive Officer, 2002-2007; Vice  
Provost, 2007-14.

**Rene Hurlemann**, *Visiting Associate  
in Psychology*  
M.D., University of Bonn Medical  
School, 2001; M.Sc., Universities  
of Maastricht and Florence, 2006;  
Ph.D., Maastricht University, 2007.  
Caltech, 2013-18.

**Nicholas R (Nick) Hutzler, Ph.D.**,  
*Assistant Professor of Physics*  
B.S., California Institute of  
Technology, 2007; A.M., Harvard  
University, 2009; Ph.D., 2014.  
Visiting Associate, Caltech, 2017;  
Assistant Professor, 2017-.

**Sonjong Hwang**, *Lecturer in  
Chemistry*  
B.S., Sogang University (Korea),  
1987; Ph.D., Iowa State University,  
1994. Caltech, 2001-09, 2010, 2012,  
2017; 2018.

**Paul R Hyams**, *Visiting Associate in  
the Humanities*  
M.A., Oxford University, 1963;  
D.Phil, 1980. Caltech, 2018.

**Andrew P Ingersoll, Ph.D.**, *Professor  
of Planetary Science*  
B.A., Amherst College, 1960; A.M.,  
Harvard University, 1961; Ph.D.,  
1966. Assistant Professor, Caltech,  
1966-71; Associate Professor,  
1971-76; Professor, 1976-2003;  
2011-; Anthony Professor, 2003-  
11. Executive Officer for Planetary  
Science, 1987-94.

**Philip (Phil) Isett, Ph.D.**, *Assistant  
Professor of Mathematics*  
B.S., University of Maryland, 2008;  
Ph.D., Princeton University, 2013;  
Caltech, 2018-.

**Rustem F Ismagilov, Ph.D.**, *Ethel  
Wilson Bowles and Robert Bowles  
Professor of Chemistry and Chemical  
Engineering; Director of the Jacobs*

*Institute for Molecular Engineering for Medicine*

B.S., Higher Chemical College of the Russian Academy of Sciences, 1994; Ph.D., University of Wisconsin, Madison, 1998. Miles Professor, Caltech, 2011-13; Bowles Professor, 2013-; Director, Jacobs Institute, 2013-.

**Oleg Ivrii**, *Olga Taussky and John Todd Instructor in Mathematics*

B.Sc., University of Toronto, 2009; Ph.D., Harvard University, 2014. Caltech 2016-19.

**Wilfred D (Bill) Iwan, Ph.D.**, *Professor of Applied Mechanics, Emeritus*

B.S., Caltech, 1957; M.S., 1958; Ph.D., 1961. Assistant Professor, 1964-67; Associate Professor, 1967-72; Professor, 1972-2004; Professor Emeritus, 2004-. Executive Officer for Civil Engineering and Applied Mechanics, 1980-86.

**Jennifer M Jackson, Ph.D.**, *Professor of Mineral Physics*

B.S., University of Illinois (Urbana-Champaign), 1999; M.S., University of Notre Dame, 2000; Ph.D., University of Illinois, 2005. Assistant Professor of Geophysics, Caltech, 2007-09; Assistant Professor of Mineral Physics, 2009-12; Professor, 2012-.

**Jennifer A Jahner, Ph.D.**, *Assistant Professor of English*

B.A., Western Washington University, 1998; M.A., University of Colorado at Boulder, 2005; Ph.D., University of Pennsylvania, 2012. Caltech, 2012-.

**Paul C Jennings, Ph.D.**, *Professor of Civil Engineering and Applied Mechanics, Emeritus*

B.S., Colorado State University, 1958; M.S., Caltech, 1960; Ph.D., 1963. Research Fellow in Civil Engineering, 1965; Assistant Professor of Applied Mechanics, 1966-68; Associate Professor, 1968-72; Professor, 1972-77; Professor of Civil Engineering and Applied Mechanics, 1977-2002; 2004-

2007. Professor Emeritus, 2002-04; 2007-. Executive Officer for Civil Engineering and Applied Mechanics, 1975-80; Chairman, Division of Engineering and Applied Science, 1985-89; Vice President and Provost, 1989-95; Acting Vice President for Business and Finance, 1995; 1998-99; Provost, 2004-07.

**Grant J Jensen, Ph.D.**, *Professor of Biophysics and Biology; Investigator, Howard Hughes Medical Institute*  
B.S., Brigham Young University, 1994; Ph.D., Stanford University, 1999. Assistant Professor, Caltech, 2002-2008; Associate Professor, 2008-10; Professor, 2010-; HHMI Investigator, 2008-.

**Chenyang (Sunny) Jiang**, *Visiting Associate in Environmental Science and Engineering*

M.S., University of South Florida, 1993; Ph.D, 1996. Caltech, 2013-18.

**Lawrence J Jin, Ph.D.**, *Assistant Professor of Finance*

B.S., Tsinghua University China, 2005; M.S., California Institute of Technology, 2006; Ph.D., Yale University, 2015. Caltech, 2015-.

**William L Johnson, Ph.D.**, *Ruben F. and Donna Mettler Professor of Engineering and Applied Science*

B.A., Hamilton College, 1970; Ph.D., Caltech, 1975. Assistant Professor of Materials Science, 1977-80; Associate Professor, 1980-84; Professor, 1984-89; Mettler Professor, 1989-.

**Lucile M (Lucy) Jones**, *Visiting Associate in Geophysics*

A.B., Brown University, 1976; Ph.D., Massachusetts Institute of Technology, 1981. Research Associate, U.S. Geological Survey, 1984-. Caltech, 1984-2018.

**Yousung Jung**, *Visiting Associate in Chemistry*

M.S., Seoul National University, 1999; M.S., Iowa State University, 2001; Ph.D., University of California (Berkeley), 2005. Caltech, 2011-12; 2017-18.

**Catherine Jurca, Ph.D.**, *Professor of English*  
B.A., University of California, 1987; M.A., Johns Hopkins University, 1992; Ph.D., 1995. Instructor, Caltech, 1995; Assistant Professor, 1995-2001; Associate Professor of Literature, 2001-04; Associate Professor of English, 2004-10; Professor, 2010-; Master of Student Houses, 2002-09; Executive Officer, 2014-18.

**Karanjit Kalsi**, *Visiting Associate in Computing and Mathematical Sciences*  
M. Eng., University of Sheffield, 2006; Ph.D., Purdue University, 2010. Caltech, 2017-18.

**Hiroo Kanamori, Ph.D.**, *John E. and Hazel S. Smits Professor of Geophysics, Emeritus*  
B.S., University of Tokyo, 1959; M.S., 1961; Ph.D., 1964. Research Fellow, Caltech, 1965-66; Professor, 1972-89; Smits Professor, 1989-2005; Smits Professor Emeritus, 2005-. Director, Seismological Laboratory, 1990-98.

**Anton N Kapustin, Ph.D.**, *Earle C. Anthony Professor of Theoretical Physics and Mathematics*  
M.S., Moscow State University, 1993; Ph.D., Caltech, 1997. Assistant Professor, 2001-04; Associate Professor, 2004-10; Professor, 2010-12; Earle C. Anthony Professor, 2012-.

**Emil P Kartalov**, *Visiting Associate in Electrical Engineering*  
B.S., Caltech, 1998; M.S., 2004; Ph.D., 2004. Assistant Professor, University of Southern California, 2007-. Visiting Associate, Caltech, 2008-18.

**Mansi M Kasliwal, Ph.D.**, *Assistant Professor of Astronomy*  
B.S., Cornell University, 2005; M.S., Caltech, 2007; Ph.D., 2011. Visiting Associate, Caltech, 2014-15; Assistant Professor, 2015-.

**Jonathan N Katz, Ph.D.**, *Kay Sugahara Professor of Social Sciences and Statistics*  
S.B., Massachusetts Institute of Technology, 1990; M.A., University of California (San Diego), 1992; Ph.D.,

1995. Assistant Professor, Caltech, 1995-98; Associate Professor, 1998; 1999-2003; Professor, 2003-11; Sugahara Professor, 2012-; Executive Officer for the Social Sciences, 2007; Director, Linde Institute, 2013-14; Division Chair, 2007-14.

**Nets H Katz, Ph.D.**, *International Business Machines Professor of Mathematics*  
B.A., Rice University, 1990; Ph.D., University of Pennsylvania, 1993. Professor, Caltech, 2013-; IBM Professor, 2016-.

**Sarah M Keating**, *Visiting Associate in Computing and Mathematical Sciences*  
B.S., Open University, 1996; M.S., University College London, 1998; Ph.D., 2002. Caltech, 2013-18.

**Alexander Kechris Ph.D., D.h.c.**, *Professor of Mathematics*  
M.S., National Technical University, Athens, 1969; Ph.D., University of California, Los Angeles, 1972; D.h.c., University of Athens. Assistant Professor, Caltech, 1974-76; Associate Professor, 1976-81; Professor, 1981-. Executive Officer for Mathematics, 1994-97.

**Mary B Kennedy, Ph.D.**, *The Allen and Lenabelle Davis Professor of Biology*  
B.S., St. Mary's College, 1969; Ph.D., Johns Hopkins University, 1975. Assistant Professor, Caltech, 1981-84; Associate Professor, 1984-92; Professor, 1992-2002; Davis Professor, 2002-.

**Daniel J Kevles, Ph.D.**, *J. O. and Juliette Koepfli Professor of the Humanities, Emeritus*  
A.B., Princeton University, 1960; Ph.D., 1964. Assistant Professor of History, Caltech, 1964-68; Associate Professor, 1968-78; Professor, 1978-86; Koepfli Professor of the Humanities, 1986-2001; Koepfli Professor Emeritus, 2001-. Executive Officer for the Humanities, 1978-81.

**D R (Rod) Kiewiet, Ph.D.**, *Professor of Political Science*  
B.A., University of Iowa, 1974;

Ph.D., Yale University, 1980.  
Assistant Professor, Caltech, 1979-82; Associate Professor, 1982-89; Professor, 1989-. Dean of Students, 1992-96; Dean of Graduate Studies, 2000-02; Dean of Undergraduate Students, 2011-14.

**YoungHee Kim**, *Visiting Associate in Geophysics*  
B.A., University of California, 2002; M.S., Seoul National University, 2004; Ph.D., Caltech, 2011. Caltech, 2018-19.

**H. J Kimble Ph.D., D.Sc.h.c.**, *William L. Valentine Professor of Physics*  
B.S., Abilene Christian University, 1971; M.S., University of Rochester, 1973; Ph.D., 1978; D.Sc.h.c., Niels Borhr Institute, University of Copenhagen. Professor, Caltech, 1989-; Valentine Professor, 1997-.

**Richard E Kipling**, *Lecturer in Journalism*  
B.A., University of California (Santa Barbara), 1966; M.A., 1968; ABD, Claremont Graduate School, 1971. Caltech, 2008; 2009; 2011; 2012; 2013-14; 2016-18.

**Evan N Kirby, Ph.D.**, *Assistant Professor of Astronomy*  
B.S., Stanford University, 2004; M.S., University of California, Santa Cruz, 2006; Ph.D., 2009. Caltech, 2014-.

**Joseph (Joe) Kirschvink, Ph.D.**, *Nico and Marilyn Van Wingen Professor of Geobiology*  
B.S., M.S., Caltech, 1975; M.A., Princeton University, 1978; Ph.D., 1979. Assistant Professor, Caltech, 1981-87; Associate Professor, 1987-92; Professor, 1992-2004; Van Wingen Professor, 2004-.

**Alexei Kitaev, Ph.D.**, *Ronald and Maxine Linde Professor of Theoretical Physics and Mathematics*  
Dipl., Moscow Institute of Physics and Technology, 1986; Ph.D., Landau Institute for Theoretical Physics, 1989. Visiting Associate,

Caltech, 1998-99; Lecturer, 1998-99; Senior Research Associate, 2001-02; Professor, 2002-13; Linde Professor, 2013-.

**Jean Patrice M (Patrice) Klein**, *Visiting Associate in Environmental Science and Engineering*  
M.S., Ecole Supérieure des Mines, 1971; Ph.D., Paris University, 1973; Ph.D., Marseille University, 1980. Lecturer, 2016. Caltech, 2016-20.

**Leah Klement**, *Postdoctoral Instructor in the Humanities*  
B. A., Oxford University, 2008; Ph.D., Princeton, 2015. Caltech, 2016-19.

**Dorit Kliemann**, *Lecturer in Psychology*  
MSc, Freie Universität Berlin, 2008; Ph.D., 2013. Caltech, 2017.

**Wolfgang G Knauss, Ph.D.**, *Theodore von Karman Professor of Aeronautics and Applied Mechanics, Emeritus*  
B.S., Caltech, 1958; M.S., 1959; Ph.D., 1963. Research Fellow in Aeronautics, 1963-65; Assistant Professor, 1965-69; Associate Professor, 1969-78; Professor, 1978-82; Professor of Aeronautics and Applied Mechanics, 1982-2001; von Karman Professor, 2001-2004; von Karman Professor Emeritus, 2004-.

**Heather A Knutson, Ph.D.**, *Professor of Planetary Science*  
B.Sc., Johns Hopkins University, 2004; A.M., Harvard University, 2006; Ph.D., 2009. Visiting Associate, Caltech, 2010-11; Assistant Professor, 2011-17; Professor, 2017-.

**Dennis M Kochmann, Dr.-Ing.**, *Professor of Aerospace*  
Dipl.-Ing, Ruhr-University, Bochum, 2006; M.S., University of Wisconsin-Madison, 2006; Dr.-Ing, Ruhr-University, Bochum, 2009. Assistant Professor, Caltech, 2011-16; Professor, 2016-.

**Monica D Kohler**, *Research Professor of Mechanical and Civil Engineering* A.B., Harvard University, 1988; Ph.D., Caltech, 1995. Assistant Research Engineer, University of California (Los Angeles), 1998-. Visiting Associate, Caltech, 2007-11; Lecturer, 2009, 2012, 2013; Research Assistant Professor, 2011-17; Research Professor, 2018-.

**Masakazu (Mark) Konishi, Ph.D.**, *Bing Professor of Behavioral Biology, Emeritus* B.S., Hokkaido University (Japan), 1956; M.S., 1958; Ph.D., University of California, 1963. Professor of Biology, Caltech, 1975-80; Bing Professor, 1980-13; Bing Professor, Emeritus, 2013-. Executive Officer for Biology, 1977-80.

**Diana L Kormos-Buchwald, Ph.D.**, *Robert M. Abbey Professor of History* B.Sc., Technion-Israel Institute of Technology, 1981; M.Sc., Tel Aviv University, 1983; A.M., Harvard University, 1985; Ph.D., 1990. Instructor, Caltech, 1989-90; Assistant Professor, 1990-96; Associate Professor, 1996-2005; Professor, 2005-2017; Abbey Professor, 2018-.

**Julia A Kornfield, Ph.D.**, *Professor of Chemical Engineering* B.S., Caltech, 1983; M.S., 1984; Ph.D., Stanford University, 1988. Assistant Professor, Caltech, 1990-95; Associate Professor, 1995-2001; Professor, 2001-.

**Victoria Kostina, Ph.D.**, *Assistant Professor of Electrical Engineering* B.S., Moscow Institute of Physics and Technology, 2004; M.S., University of Ottawa, 2006; Ph.D., Princeton University, 2013. Caltech, 2014-.

**Petros D Koumoutsakos, Ph.D.**, *Moore Distinguished Scholar in Aerospace* Dipl., National Technical University of Athens, 1986; B.S., University of Michigan, 1987; M.S., Caltech, 1988; Ph.D., 1992. Research Fellow, Caltech, 1992-94; Millikan Visiting

Professor, 2009-10, 2011-13, 2014, 2015; Moore Distinguished Scholar, 2016, 2018.

**J. M (Morgan) Kousser, Ph.D.**, *Professor of History and Social Science* A.B., Princeton University, 1965; M.Phil., Yale University, 1968; Ph.D., 1971. Instructor in History, Caltech, 1969-71; Assistant Professor, 1971-74; Associate Professor, 1974-79; Professor, 1979-80; Professor of History and Social Science, 1980-2013, 2018-; Kenan Professor, 2013-18.

**Anne J Kox**, *Visiting Associate in History* M.S., University of Amsterdam, 1972; Ph.D., 1976. Pieter Zeeman Professor, 1998-. Visiting Professor, Caltech, 2003; Visiting Associate, 2005-19.

**Benjamin Krause**, *Lecturer in Mathematics* B.A., Amherst College, 2010; Ph.D., University of California Los Angeles, 2015. Caltech, 2018.

**Shrinivas R (Shri) Kulkarni Ph.D., D.h.c.**, *George Ellery Hale Professor of Astronomy and Planetary Science* M.S., Indian Institute of Technology, 1978; Ph.D., University of California, 1983; D.h.c., Radboud University. Millikan Research Fellow in Radio Astronomy, Caltech, 1985-87; Assistant Professor of Astronomy, 1987-90; Associate Professor, 1990-92; Professor, 1992-96; Professor of Astronomy and Planetary Science, 1996-2001; MacArthur Professor, 2001-17; Hale Professor, 2017-; Executive Officer for Astronomy, 1997-2000. Director of Caltech Optical Observatories, 2006-18.

**Akiko Kumagai**, *Research Professor of Biology* B.S., Kyoto University (Japan), 1979; Ph.D., 1986. Senior Research Fellow, Caltech, 1989-95; Senior Research Associate, 1996-2014; Research Professor, 2014-.

**Kenichi Kuroda**, *Visiting Associate in Chemical Engineering*  
B.E., Kyoto University, 1995; M.S., 1997; Ph.D., Massachusetts Institute of Technology, 2006. Caltech, 2017-18.

**Christoph A Kuzmics**, *Visiting Associate in Economics*  
M.A., Graz University of Technology, 1997; M.Phil., University of Cambridge, 2002; Ph.D., 2004. Caltech, 2018.

**Jenijoy La Belle, Ph.D.**, *Professor of English, Emeritus*  
B.A., University of Washington, 1965; Ph.D., University of California (San Diego), 1969. Assistant Professor of English, Caltech, 1969-76; Associate Professor, 1977-80; Associate Professor of Literature, 1980-88; Professor of Literature, 1988-2004; Professor of English, 2004-2007; Professor Emeritus, 2007-.

