130th Annual Commencement

CALIFORNIA INSTITUTE OF TECHNOLOGY

Friday, June 14, 2024
10 a.m.

ACADEMIC PROCESSION

Chief Marshal
Elliot Meyerowitz, Ph.D.

Marshals
Nicholas Hutzler (B.S. '07), Ph.D.
Melany Hunt, Ph.D.
David Chan, Ph.D.
Azita Emami, Ph.D.
Viviana Gradinaru (B.S. '05), Ph.D.

Faculty Officer
Azita Emami, Ph.D.

Marching Order
Candidates for the Degree of Bachelor of Science
Candidates for the Degree of Master of Science
Candidates for the Degree of Doctor of Philosophy
The Faculty Officers
The Faculty
The Chairs of the Divisions
The Deans
The Vice Provosts
The Provost
The Vice Presidents
The Caltech Alumni Association Executive Officers
The Trustees
The Commencement Speaker
The President
The Chair of the Board of Trustees

PROGRAM

Organ Prelude	Leslie J. Deutsch, Ph.D. (B.S. '76, Ph.D. '80) *Celebrating 50 years as Caltech Commencement organist*
Processional	The Caltech Convocation Brass, Percussion, and Organ Ensemble *Glenn D. Price, D.M.A., Conductor*
Presiding	David W. Thompson (M.S. '78) *Chair of the Caltech Board of Trustees*
Commencement Speaker	Jensen Huang *Founder and CEO of NVIDIA*
Choral Selection "Gaudeamus Igitur" Traditional, Arranged by Dr. Deutsch *(Translation on page 66.)*	The Caltech Glee Club *Nancy Sulahian, M.M., Conductor* Convocation Brass, Percussion, and Organ Ensemble
Conferring of Degrees	Thomas F. Rosenbaum, Ph.D. *President* *Sonja and William Davidow Presidential Chair and Professor of Physics*

Presentation of Candidates for Degrees

For the Degree of Bachelor of Science	Jennifer A. Jahner, Ph.D. *Faculty Dean of Undergraduate Studies*
For the Degree of Master of Science	David C. Chan, Ph.D. *Faculty Dean of Graduate Studies*

For the Degree of Doctor of Philosophy	
Biology and Biological Engineering	Richard M. Murray, Ph.D. (B.S. '85) *Division Chair*
Chemistry and Chemical Engineering	Dennis A. Dougherty, Ph.D. *Division Chair*
Engineering and Applied Science	Harry A. Atwater, Ph.D. *Division Chair*
Geological and Planetary Sciences	John P. Grotzinger, Ph.D. *Division Chair*
Humanities and Social Sciences	Tracy K. Dennison, Ph.D. *Division Chair*
Physics, Mathematics and Astronomy	Fiona A. Harrison, Ph.D. *Division Chair*
Announcement of Awards and Concluding Remarks	President Rosenbaum
Alma Mater "Hail CIT" By Manton Barnes (B.S. '21) Arranged by Raymond Burkhart *(The audience may join in; lyrics are on page 67.)*	The Caltech Glee Club, and the Caltech Convocation Brass, Percussion, and Organ Ensemble
Recessional	The Caltech Convocation Brass, Percussion, and Organ Ensemble
Organ Postlude "The Throop Institute March," composed by E. C. Kammermeyer in 1900 for the Throop Institute Guitar and Mandolin Society	Dr. Deutsch

Livestreaming of Caltech's 2024 Commencement ceremony will begin shortly before 10 a.m. on Friday, June 16, at www.caltech.edu.

Follow along with the day's events on X (Twitter) and Instagram. Share your photos and join the celebration by using #Caltech2024. (See page 68 for more information.)

All music for the Caltech Commencement arranged by Dr. Leslie Deutsch.

ABOUT THE KEYNOTE SPEAKER

Jensen Huang is the founder and CEO of technology company NVIDIA. Named the world's best CEO by *Fortune*, *The Economist*, and Brand Finance, Huang led NVIDIA to become a pioneer in accelerated computing and the fourth most valuable company in the world.

Huang was born in Taipei, Taiwan, in 1963. When he was 9, he and his brother moved to Tacoma, Washington, to live with their uncle. After Huang's parents were able to immigrate to the U.S., Huang and his brother reunited with them in Oregon. Huang attended Aloha High School, where he graduated at the age of 16 while also a nationally ranked table-tennis player. He completed his undergraduate degree in electrical engineering from Oregon State University and worked at LSI Logic and Advanced Micro Devices during the early part of his career. In 1992, he received his master's degree in electrical engineering from Stanford University.

Huang co-founded NVIDIA in 1993 with Chris Malachowsky and Curtis Priem to take advantage of the growing demand for 3D graphics and visualization technology that accompanied the rapidly expanding PC and gaming industries.

The company initially focused on the development of microprocessors capable of providing high-quality 3D graphics. It is credited for inventing the graphics processing unit, or GPU, which leveraged parallel computing to handle mathematical operations more efficiently than the more general central processing units, or CPUs.

NVIDIA's success has since extended beyond gaming. Due to its enormous computing potential, the company's GPUs catalyzed the advancement of applications other than graphics, most notably in the area of artificial intelligence (AI). NVIDIA technology enabled programmers to create AlexNet, a powerful neural network used for image recognition and classification. NVIDIA's dedicated AI supercomputers also were responsible for training models used by ChatGPT.

Huang is listed as one of *Time* magazine's 100 most influential people and has been elected to the National Academy of Engineering. He is the recipient of the Robert N. Noyce Award from the Semiconductor Industry Association, the IEEE Founder's Medal, and the Dr. Morris Chang Exemplary Leadership Award, among many honors.

ABOUT CALTECH

Caltech, founded in 1891, is a world-renowned science and engineering institute that marshals some of the world's brightest minds and most innovative tools to address fundamental scientific questions and pressing societal challenges.

A Caltech education is notable for its rigorous curriculum, close collaborations with faculty, and small class sizes. Caltech students work toward undergraduate and graduate degrees alongside their intellectual equals in an academic environment that emphasizes interdisciplinary teamwork, critical thinking, mutual support, and a deep understanding of core concepts and principles across fields.

Students graduate from Caltech prepared to become world leaders in science, engineering, academia, industry, and public service. Graduates are well trained in their ability to identify, analyze, and solve challenging problems within and across science and engineering disciplines, and are prepared to apply and communicate their expertise broadly throughout their professional careers.

An independent, privately supported institution, Caltech manages the Jet Propulsion Laboratory (JPL) for NASA. Together with JPL, Caltech is Pasadena's largest employer and a source of programs that benefit the entire region. Caltech also owns and operates the Seismological Laboratory, more than 50 research centers and institutes, and a global network of astronomical observatories, including the Palomar and W. M. Keck observatories. In addition, the Institute co-founded and co-manages the Laser Interferometer Gravitational-wave Observatory (LIGO).

Caltech's faculty, students, postdoctoral scholars, and staff produce transformative breakthroughs in fields ranging from quantum science and engineering to bioinformatics to energy and sustainability. Caltech faculty and alumni have earned national and international recognition, including 47 Nobel Prizes.

We celebrate today the 585 graduates who will earn 236 bachelor's degrees, 156 master's degrees, and 200 doctoral degrees, and who will contribute to Caltech's impressive legacy and record of achievement around the world.

CANDIDATES FOR DEGREES

Bachelor of Science

Lucas Enrico Abounader *Austin, Texas* Chemistry.
Christopher Jacob Acosta† *Dallas, Texas* Computer Science.
Nicholas Stone Adamo *Columbia, South Carolina* Computer Science.
Agnim Agarwal *Charlotte, North Carolina* Computer Science and Business, Economics, and Management.
Gabriel Paiva Aguiar *Coconut Creek, Florida* Computer Science.
Sarah Jasmine Arellanes† *Duarte, California* Biology.
Hope Michelle Elizabeth Arnett *Torrance, California* Electrical Engineering.
Nishka Arora *Delhi, India* Computer Science.
Julio Cesar Arroyo Ibarra *San Salvador, El Salvador* Computer Science.
Angel Rodrigo Avelar Menendez *Long Beach, California* Computer Science.
Beatriz Emilia Avila-Rimer *Spring, Texas* Computer Science and Information and Data Sciences (Minor).
Carlos D Ayala† *Milwaukee, Wisconsin* Astrophysics.
Michael Dimitrov Batchev *Anaheim, California* Computer Science and Business, Economics, and Management.
Harris Ahsan Beg *San Diego, California* Computer Science.
Nachiket Dhiren Bhanushali *Dartford, United Kingdom* Physics.
Eve Sapphira Blank *New York, New York* Applied and Computational Mathematics.
Halle Grace Blend *Dallas, Texas* Computer Science and Business, Economics, and Management.
Sravani Boggaram *Dallas, Texas* Mechanical Engineering.
Charlotte Helen Borcherds *Berkeley, California* Mathematics.
Rishabh Bose *Bakersfield, California* Electrical Engineering.
Celine G Boucher *Tashkent, Uzbekistan* Geobiology.
Helen Maya Brackney *Aurora, Colorado* Chemical Engineering (Biomolecular).
Michael Bregar *Aventura, Florida* Physics and Aerospace Engineering (Minor).
Turner McNeal Bumbary *Fairfax, Virginia* Mechanical Engineering and Aerospace Engineering (Minor).

† *Students whose names are followed by a dagger are close to completion and will receive diplomas at the end of the academic year in which all graduation requirements are met.*

Bachelor of Science continued

Bryan Christopher Burnell *Chino Hills, California* Physics.
Amelia Hana Kim Burns *San Diego, California* Bioengineering.
Alex Burr *Chicago, Illinois* Biology.
Virginia Mae Canestraight *Okemos, Michigan* Chemical Engineering (Sustainability).
Ryan Y Chan *Arcadia, California* Computer Science.
Kevin Chang *Sugar Land, Texas* Applied and Computational Mathematics.
Sean Chang *Diamond Bar, California* Mechanical Engineering and Aerospace Engineering (Minor).
Gautam Raghavan Chawla *Princeton, New Jersey* Applied and Computational Mathematics and Computer Science (Minor).
Rahul Ignacio Chawlani *Katy, Texas* Electrical Engineering.
James Yuxuan Chen *Irvine, California* Electrical Engineering.
Stephanie Yuanying Chen *Brookfield, Wisconsin* Mathematics.
Yishu (Pearl) Chen *North York, Canada* Computer Science.
Alice Y Cheng *Cupertino, California* Computer Science and Astrophysics (Minor).
Carl Xulin Cheng *San Diego, California* Computer Science and Information and Data Sciences (Minor).
Emily Hyein Choe *Seoul, Republic of Korea* Computation and Neural Systems.
Katelyn Leilani Chu *Los Gatos, California* Computer Science and Business, Economics, and Management.
Thomas Henry Clark *Hinsdale, Illinois* Physics.
Lily Elizabeth Coffin† *Farmingdale, California* Mechanical Engineering.
Daniel Christian Collinson *West Chester, Pennsylvania* Computation and Neural Systems.
Matthew James Cox *Dallas, Texas* Chemical Engineering (Computational).
Kaylor William Cruz *Olathe, Kansas* Mechanical Engineering.
Stephen William D'Aquila† *McLean, Virginia* Electrical Engineering.
Patill Takouhi Daghlian *Altadena, California* Physics.
Saren Hagop Daghlian† *Altadena, California* Electrical Engineering.
Neha S Dalia *Sammamish, Washington* Computer Science.
Suchitra Sakuntala Dara *Bakersfield, California* Bioengineering and Neurobiology (Minor).
Rajeev Datta *South Bend, Indiana* Computer Science and Information and Data Sciences (Minor).
Lily Kathleen DeBell *Baltimore, Maryland* Biology.
Carlos Eduardo Del Angel Aguilar *Tampico, Mexico* Chemistry.
Zijun Deng *Guanzhou, People's Republic of China* Computer Science.