**Paul F La Porte**, *Visiting Associate in Chemical Engineering*  
B.A., University of Chicago, 2005; Ph.D., 2011, M.D., 2012. Caltech, 2016-18.

**Jay A Labinger**, *Faculty Associate in Chemistry*  
B.S., Harvey Mudd College, 1968; Ph.D., Harvard University, 1974. Caltech, 1988-1996; Faculty Associate, 2006-; Lecturer, 2008-11.

**Farshad Lahouti**, *Lecturer in Electrical Engineering*  
B.S., University of Tehran, 1996; Ph.D., University of Waterloo, 2002. Caltech, 2013-16. Lecturer, 2016-18.

**Ka Chun Lam**, *von Karman Instructor in Computing and Mathematical Sciences*  
B.S., The Chinese University of Hong Kong, 2011; M.Phil., 2013; Ph.D., 2016. Caltech, 2016-19.

**Michael P Lamb, Ph.D.**, *Professor of Geology*  
B.S., University of Minnesota, 2001;

M.S., University of Washington, 2004; Ph.D., University of California, Berkeley, 2008. Assistant Professor, Caltech, 2009-14; Professor, 2014-.

**Nadia Lapusta, Ph.D.**, *Professor of Mechanical Engineering and Geophysics*  
Dipl., Kiev State University, 1994; M.S., Harvard University, 1996; Ph.D., 2001. Assistant Professor of Mechanical Engineering, Caltech, 2002-03; Assistant Professor of Mechanical Engineering and Geophysics, 2003-08; Associate Professor, 2008-10; Professor, 2010-.

**Eugene Lavretsky**, *Lecturer in Computing and Mathematical Sciences*  
M.S., Saratov State University (Russia), 1983; Ph.D., Claremont Graduate University, 2000. Caltech, 2006-14; 2015; 2016; 2018.

**Kirill Lazebnik**, *Harry Bateman Instructor in Mathematics*  
B.A., State University of New York at Geneseo, 2012; Ph.D., Stony Brook University, 2017; Caltech, 2017-20.

**Joseph Lazio**, *Visiting Associate in Physics*  
B.S., University of Iowa, 1989; M.S., Cornell University, 1992, Ph.D., 1997. Caltech, 2010-13; 2016-21.

**Jared R Leadbetter, Ph.D.**, *Professor of Environmental Microbiology*  
B.S., Goucher College, 1991; Ph.D., Michigan State University, 1997. Assistant Professor, Caltech, 2000-06; Associate Professor, 2006-10; Professor, 2010-.

**John O Ledyard Ph.D., D.Lit.h.c.**, *Allen and Lenabelle Davis Professor of Economics and Social Sciences, Emeritus*  
A.B., Wabash College, 1963; M.S., Purdue University, 1965; Ph.D., 1967; D.Lit.h.c., Purdue University. Professor, Caltech, 1985-2016; Davis Professor, 2002-16; Davis Professor, Emeritus, 2016-. Executive Officer for the Social Sciences, 1989-92; Chair, Division of the Humanities and Social Sciences, 1992-2002.



**Brian Lee**, *Visiting Associate in Biology and Biological Engineering*  
B.S., University of Southern California, 1999; Ph.D., Caltech, 2006; M.D., University of Southern California, 2008. Caltech, 2013-18.

**Duhyun Lee**, *Visiting Associate in Applied Physics and Materials Science*  
B.S., Sungkyunkwan University, 1996; M.S., 1998; Ph.D., 2006. Caltech, 2016-18.

**Jong Seok Lee**, *Visiting Associate in Physics*  
B.S., Seoul National University, 1998; M.S., 2000; Ph.D., 2004. Caltech, 2017-18.

**Jongho Lee**, *Visiting Associate in Medical and Electrical Engineering*  
B.S., Hanyang University, 1998; M.S., Korean Advanced Institute of Science and Technology, 2003; M.S., University of California, 2006; Ph. D., 2008. Caltech, 2017-18.

**Dennis Lehmkuhl**, *Research Assistant Professor of History and Philosophy of Science*  
MSc., Imperial College London, 2003; M.A., Hamburg University, 2006; DPhil., Oxford University (Oriel College), 2009. Visiting Associate, Caltech, 2010, 2012, 2015. Caltech, 2015-18.

**Anthony Leonard, Ph.D.**, *Theodore von Karman Professor of Aeronautics, Emeritus*  
B.S., Caltech, 1959; M.S., Stanford University, 1960; Ph.D., 1963. Professor, Caltech, 1985-2000; von Karman Professor, 2000-2005; von Karman Professor Emeritus, 2005-.

**Henry A Lester, Ph.D.**, *Professor of Biology*  
A.B., Harvard College, 1966; Ph.D., Rockefeller University, 1971. Assistant Professor, Caltech, 1973-76; Associate Professor, 1976-83; Professor, 1983-2000, 2017-; Bren Professor, 2000-2017; Executive Officer, 2010-13.

**Carmel Levitan**, *Visiting Associate in Biology and Biological Engineering*  
B.A., Stanford University, 2001; Ph.D., University of California (San

Francisco & Berkeley), 2007. Caltech, 2009-18.

**Hans J (Joachim) Lewerenz**, *Visiting Associate in Applied Physics and Materials Science*  
Ph.D., Technische Universität Berlin, 1986. Caltech, 2015-19.

**Daniel Lewis**, *Lecturer in History*  
B.A., University of Redlands, 1981; M.A., University of California (Riverside), 1988, Ph.D, 1997. Caltech, 2018.

**Nathan S (Nate) Lewis, Ph.D.**, *George L. Argyros Professor and Professor of Chemistry*  
B.S., Caltech, 1977; M.S., 1977; Ph.D., Massachusetts Institute of Technology, 1981. Associate Professor, Caltech, 1988-91; Professor, 1991-2001; Argyros Professor, 2002-.

**Scott M Lewis**, *Visiting Associate in Applied Physics and Materials Science*  
B. Eng., Cardiff University, 2002; M.Sc., 2004; Ph.D., 2009. Research Fellow, The University of Manchester, 2013-. Caltech, 2018- 2019.

**Chen Li**, *Visiting Associate in Applied Physics and Materials Science*  
Ph.D., California Institute of Technology, 2012. Caltech, 2016-19.

**Dong Li**, *Visiting Associate in Medical Engineering*  
B.S., Xi'an Jiaotong University, 2005; Ph.D., 2013. Caltech, 2017-18.

**Kenneth G Libbrecht, Ph.D.**, *Professor of Physics*  
B.S., Caltech, 1980; Ph.D., Princeton University, 1984. Visiting Associate in Solar Astronomy, Caltech, 1984; Assistant Professor of Astrophysics, 1984-89; Associate Professor, 1989-95; Professor of Physics, 1995-. Executive Officer, 1997-13.

**Katrina A Ligett**, *Visiting Associate in Computing and Mathematical Sciences*  
B.S., Brown University, 2004; M.S., Carnegie Mellon University, 2007; Ph.D., 2009. Assistant Professor, Caltech, 2011-17; Visiting Associate, 2017-19.

**Fan-Chi Lin**, *Visiting Associate in Geophysics*  
B.S., National Tsing Hua University, 2000; M.S., Drexel University, 2005; Ph.D., University of Colorado, Boulder, 2009. Caltech, 2015-20.

**Dariusz C (Darek) Lis**, *Visiting Associate in Physics*  
Ph.D., University of Massachusetts (Amherst), 1989. Research Fellow, Caltech, 1989-92; Senior Research Fellow, 1992-98; Senior Research Associate, 1998-2015; Visiting Associate, 2015- 2020.

**E J (John) List, Ph.D.**, *Professor of Environmental Engineering Science, Emeritus*  
B.E., University of Auckland, 1961; M.E., 1962; Ph.D., Caltech, 1965. Research Fellow, 1965-66; Assistant Professor, 1969-72; Associate Professor, 1972-78; Professor, 1978-97; Professor Emeritus, 1997-. Executive Officer for Environmental Science, 1980-85.

**Charles Y Liu**, *Visiting Associate in Biology and Biological Engineering*  
B.S.E., University of Michigan (Ann Arbor), 1987; Ph.D., Rice University, 1993; M.D., Yale University School of Medicine, 1996. Resident Physician, University of Southern California, Keck School of Medicine, 1996-. Caltech, 2002-11; 2014-18.

**Junjie Liu**, *Visiting Associate in Environmental Science and Engineering*  
B.S., Nanjing University of Information Science and Technology, 2000; M.S., 2003; Ph.D., University of Maryland, 2007. Caltech, 2017-19.

**Yang Liu**, *Visiting Associate in Geochemistry*  
B.S., Chengdu University of Technology, 1995; M.S., University of Michigan, 1998; Ph.D., University of Michigan, 2003. Lecturer, 2015; Caltech, 2013-20.

**Alexis Livanos**, *Visiting Associate in Aerospace*  
B.S., California Institute of

Technology, 1970; M.S., 1972; Ph.D., 1975. Faculty Associate, 2013-2018. Visiting Associate, 2018-19.

**Alessandro S Lizzeri, Ph.D.**, *Moore Distinguished Scholar*  
Laurea, Università Bocconi Milano, 1990; Ph.D., Northwestern University, 1995. Caltech, 2018.

**Joerg F Loeffler**, *Visiting Associate in Materials Science*  
M.S., University of Saarbrücken (Germany), 1994; Ph.D., Paul Scherrer Institute (Switzerland), 1998. Assistant Professor, University of California (Davis), 2001-. Caltech, 2001-04; 2017-18.

**Carlos Lois**, *Research Professor*  
M.D., University of Valencia, 1991; Ph.D., Rockefeller University, 1995. Caltech, Visiting Associate, 2014-15; Research Professor 2015-.

**Gabriel Lopez-Moctezuma Jassan, Ph.D.**, *Assistant Professor of Political Science*  
B.A., Instituto Tecnológico Automotom de Mexico, 2007; M.A., Princeton University, 2012; Ph.D., 2016. Caltech, 2017-.

**Gary A Lorden, Ph.D.**, *Professor of Mathematics, Emeritus*  
B.S., Caltech, 1962; Ph.D., Cornell University, 1966. Assistant Professor, Caltech, 1968-71; Associate Professor, 1971-77; Professor, 1977-2009; Professor Emeritus, 2009-. Dean of Students, 1984-88; Vice President for Student Affairs, 1989-98; Acting Vice President, 2002; Executive Officer for Mathematics, 2003-2006.

**Zev Lovinger**, *Visiting Associate in Mechanical and Civil Engineering*  
B.Sc., Technion- Israel Institute of Technology, 1999; M.Sc., 2001; Ph.D., 2014. Caltech, 2017-19.

**Steven H Low, Ph.D.**, *Frank J. Gilloon Professor of Computer Science and Electrical Engineering*  
B.S., Cornell University, 1987; M.S., University of California, 1989; Ph.D., 1992. Associate Professor, Caltech,

2000-06; Professor, 2006-18; Gilloon Professor, 2018-.

**Jonathan Lunine, Ph.D.,** *Visiting*

*Associate in Planetary Science*

B.S., University of Rochester, 1980; M.S., California Institute of Technology, 1983; Ph.D., 1985; Moore Distinguished Scholar, 2018; Visiting Professor, 2018; Visiting Associate, 2018-19.

**Martino Lupini,** *Visiting Associate in Mathematics*

B.Sc, University of Parma, 2008; M.Sc, University of Pisa, 2010; Ph.D., York University, 2015. Caltech, 2018-19.

**W A Luxemburg, Ph.D.,** *Professor of Mathematics, Emeritus*

B.A., University of Leiden, 1950; M.A., 1953; Ph.D., Delft Institute of Technology, 1955. Assistant Professor, Caltech, 1958-60; Associate Professor, 1960-62; Professor, 1962-2000; Professor Emeritus, 2000-. Executive Officer for Mathematics, 1970-85.

**Xiaoyu Lyu,** *Visiting Associate in Electrical Engineering*

B.S., Beijing Institute of Technology, 2007; M.S., 2009; Ph.D., Chinese Academy of Sciences, 2012. Caltech, 2017-18.

**Douglas G (Doug) MacMartin,** *Visiting Associate in Computing and Mathematical Sciences*

B.A.Sc., University of Toronto, 1987; S.M., Massachusetts Institute of Technology, 1990; Ph.D., 1992. Visiting Associate, Caltech, 2000-02; 2015; Lecturer, 2001; 2004; 2005; 2009-2014; 2016-20. Senior Research Fellow, 2002-08; Research Professor, 2008-2015.

**Walid Majid,** *Visiting Associate in Physics*

B.S., Swarthmore College, 1986; M.S., University of Illinois, Urbana, 1987; Ph.D., 1993. Caltech, 2015-20.

**Nikolai Makarov, Ph.D.,** *Richard Merkin Distinguished Professor of Mathematics*

B.A., Leningrad University, 1982;

Ph.D., LOMI Mathematics Institute (Leningrad), 1986. Visiting Professor, Caltech, 1991; Professor, 1991-13; Merkin Professor, 2013-.

**Oscar Mandel, Ph.D.,** *Professor of Literature, Emeritus*

B.A., New York University, 1947; M.A., Columbia University, 1948; Ph.D., Ohio State University, 1951. Visiting Associate Professor of English, Caltech, 1961-62; Associate Professor, 1962-68; Professor, 1968-80; Professor of Literature, 1980-2003; Professor Emeritus, 2003-.

**Elena Mantovan, Ph.D.,** *Professor of Mathematics; Executive Officer for Mathematics*

Laurea, University of Padova, 1995; M.A., Harvard University, 1998; Ph.D., 2002. Assistant Professor, Caltech, 2005-10; Associate Professor, 2010; Professor, 2010-; Executive Officer, 2016-.

**Alireza Marandi, Ph.D.,** *Assistant Professor of Electrical Engineering*

B.S., University of Tehran, 2006; M.S., University of Victoria, 2008; Ph.D., Stanford University, 2013. Visiting Associate, Caltech, 2017-18; Assistant Professor, 2018-.

**Matilde Marcolli, Ph.D.,** *Professor of Mathematics*

Laurea, University Degli Studi, 1993; M.Sc., University of Chicago, 1994; Ph.D., 1997. Caltech, 2008-.

**Rudolph A (Rudy) Marcus Ph.D., D.Sc.h.c., Fil.Dr.h.c., D.h.c., Nobel Laureate.,** *John G. Kirkwood and Arthur A. Noyes Professor of Chemistry*

B.Sc., McGill University, 1943; Ph.D., 1946; D.Sc.h.c., University of Chicago; McGill University; Polytechnic University; University of Oxford; University of New Brunswick; Queen's University; University of North Carolina (Chapel Hill); University of Illinois; Technion-Israel Institute of Technology; Universidad Politecnica de Valencia; University of Waterloo; Fil.Dr.h.c., Gothenburg University; D.h.c.,

Yokohama National University;  
Northwestern University. Noyes  
Professor, Caltech, 1978-2012;  
Kirkwood-Noyes Professor, 2013-.

**Vladimir Markovic, Ph.D.**, *John D. MacArthur Professor of Mathematics*  
B.Sc., University of Belgrade, 1995;  
Ph.D., 1998. Professor, Caltech,  
2011-13; MacArthur Professor, 2013-.

**Shirley A Marneus**, *Lecturer in Theater Arts, Emeritus*  
B.A., San Jose State College, 1959;  
M.A., State University of Iowa, 1962.  
Lecturer in Literature, Caltech, 1999-  
2005; Lecturer in English, 2005-07;  
Lecturer in Theater Arts, 1999-2008;  
Lecturer in Theater Arts, Emeritus,  
2008.

**Arnaud Marsiglietti**, *Lecturer in Computing and Mathematical Sciences, Wally Baer & Jeri Weiss Postdoctoral Scholar in Electrical Engineering*  
Ph.D., Université Paris- Est Marne La Vallée, 2014. Caltech, 2017-18.

**Alain J Martin, Ph.D.**, *Professor of Computer Science, Emeritus*  
B.S., University of Marseille, 1965;  
Ing., Polytechnic Institute (Grenoble),  
1969. Visiting Assistant Professor,  
Caltech, 1981-83; Visiting Associate  
Professor, 1983; Associate Professor,  
1983-86; Professor, 1986-2016;  
Professor, Emeritus, 2016-. Executive  
Officer, 1994-97.

**Christopher Martin, Ph.D.**, *Professor of Physics*  
B.A., Oberlin College, 1978; Ph.D.,  
University of California, 1986.  
Caltech, 1993-.

**Thomas G (Tom) Mason**,  
*Visiting Associate in Computing and Mathematical Sciences*  
B.E., University of Maryland, 1989;  
Ph.D., Princeton University, 1995.  
Caltech, 2017-18.

**Sami F Masri**, *Visiting Associate in Mechanical and Civil Engineering*  
B.S., University of Texas, 1960;  
M.S., 1961; M.S., Caltech, 1962;  
Ph.D., 1965. Professor, University of

Southern California, 1981-. Research  
Fellow in Mechanical Engineering,  
Caltech, 1965-66; Visiting Associate,  
1973; 1981; 1989-96; Visiting  
Associate in Civil Engineering, 2002-  
04, 2010-11; 2016-19.

**Georgios Matheou**, *Visiting Associate in Aerospace*  
Dipl., National Technical University  
of Athens, 2002; Ph.D., California  
Institute of Technology, 2008.  
Caltech, 2013-18.

**Dimitri P Mawet, Ph.D.**, *Associate Professor of Astronomy; Jet Propulsion Laboratory Research Scientist*  
Dipl., University of Liege, 2002;  
M.Phil., 2004; Ph.D., 2006. Caltech,  
2015-; Jet Propulsion Laboratory  
Research Scientist, 2015-.

**Stephen L (Steve) Mayo, Ph.D.**,  
*Bren Professor of Biology and Chemistry; William K. Bowes Jr. Leadership Chair, Division of Biology and Biological Engineering*  
B.S., Pennsylvania State University,  
1983; Ph.D., Caltech, 1987. Senior  
Research Fellow, Caltech, 1991-  
92; Assistant Professor, 1992-98;  
Associate Professor, 1998-2003;  
Professor, 2003-07; Bren Professor,  
2007-; HHMI Investigator, 1994-07;  
Executive Officer for Biochemistry  
and Molecular Biophysics, 2004-07;  
Vice Provost, 2007-10; Division  
Chair, 2010-; Bowes Jr. Leadership  
Chair, 2012-.

**Sarkis Mazmanian, Ph.D.**, *Luis B. and Nelly Soux Professor of Microbiology; Investigator, Heritage Medical Research Institute*  
B.S., University of California (Los  
Angeles), 1995; Ph.D., 2002.  
Assistant Professor, Caltech, 2006-12;  
Professor, 2012-14; Soux Professor,  
2014-; HMRI Investigator, 2015-.

**Daniel (Dan) McCleese**, *Visiting Associate in Planetary Science*  
B.S., Antioch College, 1972; D.Phil,  
University of Oxford, 1976. Chief  
Scientist, Jet Propulsion Laboratory,  
1994-2017. Caltech, 2002-19.

**John P McCutcheon**, *Visiting Associate in Biology and Biological Engineering*  
B.S., University of Wisconsin  
Madison, 1996; M.S., University  
of Utah, 2000; Ph.D., Washington  
University, 2006. Caltech, 2018.

**Robert J McEliece, Ph.D.**, *Allen E. Puckett Professor and Professor of Electrical Engineering, Emeritus*  
B.S., Caltech, 1964; Ph.D., 1967.  
Professor, 1982-2007; Puckett  
Professor, 1997-2007; Puckett  
Professor and Professor, Emeritus,  
2007-. Executive Officer for Electrical  
Engineering, 1990-99.

**Beverly J McKeon, Ph.D.**, *Theodore von Karman Professor of Aeronautics*  
B.A., University of Cambridge, 1995;  
M.Eng., 1996; M.A. (Mechanical  
and Aerospace Engineering); M.A.  
(Engineering), Princeton University,  
1999; Ph.D., 2003. Assistant Professor,  
Caltech, 2006-11; Professor, 2011-  
17; von Karman Professor, 2017-;  
Associate Director, 2012-17.

**Basil V (Vincent) McKoy, Ph.D.**,  
*Professor of Theoretical Chemistry,  
Emeritus*  
B.S., Nova Scotia Technical  
University, 1960; Ph.D., Yale  
University, 1964. Noyes Research  
Instructor in Chemistry, Caltech,  
1964-66; Assistant Professor of  
Theoretical Chemistry, 1967-69;  
Associate Professor, 1969-75;  
Professor, 1975-2016; Professor  
Emeritus, 2016-.

**Carver Mead Ph.D., D.Sc.h.c.,  
D.h.c.**, *Gordon and Betty Moore  
Professor of Engineering and Applied  
Science, Emeritus*  
B.S., Caltech, 1956; M.S., 1957;  
Ph.D., 1960; D.Sc.h.c., University of  
Lund (Sweden); D.h.c., University  
of Southern California. Instructor  
in Electrical Engineering, Caltech,  
1958-59; Assistant Professor, 1959-  
62; Associate Professor, 1962-67;  
Professor, 1967-77; Professor of  
Computer Science and Electrical  
Engineering, 1977-80; Moore  
Professor of Computer Science, 1980-  
92; Moore Professor of Engineering

and Applied Science, 1992-99; Moore  
Professor Emeritus, 1999-.

**Lydia Mechtenberg**, *Visiting Associate  
in Economics*  
M.A., Freie Universität Berlin, 2000;  
Ph.D., Technical University of Berlin,  
2006. Caltech, 2018.

**Barry Megdal**, *Visiting Associate in  
Electrical Engineering*  
B.S., Caltech, 1977; M.S., 1978;  
Ph.D., 1983. Lecturer, Caltech, 1992-  
2018; Visiting Associate, 2018- .

**Simona Mei**, *Visiting Associate in  
Astronomy*  
Ph.D., University of Strasbourg, 1999.  
Professor, University of Paris, 2006-.  
Caltech, 2008-13; 2016-19.

**David L Meier**, *Visiting Associate in  
Astronomy*  
Ph.D., University of Texas, Austin,  
1977. Caltech, 2014-20.

**Daniel I (Dan) Meiron, Ph.D.**,  
*Fletcher Jones Professor of Aeronautics and  
Applied and Computational Mathematics*  
S.B., Massachusetts Institute of  
Technology, 1976; Sc.D., 1981.  
Research Fellow in Applied  
Mathematics, Caltech, 1981-83;  
Visiting Associate, 1984-85; Assistant  
Professor, 1985-89; Associate  
Professor, 1989-94; Professor,  
1994-2000; Professor of Applied  
and Computational Mathematics,  
2000; Professor of Applied and  
Computational Mathematics  
and Computer Science, 2001-06;  
Jones Professor of Applied and  
Computational Mathematics and  
Computer Science, 2006-09. Jones  
Professor, 2009-; Executive Officer  
for Applied Mathematics, 1994-98;  
Associate Provost for Information and  
Information Technology, 2000-04.  
Associate Director, 2009-12.

**Markus Meister, Ph.D.**, *Anne P.  
and Benjamin F. Biaggini Professor of  
Biological Sciences; Executive Officer for  
Neurobiology*  
Dipl., Technische Universität  
München, 1980; Ph.D., Caltech, 1987.  
Moore Distinguished Scholar, Caltech,

2004; Professor, 2012-13; Hanson Professor, 2013-15; Biaggini Professor, 2015-; Executive Officer, 2017-.

**Michael Mello**, *Lecturer in Mechanical and Civil Engineering*  
B.S., Bridgewater State College, 1985; M.S., University of Rochester, 1988; Ph.D., California Institute of Technology, 2012. Caltech, 2014-20.

**Jeffrey M (Jeff) Mendez**, *Lecturer in Chemistry*  
B.S., California Institute of Technology, 1999; Ph.D., 2008. Caltech, 2013-18.

**Trevor C Merrill**, *Lecturer in French*  
B.A., Yale University, 2000; Ph.D., University of California, Los Angeles, 2011. Caltech, 2012-13; 2014-18.

**Richard A Mewaldt**, *Research Professor of Physics*  
B.A., Lawrence University, 1965; M.A., Washington University (St. Louis), 1967; Ph.D., 1971. Research Fellow, Caltech, 1971-75; Senior Research Fellow, 1975-81; Lecturer, 1987; Research Professor, 1981-.

**Elliot Meyerowitz Ph.D., D.h.c., D.Sc.h.c.**, *George W. Beadle Professor of Biology; Investigator, Howard Hughes Medical Institute*  
A.B., Columbia University, 1973; M.Phil., Yale University, 1975; Ph.D., 1977; D.h.c., École Normale Supérieure; D.Sc.h.c., Yale University. Assistant Professor, Caltech, 1980-85; Associate Professor, 1985-89; Professor, 1989-2002; Beadle Professor, 2002-; HHMI Investigator, 2013-; Executive Officer, 1995-2000; Chair, Division of Biology, 2000-10.

**Charles E Miller**, *Visiting Associate in Environmental Science and Engineering*  
B.S., Duke University, 1986; Ph.D., University of California, Berkeley, 1991. Caltech, 2012-14; 2016-18.

**Thomas F (Tom) Miller III, Ph.D.**, *Professor of Chemistry*  
B.S., Texas A&M University, 2000; Ph.D., University of Oxford, 2005. Assistant Professor, Caltech, 2008-13;

Professor 2013-.

**Feng-Ying Ming**, *Lecturer in Chinese*  
B.A., Tamkang University (Taiwan), 1978; M.A., California State University, 1984; M.A., University of California (Los Angeles), 1991; Ph.D., 1999. Caltech, 2000-18.

**Austin J Minnich, Ph.D.**, *Professor of Mechanical Engineering and Applied Physics*  
B.S., University of California, Berkeley, 2006; M.S., Massachusetts Institute of Technology, 2008; Ph.D., 2011. Assistant Professor, Caltech, 2011-17, Professor, 2017-.

**Betsy Mitchell**, *Director of Athletics, Recreation and Physical Education*  
M.A., University of Texas (Austin), 1991; B.S., 1998. Caltech, 2011-.

**Eric D Mjolsness**, *Visiting Associate in Biology and Biological Engineering*  
A.B., Washington University, 1980; Ph.D., Caltech, 1985. Principal Computer Scientist, Jet Propulsion Laboratory, 1998-; Associate Professor, University of California (Irvine), 2002-2009; Professor, University of California (Irvine), 2009-. Faculty Associate, Caltech, 2000-02; Moore Distinguished Scholar 2010-11. Caltech, Visiting Associate, 2002-10; 2016-19.

**Dean Mobbs, Ph.D.**, *Assistant Professor of Cognitive Neuroscience*  
B.S., University of Birmingham, 1999; Ph.D., University College London, 2008. Caltech, 2016-.

**Kamran Mohseni**, *Visiting Associate in Aerospace*  
B.S., Iran University of Science and Technology, 1990; M.S., Imperial College, 1993; Ph.D., California Institute of Technology, 2000; Caltech, 2017-18.

**Louis Moresi**, *Visiting Associate in Geophysics*  
B.A., Cambridge University, 1989; Ph.D., Oxford University, 1992. Caltech, 2013-18.

**James J (Jim) Morgan Ph.D., D.Sc.h.c.,** *Marvin L. Goldberger Professor of Environmental Engineering Science, Emeritus*  
B.C.E., Manhattan College, 1954; M.S.E., University of Michigan, 1956; M.A., Harvard University, 1962; Ph.D., 1964; D.Sc.h.c., Manhattan College. Associate Professor of Environmental Health Engineering, Caltech, 1965-69; Professor, 1969-87; Goldberger Professor of Environmental Engineering Science, 1987-2000; Goldberger Professor Emeritus, 2000-. Academic Officer for Environmental Engineering Science, 1971-72; Dean of Students, 1972-75; Executive Officer for Environmental Engineering Science, 1974-80; 1993-96; Acting Dean of Graduate Studies, 1981-84; Vice President for Student Affairs, 1980-89.

**Hossein Mosallaei,** *Visiting Associate in Applied Physics and Materials Science*  
Ph.D., University of California Los Angeles, 2001. Caltech, 2017-18.

**Olexei I Motrunich, Ph.D.,** *Professor of Theoretical Physics*  
B.S., University of Missouri (Columbia), 1996; Ph.D., Princeton University, 2001. Assistant Professor, Caltech, 2006-12; Professor, 2012-.

**Christian Mueller,** *Visiting Associate in Computing and Mathematical Sciences*  
M.S., Graz University of Technology, 2007; Ph.D., 2010. Caltech, 2018.

**Duane O Muhleman, Ph.D.,** *Professor of Planetary Science, Emeritus*  
B.S., University of Toledo, 1953; Ph.D., Harvard University, 1963. Associate Professor, Caltech, 1967-71; Professor, 1971-97; Professor Emeritus, 1997-. Staff Member, Owens Valley Radio Observatory, 1967-.

**Richard M Murray, Ph.D.,** *Thomas E. and Doris Everhart Professor of Control and Dynamical Systems and Bioengineering*  
B.S., Caltech, 1985; M.S., University of California, Berkeley, 1988;

Ph.D., 1990. Assistant Professor of Mechanical Engineering, Caltech, 1991-97; Associate Professor, 1997-2000; Professor, 2000-05; Professor of Control and Dynamical Systems, 2005-06; Everhart Professor of Control and Dynamical Systems; 2006-09; Everhart Professor of Control and Dynamical Systems and Bioengineering, 2009-. Chair, Engineering and Applied Science, 2000-05; Director, Information Science and Technology, 2006-2009; Interim Chair, Engineering and Applied Science, 2008-09.

**Hillary Mushkin,** *Research Professor of Art and Design in Mechanical and Civil Engineering*  
BFA, Rhode Island School of Design, 1991; MFA, University of California, Irvine, 1994. Caltech, 2011-2019.

**Roger B Myerson, Ph.D.,** *Moore Distinguished Scholar*  
B.A., Harvard University, 1973; Ph.D., 1976. Visiting Associate, Caltech, 2016; Moore Distinguished Scholar, 2017.

**Jay L Nadeau,** *Research Professor of Medical Engineering and Aerospace*  
Ph.D., University of Minnesota, 1996. Visiting Associate, 2002-04; 2014-15, Caltech, 2017-2020.

**Stevan Nad Perge, Ph.D.,** *Assistant Professor of Applied Physics and Materials Science*  
M.S., Belgrade University, 2006; Ph.D., Delft University of Technology, 2010. Visiting Associate, Caltech, 2015; Assistant Professor, 2016-.

**SungWoo Nam,** *Visiting Associate in Applied Physics and Materials Science*  
B.S., Seoul National University, 2002; M.A., Harvard University, 2007; Ph.D., 2011. Assistant Professor, University of Illinois at Urbana-Champaign, 2012-. Caltech, 2018-19.

**Thomas A Neenan,** *Lecturer in Music*  
B.F.A., California State University (Northridge), 1977; M.F.A., University of California (Los

Angeles), 1982. Caltech, 1991-98; 1998-.

**Paul S Nerenberg**, *Visiting Associate in Planetary Science*  
B.S., Johns Hopkins University, 2004; Ph.D., Massachusetts Institute of Technology, 2010. Caltech, 2014-19.

**Dianne K Newman, Ph.D.**, *Gordon M. Binder/Amgen Professor of Biology and Geobiology; Allen V. C. Davis and Lenabelle Davis Leadership Chair, Center for Environmental Microbial Interactions; Executive Officer for Molecular Biology*  
B.A., Stanford University, 1993; Ph.D., Massachusetts Institute of Technology, 1997. Clare Booth Luce Assistant Professor, Caltech, 2000-05; Associate Professor, 2005-06; Professor, 2006-16; HHMI Investigator, 2005-07, 2010-16; Binder/Amgen Professor, 2016-; Davis Leadership Chair, 2017-; Executive Officer, 2017-.

**Harvey B Newman Sc.D., D.h.c.**, *Marvin L. Goldberger Professor of Physics*  
B.S., Massachusetts Institute of Technology, 1968; Sc.D., 1973; D.h.c., University Politecnica of Bucharest; Pavol Jozef Safarik University. Associate Professor, Caltech, 1982-90; Professor, 1990-17; Goldberger Professor, 2017-.

**Hien T Nguyen**, *Visiting Associate in Physics; Lecturer in Physics*  
Ph.D., Princeton University, 1993. Research Scientist, Jet Propulsion Laboratory, 2002-. Visiting Associate, Caltech, 2007-20; Lecturer, 2007; 2008; 2009; 2014; 2015-18.

**Yi Ni, Ph.D.**, *Professor of Mathematics*  
B.S., Peking University, 2001; M.S., 2003; Ph.D., Princeton University, 2007. Assistant Professor, Caltech, 2009-15; Professor, 2015-.

**Marc A Nicolet, Ph.D.**, *Professor of Electrical Engineering and Applied Physics, Emeritus*  
Ph.D., University of Basel, 1958.

Assistant Professor of Electrical Engineering, Caltech, 1959-65; Associate Professor, 1965-73; Professor, 1973-88; Professor of Electrical Engineering and Applied Physics, 1988-98; Professor Emeritus, 1998-.

**Gunter Niemeyer**, *Visiting Associate in Mechanical and Civil Engineering*  
B.A., RWTH Aachen University, 1986; M.S., Massachusetts Institute of Technology, 1990; Ph.D., 1996. Caltech, 2018.

**Shouleh Nikzad**, *Lecturer in Medical Engineering; Visiting Associate in Astrophysics*  
B.S., University of Southern California, 1982; M.S., Caltech, 1983; Ph.D., 1983. Staff, Jet Propulsion Laboratory, 1992-. Research Fellow, Caltech, 1990-91; Lecturer, 2016- 2017; Visiting Associate, 1992-96; 2012-18.

**Ralph G Nuzzo**, *Visiting Associate in Applied Physics and Materials Science*  
A.B., Rutgers College, 1976; Massachusetts Institute of Technology; 1980. Caltech, 2015-18.

**Roger C O'Brien**, *Visiting Associate in Experimental Physics*  
B.S., California Institute of Technology, 2001, M.A., University of California, Berkeley, 2005; Ph.D., 2010. Caltech, 2015-20.

**John P O'Doherty, Ph.D.**, *Professor of Psychology*  
B.A., University of Dublin (Trinity College), 1996; D.Phil., University of Oxford, 2000. Assistant Professor, Caltech, 2004-07; Associate Professor, 2007-09; Professor, 2009-; Director, Caltech Brain Imaging Center, 2013-17.

**Hiroshi (Hirosi Ooguri) Oguri, Ph.D.**, *Fred Kavli Professor of Theoretical Physics and Mathematics; Director, Burke Institute for Theoretical Physics*  
B.A., Kyoto University (Japan), 1984; M.A., 1986; Ph.D., University of Tokyo, 1989. Visiting Associate,



Caltech, 1999-2000; Professor, 2000-07; Kavli Professor, 2007-; Deputy Chair, 2010-15; Director, 2014-.

**Yuki Oka, Ph.D.**, *Assistant Professor of Biology*  
B.A., The University of Tokyo, 2002; Ph.D., 2007. Caltech, 2014-.

**Mitchio Okumura, Ph.D.**, *Professor of Chemical Physics*  
B.S., Yale University, 1979; M.S., 1979; C.P.G.S., University of Cambridge, 1980; Ph.D., University of California, 1986. Assistant Professor, Caltech, 1988-94; Associate Professor, 1994-2003; Professor, 2003-. Executive Officer, 2006-10.

**Alison E Ondrus, Ph.D.**, *Assistant Professor of Chemistry*  
B.Sc., University of Alberta, 2003; Ph.D., Massachusetts Institute of Technology, 2009. Caltech, 2017-.

**Yizhar Or**, *Visiting Associate in Mechanical and Civil Engineering*  
B.Sc., Technion-Israel Institute of Technology, 2001; Ph.D., 2007. Caltech, 2018.

**Christiane H Orcel**, *Lecturer in French*  
M.A., Princeton University, 1987; Ph.D., 1992. Instructor, Caltech, 1990-93; Lecturer, 1993-95; 1995-.

**Peter C Ordeshook, Ph.D.**, *Professor of Political Science*  
B.S., Massachusetts Institute of Technology, 1964; Ph.D., University of Rochester, 1969. Professor, Caltech, 1987-2009, 2013-; Harkness Professor, 2009-13. Executive Officer for the Social Sciences, 1992-95.

**Gabor Orosz**, *Visiting Associate in Computing and Mathematical Sciences*  
M. Sc., Budapest University of Technology and Economics, 2002; Ph.D., University of Bristol, 2006. Caltech, 2017-18.