Bachelor of Science continued

Sreemanti Dey *Salt Lake City, Utah* Computer Science and Information and Data Sciences (Minor).

Andrei Călin Diaconu *Bucharest, Romania* Physics and Computer Science (Minor).

Evan Michael Dicker *San Diego, California* Mechanical Engineering.

Jay Huang Dong *Dunlap, Illinois* Computer Science and Information and Data Sciences (Minor).

Patrick James Donohoe *New York City, New York* Computer Science and Business, Economics, and Management.

Olivia Nicole Durrett† *Huntersville, North Carolina* Astrophysics.

Matthew Gary Earney *San Diego, California* Mechanical Engineering.

James Diego Estrella *Los Angeles, California* Mechanical Engineering.

Gabriel Milo Fabre *Miami, Florida* Physics.

Hannah Mary Fisher *Portland, Oregon* Mechanical Engineering and Geophysics (Minor).

Joshua Alan Flashner *Roslyn, New York* Computer Science and Mathematics (Minor).

Ian Edward Fowler *Oswego, Illinois* Computer Science and Business, Economics, and Management and Information and Data Sciences (Minor).

Tyler Elizabeth Fox *Chevy Chase, Maryland* Business, Economics, and Management and Economics and Environmental Science and Engineering (Minor).

Lucy Yuwei Gao *San Diego, California* Computer Science and Business, Economics, and Management.

M Gardner *Roseville, California* Physics.

Lauren E Garriques *Lake Forest, Illinois* Mechanical Engineering.

Kevin Douglas Gauld *Manhasset, New York* Electrical Engineering and Astrophysics (Minor).

Adishree S Ghatare *San Jose, California* Computer Science and Computation and Neural Systems.

Joaquín A. Gómez *New Orleans, Louisiana* Computer Science.

Astral K Grayson *Waikoloa, Hawaii* Computer Science.

Brandon Guo *Saratoga, California* Applied and Computational Mathematics and Computer Science (Minor).

Shivansh Gupta *Naperville, Illinois* Computer Science.

Tanmay Gupta *Chandigarh, India* Physics and Aerospace Engineering (Minor).

Emma Celine Gurcan *Istanbul, Turkiye* Computer Science and Environmental Science and Engineering (Minor).

Xander James Hall *Elmhurst, Illinois* Astrophysics and History and Philosophy of Science (Minor).

Tiba Hussain Hamza *Rice, Virginia* Chemical Engineering (Biomolecular).

Bachelor of Science continued

Barron S Han *Shanghai, People's Republic of China* Electrical Engineering (Intelligent Systems).

Eric Yixuan Han *Cerritos, California* Computer Science and Business, Economics, and Management and Information and Data Sciences (Minor).

Sarah Hashash *Urbana, Illinois* Computer Science and Economics.

Kimia Hassibi *San Marino, California* Computer Science.

Ilana Hejna *Los Altos, California* Computer Science.

Valerie Susan Hetherington *Bozeman, Montana* Computer Science.

Martin Skyler Holmes *San Diego, California* Bioengineering.

Halle Delgado Holzbauer *Torrance, California* Bioengineering.

Jerry Yuyang Huang *San Diego, California* Applied and Computational Mathematics.

Teresa Huang *Danville, California* Computer Science and Business, Economics, and Management.

Derek Tian Hua Ing *Hong Kong, PRC* Computer Science and Information and Data Sciences (Minor).

Ahamed Raffey Iqbal *Dhaka, Bangladesh* Computer Science and Information and Data Sciences (Minor).

Rohan Iyer *Richmond Hill, New York* Computer Science and Information and Data Sciences (Minor).

Neymika Jain *Redwood Shores, California* Applied and Computational Mathematics.

Sahil Jain *Cupertino, California* Computer Science and Information and Data Sciences (Minor).

Neil C Janwani *Midland, Michigan* Computer Science.

Leo Blatz Jenkins *New York City, New York* Computer Science.

Nicolas Jimenez-Lozano *New York City, New York* Mechanical Engineering and Aerospace Engineering (Minor).

Ian Philip Alexander Johnson *Carlsbad, California* Physics.

Samir Ian Johnson *Portland, Oregon* Physics.

Sarah Amal Kabboul *Lawndale, California* Materials Science.

Shevali Manish Kadakia *Saratoga, California* Computer Science.

Ishaan Kannan *Scarsdale, New York* Physics and Computer Science (Minor).

Manav Kant *Dublin, California* Mathematics and Computer Science (Minor).

Necef Alp Kavrut *Istanbul, Turkiye* Mathematics.

Mehmet Naci Keskin *Istanbul, Turkiye* Mechanical Engineering.

Maisha Khanum *Los Angeles, California* Mechanical Engineering and Computer Science (Minor).

Joseph Hakkyu Kim *Irvine, California* Computation and Neural Systems and English.

Esme Grace Knabe *Vacaville, California* Physics.

Bachelor of Science continued

Catherine Jeanette Ko *San Francisco, California* Chemistry and Biology (Minor).
Athena Kolli *Buffalo Grove, Illinois* Mechanical Engineering.
Alexander Koutsoukos *Wilton, Connecticut* Geology and History (Minor).
Patryk Tomasz Kozlowski *Irvine, California* Chemistry.
Adam Krivka *Brno, Czech Republic* Computer Science.
Rupa Kurinchi-Vendhan *Lake Hiawatha, New Jersey* Computer Science.
Alice Kutsyy *Los Altos, California* Mechanical Engineering and Biology (Minor).
Lucas Lanzendorf *Leominster, Massachusetts* Mechanical Engineering.
Inhoo Lee *Seoul, Republic of Korea* Computer Science and Biology (Minor).
Stanton Bennett Lee *Los Angeles, California* Computer Science.
Simon Jay Lequar *Evanston, Illinois* Computer Science.
Kyle Andrew Lethander *Oakwood, Ohio* Mechanical Engineering and Aerospace Engineering (Minor).
Daniel Ziqi Li *Overland Park, Kansas* Computer Science and Information and Data Sciences (Minor).
Depei Li *Scarsdale, New York* Computer Science and Business, Economics, and Management.
Eileen Melody Li *Chandler, Arizona* Computer Science and Economics.
Shoonhsin Sean Li *Horseheads, New York* Chemical Engineering (Biomolecular).
Victor Haiwei Li *West Chester, Pennsylvania* Electrical Engineering.
Damon Lin *Atlanta, Georgia* Computer Science and Information and Data Sciences (Minor).
Joseph Randall Litvin *Bala Cynwyd, Pennsylvania* Mathematics.
Joy Liu *State College, Pennsylvania* Mechanical Engineering.
Carolyn Wei Lu *Saratoga, California* Computer Science.
Eric Yingke Ma *Fremont, California* Mathematics.
Ashvin Umasankar Maheshwar *Saratoga, California* Computer Science and Information and Data Sciences (Minor).
Tyler Huntington Mapes *Portland, Oregon* Mechanical Engineering and Aerospace Engineering (Minor).
Patrick Song Martinez *Walnut, California* Applied and Computational Mathematics.
Kyle Chang McCandless *Lexington, Massachusetts* Computer Science and Business, Economics, and Management and Information and Data Sciences (Minor).
Krish Amit Mehta *Mumbai, India* Computer Science and Business, Economics, and Management.
David J. Melisso *Palo Alto, California* Electrical Engineering.
Ellen Min *Boise, Idaho* Computer Science and English (Minor).
Joseph Refaat Mina *Palos Verdes Peninsula, California* Mechanical Engineering.

Bachelor of Science continued

Bertha Alicia Mireles Cisneros† *Columbus, Mississippi* Chemical Engineering (Biomolecular).
Anna Mortari *College Station, Texas* Chemistry (Biochemistry).
Rithvik Reddy Musuku *Gilbert, Arizona* Mechanical Engineering.
Kai Nakamura *Goleta, California* Computer Science.
Ankita Nandi *Chapel Hill, North Carolina* Materials Science and English.
Nathan A Ng† *Santa Clara, California* Mechanical Engineering.
Tyler-Michael Oribio *Honolulu, Hawaii* Mechanical Engineering.
Jordan Michael Ostby *Brea, California* Mechanical Engineering.
Lucas Layne Brass Pabarcius *Hailey, Idaho* Physics.
Vibha Padmanabhan *Bangalore, India* Physics and Computer Science (Minor).
Emily Pan *Newton, Massachusetts* Computer Science and History (Minor).
John Edward Parker *Boulder, Colorado* Physics.
Andrew Hans Pasco *Haddonfield, New Jersey* Mechanical Engineering and Business, Economics, and Management.
Avi Sandeep Patel *Los Gatos, California* Mechanical Engineering.
Ekta Mukeshkumar Patel *Los Angeles, California* Biology.
Sneh Mukeshkumar Patel† *Los Angeles, California* Computer Science.
Pranav Ajit Patil *San Diego, California* Computer Science and Information and Data Sciences (Minor).
Winter Zed Pearson *Seattle, Washington* Computation and Neural Systems and English (Minor) and Computer Science (Minor).
Jules Marin Adrien Pénot *Le Pecq, France* Mechanical Engineering and Aerospace Engineering (Minor).
Julian Boas Peres *West Hartford, Connecticut* Computer Science.
Claire Marie Perhach *Carlsbad, California* Chemical Engineering (Process Systems).
Khanh Chu Huy Pham *Baton Rouge, Louisiana* Computer Science.
Luke David Phillipps *Hesperia, California* Mechanical Engineering and Aerospace Engineering (Minor).
Kyle B Piper *Louisville, Colorado* Mechanical Engineering.
Krishna Kishore Reddy Pochana *Baton Rouge, Louisiana* Electrical Engineering.
Aditee Amit Prabhutendolkar *Arcadia, California* Computation and Neural Systems.
Olivers Prānis *Riga, Latvia* Electrical Engineering.
Christopher Peter Pukszta *Irvine, California* Biology and Visual Culture (Minor).
Derek Y Qin *Plano, Texas* Computer Science and Information and Data Sciences (Minor).
Juan Diego Quiroz Jaraba *Montelíbano, Colombia* Computer Science.
Madison Adriana Ramos *Old Westbury, New York* Computer Science.