**Victoria J Orphan, Ph.D.**, *James Irvine Professor of Environmental Science and Geobiology*

B.A., University of California (Santa Barbara), 1994; Ph.D., 2002. Assistant Professor, Caltech, 2004-2010; Associate Professor, 2010; Professor, 2010-16; James Irvine Professor 2016-.

**Michael Ortiz, Ph.D.**, *Frank and Ora Lee Marble Professor of Aeronautics and Mechanical Engineering*  
B.S., Polytechnic University of Madrid, 1977; M.S., University of California, 1978; Ph.D., 1982. Sherman Fairchild Distinguished Scholar, Caltech, 1994-95; Professor of Aeronautics and Applied Mechanics, 1995-2000; Professor of Aeronautics and Mechanical Engineering, 2000-04; Hayman Professor, 2004-13; Marble Professor, 2013-.

**David O'Shaughnessy**, *Visiting Associate in English*  
B.A., Trinity College, Dublin, 1990; M.A., National University of Ireland, Galway, 2003; DPhil, University of Oxford, 2008. Caltech, 2017-18.

**Houman Owhadi, Ph.D.**, *Professor of Applied and Computational Mathematics and Control and Dynamical Systems*  
B.S., Ecole Polytechnique (France), 1994; M.S., Ecole Nationale des Ponts et Chaussées, 1997; Ph.D., Ecole Polytechnique Federale de Lausanne (Switzerland), 2001. Assistant Professor, Caltech, 2004-11; Professor, 2011-.

**Lior S Pachter, Ph.D.**, *Bren Professor of Computational Biology and Computing and Mathematical Sciences*  
B.S., California Institute of Technology, 1994; Ph.D., Massachusetts Institute of Technology, 1999. Bren Professor, Caltech, 2017-.

**Oskar J Painter, Ph.D.**, *John G Braun Professor of Applied Physics and Physics; Fletcher Jones Foundation Co-Director of the Kavli Nanoscience Institute*  
B.S., University of British Columbia, 1994; M.S., Caltech, 1995; Ph.D., 2001. Visiting Associate, Caltech,

2001-02; Assistant Professor, 2002-08; Associate Professor, 2008-10; Professor, 2010-13; Braun Professor, 2013-; Executive Officer, 2010-13; Co-Director, Kavli Nanoscience Institute, 2011-13, 2015-.

**Thomas R Palfrey III, Ph.D.,**

*Flintridge Foundation Professor of Economics and Political Science*

B.A., University of Michigan, 1975; M.A., 1976; Ph.D., Caltech, 1981. Professor, 1986-2002; Flintridge Foundation Professor, 2003-05; 2006-. Executive Officer for the Social Sciences, 2001-02.

**Aristotelis Panagiotopoulos, Harry Bateman Instructor**

B.S., National Technical University of Athens, 2012; Ph.D., University of Illinois at Urbana-Campaign, 2017; Caltech, 2017-20

**D A (Dimitri) Papanastassiou,**

*Visiting Associate in Geochemistry*

B.S. Caltech, 1965; Ph.D., 1970. Research Fellow in Physics, 1970-72; Senior Research Fellow in Planetary Science, 1972-76; Research Associate in Geochemistry, 1976-81; Senior Research Associate, 1981-99; Faculty Associate, 1999-2017; 2017-.

**Sarthak Parikh, Olga Taussky and John Todd Instructor**

B.S., Iiser Pune, 2012; M.S., 2014; Ph.D., Princeton University, 2017. Caltech, 2017-2020.

**Hyunwoong (HP) Park, Visiting Associate in Environmental Science and Engineering**

Ph.D., Postech, 2004. Caltech, 2014-15; 2018-19.

**Carl S Parker, Ph.D., Professor of Biochemistry**

B.A., University of Rochester, 1973; Ph.D., Washington University (St. Louis), 1977. Assistant Professor of Chemical Biology, Caltech, 1981-87; Associate Professor, 1987-92; Professor, 1992-99; Professor of Biochemistry, 1999-. Executive Officer, 2000-04.

**Joseph Parker, Ph.D., Assistant Professor of Biology and Biological Engineering**

B.S., Imperial College London, 2001; Ph.D. University of Cambridge, 2005. Visiting Associate, Caltech, 2017; Assistant Professor, 2017-.

**Ryan B Patterson, Ph.D., Professor of Physics**

B.S., Caltech, 2000; Ph.D., Princeton University, 2007. Assistant Professor, Caltech, 2010-17; Professor, 2017-.

**Volnei A Pedroni, Visiting Professor of Electrical Engineering**

B.S., Federal University of Rio Grande do Sul, 1975; M.S., Caltech, 1990; Ph.D., 1995. Professor, Federal University of Technology, 1976-. Visiting Professor, Caltech, 2008; 2011; 2013, 2015-20.

**Sergio Pellegrino, Ph.D., Joyce and Kent Kresa Professor of Aerospace and Civil Engineering; Jet Propulsion Laboratory Senior Research Scientist; Co-Director, Space-Based Solar Power Project**

Laurea, University of Naples, 1982; Ph.D., University of Cambridge, 1986. Professor, Caltech, 2007-2010; Kresa Professor, 2010-; Jet Propulsion Laboratory Senior Research Scientist, 2009-; Co-Director, 2016-.

**Leora Peltz, Visiting Associate in Applied Physics and Materials Science**

B.S., University of Negev, 1975; B.S., 1976; M.S., Case Western Reserve University, 1995; Ph.D., 2005. Scientist, Boeing, 2003-. Caltech, 2007-13; 2014-18.

**Pietro Perona, Ph.D., Allen E. Puckett Professor of Electrical Engineering**

D.Eng., University of Padua (Italy), 1985; Ph.D., University of California, Berkeley, 1990. Assistant Professor, Caltech, 1991-96; Professor, 1996-2008; Puckett Professor, 2008-. Director, Center for Neuromorphic Systems Engineering, 1999-2004. Executive Officer, 2006-10.

**Isabelle S Peter Lashgari Faghani,** *Research Professor of Biology and Biological Engineering*  
Ph.D., University of Zurich, 2002.  
Caltech, 2011-.

**Jonas C Peters, Ph.D.,** *Bren Professor of Chemistry; Director, Resnick Sustainability Institute*  
B.S., University of Chicago, 1993;  
Ph.D., Massachusetts Institute of Technology, 1998. Assistant Professor, Caltech, 1999-2004; Associate Professor, 2004-06; Professor, 2006-09; Bren Professor, 2010-; Executive Officer, 2013-15; Director, Resnick Sustainability Institute, 2015-.

**Peter A Petillo,** *Visiting Associate in Applied Physics and Materials Science*  
B.S., University of New Hampshire-Durham, 1985; Ph.D., University of Wisconsin- Madison, 1991. Caltech, 2016-2019.

**Danny Petrasek,** *Visiting Associate in Medical Engineering; Lecturer in Biology and Biological Engineering*  
B.S., University of California (Los Angeles), 1980; M.D., Chicago Medical School, 1985; Ph.D., Caltech, 2002. Clinical Professor, University of California (Los Angeles) School of Medicine, 2004-. Senior Research Fellow in Applied and Computational Mathematics and Bioengineering, 2002-08; Lecturer in Biology and Biological Engineering, 2005-11, 2013; 2014; 2016; 2017; 2018. Visiting Associate, Applied and Computational Mathematics and Bioengineering, 2008-13. Visiting Associate, Medical Engineering, 2013-18.

**Robert B Phillips, Ph.D.,** *Fred and Nancy Morris Professor of Biophysics, Biology, and Physics*  
B.S., University of Minnesota, 1986; Ph.D., Washington University, 1989. Clark Millikan Visiting Assistant Professor, Caltech, 1997; Professor, 2000-2011; Morris Professor, 2012-.

**Thomas G Phillips Ph.D., D.h.c.,** *John D. MacArthur Professor of Physics, Emeritus*

B.A., University of Oxford, 1961; M.A., 1964; Ph.D., 1964; D.h.c., l'Observatoire de Paris. Visiting Associate in Radio Astronomy, Caltech, 1978-79; Professor of Physics, 1979-2004. Altair Professor, 2004-11. MacArthur Professor, 2011-2013; MacArthur Professor, Emeritus, 2013-; Staff Member, Owens Valley Radio Observatory, 1978-85; Associate Director, Owens Valley Radio Observatory, 1981-85; Director, Caltech Submillimeter Observatory, 1986-2013.

**E S (Sterl) Phinney, Ph.D.,** *Professor of Theoretical Astrophysics*  
B.S., Caltech, 1980; Ph.D., University of Cambridge, 1983. Assistant Professor, Caltech, 1985-91; Associate Professor, 1991-95; Professor, 1995-; Executive Officer, 2013-16.

**Kenneth A Pickar,** *Visiting Associate in Mechanical and Civil Engineering*  
B.S., City University of New York, 1961; Ph.D., University of Pennsylvania, 1966. Senior Vice President, Retired, Allied Signal Aerospace, 1993-. Visiting Professor of Engineering, Caltech, 1998; Visiting Professor of Mechanical and Civil Engineering, 1998-99; 2003-16; J. Stanley Johnson Visiting Professor of Mechanical Engineering, 1999-2003. Visiting Associate, 2015; 2016-18. Lecturer, 2017-18.

**Gillian Pierce,** *Lecturer in Engineering*  
B.A., Oxford University, 1997. Caltech, 2009; 2010; 2011-14; 2016; 2018.

**Niles A Pierce, Ph.D.,** *Professor of Applied and Computational Mathematics and Bioengineering*  
B.S.E., Princeton University, 1993; D.Phil., University of Oxford, 1997. Assistant Professor of Applied Mathematics, Caltech, 2000; Assistant Professor of Applied and Computational Mathematics, 2000-04; Assistant Professor of Applied and Computational Mathematics and Bioengineering, 2004-06; Associate

Professor, 2006-10; Professor, 2010-; Acting Executive Officer for Bioengineering, 2007; Executive Officer for Bioengineering, 2007-13; Executive Officer for Biological Engineering, 2013.

**George Pigman III, Ph.D.,** *Professor of English*  
A.B., Harvard College, 1973; M.Phil., Yale University, 1975; Ph.D. (Comparative Literature), 1977; Ph.D., (Psychoanalysis), Southern California Psychoanalytic Institute, 1989. Assistant Professor of English, Caltech, 1977-80; Assistant Professor of Literature, 1980-83; Associate Professor, 1983-93; Professor of Literature, 1993-2004; Professor of English, 2004-. Executive Officer for the Humanities, 2003-08.

**Ulrich Pinkall,** *Visiting Associate in Computing and Mathematical Sciences*  
B.S., University of Freiburg, 1979; Ph.D., 1982. Caltech, 2011; 2012; 2013; 2014; 2015; 2017.

**Donald H (Donnie) Pinkston,** *Lecturer in Computing and Mathematical Sciences*  
B.S., Caltech, 1998. Lecturer, 2005-19.

**Scott Ploen,** *Lecturer in Aerospace*  
B.S., University of California, San Diego, 1991; M.S., University of California, Irvine, 1994; Ph.D., 1997. Caltech 2013, 2018.

**Charles R Plott, Ph.D., D.Lit.h.c., D.h.c.,** *William D. Hacker Professor of Economics and Political Science*  
B.S., Oklahoma State University, 1961; M.S., 1964; Ph.D., University of Virginia, 1965; D.Lit.h.c., Purdue University; D.h.c., Université Pierre Mendès. Professor of Economics, Caltech, 1971-87; Harkness Professor, 1987-2013; Hacker Professor, 2013-.

**Keith D Plumbers,** *Howard E. and Susanne C. Jessen Postdoctoral Instructor in the Humanities*  
B.A., University of Delaware, 2009; M.A., University of Southern California, 2012; Ph.D., 2015. Caltech, 2015-18.

**Kirill B Pogorelskiy,** *Visiting Associate in Economics*  
B.S., Nizhny Novgorod State Technical University, 2007; M.Sc, National Research University Higher School of Economics, 2009; M.S, California Institute of Technology, 2012, Ph.D., 2015. Caltech, 2018.

**David Poland,** *Visiting Associate in Theoretical Physics*  
B.S., Massachusetts Institute of Technology, 2004; Ph.D., University of California, Berkeley, 2008. Caltech 2018-19.

**Jarmila Polet,** *Visiting Associate in Geophysics*  
M.S., University of Utrecht, 1992; M.S., California Institute of Technology, 1994; Ph.D., 1999. Caltech, 2011-14; 2016-18.

**Hugh D (David) Politzer, Ph.D.,** *Richard Chace Tolman Professor of Theoretical Physics*  
B.S., University of Michigan, 1969; Ph.D., Harvard University, 1974. Visiting Associate, Caltech, 1975-76; Associate Professor, 1977-79; Professor, 1979-2004; Tolman Professor, 2004-. Executive Officer for Physics, 1986-88.

**James E (Jay) Polk,** *Lecturer in Aerospace*  
B.S., Georgia Institute of Technology, 1984; M.S., Princeton University, 1986; Ph.D., 1996. Visiting Associate, Caltech, 2007-12; Lecturer, 1999-2002; 2005-08; 2010-14; 2015-18.

**Luciano Pomatto, Ph.D.,** *Assistant Professor of Economics*  
B.A., Università di Torino, 2007; M.A., 2009; Ph.D., Northwestern University, 2015. Caltech, 2016-.

**Frank C Porter, Ph.D.,** *Professor of Physics*  
B.S., Caltech, 1972; Ph.D., University of California, 1977. Research Fellow, Caltech, 1977-78; Weizmann Research Fellow, 1978-80; Senior Research Fellow, 1980-82; Assistant Professor, 1982-88; Associate Professor, 1988-94; Professor, 1994-.

**Hendrik W Postma**, *Visiting Associate in Applied Physics and Materials Science* M. Sc., Leiden University, 1997; Ph.D., Delft University of Technology, 2001. Caltech, 2017-19.

**Trity Pourbahrami**, *Lecturer in Engineering* B.S., University of British Columbia, 1999; M.S.W., University of Hawaii, 2004. Caltech, Lecturer in Engineering, 2018.

**John P Preskill, Ph.D.**, *Richard P. Feynman Professor of Theoretical Physics; Allen V.C. Davis and Lenabelle Davis Leadership Chair, Institute for Quantum Science and Technology* A.B., Princeton University, 1975; A.M., Harvard University, 1976; Ph.D., 1980. Associate Professor, Caltech, 1983-90; Professor, 1990-2002; MacArthur Professor, 2002-09; Feynman Professor, 2010-; Davis Leadership Chair, Institute for Quantum Science and Technology, 2017-.

**Glenn Price**, *Band Director and Director of Performing and Visual Arts* B.S., University of Toronto, 1977; M.S., University of Rochester, 1981; Ph.D., 1986. Caltech, 2016-19.

**Thomas A (Tom) Prince, Ph.D.**, *Ira S. Bowen Professor of Physics; Allen V. C. Davis and Lenabelle Davis Leadership Chair, Keck Institute for Space Studies; Jet Propulsion Laboratory Senior Research Scientist; Director, W. M. Keck Institute for Space Studies* B.S., Villanova University, 1970; M.S., University of Chicago, 1972; Ph.D., 1978. Research Fellow, Caltech, 1979-80; Robert A. Millikan Research Fellow, 1980-82; Senior Research Fellow, 1982-83; Assistant Professor, 1983-86; Associate Professor, 1986-92; Professor, 1992-16; Bowen Professor, 2017-; Davis Leadership Chair, Keck Institute for Space Studies, 2017-; Associate Director for Advanced Computer Research, 1995-2001; Director, Keck Institute, 2008-; Chief Scientist, Jet Propulsion Laboratory, 2001-06; Jet Propulsion Laboratory Senior Research Scientist, 2006-; Deputy Executive Officer, 2013-16;

**David Prober, Ph.D.**, *Professor of Biology* B.Sc., University of Manitoba, 1995; Ph.D., University of Washington, 2002. Assistant Professor, Caltech, 2009-2017; Professor, 2017-.

**Carmie Puckett Robinson**, *Visiting Associate in Biology and Biological Engineering* B.S., Michigan State University, 1970; M.D., 1975. Professor, University of Southern California, 2000-. Senior Research Fellow, Caltech, 1986-1992; Visiting Associate, 2006-09, 2010-19.

**Dale I Pullin, Ph.D.**, *Robert H. Goddard Professor of Aeronautics* B.Sc., University of Melbourne, 1966; B.E., University of Sydney, 1968; Ph.D., University of London (Imperial College), 1974. Visiting Associate, Caltech, 1990; Professor, 1991-2006, von Karman Professor, 2006-2016; Goddard Professor, 2016-.

**You Qi**, *Sherman Fairchild Research Assistant Professor* B.S., Tsinghua University China, 2006; M.P.H., Hong Kong University of Science and Technology, 2008; Ph.D., Columbia University, 2013. Caltech 2017-20.

**Lulu Qian, Ph.D.**, *Assistant Professor of Bioengineering* B.E., Southeast University, 2002; Ph.D., Shanghai Jiao Tong University, 2007. Caltech, 2013-.

**Steven R Quartz, Ph.D.**, *Professor of Philosophy* B.A., University of Western Ontario (Huron College), 1986; M.A., 1988; Ph.D., University of California (San Diego), 1993. Instructor, Caltech, 1998-99; Assistant Professor, 1999-2002; Associate Professor, 2002-10; Professor, 2010-.

**Aleta Quinn**, *Abmanson Postdoctoral Instructor in Philosophy of Science* B.S., University of Maryland, 2005; Ph.D., University of Pittsburgh, 2015. Caltech, 2016-18.

**Maksym Radziwill, Ph.D.**, *Professor of Mathematics*  
B.Sc., McGill University, 2009;  
Ph.D., University of California,  
Stanford, 2013; Caltech, 2018-.

**Eric M Rains, Ph.D.**, *Professor of Mathematics*  
B.A., Case Western Reserve  
University, 1991; B.S., 1991; M.S.,  
1991; Ph.D., Harvard University,  
1995. Visiting Associate and  
Lecturer, Caltech, 2002; Professor,  
2007-.

**Aditya Rajagopal**, *Visiting Associate in Electrical Engineering*  
B.S., California Institute of  
Technology, 2008; M.S., 2010;  
Ph.D., 2014. Visiting Scientist,  
2014-, Stanford School of Medicine.  
Caltech, 2017-18.