Bachelor of Science continued

Dennis Raush *San Diego, California* Information and Data Sciences and Astrophysics (Minor).
Marilyn Abigail Recarte Perdomo *Canton, Ohio* Mechanical Engineering.
Heidi Elizabeth Redmond *Wheaton, Illinois* Chemical Engineering (Process Systems).
Kyle Daniel Reese *Sammamish, Washington* Mechanical Engineering.
Raha Riazati *Jacksonville, Florida* Electrical Engineering.
Patrick K Rim *Fullerton, California* Computer Science and Information and Data Sciences (Minor).
Joshua Jacksy Roberts *Bethesda, Maryland* Mechanical Engineering.
Megan Laura Robertson *Nashville, Tennessee* Geochemistry and Environmental Science and Engineering (Chemistry).
Milan Alera Robinson *Whittier, California* Bioengineering and Business, Economics, and Management.
Jonah Brooks Rolfness *Cave Creek, Arizona* Mechanical Engineering and Aerospace Engineering (Minor).
Asha Preston Rollins *Falls Church, Virginia* Chemical Engineering (Biomolecular) and Biology (Minor).
Maya Youlan Rushlow *San Francisco, California* Mechanical Engineering.
Snigdha Saha *Irvine, California* Computer Science and Information and Data Sciences (Minor).
Perry Florent Samimy *Miami, Florida* Mechanical Engineering and Business, Economics, and Management.
Megan Olivia Santhumayor *Piscataway, New Jersey* Computer Science and Information and Data Sciences (Minor).
Pranay Madimsetty Satya *Hyderabad, India* Bioengineering.
Cameron Elise Scantlin *El Cajon, California* Chemistry.
Eli J Seiner *Hollywood, Florida* Computer Science and Business, Economics, and Management.
Samuel David Senzon *Bridgewater, New Jersey* Physics.
Yakov Shalunov *Lafayette, California* Mathematics and Computer Science.
Madeline Weiyi Shao *San Jose, California* Computer Science.
Junxuan Shen *Hangzhou, People's Republic of China* Computer Science and Mathematics (Minor).
Joy Shi *Rockville, Maryland* Computer Science.
Rachel Shi *Fairfax, Virginia* Computer Science.
Cole Ke'alohi Shimokaji† *Hacienda Heights, California* Physics.
Riya Shrivastava *Saratoga, California* Computer Science and Astrophysics (Minor).
Kaushal Nuggehalli Shyamsundar *Cypress, California* Electrical Engineering.

Bachelor of Science continued

Jason Kent Simon *Agoura Hills, California* Computer Science and Business, Economics, and Management.

Parul R Singh *Tallahassee, Florida* Mechanical Engineering.

Jay Patipan Siri *Diamond Bar, California* Computer Science and English (Minor) and Information and Data Sciences (Minor).

Saraswati Soedarmadji *Los Angeles, California* Computer Science and Information and Data Sciences.

Leah Sofia Soldner *South Pasadena, California* Chemical Engineering (Materials).

Vishvesha Krishna Sridhar *Blacksburg, Virginia* Physics and Computer Science (Minor).

Andrei Cristian Staicu† *Cary, North Carolina* Mathematics and Computer Science (Minor).

Aubrey Juliette Stevens *Castle Rock, Colorado* Bioengineering.

Katelyn Angela Sulett *Santa Clarita, California* Biology and Geobiology.

Andy Jiawen Sun *San Marino, California* Computer Science and Information and Data Sciences (Minor).

Brea Avery Swartwood *Honolulu, Hawaii* Applied and Computational Mathematics.

Riley Lauren Tam *North Vancouver, Canada* Astrophysics and Planetary Science.

Nassim Tavakoli *Lancaster, California* Physics and Philosophy (Minor).

Lasya Tenneti *Princeton, New Jersey* Computer Science.

Vinny Thai *Rosemead, California* Computer Science.

Kathryn Suzanne Thompson *Granite Bay, California* Mechanical Engineering.

Malcolm George Adams Tisdale *London, United Kingdom* Mechanical Engineering.

Sasha Nicole Tolstoff *Los Angeles, California* Applied and Computational Mathematics.

Haruna Tomono *Hilo, Hawaii* Bioengineering and Neurobiology (Minor).

Kayton Khan Truong *Baldwin Park, California* Physics.

Gabriella Patricia Twombly *Weston, Florida* Computer Science and Information and Data Sciences (Minor).

Amy-Doan Phuong Vo *Austin, Texas* Chemistry.

Alexis Huiyu Wang *Brooklyn, New York* Computer Science and English.

Angel Wang *Colorado Springs, Colorado* Computer Science.

Clara Lynn Wang *Charlotte, North Carolina* Computer Science.

Jesse Jialin Wang *Vancouver, Canada* Computer Science.

Daniel Zijian Wen *McLean, Virginia* Computer Science.

Daniel Luca Wendt *Madison, Wisconsin* Physics.

Tomás Ariel Wexler *Columbia, Missouri* Mechanical Engineering.

Bachelor of Science continued

Amelia Yuna Whitworth *Carlsbad, California* Information and Data Sciences and Business, Economics, and Management.

Leo Alexander Williams *Beverly Hills, Michigan* Bioengineering.

Hector J. Wilson *New York City, New York* Electrical Engineering and Business, Economics, and Management.

Juniper Leigh Sweat Woodward *Menomonie, Wisconsin* Computer Science.

Jia Yue Wu *Toronto, Canada* Computer Science and Mathematics (Minor) and Information and Data Sciences (Minor).

Lena Margareta Wu *Ithaca, New York* Computer Science.

Brian Boan Yang *Cupertino, California* Mathematics.

Bridget Chaeryn Yang *Santa Clarita, California* Computation and Neural Systems.

Leo Yang *Blacksburg, Virginia* Computer Science and Information and Data Sciences (Minor).

Zitian Ye† *Beijing, People's Republic of China* Physics.

Kyla Qi Yu-Swanson *San Diego, California* Computer Science.

Ga Eun Yun *Auburn, Alabama* Computer Science.

Benjamin David Zalla *Taylor Mill, Kentucky* Physics.

Benjamin Zeng *Pleasanton, California* Mechanical Engineering.

Claire Keke Zhang *Mount Laurel, New Jersey* Bioengineering and Neurobiology (Minor).

Emily Lixuan Zhang *Sharon, Massachusetts* Computer Science and Information and Data Sciences (Minor).

Theresa Zhang *Parsippany, New Jersey* Applied and Computational Mathematics and Computer Science (Minor).

Vivian Lu Zhang *Green Brook, New Jersey* Computer Science.

Wentao Zhang *Englewood, Colorado* Biology and Chemistry (Minor).

Christopher Xk Zhou *Plano, Texas* Computer Science.

Lian Zhu *Torrance, California* Chemical Engineering (Biomolecular).

Anas Zouhar *North Bethesda, Maryland* Business, Economics, and Management and Information and Data Sciences (Minor).

Master of Science

Ayomiposi Bayode Adewakun *(Neurobiology)* B.S., New York University 2021.
Zachary Chase Ahmad *(Materials Science)* B.S., The University of Southern Mississippi 2022.
Simon Joel Emil Andren *(Geochemistry)* B.Sc., Minerva University 2022.
Adrián Antón Álvarez *(Aeronautics)* B.E., Universidad Politécnica de Madrid 2022.
Julie Belleville *(Applied Physics)* B.A.Sc., University of British Columbia 2022.
Jennifer Marie Berry *(Space Engineering)* B.E., University of Canterbury 2022.
Radhika R Bhatt *(Physics)* S.B., Massachusetts Institute of Technology 2019.
Eli Bird *(Geophysics)* B.S., University of North Carolina at Chapel Hill 2022.
Chase Siyuan Blanchette *(Electrical Engineering)* B.S., California Institute of Technology 2023.
Michael Anne Elizabeth Bolene *(Medical Engineering)* B.S., Columbia University 2020.
Sydney Elizabeth Bottcher *(Chemistry)* B.S., Samford University 2022.
Katheryn Rose Whitehead Broersma *(Control and Dynamical Systems)* B.S., University of California, Santa Barbara 2004.
Jesse W. Brunet *(Electrical Engineering)* B.S., California Polytechnic State University, San Luis Obispo 2022.
Jack Noah Caldwell *(Space Engineering)* B.S., California Institute of Technology 2022.
Yulu Cao *(Chemistry)* B.S., University of Science and Technology of China 2021.
Diego José Causarano Benegas *(Electrical Engineering)* B.Eng., Universidad Nacional de Asunción 2019.
Yi Hua Chang *(Applied Physics)* M.Sc., Imperial College London 2018.
Chun-Fu Chen *(Electrical Engineering)* B.S., National Taiwan University 2022.
Ryan Kaiqi Chen *(Electrical Engineering)* B.S., Georgia Institute of Technology 2022.
Reeya Chenanda *(Electrical Engineering)* B.S., California Institute of Technology 2023.
Piero Chiappina *(Physics)* B.S., Georgia Institute of Technology 2019.
Ellie Seunghee Cho *(Electrical Engineering)* B.S., California Institute of Technology 2023.
Jin Hyung Chung *(Neurobiology)* B.S., University of Southern California 2021.
Jessica Rachel Craven *(Physics)* B.S., Stellenbosch University 2019; M.S., University of Witwatersrand 2022.
Matthew Raymond Davidson *(Applied Physics)* A.S., MiraCosta College 2019; B.S., University of California, Davis 2022.
Polina Detkova *(Social Science)* B.S., National Research University Higher School of Economics 2017; M.A., New Economic School 2019.
Sijing Du *(Applied Physics)* B.S., Peking University 2022.
Ethan Robert Eichberger *(Mechanical Engineering)* B.S., University of Kansas 2022.

Master of Science continued

Sergio Arturo Esteban *(Mechanical Engineering)* B.S., California State Polytechnic University, Pomona 2020.

Ryan Michael Eusebi *(Environmental Science and Engineering)* B.S.E., Princeton University 2022.

Jakob Tristan Faber *(Astrophysics)* B.A., Oberlin College 2021.

Camila Farres Rodriguez *(Social Science)* B.A., Mexico Autonomous Institute of Technology 2020; M.A., 2022.

William Frederick Francis Feasey *(Space Engineering)* M.Phys., University of Oxford 2023.

Kevin Scott Fleisher *(Applied Physics)* B.S., Texas A&M University 2021.

Zhiyuan Gao *(Electrical Engineering)* B.E., ShanghaiTech University 2021.

Jinhao Ge *(Applied Physics)* B.S., University of Science and Technology of China 2022.

Reza Ghane Khiabanian *(Electrical Engineering)* B.Sc., Sharif University of Technology 2022.

Sandra Elizabeth Glotzer *(Materials Science)* S.B., Massachusetts Institute of Technology 2019.

Jonathan Daniel Gomez Barrientos *(Planetary Science)* B.A., Cornell University 2022.

Emanuel Jordan Green *(Applied Physics)* B.A., B.S., The University of Chicago 2022.

Pedro Guzman *(Materials Science)* B.S., University of California, Los Angeles 2016.

Sarah Mary Habib *(Physics)* B.S., University of Illinois at Urbana-Champaign 2020.

James Garrett Hall *(Social Science)* B.S., Auburn University 2020.

Yuchen Han *(Physics)* B.A., Cornell University 2020.

Evie Harel *(Chemistry)* B.S., Rensselaer Polytechnic Institute 2021.

Mohammad Muntasir Hassan *(Electrical Engineering)* B.Sc., Bangladesh University of Engineering and Technology 2019; M.Sc., 2021.

Grigory James Heaton *(Physics)* B.S., California Polytechnic State University, San Luis Obispo 2019.

Elizabeth Ann Heiny *(Geology)* B.S., Case Western Reserve University 2022.

Ricardo Antonio Hernandez *(Mechanical Engineering)* B.S., Texas Tech University 2022.

Azmain Abrawr Hossain *(Applied Physics)* B.S., University of California, Los Angeles 2021.

Cheolmin Im *(Applied Physics)* B.A., University of California, Berkeley 2019.

Shaelyn Iyer *(Applied Physics)* B.S., Northwestern University 2021.

Valeriya Kachmar *(Planetary Science)* B.A., Saint Petersburg State University 2013; B.S., Patrice Lumumba Peoples' Friendship University of Russia 2021.

Zhenlin Kang *(Social Science)* B.S., The University of Sydney 2020.

Oak Arden Kanine *(Geology)* B.A., Dartmouth College 2020.

Hyunjin Kim *(Physics)* B.Sc., Seoul National University 2019.

Yoonsoo Kim *(Physics)* B.Sc., Seoul National University 2020.

Master of Science continued

Shunto Jerry Kobayashi *(Social Science)* B.S., California State Polytechnic University, Pomona 2018.

Stella Bieta Wavua Kombo *(Applied Physics)* B.S., University of Rochester 2021.

Nikita Kosogorov *(Astrophysics)* B.S., Moscow Institute of Physics and Technology 2020; M.S., 2022.

Abhimanyu Kumar *(Electrical Engineering)* B.E., Thapar Institute of Engineering & Technology 2021.

Satvik Guru Kumar *(Space Engineering)* B.S., Georgia Institute of Technology 2023.

Matthew Alexander Langley *(Biology)* B.A.Sc., University of Toronto 2015; M.A.Sc., 2018.

William Martin Lawrence *(Geochemistry)* B.Sc., Yale University 2022.

Isaac Norman Legred *(Physics)* B.A., Cornell University 2020.

Sze Chai Leung *(Mechanical Engineering)* B.S., University of Illinois at Urbana-Champaign 2022.

Jiahui Li *(Applied Physics)* B.S., The College of William & Mary 2022.

Zhuofang Li *(Social Science)* B.A., B.S., Renmin University of China 2019.

Zihao Li *(Electrical Engineering)* B.Eng., The Chinese University of Hong Kong 2019.

McCoy Wei Lim *(Applied Physics)* B.Sc., National University of Singapore 2022.

Yae Chan Lim *(Applied Physics)* B.S., Seoul National University 2019; M.S., 2021.

Anne Lin *(Materials Science)* B.S., University of California, San Diego 2023.

Siyu Lin *(Electrical Engineering)* B.S., University of California, Santa Barbara 2022.

Yiheng Lin *(Computing and Mathematical Sciences)* B.E., Tsinghua University 2020.

Jin-Yu Liu *(Applied Physics)* B.S., Peking University 2022.

Peng Liu *(Applied Physics)* B.S., Peking University 2022.

Amy Lu *(Chemical Engineering)* B.S., University of California, Riverside 2022.

Meng Luo *(Chemistry)* B.A., Macalester College 2020.

Yao Luo *(Applied Physics)* B.S., Nanjing University 2020.

Xiaotian (Frank) Ma *(Medical Engineering)* B.E., Huazhong University of Science and Technology 2022.

Ian Alexander Ouellette MacMillan *(Physics)* B.S., Georgetown University 2019.

Vikrant Malik *(Electrical Engineering)* B.Tech., Indian Institute of Technology Kanpur 2022.

Paulo Cesar Matos Trifu *(Social Science)* B.A., Pontificia Universidad Católica del Perú 2017.

Logan Kim McGraw *(Chemistry)* B.S., University of Minnesota, Twin Cities 2021.

Hayward Julian Melton *(Electrical Engineering)* B.S., California Institute of Technology 2022.

Jonathan Malte Zschiegner Michelsen *(Chemistry)* B.S., The University of Chicago 2018.

Ernesto Millan Aceves *(Chemistry)* B.S., San Diego State University 2021.

Master of Science *continued*

Ankan Mukherjee *(Applied Physics)* B.Tech., Indian Institute of Technology Bombay 2023.
Raj Shivatej Mukkamala *(Chemical Engineering)* B.S., Case Western Reserve University 2022.
Rithvik Reddy Musuku *(Mechanical Engineering)* B.S., California Institute of Technology 2024.
Pranav Nagarajan *(Astrophysics)* B.A., University of California, Berkeley 2022.
Hritam Nath *(Space Engineering)* B.Tech., Indian Institute of Space Science and Technology 2023.
Kyle C. Nelli *(Physics)* B.S., University of Illinois at Urbana-Champaign 2020.
Aaron Alexander Nelson *(Mechanical Engineering)* B.S., Texas A&M University 2022.
Franz Romeo O'Meally *(Mechanical Engineering)* B.S., The Johns Hopkins University 2021.
Yeonsoo Park *(Environmental Science and Engineering)* B.S., Cornell University 2019.
Ethan Payne *(Physics)* B.S., Monash University 2020.
Erin Rose Pimentel *(Geology)* B.A., Hamilton College 2022.
Devika Pokhriyal *(Chemistry)* B.A., Cornell University 2019.
Elena Ruth Priesen Reis *(Materials Science)* M.Sc., University College London 2022.
Palak Manish Purohit *(Electrical Engineering)* B.Tech., Indian Institute of Technology Gandhinagar 2022.
Nimisha Ramprasad *(Applied Physics)* B.S., The University of Texas at Austin 2022.
Auden Michael Reid-McLaughlin *(Geophysics)* B.Sc., Cornell University 2022.
Samantha Summer Rose *(Astrophysics)* B.A., University of California, Berkeley 2022.
Paolo Rosario Sanchez *(Geochemistry)* B.A., University of California, Berkeley 2022.
Rohan Nimish Sanghavi *(Electrical Engineering)* B.Tech., University of Mumbai 2022.
Maria Nicole Schmeer *(Geology)* B.A., Washington University in St. Louis 2022.
Ayantika Sengupta *(Applied Physics)* B.Tech., Indian Institute of Technology Delhi 2022.
Kritti Sharma *(Astrophysics)* B.Tech., Indian Institute of Technology Bombay 2022.
Soyoung Shin *(Chemical Engineering)* B.S., University of California, San Diego 2021.
Veronica Lin Show *(Materials Science)* B.S., Harvey Mudd College 2022.
Nadine Soliman *(Astrophysics)* B.Sc., New York University 2019.
Ellis Anna Spickermann *(Materials Science)* B.S., University of California, Berkeley 2022.
Rohit Srikanth *(Medical Engineering)* B.E., JSS Science and Technology University 2021.
Jamison Robert Stevens *(Electrical Engineering)* B.S., University of Virginia 2022.
Egor Stoyan *(Social Science)* M.S., Libera Università Internazionale degli Studi Sociali Guido Carli 2022.
Dongze Sun *(Physics)* B.S., Wuhan University 2020.
Shi-Ning Sun *(Electrical Engineering)* B.S., M.S., The University of Chicago 2018.
Po Hyun Sung *(Social Science)* B.A., Korea University 2020; M.S., 2022.

Master of Science *continued*

Yuri Tamama *(Geophysics)* B.A., Princeton University 2022.

Sara Alexandra Taylor *(Environmental Science and Engineering)* B.S., Portland State University 2017; M.A.T., Pacific University 2018.

Sophia Tevosyan *(Physics)* B.S., University of Washington 2021.

Iva Ivanova Tomchovska *(Geobiology)* B.S., University of Miami 2022.

Afonso Guilherme Trindade Bonina de Mesquita *(Space Engineering)* B.Sc., University of Lisbon 2023.

Theresa Helen Tsaggaris *(Mechanical Engineering)* B.S.E., University of Pennsylvania 2022.

Nirbhay Tyagi *(Electrical Engineering)* B.Tech., Indian Institute of Space Science and Technology 2023.

Tara Kamala Venkatadri *(Space Engineering)* S.B., Massachusetts Institute of Technology 2022; M.Phil., University of Cambridge 2024.

Praveen S Venkataramana *(Mathematics)* S.B., Massachusetts Institute of Technology 2017.

Victor Vescu *(Mechanical Engineering)* M.S., University of Oxford 2022.

Valeria Villa *(Geophysics)* B.S., University of California, Los Angeles 2021.

Guanli Wang *(Geology)* B.S., Peking University 2020.

Yingjin Wang *(Materials Science)* B.E., Tsinghua University 2020.

Ming-Liang Wei *(Medical Engineering)* B.S., M.S., National Taiwan University 2015.

Billy Welch *(Mechanical Engineering)* B.S., University of California, Los Angeles 2022.

Fabian Jarrell Williams *(Materials Science)* B.S., University of Minnesota, Twin Cities 2023.

James Anthony Williams *(Electrical Engineering)* B.S., Northwestern University 2020.

Fan Wu *(Social Science)* B.S., Peking University 2017; M.S., Tsinghua University 2019.

Erina Yamaguchi *(Aeronautics)* S.B., Massachusetts Institute of Technology 2023.

Natsuko Yamaguchi *(Astrophysics)* B.S., University of California, Los Angeles 2022.

Hujie Yan *(Mechanical Engineering)* B.Eng., Tsinghua University 2022.

Reo Yanagi *(Materials Science)* B.Eng., Nagoya University 2019; M.Eng., 2022.

Lizhi Yang *(Mechanical Engineering)* B.S., University of California, Berkeley 2022.

Teng Ee Yap *(Planetary Science)* B.A., Colgate University 2022.

Fei Yin *(Electrical Engineering)* B.S., University of California, San Diego 2022.

Shukun Yin *(Medical Engineering)* B.E., Wuhan University 2022.

Seijiro Yoshihara *(Space Engineering)* B.S., University of Massachusetts Lowell 2023.

Yan Yu *(Applied Physics)* B.S., Peking University 2021.

Qingyuan Zeng *(Electrical Engineering)* B.S., Columbia University 2022.

Haochen Zhang *(Electrical Engineering)* B.E., University of Illinois at Urbana-Champaign 2022.

Master of Science *continued*

Shiyu Zhang *(Social Science)* B.Sc., The Hong Kong University of Science and Technology 2020; M.Sc., 2021.

Yiming Zhao *(Electrical Engineering)* B.S., Emory University 2021.

Maxim Zhelyabovskiy *(Chemical Engineering)* B.Sc., Georgia Institute of Technology 2022.

Haowen Zhou *(Electrical Engineering)* M.Sc., University of Dayton 2021.

Wenying Zhu *(Computation and Neural Systems)* B.A., B.S., Emory University 2019.

Jasen Patrick Zion *(Applied Physics)* B.S., University of California, Irvine 2022.

Caifeng Zou *(Geophysics)* B.Sc., Tongji University 2020.

Doctor of Philosophy

DIVISION OF BIOLOGY AND BIOLOGICAL ENGINEERING

Pranav Subramanyam Bhamidipati *(Bioengineering)* B.A., B.S., The University of Texas at Austin 2017.

Thesis: Modeling and Design of Synthetic Biochemical Circuits for Biological Phenotypes.