**Dinakar Ramakrishnan, Ph.D.**,  
*Tausky-Todd-Lonergan Professor of Mathematics*  
Ph.D., Columbia University, 1980.  
Professor, Caltech, 1988-2007;  
Tausky-Todd-Lonergan Professor,  
2007-; Executive Officer, 2013-16.

**Anamparambu N (Ram) Ramaprakash**, *Visiting Associate in Astrophysics*  
Btech, Technical University of  
Munich, 1992, Ph.D., University of  
Pune, 1999. Caltech 2015-18.

**Christina M Ramirez**, *Visiting Associate in Economics*  
B.S., University of Texas (Austin); M.  
S., California Institute of Technology,  
1997; Ph.D., 1999. Caltech, 2017.

**Michael Ramsey-Musolf**, *Visiting Associate in Physics*  
Ph.D., Princeton University, 1989.  
Professor, University of Wisconsin  
(Madison), 2007-. Visiting Associate,  
Caltech, 2001; 2007-20; Senior  
Research Associate, 2001-07;  
Lecturer, 2005-06.

**Antonio Rangel, Ph.D.**, *Bing Professor of Neuroscience, Behavioral Biology, and Economics*  
B.Sc., Caltech, 1993; M.S., Harvard

University, 1996; Ph.D., 1998.  
Instructor, Caltech, 1997-98; Visiting  
Associate, 2005-06; Associate  
Professor, 2006-10; Professor, 2010-  
13; Bing Professor, 2013-; Head  
Faculty in Residence, 2018-.

**Guruswami (Ravi) Ravichandran Ph.D., D.h.c.**, *John E. Goode, Jr., Professor of Aerospace and Mechanical Engineering; Otis Booth Leadership Chair, Division of Engineering and Applied Science*  
B.E., University of Madras (Regional  
Engineering College), 1981; Sc.M.  
(Solid Mechanics and Structures),  
Brown University, 1983; Sc.M.  
(Applied Mathematics), 1984; Ph.D.,  
1987; D.h.c., Paul Verlaine University.  
Assistant Professor, Caltech, 1990-95;  
Associate Professor, 1995-99; Professor,  
1999-2005; Goode Professor, 2005-;  
Associate Director, 2008-09; Director,  
Graduate Aerospace Laboratories,  
2009-15; Division Chair, 2015-; Otis  
Booth Leadership Chair, 2015-.

**Animesh Ray**, *Visiting Associate in Biology and Biological Engineering*  
Ph.D., Monash University, 1984.  
Caltech, 2016-19.

**Anthony C Readhead, Ph.D.**,  
*Robinson Professor of Astronomy, Emeritus; Director, Owens Valley Radio Observatory*  
B.Sc., University of Witwatersrand  
(South Africa), 1968; Ph.D.,  
University of Cambridge, 1972.  
Research Fellow, Caltech, 1974-75;  
Senior Research Fellow, 1976-  
79; Research Associate, 1979-81;  
Professor of Radio Astronomy,  
1981-90; Professor of Astronomy,  
1990-2000; Rawn Professor, 2000-  
13; Robinson Professor, 2013-15;  
Robinson Professor, Emeritus,  
2015-; Director, Owens Valley  
Radio Observatory, 1981-86, 2007-;  
Executive Officer for Astronomy,  
1990-92, 2012-13; Director,  
Chajnantor Observatory, 2006-2011;  
Jet Propulsion Laboratory Senior  
Research Scientist, 2006-15.

**Carol W Readhead**, *Visiting Associate in Biology and Biological Engineering*

B.Sc., University of Witwatersrand (South Africa), 1969; Ph.D., University of Cambridge, 1976. Research Fellow in Biology, Caltech, 1977-79; Senior Research Fellow, 1980-83; Senior Research Associate, 1998-2002; Lecturer in Engineering, 2006-17; Visiting Associate, 2011-15; 2017-19.

**Douglas C (Doug) Rees, Ph.D.,** *Roscoe Gilkey Dickinson Professor of Chemistry; Investigator, Howard Hughes Medical Institute; Dean of Graduate Studies* B.S., Yale University, 1974; Ph.D., Harvard University, 1980. Professor, Caltech, 1989-2004; Dickinson Professor, 2004-. HHMI Investigator, 1997-; Executive Officer for Chemistry, 2002-06; Executive Officer for Biochemistry and Molecular Biophysics, 2007-15; Dean of Graduate Studies, 2015-.

**Gil Refael, Ph.D.,** *Taylor W. Lawrence Professor of Theoretical Physics; Executive Officer for Physics* B.S., Tel Aviv University, 1997; M.S., 1998; Ph.D., Harvard University, 2003. Assistant Professor, Caltech, 2005-2008; Associate Professor, 2008-11; Professor, 2011-17; Lawrence Professor, 2017-; Executive Officer, 2014-.

**Sarah E Reisman, Ph.D.,** *Professor of Chemistry; Investigator, Heritage Medical Research Institute; Executive Officer for Chemistry* B.A., Connecticut College, 2001; Ph.D., Yale University, 2006. Assistant Professor, Caltech, 2008-14; Professor, 2014-; HMRI Investigator 2015-; Executive Officer, 2015-.

**David H Reitze,** *Research Professor of Physics; Executive Director of the LIGO Project* B.A., Northwestern University, 1983; Ph.D., University of Texas (Austin), 1993. Professor, University of Florida, 1998-. Visiting Associate, Caltech, 1996-97; 2000; 2003; 2007-11; Senior Research Associate, 2011-16; Executive Director, 2011-21.

**Leon Reubsact,** *Visiting Associate in Chemistry* Ph.D., University of Utrecht, 1996. Caltech, 2018-2019.

**Jean-Paul Revel, Ph.D.,** *Albert Billings Ruddock Professor of Biology, Emeritus* B.Sc., University of Strasbourg, 1949; Ph.D., Harvard University, 1957. Professor of Biology, Caltech, 1971-78; Ruddock Professor, 1978-2006; Ruddock Professor Emeritus, 2006-. Dean of Students, 1996-2005.

**Jason D Rhodes,** *Visiting Associate in Astronomy* B.S., Harvey Mudd College, 1994; Ph.D., Princeton University, 1999. Staff Scientist, Jet Propulsion Laboratory, 2004-. Caltech, 2004-19.

**Frank R Rice,** *Lecturer in Physics* B.A., Northwestern University, 1977; M.S., Naval Postgraduate School, 1986; M.S., Caltech, 1999. Lecturer, 2001-13; 2015; 2016; 2017; 2018.

**Elon Rimon,** *Visiting Associate in Mechanical and Civil Engineering* B.S., Technion-Israel Institute of Technology, 1985; M.S., Yale University, 1987; Ph.D., 1991. Senior Lecturer, Technion - Israel Institute of Technology, 1994-. Research Fellow, Caltech, 1992-94; Visiting Associate, 1994-97; 1999-2004; 2008; 2010; 2011; 2012; 013:2014; 015; 2016; 2017; 2018.

**Robert C Ritchie,** *Visiting Associate in History* A.B., Occidental College, 1960; Ph.D., University of California (Los Angeles), 1970. W. M. Keck Foundation Director of Research, Huntington Library and Art Gallery, 1992-. Visiting Associate, Caltech, 1993-19; Lecturer, 1995; 1997; 1999; 2001; 2005.

**Maxwell J Robb, Ph.D.,** *Assistant Professor of Chemistry* B.S., Colorado School of Mines, 2009; Ph.D., University of California,

Santa Barbara, 2014; Visiting Associate, Caltech, 2017; Assistant Professor, 2017-.

**Graca M Rocha**, *Visiting Associate in Physics*

M.S., London University, 1992; Ph.D., University of Cambridge, 1997; Visiting Associate in Physics, Caltech, 2016-20.

**Damien C Rodger**, *Visiting Associate in Medical Engineering*

B.S., Cornell University, 2000; Ph.D., California Institute of Technology, 2008; M.D., University of California, Keck School of Medicine, 2009. Caltech, 2015-18.

**Richard W Roll, Ph.D.**, *Linde*

*Institute Professor of Finance*  
B.A.E., Auburn University, 1961; M.B.A., University of Washington, 1963; Ph.D., University of Chicago, 1968. Caltech, Linde Institute Professor, 2013-.

**Alton D Romig**, *Visiting Associate in*

*Applied Physics and Materials Science*  
Ph.D., Lehigh University, 1979. Caltech, 2013-18.

**Ares J Rosakis, Ph.D.**, *Theodore von Karman Professor of Aeronautics and Mechanical Engineering*

B.Sc., University of Oxford, 1978; Sc.M., Brown University, 1980; Ph.D., 1982. Assistant Professor of Aeronautics and Applied Mechanics, Caltech, 1982-88; Associate Professor, 1988-93; Professor, 1993-2000; Professor of Aeronautics and Mechanical Engineering, 2000-04; von Karman Professor, 2004-; Director, Graduate Aerospace Laboratories, 2004-09; Division Chair, 2009-13; Otis Booth Leadership Chair, 2013-15.

**Phoebus Rosakis**, *Visiting Associate in Aerospace*

B.S., Brown University, 1983; M.S., Caltech, 1984; Ph.D., 1989. Caltech, 2011-18.

**Paul A Rosen**, *Visiting Associate in Geophysics*

B.S., University of Pennsylvania,

1981; M.S., 1982; Ph.D., Stanford University, 1989. Technical Group Supervisor, Jet Propulsion Laboratory, 1992-. Lecturer, 2000-03; 2005-2008; Visiting Associate, Caltech, 1998-2018.

**Robert A Rosenstone, Ph.D.**,

*Professor of History, Emeritus*  
B.A., University of California (Los Angeles), 1957; Ph.D., 1965. Visiting Assistant Professor, Caltech, 1966-68; Assistant Professor, 1968-69; Associate Professor, 1969-75; Professor, 1975-2012; Professor Emeritus, 2012-. Executive Officer for the Humanities, 1983-86.

**Jean-Laurent Rosenthal Ph. D.**,

*Rea A. and Lela G. Axline Professor of Business Economics; Ronald and Maxine Linde Leadership Chair, Division of the Humanities and Social Sciences*

B.A., Reed College, 1984; Ph.D., Caltech, 1988. Professor of Economics, 2006-2008; Axline Professor of Business Economics, 2008-; Executive Officer, 2007-13; Division Chair, 2014-; Linde Leadership Chair, 2016-.

**Brian D Ross**, *Visiting Associate in Medical Engineering*

B.Sc., University College London, 1958; M.B.B.S., 1961; D.Phil., University of Oxford (Trinity College), 1966. Director, Clinical Spectroscopy Laboratory, Huntington Medical Research Institutes, 1986-. Caltech, 1988-2008; 2014; 2015; 2016-19.

**Ian Ross**, *Visiting Associate in Biology and Biological Engineering*

B.Sc., McGill University, 1981; M.D., Queens University, 1985; M.Sc., University of Toronto, 1992. Provisional Staff, Huntington Memorial Hospital, 2005-. Caltech, 2008-19.

**George R Rossman, Ph.D.**, *Professor of Mineralogy*

B.S., Wisconsin State University, 1966; Ph.D., Caltech, 1971. Instructor, 1971; Assistant Professor,



1971-77; Associate Professor, 1977-83; Professor, 1983-2008; 2015-.  
McMillan Professor, 2008-15.  
Divisional Academic Officer for Geological and Planetary Sciences, 1999-2008.

**Paul W Rothemund**, *Research Professor of Bioengineering, Computing and Mathematical Sciences, and Computation and Neural Systems*

B.S., Caltech, 1994; Ph.D., University of Southern California, 2001. Visiting Associate, Caltech, 2001; Beckman Senior Research Fellow, 2001-04; Senior Research Fellow, Computation and Neural Systems and Computer Science, 2004-08; Senior Research Associate, 2008-2015; Research Professor, 2015-.

**Ellen Rothenberg, Ph.D.**, *Albert Billings Ruddock Professor of Biology*  
A.B., Harvard University, 1972; Ph.D., Massachusetts Institute of Technology, 1977. Assistant Professor, Caltech, 1982-88; Associate Professor, 1988-94; Professor, 1994-2007; Ruddock Professor, 2007-.

**Ira Z Rothstein**, *Visiting Associate in Physics*

Sc.B., Brown University, 1985; M.S., 1987; Ph.D., University of Maryland, 1992. Assistant Professor, Carnegie Mellon University, 1998-. Caltech, 1999-2000; 2010; 2011; 2012; 2013; 2014; 2015; 2016-17.

**Michael L Roukes, Ph.D.**, *Frank J. Roshek Professor of Physics, Applied Physics, and Bioengineering*

B.A., University of California (Santa Cruz), 1978; Ph.D., Cornell University, 1985. Associate Professor, Caltech, 1992-96; Professor of Physics, 1996-2002; Professor of Physics, Applied Physics, and Bioengineering, 2002-11; Abbey Professor, 2011-17; Roshek Professor, 2018-; Director, Kavli Nanoscience Institute, 2004-06; Co-Director, 2008-2013.

**Jay Rubenstein**, *Visiting Associate in the Humanities*

B.A., Carleton College, 1989; M.

Phil, University of Oxford, 1992; Ph.D., University of California, Berkeley, 1997. Caltech, 2018.

**Jared Rubin**, *Visiting Associate in Economic History*

B.A., University of Virginia, 2002; Ph.D., Stanford University, 2007. Caltech, 2018.

**Ueli Rutishauser**, *Visiting Associate in Biology and Bioengineering*

B.S., University of Applied Sciences, Rapperswil, 2003; Ph.D., California Institute of Technology, 2008. Caltech, 2013-18.

**David B Rutledge, Ph.D.**, *Kiyoo and Eiko Tomiyasu Professor of Engineering, Emeritus*

B.A., Williams College, 1973; M.A., University of Cambridge, 1975; Ph.D., University of California, 1980. Assistant Professor, Caltech, 1980-84; Associate Professor, 1984-89; Professor, 1989-2001; Tomiyasu Professor, 2001-18; Tomiyasu Professor, Emeritus, 2018-. Executive Officer for Electrical Engineering, 1999-2002; Chair, Division of Engineering and Applied Science, 2005-08.

**John E Sader**, *Visiting Associate in Physics*

B.S., University of New South Wales, 1989; Ph.D., 1993. Professor, University of Melbourne, 2008-. Caltech, 2009; 2010; 2012-18.

**Kota Saito, Ph.D.**, *Professor of Economics*

M.A., University of Tokyo, 2007; Ph.D., Northwestern University, 2011. Assistant Professor, Caltech, 2011-16; Professor, 2017-.

**Hiroyasu Saitoh**, *Visiting Associate in Aerospace*

B.S., Osaka University, 1997, M.S., 1999, Ph.D., 2003. Caltech, 2017-2018.

**Jason B Saleeby, Ph.D.**, *Professor of Geology, Emeritus*

B.S., California State University (Northridge), 1972; Ph.D., University

of California (Santa Barbara), 1975. Associate Professor, Caltech, 1978-88; Professor, 1988-2015; Professor Emeritus, 2015-.

**Benjamin A Saltzman**, *Visiting Associate in English*

B.A., Pace University, 2007; Ph.D., University of California (Berkeley), 2014. Instructor, 2014-17. Caltech, 2017-18.

**Konrad H Samwer**, *Visiting Associate in Applied Physics and Materials Science*

Ph.D., University of Goettingen (Germany), 1981. Professor, 1990-. Research Fellow, Caltech, 1981-82; Visiting Associate, 1987; 1994; 1998-2000; 2004-05; 2007; 2009-19.

**Stanley P (Stan) Sander**, *Visiting Associate in Planetary Science*

B.A., Pomona College, 1974; M.S., Caltech, 1975; Ph.D., 1980. Senior Research Scientist, Jet Propulsion Laboratory, 1996-. Visiting Associate in Planetary Science and Environmental Engineering Science, Caltech, 1998-2005; Lecturer in Geology and Planetary Sciences and Environmental Engineering Science, 1998-2004, 2017; Visiting Associate in Planetary Science and Environmental Engineering and Science, 2005; Visiting Associate in Planetary Science, 2006-19.

**Suniti V Sanghavi**, *Visiting Associate in Environmental Science and Engineering*

B.Sc., University of Bombay, 1998; Ph.D., Heidelberg University, 2008. Caltech, 2015-18.

**Anneila I Sargent Ph.D., D.Sc.h.c.**, *Ira S. Bowen Professor of Astronomy, Emeritus*

B.Sc., University of Edinburgh, 1963; M.S., Caltech, 1967; Ph.D., 1977; D.Sc.h.c., University of Edinburgh. Research Fellow, 1977-79; Member of the Professional Staff, 1979-88; Senior Research Fellow, 1988-90; Senior Research Associate, 1990-98; Professor, 1998-2004, 2016-17; Rosen Professor, 2004-13; Bowen Professor, 2013-16; Bowen Professor, Emeritus, 2018-; Associate Director, Owens

Valley Radio Observatory, 1992-96; Executive Director, 1996-98; Director, 1998-2007; Director, Interferometry Science Center, 2000-03; Director, Michelson Science Center, 2003; Vice President, 2007-15.

**Michael Savage**, *Abmanson*

*Postdoctoral Instructor in History* B.A., University of Calgary, 2007, M.A., 2009. Ph.D, 2018. Caltech, 2018-20.

**Jack Sayers**, *Research Assistant*

*Professor of Physics* Ph.D., California Institute of Technology, 2008. Caltech, 2016-19.

**Daniel Scharf**, *Lecturer in Aerospace*

B.S., University of Minnesota, 1995; M.S., University of Michigan, Ann Arbor, 1997; Ph.D, 2001. Caltech, 2013; 2014; 2015; 2016; 2017; 2018.

**Mark Scheel**, *Research Professor of Physics*

Ph.D., Cornell University, 1996. Senior Research Fellow, Caltech, 2005-; Lecturer, 2005-06; 2014-15; Research Professor, 2015-.

**Axel Scherer, Ph.D.**, *Bernard Neches*

*Professor of Electrical Engineering, Applied Physics and Physics* B.S., New Mexico Institute of Mining and Technology, 1981; M.S., 1982; Ph.D., 1985. Associate Professor of Electrical Engineering, Caltech, 1993-95; Professor, 1995; Professor of Electrical Engineering and Applied Physics, 1995-96; Professor of Electrical Engineering, Applied Physics, and Physics, 1996-2000; Neches Professor, 2000-. Director, Kavli Nanoscience Institute, 2006-08; Co-Director, 2008-11.