Tara Varada Chari *(Bioengineering)* B.S., Cornell University 2018.

Thesis: Perturbing the Genome: From Bench to Biophysics.

Peiwei Chen *(Biology)* B.Sc., The Hong Kong University of Science and Technology 2017.

Thesis: Sexual Dimorphism and Evolutionary Innovation in piRNA-Guided Genome Defense.

Kevin Matthew Cherry *(Bioengineering)* B.S., Purdue University 2012.

Thesis: Molecular Pattern Recognition and Supervised Learning in DNA-Based Neural Networks.

John Alan Ciemniecki *(Microbiology)* B.S., University of Richmond 2015.

Thesis: The Bioenergetics of a Low-Power, Phenazine-Dependent Maintenance Metabolism in *Pseudomonas aeruginosa*.

Mengtong (Tom) Duan *(Bioengineering)* B.S., University of Washington 2016.

Thesis: Expanding Frontiers in Biomedical Imaging and Synthetic Biology: Dynamic Acoustic Reporter Gene Imaging and Ratio-Tuning of Mammalian mRNA Polycistronic Expression.

Jessica Anne Griffiths *(Bioengineering)* B.S., Rice University 2017.

Thesis: Bidirectional Interactions Between the Gut Microbiome and Nervous System.

Jimmy Kang Guo *(Biology)* B.A., University of California, Berkeley 2016.

Thesis: Defining the Universe of Functional RNA-Protein Interactions.

Andrew James Hill *(Biology)* B.S., California State University, Northridge 2013.

Thesis: The Genetic and Neuronal Substrates of Melatonin Signaling in Zebrafish Sleep.

Tobin William Ivy *(Genetics)* B.S., Harvey Mudd College 2013.

Thesis: Implementing and Modeling Gene Drives for Population Modification and Suppression.

Jialong Jiang *(Systems Biology and Applied and Computational Mathematics)* B.S., Peking University 2018.

Thesis: Revealing Regulatory Network Organization through Single-Cell Perturbation Profiling and Maximum Entropy Models.

When more than one field of study is listed, the first is the major and the second and others are minors.

Doctor of Philosophy *continued*

Kadina Elizabeth Johnston *(Bioengineering)* B.S., University of Wisconsin-Madison 2018.
Thesis: Acquiring Enzyme Sequence-Fitness Data at Scale Toward Predictive Methods for Enzyme Engineering.

Emily Chiu Laubscher *(Chemistry)* B.S., University of California, Berkeley 2018.
Thesis: Deep Learning-Enabled Integrated Measurements of Immune Signaling in Primary Human Macrophages.

Justin Lee *(Bioengineering)* B.A., The Johns Hopkins University 2015.
Thesis: Ultrasound Control and Imaging of Cellular Immunotherapy.

Mengyu Liu *(Neurobiology)* B.S., Nankai University 2018.
Thesis: Love and War: Control of Female Social Behaviors by the Hypothalamus.

Laura Luebbert *(Biology)* B.Sc., Leiden University 2017; M.Sc., 2019.
Thesis: Complexity of Transcriptomic Data Analysis and Implications for Biological Discovery.

Acacia Michelle Hori Mayfield *(Bioengineering)* B.A., Pitzer College 2013.
Thesis: Customized and Modular Control of Gene Expression for Precision Gene Therapies.

Andrew Alexander Perez *(Molecular Biology and Biochemistry)* B.S., California State University, Fullerton 2016.
Thesis: ChIP-DIP: A Multiplexed Method for Mapping Proteins to DNA Uncovers Combinatorics Controlling Gene Expression.

Francesca V. Ponce *(Biology)* B.S., University of Florida 2015.
Thesis: The Role of Integral Gain and Its Neuromuscular Implementation in the Flight Control System of *Drosophila melanogaster*.

Sharan Jagdish Prakash *(Biology)* B.A., B.Sc., Monash University 2015.
Thesis: Experimental and Neuroinformatic Definition of Neural Circuits in *Caenorhabditis elegans*.

Charles Sanfiorenzo *(Biology)* B.S., University of Puerto Rico 2018.
Thesis: Design and Construction of Bacterial Genomes at the Megabase-Scale.

Morgan Sarah Schwartz *(Biology)* B.A., Smith College 2018.
Thesis: Accelerating Biological Discovery with Deep Learning and Spatial Optical Barcodes.

Mackenzie Marie Strehle *(Molecular Biology and Biochemistry)* B.S., University of Nebraska, Lincoln 2018.
Thesis: Mechanisms of Xist-Mediated Gene Silencing During the Initiation and Maintenance of X Chromosome Inactivation.

Varun Spenta Wadia *(Neurobiology)* B.A., Bowdoin College 2015.
Thesis: How We Imagine: Insights from Single Neuron Recordings in the Human Brain.

Julian Morgan Wagner *(Biology)* B.S., Arizona State University 2017.
Thesis: Uncovering Mechanisms of Host Recognition, Host Finding and Host Specificity.

Doctor of Philosophy *continued*

Mark Guangde Zhang *(Biology)* B.A., Pomona College 2017.
Thesis: Bridging Sensory Perception to Developmental Decision-Making in *Caenorhabditis elegans*.

Zikun Zhu *(Molecular Biology and Biochemistry and Computational Science and Engineering)* B.S., Nankai University 2018.
Thesis: Spatiotemporal Regulation of Nascent Protein Targeting.

DIVISION OF CHEMISTRY AND CHEMICAL ENGINEERING

Meaghan Ann Bruening *(Chemistry)* B.S., St. Catherine University 2017.
Thesis: Applications of Synthesis in Copolymer Upcycling, Reduction of CO_2, Ligand Non-Innocence, and New Weakly-Coordinating Anions.

Reina S. Buenconsejo *(Chemistry)* B.A., Pomona College 2015.
Thesis: Clearing the Air: A Chemical Approach to Understanding Secondary Organic Aerosol Formation from Volatile Chemical Products.

Marjorie Theresa Buss *(Chemical Engineering)* S.B., Massachusetts Institute of Technology 2018.
Thesis: Tools for Noninvasive Imaging and Control of Engineered Bacteria In Vivo.

David Abraham Cagan *(Chemistry)* B.S., California State University, Los Angeles 2019.
Thesis: Exploring the Photophysics and Reactivity of Nickel–Bipyridine Cross-Coupling Catalysts.

Tsam Mang Melinda Chan *(Chemistry)* B.S., University of California, San Diego 2019.
Thesis: Asymmetric Total Synthesis of Havellockate and Investigation into Chiral Pd Enolates: Synthesis, Reactivity, and Applications.

Wen Chao *(Chemistry)* B.S., National Taiwan University 2015; M.S., 2017.
Thesis: Spectroscopy and Kinetics of Reactive Intermediates in the Atmosphere of Venus: The Catalytic Role of Chlorine Atoms.

Timothy Andrew Csernica *(Chemistry)* B.S., The University of Chicago 2018.
Thesis: Exploring Nature's Fingerprints with Isotopic Distributions.

Alexander Cusumano *(Chemistry)* B.S., North Carolina State University 2018.
Thesis: Asymmetric Pericyclic Transformations from Reactive Palladium Intermediates.

William Thomas Plent Denman *(Chemistry)* B.S., University of Michigan, Ann Arbor 2016.
Thesis: The Birth of PICL: New Laboratory Experiments for Understanding Ocean Worlds.

Taleen Gaied Dilanyan *(Chemistry)* B.A., Smith College 2016; M.S., California Institute of Technology 2023.
Thesis: Open-Source Custom Beads for Single-Cell Transcriptomics.

Jiajun Du *(Chemistry)* B.S., University of Science and Technology of China 2017.
Thesis: Vibrational Imaging for Chemical Biology: From Label-Free to Molecular Probes.

Doctor of Philosophy *continued*

John Matthew Evans *(Chemistry)* B.S., University of North Carolina at Chapel Hill 2019.
Thesis: Impact of Interfacial Chemistry on Corrosion, Sensing, and Catalytic Properties of Materials.

Shilong Gao *(Chemistry)* B.A., Boston University 2018.
Thesis: Engineering Heme Proteins for C*(sp^3)*–H Primary Amination.

Isabel Nadine Goronzy *(Biochemistry and Molecular Biophysics)* B.S., Stanford University 2018.
Thesis: Higher-Order Chromatin States and Nuclear Structures Regulating Gene Expression.

Robert Wall Grayson *(Chemical Engineering)* B.S., Virginia Polytechnic Institute and State University 2018.
Thesis: Low-Energy Plasma–Surface Interactions at Airless Icy Bodies.

Manni He *(Chemistry)* B.S., University of California, Berkeley 2018.
Thesis: Entanglement-Enhanced Bioimaging and Sensing.

Gavin Paul Heim *(Chemistry)* B.S., University of California, San Diego 2018.
Thesis: Molecular Tuning of Electrocatalysts for Generation of Commodity Chemicals.

Bryce Patrick Hickam *(Chemistry)* B.A., Occidental College 2018.
Thesis: Exploring How Entangled Photon Correlations Can Enhance Spectroscopy.

Christopher Glenn Jones *(Chemistry)* B.S., California State University, East Bay 2013; M.S., San Jose State University 2017.
Thesis: Development of Microcrystal Electron Diffraction Techniques for the Characterization of Small Molecules and Novel Materials.

Gregory Harrison Jones *(Chemistry)* B.S., The University of Tulsa 2016; M.S., California Institute of Technology 2019.
Thesis: From Venus to Mars: Spectroscopy and Kinetics of Reactive Intermediates in Planetary Atmospheres.

Dennis Lok Ko *(Chemical Engineering)* B.S., The Johns Hopkins University 2008; M.S., California Institute of Technology 2012.
Thesis: Design and Implementation of a Microparticle Delivery Device for the Cornea.

Roman Korol *(Chemistry)* B.Sc., University of Toronto 2018.
Thesis: Development and Applications of Imaginary Time Path Integral Methods.

Linh Nguyen Vuong Le *(Chemistry)* B.A., Colgate University 2018.
Thesis: Partial Synthetic Models of the FeMoco Nitrogenase Cluster with Bridging C-Based Ligands.

Haw-Wei Lin *(Chemistry)* B.S., University of California, Berkeley 2018.
Thesis: Nonlinear and Multidimensional Terahertz Spectroscopy of Liquids and Crystalline Solids.

Doctor of Philosophy *continued*

Hanwei Liu *(Chemistry)* B.S., University of California, Berkeley 2016.
Thesis: Engineered Living Material Based on Protein-Mediated Bacterial Assembly.

Kun Miao *(Chemistry)* B.S., Pennsylvania State University 2016.
Thesis: Stimulated Raman Scattering: A Biophysical Perspective for Imaging Cells and Tissues.

Jonathan Malte Zschiegner Michelsen *(Chemistry)* B.S., The University of Chicago 2018.
Thesis: Measuring Charge Carrier and Structural Photodynamics at Solar Energy Material Surfaces using Transient Extreme Ultraviolet Reflection Spectroscopy.

Anand Kumar Muthusamy *(Chemistry and Biology)* B.A., University of Pennsylvania 2014.
Thesis: Neuropsychiatric Drug Biosensors in Organelles, Cells, Biofluids, & Behaving Animals.

Anna Karen Orta *(Biochemistry and Molecular Biophysics)* B.S., The University of Texas at El Paso 2017.
Thesis: Leveraging the ΦX174 Lysis Protein to Study MraY Structure, Function, and Regulation.

Katharine Rose Page *(Chemistry)* B.A., Pomona College 2017.
Thesis: Using Functional Genomics to Characterize Biogenesis and Quality Control Pathways in the Mammalian ER.

Youngkyu Park *(Chemical Engineering)* B.S., Seoul National University 2019.
Thesis: Altering Framework Topology and Heteroatom Distributions of Molecular Sieves by Designed Organic Structure-Directing Agents.

Michael Koizumi Porter *(Chemical Engineering)* B.S., The Johns Hopkins University 2017.
Thesis: Improvement of Microbial Detection and Analysis Techniques in Complex Biological Environments.

Laura Katherine Quinn *(Chemistry)* B.S., Rice University 2019.
Thesis: Freeze-Cast Porous Ceramics: Tailoring Chemistry and Porosity for Functionality.

Shyam Madhukar Saladi *(Biochemistry and Molecular Biophysics)* B.S., B.S., University of Illinois at Urbana-Champaign 2014.
Thesis: Some Computer Studies of Membrane Proteins, Molecular Chaperones, and Color.

Allison Michelle Stanko *(Chemistry)* B.S., University of Rochester 2019.
Thesis: Assembly of Complex Carbocyclic Architectures via Palladium and Nickel-Catalyzed Cyclizations.

Taylor Anthony Stevens *(Biochemistry and Molecular Biophysics)* A.Sc., Nashville State Community College 2014; B.S., The University of Tennessee, Knoxville 2015.
Thesis: Characterization of a Novel Membrane Protein Insertase in the Mitochondrial Outer Membrane.

Doctor of Philosophy *continued*

Xiaoyu Tong *(Chemistry)* B.A., Vanderbilt University 2019.
Thesis: Novel Reactivity and Applications of Transition Metal-Catalyzed Nucleophilic Substitution Reactions.

Kyle Allen Virgil *(Chemistry)* B.S., North Carolina State University 2016.
Thesis: Polarization-Resolved, Oblique Incidence Terahertz Spectroscopy of Highly Uniform 2D Hybrid Perovskite Films.

Daniel Joseph Wackelin *(Chemical Engineering)* B.S.E., University of Connecticut 2018.
Thesis: New to Nature C–C Bond Forming Cyclases: Pushing the Boundaries of Ring Forming Reactions.

Grace Zimu Wang *(Chemistry)* B.S., Duke University 2017.
Thesis: Chemo-Selective Proteomics for Discovery of Polymicrobial Interactions.

Skyler Danielle Ware *(Chemistry)* B.S., The Ohio State University 2018.
Thesis: Nonaqueous Electrolyte Design for Energy Storage and Electrosynthesis.

Nicholas Bret Watkins *(Chemistry)* B.S., University of California, Berkeley 2019.
Thesis: Organic Films at the Electrode-Electrolyte Interface in CO_2 Reduction.

Tian Zeng *(Chemistry)* B.S., University of California, San Diego 2018.
Thesis: Masked 2-Furylcarbinol Derivatives: A Modular and General Platform for Mechanically Triggered Molecular Release.

Wanji Zhang *(Chemistry)* B.S., The College of William & Mary 2015; M.S., 2016.
Thesis: Efforts Towards C-C Bond Formations: From Ni Catalysis to Transition-Metal Free Electrolysis.

DIVISION OF ENGINEERING AND APPLIED SCIENCE

Fatemeh Aghlmand *(Electrical Engineering)* B.S., University of Tehran 2008; M.S., Sharif University of Technology 2011; M.S., California Institute of Technology 2019.
Thesis: Adaptive Optoelectronic Systems: From Bio-Sensing to Free-Space Optical Communication.

Hamidreza Akbari *(Applied Physics)* B.S., Sharif University of Technology 2014; M.S., 2017; M.S., California Institute of Technology 2020.
Thesis: Characterization and Tuning of Quantum Emitters in Hexagonal Boron Nitride.

Benyamin Allahgholizadeh Haghi *(Electrical Engineering)* B.S., Sharif University of Technology 2016; M.S., California Institute of Technology 2018.
Thesis: Energy-Efficient and Robust Machine Learning for Biomedical Applications.

Doctor of Philosophy *continued*

Apurva Srinivas Badithela *(Control and Dynamical Systems)* B.S., University of Minnesota, Twin Cities 2018.

Thesis: Test and Evaluation of Autonomous Systems: Reactive Test Synthesis and Task-Relevant Evaluation of Perception.

Camille Marie Bernal-Choban *(Materials Science)* B.S., University of California, San Diego 2016; M.S., California Institute of Technology 2019.

Thesis: Atomic Dynamics in Solids and Liquids from Inelastic Neutron Scattering.

Annette Ellen Böhme *(Applied Physics)* B.Sc., University of Stuttgart 2016; M.Sc., 2019; M.S., California Institute of Technology 2022.

Thesis: Observation of the Microenvironment Around CO_2 Reduction Electrodes via Fluorescent Confocal Laser-Scanning Microscopy.

Dmitry Anatolyevich Burov *(Applied and Computational Mathematics)* B.Sc., Lomonosov Moscow State University 2013.

Thesis: Kernel Methods for Learning About Complex Dynamical Systems.

Ruizhi Cao *(Electrical Engineering)* B.E., Zhejiang University 2018; M.S., California Institute of Technology 2021.

Thesis: Dealing with Imperfections: From Aberration to Scattering.

Benjamin K Chang *(Applied Physics and Computer Science)* B.S., National Tsing Hua University 2015; M.S., National Taiwan University 2017; M.S., California Institute of Technology 2020.

Thesis: Electron-Phonon Interactions and Charge Transport in Organic Crystals and Transition Metal Oxides from First-Principles Calculations.

Yi Hua Chang *(Applied Physics)* M.Sc., Imperial College London 2018.

Thesis: Studies of the Evolution and Stability of the Thin Film Equation for Externally Modulated Control of Electrohydrodynamic and Thermocapillary Patterning.

Po-Chih Chen *(Electrical Engineering)* B.S., National Taiwan University 2015; M.S., 2017.

Thesis: Signal Processing for Large Arrays: Convolutional Beamspace, Hybrid Analog and Digital Processing, and Distributed Algorithms.

Weiting Deng *(Medical Engineering)* B.Eng., University of Science and Technology of China 2017; M.S., California Institute of Technology 2020.

Thesis: Additive Manufacturing of 3D Micro-Architected Materials for Device Applications.

Niyati Desai *(Space Engineering)* S.B., Massachusetts Institute of Technology 2019; M.S., California Institute of Technology 2020.

Thesis: Scalar Vortex Coronagraphs for Imaging Habitable Exoplanets.

Doctor of Philosophy *continued*

Iretomiwa Esho *(Materials Science)* B.S., The University of Texas at Arlington 2018.
Thesis: Investigation of Transport Phenomena in Semiconductors and Semiconductor Devices: Drain Noise, Two-Phonon Scattering, and Phonon Drag.

Salvador Rey Gomez *(Aeronautics)* B.S., University of California, Berkeley 2018; M.S., California Institute of Technology 2019.
Thesis: Linear Amplification in Nonequilibrium Turbulent Boundary Layers.

Josefine Berta Marie Graebener *(Space Engineering and Computer Science)* B.Eng., Aachen University of Applied Sciences 2017; M.S., California Institute of Technology 2019.
Thesis: Formal Methods for Test and Evaluation: Reasoning over Tests, Automated Test Synthesis, and System Diagnostics.

Peter John Gunnarson *(Aeronautics)* B.S., University of Virginia 2019; M.S., California Institute of Technology 2020.
Thesis: Autonomous Flow-Based Navigation in Unsteady Underwater Environments.

Pedro Guzman *(Materials Science)* B.S., University of California, Los Angeles 2016.
Thesis: Developments in Mössbauer Spectrometry: From Instrumentation to High Pressure Studies on Spins and Phonons.

Dimitar Mi Ho *(Control and Dynamical Systems)* B.S., Technical University of Darmstadt 2011.
Thesis: Control of Unknown Dynamical Systems: Robustness and Online Learning of Feedback Control.

Hsin-Yuan Huang *(Computing and Mathematical Sciences)* B.S., National Taiwan University 2018.
Thesis: Learning in the Quantum Universe.

Yujia Huang *(Electrical Engineering)* B.Eng., Zhejiang University 2017; M.S., California Institute of Technology 2021.
Thesis: Understanding and Improving Reliability of Inference Dynamics in Deep Neural Networks.

Zachery William Benjamin Iton *(Materials Science)* B.A., B.S.E., University of Pennsylvania 2017.
Thesis: Solid State Conduction of Next-Generation Mobile Ions Enabled by Coordinating Ligands.

Craig Edward Ives *(Electrical Engineering)* B.S., University of California, San Diego 2017; M.S., California Institute of Technology 2020.
Thesis: Subtractive Photonics in Bulk CMOS.

Zhiyang Jin *(Medical Engineering)* B.S., Nanjing University 2017; M.S., California Institute of Technology 2018.
Thesis: Acoustic Biosensors for Noninvasive Imaging of Molecular Processes.

Doctor of Philosophy *continued*

Zoila Estefani Jurado Quiroga *(Mechanical Engineering)* B.S., University of Connecticut 2015; M.S., California Institute of Technology 2017.
Thesis: Towards a Synthetic Nucleus: Separating Transcription and Translation in Cell-Free Protein Expression Systems.

Hiroki Kaifu *(Applied Physics)* B.S., University of California, San Diego 2016; M.S., California Institute of Technology 2021.
Thesis: Structural and Dynamical Correlations Linked to Smaller Thermal Resistance at a Classical Liquid/Solid Interface.

Hirsh Kamakari *(Applied Physics)* B.Sc., University of British Columbia 2019; M.S., California Institute of Technology 2023.
Thesis: Investigation of Quantum Computers for Quantum Simulation and Machine Learning.

Kordag Mehmet Kilic *(Electrical Engineering)* B.S., Bilkent University 2018; M.S., California Institute of Technology 2021.
Thesis: On the Complexity of Neural Network Representations.

Areum Kim *(Applied Physics)* B.E., Chung-Ang University 2014; M.E., 2016; M.S., California Institute of Technology 2019.
Thesis: Probing Active Nanophotonic Materials Phenomena Under Electrostatic Modulation.

Connor Tinghan Lee *(Space Engineering)* B.S., California Institute of Technology 2017; M.S., 2019.
Thesis: Learning-Based Perception for Robotics in Suboptimal Data Landscapes.

Christian Richard Leefmans *(Applied Physics)* B.S., Cornell University 2018.
Thesis: Topological Phenomena in Time-Multiplexed Resonator Networks.

Mi Lei *(Applied Physics)* B.S., University of Science and Technology of China 2017.
Thesis: Many-Body Cavity Quantum Electrodynamics and Spin Dynamics with an Ensemble of Rare-Earth Ions.

Daniel Victor Leibovici *(Applied and Computational Mathematics)* M.S., HEC Paris 2018.
Thesis: General Domain FC-Based Shock Dynamics Solver.