**Lukas W Schimmer**, *Harry Bateman Research Instructor*

M.S., Vienna University of Technology, 2011; Ph.D., Imperial College, London, 2015. Caltech, 2016-17.

**Maarten Schmidt, Ph.D.**, *Francis L. Moseley Professor of Astronomy,*

*Emeritus* Ph.D., University of Leiden,

1956; Sc.D., Yale University, 1966. Associate Professor, Caltech, 1959-64; Professor, 1964-81; Institute Professor, 1981-87; Moseley Professor, 1987-96; Moseley Professor Emeritus, 1996-. Executive Officer for Astronomy, 1972-75; Chairman, Division of Physics, Mathematics and Astronomy, 1976-78; Director, Hale Observatories, 1978-80.

**Tapio Schneider, Ph.D.**, *Theodore Y. Wu Professor of Environmental Science and Engineering; Jet Propulsion Laboratory Senior Research Scientist* Vordipl., Albert-Ludwigs-Universität Freiburg, 1993; Ph.D., Princeton University, 2001. Assistant Professor, Caltech, 2002-08; Associate Professor, 2008-09; Professor, 2009-10; Gilloon Professor, 2010-18; Wu Professor, 2018-; Director, Linde Center, 2011-12; Executive Officer, 2011-12; Jet Propulsion Laboratory Senior Research Scientist, 2016-.

**Peter Schroeder, Ph.D.**, *Shaler Arthur Hanisch Professor of Computer Science and Applied and Computational Mathematics* B.S., Technical University of Berlin, 1987; M.S., Massachusetts Institute of Technology, 1990; M.A., Princeton University, 1992; Ph.D., 1994. Assistant Professor of Computer Science, Caltech, 1995-98; Associate Professor, 1998-2000; Associate Professor of Computer Science and Applied and Computational Mathematics, 2000-01; Professor, 2001-13; Hanisch Professor, 2013-; Division Deputy Chair, 2012-15; Acting Director of the Center for Advanced Computing Research, 2013-14.

**Leonard J Schulman, Ph.D.**, *Professor of Computer Science* B.S., Massachusetts Institute of Technology, 1988; Ph.D., 1992. Associate Professor, Caltech, 2000-05; Professor, 2005-.

**Wolfram Schultz**, *Visiting Associate in Neuroscience* B.A., Universities of Hamburg and Heidelberg, 1971; M.D.,

University of Heidelberg, 1972; Ph.D., University of Fribourg, 1981. Professor, University of Cambridge, 2001-. Visiting Associate, Caltech, 2004-05; 2007; 2008; 2009; 2010-12; 2013-15; 2016-17; 2018. Moore Distinguished Scholar, 2005-06.

**Keith C Schwab, Ph.D.**, *Professor of Applied Physics* B.A., University of Chicago, 1990; Ph.D., University of California, 1996. Associate Professor, Caltech, 2009-10; Professor, 2010-; Fletcher Jones Foundation Co-Director of the Kavli Nanoscience Institute, 2013-15.

**John H Schwarz, Ph.D.**, *Harold Brown Professor of Theoretical Physics, Emeritus* A.B., Harvard College, 1962; Ph.D., University of California, 1966. Research Associate, Caltech, 1972-81; Senior Research Associate, 1981-85; Professor of Theoretical Physics, 1985-89; Brown Professor, 1989-2014; Brown Professor Emeritus, 2015-.

**Nicholas Z (Nick) Scoville, Ph.D.**, *Francis L. Moseley Professor of Astronomy, Emeritus* B.A., Columbia University, 1967; Ph.D., 1972. Professor, Caltech, 1984-96; Moseley Professor, 1996-2016; Moseley Professor, Emeritus, 2016-. Director, Owens Valley Radio Observatory, 1986-96. Executive Officer for Astronomy, 2000-04.

**Thayer Scudder, Ph.D.**, *Professor of Anthropology, Emeritus* A.B., Harvard College, 1952; Ph.D., Harvard University, 1960. Assistant Professor, Caltech, 1964-66; Associate Professor, 1966-69; Professor, 1969-2000; Professor Emeritus, 2000-.

**Charles T (Chip) Sebens, Ph.D.**, *Assistant Professor of Philosophy* B.S., Massachusetts Institute of Technology, 2009, M.St., University of Oxford, 2010, Ph.D., University of Michigan, 2015. Caltech, 2018-.

**Kimberly A See, Ph.D.**, *Assistant Professor of Chemistry*  
B.S. Colorado School of Mines, 2009; Ph.D., University of California, Santa Barbara, 2014; Visiting Associate, Caltech, 2017; Assistant Professor, 2017-.

**Michael D Seiffert**, *Visiting Associate in Astronomy*  
B.S., Stanford University, 1986; Ph.D., University of California (Santa Barbara), 1994. Group Supervisor and Lead Scientist for Cosmology, Jet Propulsion Laboratory, 2004-. Caltech, 2005-19.

**John H Seinfeld Ph.D., D.Sc.h.c.**, *Louis E. Nohl Professor of Chemical Engineering*  
B.S., University of Rochester, 1964; Ph.D., Princeton University, 1967; D.Sc.h.c., University of Patras; Carnegie Mellon University; Clarkson University. Assistant Professor, Caltech, 1967-70; Associate Professor, 1970-74; Professor, 1974-; Nohl Professor, 1979-; Executive Officer for Chemical Engineering, 1974-90; Executive Officer for Environmental Science and Engineering, 2016-17; Chair, Division of Engineering and Applied Science, 1990-2000.

**Shaunak Sen**, *Visiting Associate in Computing and Mathematical Sciences*  
B.S., Indian Institute of Technology, Kanpur, 2003; Ph.D., California Institute of Technology, 2011. Caltech, 2012-15, 2017-18.

**Peter C Sercel**, *Visiting Associate in Applied Physics and Materials Science*  
B.S., University of Arizona, 1987; M.S., Caltech, 1988; Ph.D., 1992. Lecturer, 2007-08. 2016-18.

**Alex L Sessions, Ph.D.**, *Professor of Geobiology*  
B.A., Williams College, 1991; M.Sc., Dartmouth College, 1996; Ph.D., Indiana University (Bloomington), 2001. Assistant Professor, Caltech, 2003-10; Associate Professor, 2010; Professor, 2010-.

**Mona Shahgholi**, *Lecturer in Chemistry*  
B.S., Oklahoma State University, 1979; M.S., University of Colorado, 1989; Ph.D., University of Tennessee, 1993. Caltech, 2008; 2009; 2010; 2011; 2013; 2014; 2015; 2016.

**Shu-ou Shan, Ph.D.**, *Professor of Chemistry; Executive Officer for Biochemistry and Molecular Biophysics*  
B.S., University of Maryland, 1994; Ph.D., Stanford University, 2000. Assistant Professor, Caltech, 2005-11; Professor, 2011-; Executive Officer, 2015-.

**Mikhail Shapiro, Ph.D.**, *Assistant Professor of Chemical Engineering and Schlinger Scholar; Investigator, Heritage Medical Research Institute*  
B.S., Brown University, 2004; Ph.D., Massachusetts Institute of Technology, 2008. Visiting Associate, Caltech, 2013; Assistant Professor, 2014-; HMRI Investigator, 2015-; Schlinger Scholar, 2017-.

**Andrew A Shapiro-Scharlotta**, *Visiting Associate in Aerospace*  
B.S., University of California, 1981; M.S., University of California (Los Angeles), 1989; Ph.D., University of California (Irvine), 1998. Principal Engineer, Jet Propulsion Laboratory, 2002-. Caltech, 2008-19.

**Mohammad H Shehata**, *Visiting Associate in Biology and Biological Engineering*  
B.S., Cairo University, Egypt, 2001; Ph.D., University of Toyama, Japan, 2011. Caltech, 2016-19.

**Joseph E Shepherd, Ph.D.**, *C. L. Kelly Johnson Professor of Aeronautics and Mechanical Engineering; Allen V. C. Davis and Lenabelle Davis Leadership Chair, Student Affairs; Vice President for Student Affairs*  
B.S., University of South Florida, 1976; Ph.D., Caltech, 1981. Associate Professor, 1993-99; Professor of Aeronautics, 1999-2005; Professor of Aeronautics and Mechanical Engineering, 2006-08; Johnson Professor, 2008-; Davis

Leadership Chair, 2018-; Dean of Graduate Studies, 2009-15; Vice President for Student Affairs, 2015-.

**Melanie M Sherazi**, *Howard E. and Susanne C. Jessen Postdoctoral Instructor in the Humanities*

B.A., University of California, San Diego, 2000; Ph.D., University of California, Riverside, 2015. Caltech, 2017-19.

**Robert P (Bob) Sherman, Ph.D.**,

*Professor of Economics and Statistics*

B.A., Marquette University, 1978; M.A., University of Louisville, 1985; M.Phil., Yale University, 1987; Ph.D., 1991. Assistant Professor, Caltech, 1996-99; Associate Professor, 1999-2005; Professor, 2005-.

**Shinsuke (Shin) Shimojo, Ph.D.**,

*Gertrude Baltimore Professor of Experimental Psychology*

B.A., University of Tokyo, 1978; M.A., 1980; Ph.D., Massachusetts Institute of Technology, 1985. Associate Professor, Caltech, 1997-98; Professor, 1999-2010; Baltimore Professor, 2010-.

**Matthew S (Matt) Shum, Ph.D.**, *J.*

*Stanley Johnson Professor of Economics*

B.A., Columbia University, 1992; Ph.D., Stanford University, 1998. Professor, Caltech, 2008-16; J. Stanley Johnson Professor, 2016-.

**Athanassios G (Thanos) Siapas,**

**Ph.D.**, *Professor of Computation and Neural Systems; Executive Officer for Computation and Neural Systems*

B.S., Massachusetts Institute of Technology, 1990; M.S., 1992; Ph.D., 1996. Assistant Professor, Caltech, 2002-08; Bren Scholar 2003-08; Associate Professor, 2008-10; Professor, 2010-; Executive Officer, 2017-.

**Peter Siegel**, *Visiting Associate in*

*Electrical Engineering*

B.A., Colgate University, 1975; M.S., Columbia University, 1983; M.Ph., 1983; Ph.D., 1983. Caltech, 2002; 2007-10; 2014-18.

**Daniel M Silevitch**, *Research Professor of Physics*

B.S., Massachusetts Institute of Technology, 1996; Ph.D., John Hopkins University, 2003. Caltech, 2015-18.

**Leon T Silver, Ph.D.**, *W. M. Keck*

*Foundation Professor for Resource Geology, Emeritus*

B.S., University of Colorado, 1945; M.S., University of New Mexico, 1948; Ph.D., Caltech, 1955. Assistant Professor of Geology, 1955-62; Associate Professor, 1962-65; Professor, 1965-83; Keck Professor, 1983-96; Keck Professor Emeritus, 1996-.

**David W Simmons-Duffin, Ph.D.**,

*Assistant Professor of Theoretical Physics*

A.B., Harvard University, 2006; A.M., 2006; CASM., University of Cambridge, 2007; Ph.D., Harvard University, 2012. Visiting Associate, Caltech, 2016-17; Assistant Professor, 2017-.

**Barry M Simon Ph.D.; D.Sc.h.c.**,

*International Business Machines*

*Professor of Mathematics and Theoretical Physics, Emeritus*

A.B., Harvard College, 1966; Ph.D., Princeton University, 1970; D.Sc.h.c., Technion-Israel Institute of Technology; University of Wales Swansea; Ludwig Maximilians-Universität München. Sherman Fairchild Distinguished Scholar, Caltech, 1980-81; Professor, 1981-84; International Business Machines Professor, 1984-2016; International Business Machines Professor, Emeritus, 2016-. Executive Officer for Mathematics, 1997-2003; 2009-13.

**Melvin I (Mel) Simon, Ph.D.**, *Anne P. and Benjamin F. Biaggini Professor*

*of Biological Sciences, Emeritus*

B.S., City College of New York, 1959; Ph.D., Brandeis University, 1963. Professor, Caltech, 1982-86; Biaggini Professor, 1986-2005; Biaggini Professor Emeritus, 2005-; Chair, Division of Biology, 1995-2000.

**Mark Simons, Ph.D.**, *John W. and Herberta M. Miles Professor of Geophysics; Jet Propulsion Laboratory Chief Scientist*

B.S., University of California (Los Angeles), 1989; Ph.D., Massachusetts Institute of Technology, 1995. Assistant Professor, Caltech, 1997-2003; Associate Professor, 2003-2007; Professor, 2007-17; Miles Professor, 2017-; Jet Propulsion Laboratory Chief Scientist, 2017-.

**Denis Sipp**, *Visiting Associate in Mechanical and Civil Engineering*  
B.S., Ecole Polytechnique, 1996; Ph.D., 1999. Caltech, 2018.

**Annette J Smith, Ph.D.**, *Professor of Literature, Emeritus*  
B.A., University of Paris (Sorbonne), 1947; M.A., 1950; Ph.D., 1970. Visiting Assistant Professor of French, Caltech, 1970-71; Lecturer, 1971-81; Associate Professor, 1982-85; Professor, 1985-92; Professor of Literature Emeritus, 1993-.

**G J (Jeff) Snyder**, *Visiting Associate in Applied Physics and Materials Science*  
B.A., Cornell University, 1991; Ph.D., Stanford University, 1997. Lecturer, 2003; 2007-08. Faculty Associate, 2006-17, Visiting Associate, 2000-06; 2017-19.

**B T Soifer, Ph.D.**, *Harold Brown Professor of Physics, Emeritus; Director, Spitzer Science Center*  
B.S., Caltech, 1968; Ph.D., Cornell University, 1972. Senior Research Fellow, Caltech, 1978-81; Senior Research Associate, 1981-89; Professor, 1989-15; Harold Brown Professor, 2015-17; Harold Brown Professor, Emeritus, 2017-; Director, Space Infrared Telescope Facility (SIRTF) Science Center, 1997-2004. Director, Spitzer Science Center, 2004-; Deputy Chair, 2008-10; Acting Chair, 2010; Division Chair, 2010-14; Kresa Leadership Chair, 2014-15.

**Manuel P Soriaga**, *Research Professor of Applied Physics and Materials Science*  
B.S., University of San Carlos,

1970; Ph.D., University of Hawaii, 1978. Visiting Associate, 2012-16, Caltech, 2016-19.

**Maria Spiropulu, Ph.D.**, *Shang-Yi Ch'en Professor of Physics*  
B.Sc., Aristotle University of Thessaloniki, 1993; M.A., Harvard University, 1995; Ph.D., 2000. Associate Professor, Caltech, 2008-11; Professor, 2011-17; Ch'en Professor, 2017-.

**Damian A Stanley**, *Visiting Associate in Psychology*  
Ph.D., New York University, 2005. Caltech, 2016-18.

**Angelike Stathopoulos, Ph.D.**, *Professor of Biology*  
B.A., University of California, 1992; Ph.D., Stanford University, 1998. Assistant Professor, Caltech, 2005-11; Professor, 2011-.

**Charles (Chuck) Steidel, Ph.D.**, *Lee A. DuBridge Professor of Astronomy*  
A.B., Princeton University, 1984; Ph.D., Caltech, 1990. Assistant Professor, 1995-97; Associate Professor, 1997-98; Professor 1998-2004; DuBridge Professor, 2004-. Executive Officer for Astronomy, 2004-2007.

**Eric D Stemp**, *Visiting Associate in Chemistry*  
B.S., University of Denver, 1987; M.S., Northwestern University, 1988; Ph.D., 1993. Assistant Professor, Mount St. Mary's College, 1996-. Research Fellow, Caltech, 1993-96; Visiting Associate, 1996-2019.

**Paul W Sternberg, Ph.D.**, *Bren Professor of Biology*  
B.A., Hampshire College, 1978; Ph.D., Massachusetts Institute of Technology, 1984. Assistant Professor, Caltech, 1987-92; Associate Professor, 1992-96; Professor, 1996-2004; Morgan Professor, 2004-17; Bren Professor, 2017-; HHMI Investigator, 1992-2017.

**David J (Dave) Stevenson Ph.D., D.S.c.,** *Marvin L. Goldberger Professor of Planetary Science*  
B.S., Victoria University (New Zealand), 1971; M.S., 1972; Ph.D., Cornell University, 1976; D.S.c., Victoria University. Associate Professor, Caltech, 1980-84; Professor, 1984-95; Van Osdol Professor, 1995-2011; Goldberger Professor, 2011-. Chair, Division of Geological and Planetary Sciences, 1989-94.

**Joann M Stock, Ph.D.,** *Professor of Geology and Geophysics*  
B.S., Massachusetts Institute of Technology, 1981; M.S., 1981; Ph.D., 1988. Visiting Assistant Professor, Caltech, 1990; Associate Professor, 1992-98; Professor, 1998-.

**Edward M Stolper Ph.D., D.Sc.h.c., D.Phil.h.c.,** *William E. Leonhard Professor of Geology; Senior Advisor to the Vice President for Development and Institute Relations*  
A.B., Harvard College, 1974; M.Phil., University of Edinburgh, 1976; Ph.D., Harvard University, 1979; D.Sc.h.c., University of Bristol, University of Edinburgh; D.Phil.h.c., Hebrew University. Assistant Professor, Caltech, 1979-82; Associate Professor, 1982-83; Professor, 1983-90; Leonhard Professor, 1990-. Acting Executive Officer for Geochemistry, 1989; Executive Officer, 1989-94; Chair, Division of Geological and Planetary Sciences, 1994-2004; Acting Provost, 2004; Provost, 2007-17; Larson Provostial Chair, 2013-17; Interim President, 2013-2014; Senior Advisor, 2017-.

**Brian M Stoltz, Ph.D.,** *Professor of Chemistry*  
B.A., B.S., Indiana University of Pennsylvania, 1993; M.A., Yale University, 1996; Ph.D., 1997. Assistant Professor, Caltech, 2000-06; Associate Professor, 2006-07; Professor, 2007-; Bowles Professor, 2007-12. Executive Officer, 2010-12.

**Edward C Stone Ph.D., D.Sc.h.c.,** *David Morrisroe Professor of Physics; Vice Provost for Special Projects*

S.M., University of Chicago, 1959; Ph.D., 1964; D.Sc.h.c., Harvard University; Washington University; University of Chicago; University of Southern California. Research Fellow, Caltech, 1964-66; Senior Research Fellow, 1967; Assistant Professor, 1967-71; Associate Professor, 1971-76; Professor, 1976-94; Morrisroe Professor, 1994-. Chairman, Division of Physics, Mathematics and Astronomy, 1983-88; Vice President for Astronomical Facilities, 1988-90; Vice President and Director of the Jet Propulsion Laboratory, 1991-2001; Vice Provost for Special Projects, 2004-.

**Ellen G Strauss, Senior Research Associate in Biology, Emeritus**  
B.A., Swarthmore College, 1960; Ph.D., Caltech, 1966. Research Fellow, 1969-73; Senior Research Fellow, 1973-84; Senior Research Associate, 1984-2007; Senior Research Associate Emeritus, 2007-.

**James H Strauss, Jr., Ph.D.,** *Ethel Wilson Bowles and Robert Bowles Professor of Biology, Emeritus*  
B.S., Saint Mary's University, 1960; Ph.D., Caltech, 1967. Assistant Professor, 1969-75; Associate Professor, 1975-83; Professor, 1983-93; Bowles Professor, 1993-2007; Bowles Professor Emeritus, 2007-. Executive Officer for Molecular and Cellular Biology, 1980-89.

**Andrew M Stuart, Ph.D.,** *Bren Professor of Computing and Mathematical Sciences*  
B.S., University of Bristol, 1983; Ph.D., University of Oxford, 1986. Bren Professor, Caltech, 2016-.

**John Styles, Moore Distinguished Scholar**  
B.A., University of Cambridge, 1971; M.A., 1976. Head of M.A. Course in the History of Design, Victoria and Albert Museum, 1993-; Lecturer, Caltech, 1995; Visiting Associate, 1996; Moore Distinguished Scholar, 2017-18.

**Tsu-Te J (Judith) Su, Visiting Associate in Biology and Biological Engineering**  
B.S., Massachusetts Institute of

Technology, 2002, M.S., 2004. Ph.D., California Institute of Technology, 2014. Caltech, 2017-18.

**Piotr Sulkowski**, *Visiting Associate in Theoretical Physics*  
M.Sc., Warsaw University, 2002; Ph.D., 2007. Caltech, 2012-20.

**Hua Sun**, *Visiting Associate in Computing and Mathematical Sciences*  
B.E., Beijing University of Posts and Telecommunications, 2011; M.S., University of California Irvine, 2013; Ph.D, 2017. Caltech, 2017.

**Wei Sun**, *Visiting Associate in Chemical Engineering*  
B.S., Zhejiang University, 2005, Ph.D., 2010. Caltech, 2013-14; 2017-18.

**Mark R Swain**, *Visiting Associate in Planetary Science*  
B.A., University of Virginia, 1989; Ph.D., University of Rochester, 1996. Caltech, 2015-18.

**Noel M Swerdlow**, *Visiting Associate in History*  
B.A., University of California (Los Angeles), 1964; M.A., Yale University, 1967; Ph.D., 1968. Professor, University of Chicago, 1982-. Visiting Associate in History, Caltech, 2008, 2010-20; Visiting Professor, 2008-09.

**Shervin Taghavi Larigani**, *Visiting Associate in Mechanical and Civil Engineering*  
M.S., California Institute of Technology, 2001; Ph.D., 2006. Caltech, 2015-19.

**Yu-Chong Tai, Ph.D.**, *Anna L. Rosen Professor of Electrical Engineering and Medical Engineering; Andrew and Peggy Cherng Medical Engineering Leadership Chair; Executive Officer for Medical Engineering*  
B.S., National Taiwan University, 1981; M.S., University of California, 1986; Ph.D., 1989. Assistant Professor of Electrical Engineering, Caltech, 1989-95; Associate Professor, 1995-2000; Professor, 2000-05; Professor

of Electrical Engineering and Mechanical Engineering, 2005-13; Rosen Professor, 2013-; Cherng Medical Engineering Leadership Chair, 2017-; Executive Officer for Electrical Engineering, 2005-2008; Executive Officer for Medical Engineering, 2013-.

**Omer Tamuz, Ph.D.**, *Assistant Professor of Economics and Mathematics*  
B.Sc., Tel Aviv University, 2006; M.Sc., Weizman Institute of Science, 2010; Ph.D., 2013. Assistant Professor, Caltech, 2015-.

**Armand R Tanguay**, *Visiting Associate in Biology and Biological Engineering*  
B.S., Caltech, 1971; M.S., Yale University, 1972; M.Phil., 1975; Ph.D., 1977. Associate Professor, University of Southern California, 1983-. Visiting Associate, Caltech, 1984; 1999-2003; 2017 -18.

**Robert D Tanner**, *Visiting Associate in Chemical Engineering*  
B.S., University of Michigan, 1962; M.S., 1963; Ph.D, Case Western Reserve, 1967. Caltech, 2010-18.

**Vahid Tarokh, Ph.D.**, *Moore Distinguished Scholar*  
M.S., University of Windsor, 1992; Ph.D., University of Waterloo, Ontario, 1995; Caltech, 2018.

**Hugh P Taylor, Jr., Ph.D.**, *Robert P. Sharp Professor of Geology, Emeritus*  
B.S., Caltech, 1954; A.M., Harvard University, 1955; Ph.D., Caltech, 1959. Assistant Professor, 1959-61; Research Fellow, 1961; Assistant Professor, 1962-64; Associate Professor, 1964-69; Professor, 1969-81; Sharp Professor, 1981-2002; Sharp Professor Emeritus, 2002-. Executive Officer for Geology, 1987-94.

**Joao Teixeira**, *Visiting Associate in Environmental Science and Engineering*  
Ph.D., University of Lisbon, 2000. Caltech, 2010-20.



**Saul A Teukolsky, Ph.D.**, *Robinson Professor of Theoretical Astrophysics*  
B.Sc., University of the Witwatersrand, 1970; Ph.D., California Institute of Technology, 1973. Visiting Associate, Caltech, 2015-16; Robinson Professor, 2017-.

**Andrew F Thompson, Ph.D.**, *Professor of Environmental Science and Engineering*  
B.S., Dartmouth College, 2000; C.A.S., University of Cambridge, 2001, M.Phil., 2002; Ph.D., Scripps Institute of Oceanography, 2006. Assistant Professor, Caltech, 2011-17; Professor, 2017-.

**Matthew W Thomson, Ph.D.**, *Assistant Professor of Computational Biology*  
B.A., Harvard University, 2001; Ph.D., 2011. Visiting Associate, Caltech, 2016; Assistant Professor, 2017-.

**Kip S Thorne Ph.D, D.Sc.h.c., D.h.c., L.H.D.h.c., Nobel Laureate**, *Richard P. Feynman Professor of Theoretical Physics, Emeritus*  
B.S., Caltech, 1962; Ph.D., Princeton University, 1965; D.Sc.h.c., Illinois College; Utah State University; University of Chicago; D.h.c., Moscow University; University of Glasgow; L.H.D.h.c., The Claremont Graduate University. Research Fellow in Physics, Caltech, 1966-67; Associate Professor of Theoretical Physics, 1967-70; Professor, 1970-91; William R. Kenan Professor, 1981-91; Feynman Professor, 1991-2009; Feynman Professor Emeritus, 2009-.

**David A Tirrell Ph.D., D.h.c.**, *Provost; Ross McCollum-William H. Corcoran Professor of Chemistry and Chemical Engineering; Carl and Shirley Larson Provostial Chair*  
B.S., Massachusetts Institute of Technology, 1974; M.S., University of Massachusetts, 1976; Ph.D., 1978; D.h.c., Eindhoven Technical University. McCollum-Corcoran Professor and Professor, Caltech, 1998-. Chair, Division

of Chemistry and Chemical Engineering, 1999-2009; Director, Beckman Institute, 2011-17, Provost, 2017-; Larson Provostial Chair, 2017-.

**Francois Tissot, Ph.D.**, *Assistant Professor of Geochemistry*  
Diplôme d'Ingenieur, École National Supérieure de Géologie, 2009; M.Sc., Luleå University of Technology, 2009; Ph.D., University of Chicago, 2015. Caltech, 2018-.

**Ritsuko H (Hirai-Toner) Toner**, *Lecturer in Japanese*  
B.A., Kyoto University of Foreign Studies (Japan), 1974; M.A., University of Southern California, 1979; Ph.D., 1987. Caltech, 1992-.

**Geoffrey C Toon**, *Visiting Associate in Planetary Science*  
B.A., University of Oxford, 1978; M.A., 1981; D.Phil., 1984. Research Scientist, Jet Propulsion Laboratory, 1986-. Caltech, 2001-20.

**Sandra Troian, Ph.D.**, *Professor of Applied Physics, Aeronautics, and Mechanical Engineering*  
B.A., Harvard University, 1980; M.S., Cornell University, 1984; Ph.D., 1987. Moore Distinguished Scholar, Caltech, 2004-05; Professor, 2006-.

**Joel A Tropp, Ph.D.**, *Steele Family Professor of Applied and Computational Mathematics*  
B.A., B.S., University of Texas (Austin), 1999; M.S., 2001; Ph.D., 2004. Assistant Professor, Caltech, 2007-12; Professor, 2012-17; Steele Family Professor, 2017-.

**Victor C Tsai, Ph.D.**, *Professor of Geophysics*  
B.S., California Institute of Technology, 2004; A.M., Harvard University, 2006; Ph.D., 2009. Assistant Professor, Caltech, 2011-17; Professor, 2017-.

**Doris Y Tsao, Ph.D.**, *Professor of Biology; T&C Chen Center for Systems Neuroscience Leadership Chair;*

*Investigator, Howard Hughes Medical Institute; Director, T&C Chen Center for Systems Neuroscience*  
B.S., Caltech, 1996; Ph.D., Harvard University, 2002. Assistant Professor, Caltech, 2008-2014; Professor, 2014-; T&C Chen Center for Systems Neuroscience Leadership Chair, 2017-; HHMI Investigator, 2015-; Director, 2017-.

**Kohji Tsumura, Visiting Associate in Physics**  
B.S., Tohoku University, 2005; M.S., University of Tokyo, 2007; Ph.D., University of Tokyo, 2010. Caltech, 2018-21.

**Carol C (Chace) Tydell, Lecturer in Biology**  
B.S., University of California (Davis), 1980; D.V.M., 1982. Adjunct Professor, Pasadena City College, 2007-. Visiting Associate, Caltech, 2007-09; Lecturer, 2008, 2010, 2011, 2012, 2013, 2014, 2015-18.

**Christopher M (Chris) Umans, Ph.D., Professor of Computer Science; EAS Division Deputy Chair**  
B.A., Williams College, 1996; Ph.D., University of California, Berkeley, 2000. Assistant Professor, Caltech, 2002-08; Associate Professor, 2008-10; Professor, 2010-; EAS Division Deputy Chair, 2018-.

**Carlo R (Carl) Urbinati, Visiting Associate in Biology and Biological Engineering**  
B.S., University of Illinois (Urbana), 1992; Ph.D., Loyola University (Chicago), 1998. Caltech, 2017-18.

**Faramarz Vafaei, Harry Bateman Instructor in Mathematics**  
Ph.D., Michigan State University, 2014. Caltech, 2014-18.

**Kerry J Vahala, Ph.D., Ted and Ginger Jenkins Professor of Information Science and Technology and Applied Physics; Executive Officer for Applied Physics and Materials Science**  
B.S., Caltech, 1980; M.S., 1981; Ph.D., 1985. Research Fellow in Applied Physics, 1985; Assistant

Professor, 1986-90; Associate Professor, 1990-96; Professor, 1996-2002; Jenkins Professor, 2002-; Executive Officer, 2013-.

**Palghat P Vaidyanathan, Ph.D., Kiyo and Eiko Tomiyasu Professor of Electrical Engineering**  
B.Sc., University of Calcutta, 1974; B.Tech., 1977; M.Tech., 1979; Ph.D., University of California (Santa Barbara), 1982. Assistant Professor, Caltech, 1983-88; Associate Professor, 1988-93; Professor, 1993-2018; Tomiyasu Professor, 2018-; Executive Officer for Electrical Engineering, 2002-05.

**Joan S Valentine, Visiting Associate in Geobiology**  
A.B., Smith College, 1967; Ph.D., Princeton University, 1971. Professor, University of California (Los Angeles), 1981-. Caltech, 1986-2001, 2015-.

**Michele Vallisneri, Visiting Associate in Physics**  
Laurea, University of Parma (Italy), 1997; M.S., 2000; Ph.D., Caltech, 2002. Research Scientist, Jet Propulsion Laboratory, 2005-. Lecturer, Caltech, 2003-05; Visiting Associate, 2005-20.

**John P Van Deusen, ME Shop Supervisor; Lecturer in Mechanical and Civil Engineering**  
A.A., El Camino College, 1978; B.S., California State University (Long Beach), 2003. Caltech, 2004-18.

**David A Van Valen, Ph.D., Assistant Professor of Biology and Biological Engineering**  
B.S., Massachusetts Institute of Technology, 2003; Ph.D., Caltech, 2011; M.D., University of California Los Angeles, 2013; Visiting Associate, Caltech, 2017-18; Research Assistant Professor, 2018; Assistant Professor, 2018-.

**David A Van Valen, Research Assistant Professor of Biology and Biological Engineering**  
B.S., Massachusetts Institute

of Technology, 2003; Ph.D., Caltech, 2011; M.D., University of California Los Angeles, 2013; Visiting Associate, Caltech, 2017-18; Research Assistant Professor, 2018; Assistant Professor, 2018-.

**Jakob J van Zyl**, *Senior Faculty Associate in Electrical Engineering and Aerospace*

B.Eng., University of Stellenbosch (South Africa), 1979; M.S., Caltech, 1983; Ph.D., 1986. Research Fellow in Electrical Engineering, 1986; Lecturer in Electrical Engineering and Planetary Science, 2001-07; Faculty Associate, 2007-11, Lecturer, 2008-14, 2015-17; Senior Faculty Associate, 2012-.

**Michael C Vanier**, *Lecturer in Computing and Mathematical Sciences*  
B.S., McGill University, 1986; M.S., 1993; Ph.D., Caltech, 2001. Lecturer, 2004-19.

**Alexander J Varshavsky, Ph.D.**, *Thomas Hunt Morgan Professor of Biology*  
B.S., Moscow State University, 1970; Ph.D., Institute of Molecular Biology, 1973. Smits Professor, Caltech, 1992-17; Morgan Professor, 2017-.

**Tarciso A Velho**, *Visiting Associate in Biology and Biological Engineering*  
Ph.D., Oregon Health and Sciences University, 2008. Caltech, 2015-18.

**Michael A (Mike) Vicic**, *Lecturer in Chemical Engineering*  
B.S., University of Akron, 1992; Ph.D., Caltech, 1999. Lecturer, 2003-08; 2010; 2012-18.

**Amanda Vickery**, *Eleanor Searle Visiting Professor of History*  
B.A., Bedford College, 1984; Ph.D., London University, 1991. Caltech, 2017-18.

**Thomas G Vidick, Ph.D.**, *Professor of Computing and Mathematical Sciences*  
B.S., Ecole Normale Supérieure, Paris, 2007; M.S., 2007; Ph.D., University of California, Berkeley, 2011. Assistant

Professor, Caltech, 2014-17; Associate Professor, 2017-18; Professor, 2018-.

**Scott C Virgil**, *Lecturer in Chemistry*  
B.S., Caltech, 1987; Ph.D., Harvard University, 1991. Caltech, 2008; 2009; 2010; 2011; 2013; 2014; 2015; 2016; 2017; 2018.

**Petr Vogel**, *Senior Research Associate in Physics, Emeritus*

Ph.D., Joint Institute of Nuclear Research (USSR), 1966. Senior Research Fellow, Caltech, 1970-75; Research Associate, 1975-81; Senior Research Associate, 1981-2004; Lecturer, 1983-90; 1992; 1995-96; 1999-2000; 2006; Senior Research Associate Emeritus, 2004-.

**Rochus E (Robbie) Vogt, Ph.D.**, *R. Stanton Avery Distinguished Service Professor and Professor of Physics, Emeritus*

S.M., University of Chicago, 1957; Ph.D., 1961. Assistant Professor, Caltech, 1962-65; Associate Professor, 1965-70; Professor, 1970-82; R. Stanton Avery Distinguished Service Professor, 1982-2002; R. Stanton Avery Distinguished Service Professor Emeritus, 2002-. Chief Scientist, Jet Propulsion Laboratory, 1977-78; Chairman, Division of Physics, Mathematics and Astronomy, 1978-83; Acting Director, Owens Valley Radio Observatory, 1980-81; Vice President and Provost, 1983-87; Director, Laser Interferometer Gravitational- wave Observatory Project, 1987-94.

**Rebecca M Voorhees, Ph.D.**, *Assistant Professor of Biology and Biological Engineering; Investigator, Heritage Medical Research Institute*  
B.S., Yale University, 2007; M.Sc., 2007; Ph.D., MRC Laboratory of Molecular Biology, 2011. Visiting Associate, Caltech, 2016-17; Assistant Professor, 2017-; HMRI Investigator, 2017-.

**Daniel A Wagenaar**, *Research Professor of Biology and Biological Engineering*  
M.S., University of Amsterdam, 1997; M.S., King's College -

London, 1998; Ph.D., Caltech, 2006.  
Caltech, 2016-2020.

**David B Wales, Ph.D.**, *Professor of Mathematics, Emeritus*

B.S., University of British Columbia, 1961; M.A., 1962; Ph.D., Harvard University, 1967. Bateman Research Fellow, Caltech, 1967-68; Assistant Professor, 1968-71; Associate Professor, 1971-77; Professor, 1977-2008; Professor Emeritus, 2008-. Associate Dean of Students, 1976-80; Dean of Students, 1980-84; Executive Officer for Mathematics, 1985-91; Master of Student Houses, 1991-97.

**Duane E Waliser, Visiting Associate in Planetary Science**

B.S., Oregon State University, 1985; M.S., University of California (San Diego), 1987; Ph.D., 1992. Research Scientist, Jet Propulsion Laboratory, 2004-. Caltech, 2004-19.