Jing Shuang Li *(Control and Dynamical Systems)* B.A.Sc., University of Toronto 2018.
Thesis: Distributed Control Theory for Biological and Cyberphysical Systems.

Mingchen Liu *(Electrical Engineering)* B.S., Huazhong University of Science and Technology 2018.
Thesis: Nonlinear Enhancement of Optical Spectroscopy in the Mid-infrared.

Doctor of Philosophy *continued*

Chen-Hsuan Lu *(Materials Science)* B.S., National Taiwan University 2018; M.S., California Institute of Technology 2020.

Thesis: Strategic Advances in 2D Materials: Low-Temperature Plasma-Enhanced Chemical Vapor Deposition Growth of Graphene and Complementary Insights into MoS_2.

Bijan Henrik Socrates Mazaheri *(Computing and Mathematical Sciences)* B.A., Williams College 2016.

Thesis: Combining Sources and Leveraging Contexts.

Jihong Min *(Medical Engineering)* B.S., University of Illinois at Urbana-Champaign 2017; M.S., California Institute of Technology 2019.

Thesis: Innovations in Wireless Bioelectronics for Precision Medicine, from Sustainable Sweat Sensing to Ingestible Gut Monitoring.

Rigoberto Moncada Lopez *(Civil Engineering)* B.Sc., Universidad Tecnológica Centroamericana 2009; M.Sc., Tohoku University 2012; M.S., California Institute of Technology 2020.

Thesis: Sea Ice Discrete Element Modeling: Melt and Fracture of Floes and Sheets.

Andrew Sterling Mueller *(Applied Physics)* B.S., University of California, San Diego 2017.

Thesis: Quantum Measurements with Superconducting Nanowire Single Photon Detectors.

Nachiket Ramchandra Naik *(Mechanical Engineering)* B.S., Georgia Institute of Technology 2017; M.S., California Institute of Technology 2019.

Thesis: Charge Transport Phenomena in Cryogenic SiGe Heterojunction Bipolar Transistors.

Nicholas Hao Nelsen *(Mechanical Engineering and Applied and Computational Mathematics)* B.S., Oklahoma State University 2018; M.S., California Institute of Technology 2020.

Thesis: Statistical Foundations of Operator Learning.

Alexander Charles Ogren *(Mechanical Engineering)* B.S., University of Wisconsin-Madison 2018; M.S., California Institute of Technology 2020.

Thesis: Machine Learning and Inference Methods for Surrogate Modeling and Inexpensive Characterization of Elastodynamic Systems.

Ayush Pandey *(Control and Dynamical Systems)* B.Tech., M.Tech., Indian Institute of Technology Kharagpur 2017; M.S., California Institute of Technology 2019.

Thesis: Modeling Frameworks for Modular and Scalable Biological Circuit Design.

Benjamin Pierre Riviere *(Aeronautics)* B.S., Stanford University 2017; M.S., California Institute of Technology 2018.

Thesis: What Do Robots Dream Of? Monte Carlo Tree Search for Dynamical, Partially-Observable, and Multi-Agent Systems.

Doctor of Philosophy *continued*

Gregory David Roberts *(Applied Physics)* B.S., University of California, Berkeley 2014; M.S., California Institute of Technology 2020.
Thesis: Design, Realization, and Applications of 3D Multifunctional Nanophotonics.

Andrei Ruskuc *(Applied Physics)* B.A., M.Sc., University of Cambridge 2017.
Thesis: Single Rare-Earth Ions in Solid-State Hosts: A Platform for Quantum Networks.

Kuang-Ming Shang *(Medical and Electrical Engineering)* B.S., National Taiwan University 2017; M.S., California Institute of Technology 2018.
Thesis: Oxygen-Regulating MEMS Devices for Cell Transplantation to Cure Type 1 Diabetes.

Christopher Simon *(Applied Physics)* B.S., Stanford University 2014; M.S., California Institute of Technology 2021.
Thesis: Non-Equilibrium Quantum Dynamics in a Disordered Ising Magnet.

Yousuf Soliman *(Applied and Computational Mathematics)* B.Sc., M.S., Carnegie Mellon University 2018.
Thesis: Discrete Constrained Willmore Surfaces.

Jean-Sébastien Alexandre Spratt *(Space Engineering)* B.A., Vassar College 2016; M.S., California Institute of Technology 2018.
Thesis: Numerical Simulations of Cavitating Bubbles in Elastic and Viscoelastic Materials for Biomedical Applications.

Magel P. Su *(Materials Science)* B.S.E., University of Michigan, Ann Arbor 2018.
Thesis: Exploring Thermal Photonics for Sustainability: From Selective Solar Absorbers to Terrestrial Radiative Cooling.

Jennifer Jianing Sun *(Computing and Mathematical Sciences)* B.A.Sc., University of Toronto 2017.
Thesis: AI for Scientists: Accelerating Discovery Through Knowledge, Data, and Learning.

Shi-Ning Sun *(Applied Physics)* B.S., M.S., The University of Chicago 2018.
Thesis: Digital Quantum Simulation of Quantum Many-Body Systems.

Yuchun Sun *(Materials Science)* B.S., University of California, Berkeley 2018; M.S., California Institute of Technology 2020.
Thesis: 3D Micro-Architected Materials for Batteries.

Jiaobing Tu *(Medical Engineering)* B.Eng., Imperial College London 2017; M.S., California Institute of Technology 2020.
Thesis: Wearable Sweat Sensors for Disease Monitoring and Management.

Fernando Joaquin Villafuerte *(Materials Science)* B.A., Hunter College of the City University of New York 2017; M.S., California Institute of Technology 2020.
Thesis: Additive Manufacturing of Batteries and IR-Active Microparticles: Polyborane-Based Electrolytes for Solid State Batteries and Additively Manufactured, TiN-Coated Microbridges.

Doctor of Philosophy *continued*

Cameron Voloshin *(Computing and Mathematical Sciences)* B.S., California Institute of Technology 2017.

Thesis: Guaranteed Policy Performance in Reinforcement Learning.

Skylar Xueyao Wei *(Control and Dynamical Systems)* B.S., M.S., University of California, Los Angeles 2018.

Thesis: Data-Driven Safety-Critical Autonomy in Unknown, Unstructured, and Dynamic Environments.

Alexander Huai-Cheng Wen *(Space Engineering)* B.A., B.S., University of California, Berkeley 2013; M.S., California Institute of Technology 2018.

Thesis: Vibration Damping of Coiled Structures Through Frictional Slip.

Steven Andrew Wood *(Applied Physics)* B.S., Temple University 2018; M.S., California Institute of Technology 2020.

Thesis: Quantum Microwave to Optical Transduction with Light-Robust Superconducting Circuits. Part I: Light-Robust Aluminum Nitride Transducer. Part II: Light-Robust Lithium Niobate Transducer.

Parker Ryan Wray *(Electrical Engineering)* B.S., The University of Texas at Austin 2015; M.S., California Institute of Technology 2018.

Thesis: How to Make Small Things do Big Things: Exploring Engineered Disorder for Massively Scalable Metasurfaces and Metamaterials.

Lue Wu *(Applied Physics and Quantum Science and Engineering)* B.S., Tsinghua University 2016; M.S., California Institute of Technology 2020.

Thesis: Greater than One Billion Optical Q Factor for On-Chip Microresonators.

Changhao Xu *(Medical Engineering and Computer Science)* B.S., Fudan University 2018; M.S., California Institute of Technology 2020.

Thesis: Electronic Skin in Robotics and Healthcare: Towards Multimodal Sensing and Intelligent Analysis.

Matthew Xuhuai Yao *(Mechanical Engineering)* B.A.Sc., University of Waterloo 2018; M.A.Sc., 2019; M.S., California Institute of Technology 2021.

Thesis: Lean Premixed Hydrogen Flames: Turbulence, Chemistry, and Modelling.

Wesley Minlai Yu *(Aeronautics)* B.S., The University of Texas at Austin 2017; M.S., California Institute of Technology 2018.

Thesis: Experiments on Separation Shear Layer Instabilities in Hypervelocity Flows.

Zhiquan Yuan *(Applied Physics and Quantum Science and Engineering)* B.E., Tsinghua University 2018; M.S., California Institute of Technology 2021.

Thesis: Physics and Applications of Optical Nonlinearity in High-Q Microresonators.

Doctor of Philosophy *continued*

Yang Zhang *(Applied Physics)* B.S., Harbin Institute of Technology 2018; M.S., California Institute of Technology 2021.
Thesis: Understanding the Plasma Universe through Laboratory Experiments and Related Models.

Tianzhe Zheng *(Applied Physics)* B.S., University of Science and Technology of China 2018; M.S., California Institute of Technology 2023.
Thesis: Reconfigurable Metasurfaces in Nanoelectromechanical and Silicon-Organic Systems.

DIVISION OF GEOLOGICAL AND PLANETARY SCIENCES

Brooke Hillary Dallas *(Geology)* B.S., University of California, Davis 2011; M.S., California Institute of Technology 2016.
Thesis: Intermolecular and Intramolecular Stable Isotope Studies in Alanine.

Guannan Dong *(Geochemistry)* B.S., University of Science and Technology of China 2017; M.S., California Institute of Technology 2019.
Thesis: Taking the Pulse of Life: Intramolecular and Clumped Isotopic Perspectives on the Origins and Evolution of Hydrocarbons in Geological and Prebiotic Systems.

Erin Jessica Hightower *(Geophysics)* B.A., Colorado College 2016; M.S., California Institute of Technology 2020.
Thesis: From Tectonic Evolution to Intraplate Stress: The Role of Structural Inheritance and Long-Wavelength Loading.

Haoyu Li *(Geochemistry)* B.S., Nanjing University 2018; M.S., California Institute of Technology 2021.
Thesis: Revisiting U-Pb and ^{26}Al-^{26}Mg Systematics of Calcium Aluminum-Rich Inclusions: Applications on Early Solar System Chronology and Evolution History.

Yida Li *(Geophysics)* B.S., University of Science and Technology of China 2018; M.S., California Institute of Technology 2021.
Thesis: I. Dynamics of Subduction Initiation and II. Constraining Sedimentary Basin Structure with Seismic Ambient Noise.

Sujung Lim *(Geobiology)* B.S., University of Washington 2008; M.S., 2012; M.S., California Institute of Technology 2018.
Thesis: The Impact of Energy Availability and Substrate Complexity on Anaerobic Microbial Communities in Marine Sediment.

Ren Thomas Caburnay Marquez *(Geochemistry)* B.Sc., University of the Philippines Diliman 2014; M.Sc., 2017; M.S., California Institute of Technology 2021.
Thesis: Primitive Stellar Remnants and their Signatures as Probes to the Nascent Solar System.

Doctor of Philosophy *continued*

Freya K. Morris *(Geology)* B.S., Lafayette College 2017; M.S., California Institute of Technology 2019.

Thesis: Depositional and Structural History of the Pavian and Kudu Nappes in the Naukluft Mountains, Namibia.

Elliott Patrick Mueller *(Geobiology)* B.S., Northeastern University 2017; M.S., California Institute of Technology 2020.

Thesis: Carbon Currencies: Isotopic Constraints on the Biogeochemistry of Organic Acids.