**Lincoln A Wallen, Visiting Associate in Computing and Mathematical Sciences**

B. Sc., Durham University, 1981; Ph.D., Edinburgh University, 1987. Caltech, 2017-18.

**Chong (Alex) Wang, Visiting Associate in Applied Physics and Materials Science**

B.S., Sichuan University, 2005; M.S., 2008; Ph.D., Universite Paris, 2013. Caltech, 2018.

**Kaihang Wang, Ph.D.**, *Assistant Professor of Biology and Biological Engineering*

B.S., University College, London, 2004; Ph.D., University of Cambridge, 2008. Assistant Professor, 2018-.

**Lihong Wang, Ph.D.**, *Bren Professor of Medical Engineering and Electrical Engineering*

B.S., Huazhong University of Science and Technology, 1984; M.S., 1987; Ph.D., Rice University, 1992. Visiting Associate, Caltech, 2016; Bren Professor, 2017-.

**Lu Wang, Visiting Associate in Chemistry**

Ph.D., Dalian University of Technology, 2011. Caltech 2017-18.

**Xiangyun Wang, Lecturer in Chinese** M.A., Central Institute for Nationalities (China), 1985; Ph.D., Harvard University, 1995. Caltech, 2001-18.

**Zhen-Gang Wang, Ph.D.**, *Dick and Barbara Dickinson Professor of Chemical Engineering*

B.Sc., Beijing University, 1982; Ph.D., University of Chicago, 1987. Assistant Professor, Caltech, 1991-97; Associate Professor, 1997-2002; Professor, 2002-15; Hanson Professor, 2015-17; Dickinson Professor, 2017-.

**Michael M Watkins, Ph.D.**, *Vice President and Director of the Jet Propulsion Laboratory; Professor of Aerospace and Geophysics*

B.S., Cornell University, 1983; M.S., University of Texas, Austin, 1985; Ph.D., 1989. Professor, 2016-; Vice President and Director, 2016-, Caltech.

**Lu Wei, Ph.D.**, *Assistant Professor of Chemistry*

B.S., Nanjing University, 2010; Ph.D., Colombia University, 2015. Visiting Associate, Caltech, 2017-18; Assistant Professor, 2018-.

**Sander Weinreb, Visiting Associate in Electrical Engineering**

B.S., Massachusetts Institute of Technology, 1958; Ph.D., 1963. Caltech, 1999-2019.

**Alan J Weinstein, Ph.D.**, *Professor of Physics*

A.B., Harvard University, 1978; Ph.D., 1983. Assistant Professor, Caltech, 1988-95; Associate Professor, 1995-99; Professor, 2000-.

**Cindy A Weinstein, Ph.D.**, *Eli and Edythe Broad Professor of English*

B.A., Brandeis University, 1982; Ph.D., University of California, 1989. Assistant Professor of Literature,

Caltech, 1989-95; Associate Professor, 1995-2004; Associate Professor of English, 2004-05; Professor, 2005-16; Broad Professor, 2016-; Executive Officer, 2008-14; Vice Provost, 2014-18; Chief Diversity Officer, 2015-18.

**Daniel P (Dan) Weitekamp, Ph.D.,** *Professor of Chemical Physics*  
B.A., Harvard College, 1974; Ph.D., University of California, 1982. Assistant Professor of Chemistry, Caltech, 1985-91; Associate Professor of Chemical Physics, 1991-2006; Professor, 2006-.

**Xin Wen,** *Visiting Associate in Chemistry*  
B.S., Nanjing University, 1998; Ph.D., University of Rochester, 2005. Caltech, 2014-18.

**Paul O Wennberg, Ph.D.,** *R. Stanton Avery Professor of Atmospheric Chemistry and Environmental Science and Engineering; Executive Officer for Environmental Science and Engineering; Director, Ronald and Maxine Linde Center for Global Environmental Science*  
B.A., Oberlin College, 1985; Ph.D., Harvard University, 1994. Associate Professor of Atmospheric Chemistry and Environmental Engineering Science, Caltech, 1998-2001; Professor, 2001-03; Professor of Atmospheric Chemistry and Environmental Science and Engineering, 2003-04; Avery Professor, 2004-; Director, Linde Center, 2008-11, 2014-; Executive Officer, 2012-; Acting Director, Linde Center, 2012-14.

**Michael W Werner,** *Visiting Associate in Astrophysics*  
B.A., Haverford College, 1963; Ph.D., Cornell University, 1968. Caltech, 1992-96 Caltech, 2009-13, 16-20.

**Brian P Wernicke, Ph.D.,** *Chandler Family Professor of Geology*  
B.S., University of Southern California, 1978; Ph.D., Massachusetts Institute of

Technology, 1982. Visiting Professor, Caltech, 1990; Professor of Geology, 1992-2001; Chandler Professor, 2001-.

**Peter J Westwick,** *Lecturer in History*  
B.A., University of California, 1989; M.A., 1994; Ph.D., 1999. Senior Research Fellow, Caltech, 2000-04; Lecturer, 2001-02, 2017-18; Visiting Professor, 2013-14.

**Nicolas Wey-Gomez, Ph.D.,** *Professor of History*  
B.A., Brandeis University, 1986; M.A., Johns Hopkins University, 1987; M.A., 1991; PhD, 1996. Associate Professor, Caltech, 2010; Professor, 2010-.

**Ward Whaling, Ph.D.,** *Professor of Physics, Emeritus*  
B.S., Rice University, 1944; M.A., 1947; Ph.D., 1949. Research Fellow, Caltech, 1949-52; Assistant Professor, 1952-58; Associate Professor, 1958-62; Professor, 1962-93; Professor Emeritus, 1993-.

**Mark E Wiedenbeck,** *Visiting Associate in Physics*  
B.S., University of Michigan, 1971; Ph.D., 1978. Principal Research Scientist, Jet Propulsion Laboratory, 1992-. Visiting Associate, 2009-19; Lecturer, 2011.

**Anna K Wienhard,** *Visiting Associate in Mathematics*  
Diploma in Mathematics, Universitat Bonn, 2000; Diploma in Theology, 2001; Ph.D., 2004. Moore Distinguished Scholar, Caltech, 2014-15; Visiting Associate, 2015-18.

**Adam Wierman, Ph.D.,** *Professor of Computing and Mathematical Sciences; Executive Officer for Computing and Mathematical Sciences; Director, Information Science and Technology*  
B.S., Carnegie Mellon University, 2001; M.S., 2004; Ph.D., 2007. Assistant Professor, Caltech, 2007-

12; Professor, 2012-; Executive Officer, 2015-; Associate Director, 2015-16; Director, 2016-.

**Christian E Willert**, *Clark B. Millikan Visiting Professor of Aerospace* B.S., University of California, San Diego, 1987; M.S., 1991; Ph.D., 1992. Research Fellow, Caltech, 1993-94; Visiting Associate, 2009-10; Clark B. Millikan Visiting Professor of Aerospace, 2018.

**Kenneth Williford**, *Visiting Associate in Geobiology* B.S., University of the South, 1998; M.S., University of Washington, 2000; Ph.D., 2007. Caltech, 2013-19.

**Josh Willis**, *Visiting Associate in Environmental Science and Engineering* B.S., University of Houston, 1996; M.S., University of California, San Diego, 1998; Ph.D., 2004. Caltech, 2014-2019.

**Nathan M Wilson**, *Lecturer in Engineering* B.S., Virginia Polytechnic Institute and State University, 1996; M.S., Stanford University, 1997; M.B.A., University of California, Los Angeles, 2011; Ph.D., Stanford University, 2003. Caltech, 2018.

**Richard M Wilson, Ph.D.**, *Professor of Mathematics, Emeritus* B.S., Indiana University, 1966; M.S., Ohio State University, 1968; Ph.D., 1969. Sherman Fairchild Distinguished Scholar, Caltech, 1976; Professor, 1980-2014; Professor Emeritus, 2014-.

**Erik Winfree, Ph.D.**, *Professor of Computer Science, Computation and Neural Systems, and Bioengineering* B.S., University of Chicago, 1991; Ph.D., Caltech, 1998. Assistant Professor, 1999-2006; Associate Professor of Computer Science and Computation and Neural Systems, 2006-07; Associate Professor, 2007-10; Professor, 2010-.

**Jay R Winkler**, *Faculty Associate in Chemistry; Lecturer in Chemistry* B.S., Stanford University, 1978; Ph.D., Caltech, 1984. Lecturer, 2002; 2004-05; 2009-10; 2013; 2014; 2015; 2016; 2017; 2018. Faculty Associate, 2008-19.

**Kenneth J Winston**, *Lecturer in Economics* B.S., Caltech, 1973; M.S., 1974; Ph.D., Massachusetts Institute of Technology, 1979. Caltech, 2011; 2012; 2013; 2014; 2015; 2016; 2017; 2018.

**Mark B Wise, Ph.D.**, *John A. McCone Professor of High Energy Physics* B.Sc., University of Toronto, 1976; M.Sc., 1977; Ph.D., Stanford University, 1980. Assistant Professor of Theoretical Physics, Caltech, 1982-84; Associate Professor, 1984-85; Professor, 1985-92; McCone Professor, 1992-.

**Pernilla Wittung**, *Visiting Associate in Chemistry* B.S., Chalmers University of Technology, Ph.D., 1996. Caltech, 2015; 2018.

**Barbara J Wold, Ph.D.**, *Bren Professor of Molecular Biology* B. S., Arizona State University (Tempe), 1973; Ph.D., Caltech, 1978. Research Fellow, 1978; Assistant Professor, 1981-88; Associate Professor, 1988-96; Professor, 1996-2002; Bren Professor, 2003-. Director, 2001-2011.

**Juliann K (Juli) Wolfgram**, *Lecturer in Art History* B.A., Scripps College, 1979; M.A., University of Kansas, 1986; M.Phil., 1986; Ph.D., 1986. Caltech, 1992-2012; 2016; 2018.

**Alexander Wolszczan**, *Visiting Associate in Astronomy* Ph.D., Nicolaus Copernicus University, 1975. Caltech, 2017-18.

**James F Woodward, Ph.D., J. O.** and *Juliette Koepfli Professor of the Humanities, Emeritus*  
B.A., Carleton College, 1968; Ph.D., University of Texas (Austin), 1977. Mellon Postdoctoral Instructor, Caltech, 1983-86; Assistant Professor, 1986-88; Associate Professor, 1988-92; Professor, 1992-2001; Koepfli Professor, 2001-2010; Koepfli Professor Emeritus, 2010-. Executive Officer for the Humanities, 1992-95; 2000-2003.

**Haiyan Wu, Visiting Associate in Psychology**  
B.A., Guangxi Normal University, 2007; M.A., Zhejiang University, 2010; Ph.D., Beijing Normal University, 2013. Caltech, 2017-18.

**Mingming Wu, Visiting Associate in Aerospace**  
B.S., Nanjing University (China), 1984; Ph.D., Ohio State University, 1992. Assistant Professor, Occidental College, 1996-2003. Associate Professor, 2003-2005, Adjunct Associate Professor, Cornell University, 2003-2012, Associate Professor, 2012-present. Visiting, Associate, Caltech, 2000; 2018.

**Theodore Y Wu, Ph.D., Professor of Engineering Science, Emeritus**  
B. Sc., Chiao-Tung University (China), 1946; M.S., Iowa State University, 1948; Ph.D., Caltech, 1952. Research Fellow in Hydrodynamics, 1952-55; Assistant Professor of Applied Mechanics, 1955-57; Associate Professor, 1957-61; Professor, 1961-66; Professor of Engineering Science, 1966-96; Professor Emeritus, 1996-.

**Peter J Wyllie Ph.D., D.Sc.h.c., Professor of Geology, Emeritus**  
B.Sc. (Geology and Physics), Saint Andrews University (Scotland), 1952; B.Sc. (Geology), 1955; Ph.D., 1958; D.Sc.h.c., Saint Andrews University. Professor, Caltech, 1983-99; Professor Emeritus, 1999-. Chairman, Division of Geological and Planetary Sciences, 1983-87; Divisional Academic Officer, 1994-99.

**Yi Xin, Ph.D., Assistant Professor of Economics**  
B.A., B.S., Peking University, 2012; M.A., Johns Hopkins University, 2014; Ph.D., 2018; Caltech, 2018-.

**Daxin Xu, Harry Bateman Instructor Mathematics**  
B.S., Peking University, 2013; M.S., University of Paris VII, 2014; Ph.D., University of Paris-Saclay 2014. Caltech, 2017-20.

**Changhui Yang, Ph.D., Thomas G. Myers Professor of Electrical Engineering, Bioengineering, and Medical Engineering**  
B.S. (Electrical Engineering); B.S. (Physics), Massachusetts Institute of Technology, 1997; M.S.(Engineering), 1997; B.S. (Mathematics), 2002; Ph.D., 2001. Assistant Professor of Electrical Engineering, Caltech, 2003-04; Assistant Professor of Electrical Engineering and Bioengineering, 2004-09; Associate Professor, 2009-10; Professor, 2010-16; Myers Professor, 2016-.

**Amnon Yariv, Ph.D., Martin and Eileen Summerfield Professor of Applied Physics and Electrical Engineering**  
B.S., University of California, Berkeley, 1954; M.S., 1956; Ph.D., 1958. Associate Professor, Caltech, 1964-66; Professor, 1966-74; Professor of Electrical Engineering and Applied Physics, 1974-79; Myers Professor, 1979-96; Summerfield Professor, 1996-.

**Nai-Chang Yeh, Ph.D., Professor of Physics; Fletcher Jones Foundation Co-Director of the Kavli Nanoscience Institute**  
B.S., National Taiwan University, 1983; Ph.D., Massachusetts Institute of Technology, 1988. Assistant Professor, Caltech, 1989-95; Associate Professor, 1995-97; Professor, 1997-; Fletcher Jones Foundation Co-Director of the Kavli Nanoscience Institute, 2013-.

**Alexander (Sasha) Yom Din**, *Olga Taussky and John Todd Instructor in Mathematics*  
B.Sc., Haifa University, 2006;  
M.Sc., Tel Aviv University, 2010;  
Ph.D., 2016. Caltech 2016-19.

**Shaocai Yu**, *Visiting Associate in Chemical Engineering*  
B.S., Peking University, 1985; M.S., 1988; Ph.D., North Carolina State University Raleigh, 1999.  
Caltech, 2017-18.

**Yisong Yue, Ph.D.**, *Assistant Professor of Computing and Mathematical Sciences*  
B.S., University of Illinois, 2005;  
Ph.D., Cornell University, 2010.  
Caltech, 2014-.

**Mary A Yui**, *Research Professor of Biology and Biological Engineering*  
B.A., University of California (Santa Barbara), 1977, M.S., Oregon State University, 1982;  
Ph.D., University of Florida, 1995.  
Lecturer, Caltech, 2005; Senior Research Fellow, 2005-09; Senior Research Associate, 2009-15.  
Caltech, 2015 -19.

**Yuk L Yung, Ph.D.**, *Professor of Planetary Science; Jet Propulsion Laboratory Senior Research Scientist*  
B.S., University of California, 1969; Ph.D., Harvard University, 1974. Visiting Associate, Caltech, 1976; Assistant Professor, 1977-82; Associate Professor, 1982-86; Professor, 1986-2011, 2017-; Smits Family Professor, 2012-16; Jet Propulsion Laboratory Research Scientist, 2014-15; Jet Propulsion Laboratory Senior Research Scientist, 2015-.

**Shekufeh Zarcian**, *Visiting Associate in Biology and Biological Engineering*  
B.Sc., Tarbiat Moallem University, 2004; M.Sc., 2007; Ph.D., 2012.  
Caltech 2016-18.

**Davit Zargarian**, *Visiting Associate in Chemistry*  
B.S., University of Toronto, 1985;  
M.S., University of Waterloo, 1987;

Ph.D., University of Ottawa, 1992.  
Associate Professor, Université de Montréal, 1999-. Caltech, 2001; 2018.

**Zhongwen Zhan, Ph.D.**, *Assistant Professor of Geophysics*  
B.S., University of Science and Technology of China, 2006; M.S., 2008; Ph.D., California Institute of Technology, 2013. Caltech, 2015-.

**Tengren Zhang**, *Olga Taussky and John Todd Instructor in Mathematics*  
B.S., University of Chicago, 2010;  
Ph.D., University of Michigan, 2015. Instructor, 2015-18.

**Yi Zhang**, *Visiting Associate in Environmental Science and Engineering*  
B.S., Zhejiang University, 2003;  
Ph.D., 2008. Caltech, 2013-14; 2018.

**Zhiliang Zhang**, *Visiting Associate in Mechanical and Civil Engineering*  
B.S., Tongji University, 1985;  
M.S., 1988; Ph.D., Lappeenranta University of Technology, 1994.  
Caltech, 2017-18.

**Xinwen Zhu, Ph.D.**, *Professor of Mathematics*  
A.B., Peking University, 2004;  
Ph.D., University of California, Berkeley, 2009. Associate Professor, Caltech, 2014-16; Professor, 2016-.

**Kai G Zinn, Ph.D.**, *Howard and Gwen Laurie Smits Professor of Biology*  
B.A., University of California (San Diego), 1977; Ph.D., Harvard University, 1983. Assistant Professor, Caltech, 1989-95; Associate Professor, 1995-1999. Professor, 1999-2017; Smits Professor, 2017-.

**Jonas Zmuidzinas, Ph.D.**, *Merle Kingsley Professor Physics; Director, Caltech Optical Observatories*  
B.S., Caltech, 1981; Ph.D., University of California, 1987.  
Assistant Professor, Caltech, 1989-95; Associate Professor, 1995-



2000; Professor 2000-10; Kingsley  
Professor, 2010-; Jet Propulsion  
Laboratory Senior Research  
Scientist, 2005-11; Jet Propulsion  
Laboratory Chief Technologist,  
2011-16; Director, Micro-Devices  
Laboratory, Jet Propulsion  
Laboratory, 2007-11; Director,  
2018-.

**Konstantin M Zuev**, *Lecturer in  
Computing and Mathematical Sciences*

B.S., Lomonosov Moscow  
State University, Russia, 2003;  
M.S., 2008; Ph.D., Hong  
Kong University of Science and  
Technology, 2009. Caltech 2011-  
13, 2015-2022.