Newton Huy Nguyen *(Environmental Science and Engineering)* B.A., University of California, Berkeley 2016; M.S., California Institute of Technology 2019.

Thesis: From Source to Sink: Modeling and Measuring Methane Emissions and Loss.

William Richard Palfey *(Geochemistry)* B.S., Virginia Polytechnic Institute and State University 2017; M.S., California Institute of Technology 2019.

Thesis: Hydrogen Incorporation in Rutile- and Perovskite-Structured Minerals and Their Analogues.

Shirui Peng *(Environmental Science and Engineering)* B.S., Peking University 2017; M.S., Stanford University 2019.

Thesis: Seismic Thermometry of the North Pacific and Equatorial Indian Oceans.

Clare Emilie Elmendorf Singer *(Environmental Science and Engineering)* B.A., The University of Chicago 2018; M.S., California Institute of Technology 2020.

Thesis: The Role of Small-Scale Cloud, Aerosol, and Radiation Processes for Earth's Climate.

Krittanon Sirorattanakul *(Geophysics and Computational Science and Engineering)* B.S., Lehigh University 2018; M.S., California Institute of Technology 2020.

Thesis: Response of Earthquakes to Transient Stresses, in Laboratory and Nature.

Emma Sofia Sosa *(Geology)* B.S., Lafayette College 2017; M.S., California Institute of Technology 2019.

Thesis: Composition, Structure, and Formation of the Lower Crust in Continental and Oceanic Arc Settings: Insights from the Xenolith Record.

Carl Raymond Swindle *(Geology)* B.S., University of California, Santa Barbara 2018; M.S., California Institute of Technology 2020.

Thesis: Fluid-Rock Interactions from the Lithosphere to Earth's Surface.

Renee Zurui Wang *(Geochemistry)* B.S., University of Southern California 2016; M.S., California Institute of Technology 2019.

Thesis: From Photosynthesis to Detoxification: Microbial Metabolisms Shape Earth's Surface Chemistry.

Doctor of Philosophy *continued*

Sarah Soojin Zeichner *(Geochemistry)* B.S., The University of Chicago 2016; M.S., California Institute of Technology 2020.
Thesis: Fates of Carbon.

Qicheng Zhang *(Planetary Science)* B.S., University of California, Santa Barbara 2017; M.S., California Institute of Technology 2019.
Thesis: Sampling the Evolution of Solar System Cometoids.

DIVISION OF THE HUMANITIES AND SOCIAL SCIENCES

Daniel Ebanks *(Social Science)* B.A., Princeton University 2015; M.S., California Institute of Technology 2021.
Thesis: Unexpected Partisan Unity Among Congressional Leaders and Legislators Using New Latent Variable Estimation Techniques and Frameworks.

Meng-Jhang Fong *(Social Science)* B.B.A., National Taiwan University 2014; M.A., 2016.
Thesis: Essays in Behavioral Economics and Game Theory.

Lindsey Anne Gailmard *(Social Science)* B.A., University of California, Berkeley 2012; M.P.P., The University of Chicago 2014; M.S., California Institute of Technology 2018.
Thesis: Reputation and Accountability.

Wanying Huang *(Social Science)* B.A., The University of Queensland 2017; M.S., California Institute of Technology 2023.
Thesis: Essays on Rational Social Learning.

Joanna Nanami Huey *(Social Science)* A.B., Harvard University 2006; J.D., M.P.P., 2010.
Thesis: Institutional Design of Criminal Justice Processes.

Shunto Jerry Kobayashi *(Social Science)* B.S., California State Polytechnic University, Pomona 2018.
Thesis: Essays in Empirical Industrial Organization.

Zhuofang Li *(Social Science and Applied and Computational Mathematics and Computer Science)* B.A., B.S., Renmin University of China 2019.
Thesis: Essays on Trustworthy Online Platforms.

Po-Hsuan Lin *(Social Science)* B.A., National Taiwan University 2016; M.S., California Institute of Technology 2023.
Thesis: Essays in Behavioral Game Theory Solution Concepts.

Aldo Lucia *(Social Science)* B.S., Università Commerciale Luigi Bocconi 2016; M.S., 2018.
Thesis: An Experimental and Theoretical Investigation of Decision-Making Under Risk.

DIVISION OF PHYSICS, MATHEMATICS AND ASTRONOMY

Ismail Abouamal *(Mathematics)* B.Sc., Université de Montréal 2015; M.Sc., 2017.
Thesis: Bost-Connes-Marcolli System for the Siegel Modular Variety.

Doctor of Philosophy *continued*

Shreya Anand *(Physics)* B.S., University of Maryland, College Park 2017.
Thesis: Cosmic Gold Mining: Hunting for the Astrophysical Sites of r-process Nucleosynthesis.

Taylor Benjamin Aralis *(Physics)* B.S., University of California, Santa Barbara 2016.
Thesis: SuperCDMS SNOLAB, HVeV Run 3, and Development of KIPM Detectors.

Marie Ann Blatnik *(Physics)* B.S., Cleveland State University 2015.
Thesis: Creating the Electric and Magnetic Fields for the nEDM@SNS Experiment.

Can Tran Thanh Trung *(Mathematics)* B.A., Duke University 2018.
Thesis: On Arithmetic Invariants of Special Families of K3-Type Surfaces.

Cyuan-Han Chang *(Physics)* S.B., Massachusetts Institute of Technology 2018.
Thesis: Energy Correlators, Dispersive Sum Rules, and Modular Bootstrap in Conformal Field Theories.

Ge Chen *(Physics)* B.Sc., McGill University 2015.
Thesis: Localized Fast Radio Bursts Using DSA-110.

Daniel Echeverri *(Physics)* B.S.E., Princeton University 2017.
Thesis: Vortex Fiber Nulling for Exoplanet Observations.

Richard Moses Feder *(Physics)* A.B., Harvard College 2018.
Thesis: Dissecting and Reconstructing the Cosmic Infrared Background with Spaceborne Experiments.

Max Elliot Goldberg *(Astrophysics)* B.S., The University of Chicago 2019; M.S., California Institute of Technology 2022.
Thesis: Early Dynamics and Evolution of Extrasolar Planetary Systems.

Shouzhen Gu *(Physics)* B.Math., University of Waterloo 2018.
Thesis: Quantum Error Correction Using Low-Density Parity-Check Codes and Erasure Qubits.

Yuhui Jin *(Mathematics)* B.S., University of California, San Diego 2017.
Thesis: On the Hecke Module of $GL_n(k[[z]])GL_n(k((z)))/GL_n(k((z^2)))$.

Neeraja Raghavendra Kulkarni *(Mathematics)* B.A., Carleton College 2018.
Thesis: A Kakeya Estimate for Sticky Sets Using a Planebrush.

Chen Li *(Physics)* B.S., Peking University 2017; M.S., California Institute of Technology 2021.
Thesis: Ultrafast Optical Studies of Pressure-Tuned Spin-Orbit Materials.

Dongjun Li *(Physics)* B.A., Cornell University 2019.
Thesis: Black Hole Perturbation Theory Beyond General Relativity and Holographic Gravity in Flat Spacetime.

Doctor of Philosophy *continued*

Ka Yue Alvin Li *(Physics)* B.Sc., The Chinese University of Hong Kong 2019; M.S., California Institute of Technology 2023.
Thesis: Probing the Higher Redshift Universe by Studying Strong Lensing of Gravitational Waves and Enhancing Search Sensitivity of the GstLAL Search Pipeline.

Zhihui Li *(Astrophysics)* B.S., Peking University 2018; M.S., California Institute of Technology 2021.
Thesis: Unveiling the Structure of the Circumgalactic Medium of High-Redshift Galaxies via Emission and Absorption Lines.

Aike Liu *(Physics)* B.S., University of Illinois at Urbana-Champaign 2019.
Thesis: Bootstrapping the Gross-Neveu-Yukawa Archipelago and the Skydiving Algorithm.

Ka Lok Lo *(Physics)* B.Sc., The Chinese University of Hong Kong 2018.
Thesis: Gravitational Wave Exotica - Advancing the Search for Signatures of Exotic Compact Objects and Gravitational Lensing from Data-Analysis and Theoretical Perspectives.

Linhao Ma *(Physics)* B.S., University of Science and Technology of China 2019; M.S., California Institute of Technology 2022.
Thesis: Dissipative Dynamics of Stars, Planets, and Black Holes.

Aaron Gregory Markowitz *(Physics)* A.B., Harvard University 2016.
Thesis: Interferometric Precision Measurement with Macroscopic Silicon Optomechanics.

Lorenzo Minutolo *(Physics)* B.S., Sapienza Università di Roma 2015; M.S., 2017; M.S., California Institute of Technology 2023.
Thesis: Thermal Kinetic Inductance Detector *(TKIDs)* Camera: A Pathfinder mm-Wave Polarimeter.

Keefe Edward Alden Mitman *(Physics)* B.A., Columbia University 2019; M.S., California Institute of Technology 2022.
Thesis: Asymptotics with Numerical Relativity: Gravitational Memory, BMS Frames, and Nonlinearities.

Kathryn Annette Plant *(Astrophysics)* B.S., University of California, Santa Cruz 2016; M.S., California Institute of Technology 2020.
Thesis: A New Sensor for Milky-Way Particle Accelerators: The Standalone-Radio Cosmic Ray Detector at the Owens Valley Radio Observatory Long Wavelength Array.

Ryan Asa Rubenzahl *(Astrophysics)* B.S., University of Rochester 2018; M.S., California Institute of Technology 2021.
Thesis: From the Sun to the Stars: A Solar Calibrator for the Keck Planet Finder and New Frontiers in Exoplanet Obliquities.

Nabha Shah *(Physics)* M.S., Indian Institute of Science Education and Research, Pune 2018.
Thesis: Scattering and Gravitational Effective Field Theory.

Doctor of Philosophy *continued*

Adam Lawrence Shaw *(Physics and Quantum Science and Engineering)* B.S., Harvey Mudd College 2018.

Thesis: Learning, Verifying, and Erasing Errors on a Chaotic and Highly Entangled Programmable Quantum Simulator.

Christina Wenlu Wang *(Physics)* S.B., Massachusetts Institute of Technology 2018; M.S., California Institute of Technology 2021.

Thesis: Search for New Physics with the Compact Muon Solenoid Experiment and QIS-enabled Technology.

Yijun Wang *(Physics)* B.A., Pomona College 2019.

Thesis: Topics in Gravitational Wave Physics: Lensing, Detection with Astrometry and Dark Siren Hubble Measurement.

Samantha Chloe Wu *(Astrophysics)* B.A., University of California, Berkeley 2018; M.S., California Institute of Technology 2021.

Thesis: The Interplay of Waves and Stellar Evolution.

Nitika Yadlapalli Yurk *(Astrophysics)* B.S., Rutgers, The State University of New Jersey 2018; M.S., California Institute of Technology 2021.

Thesis: Interferometric Millimeter Observations of the High Energy Universe.

Yi Zeng *(Physics)* B.S., University of California, Santa Barbara 2018; M.S., California Institute of Technology 2022.

Thesis: Progress Toward Precision Measurements Using Polyatomic Molecules.

PRIZES AND AWARDS

Prizes and awards are listed only for those students participating in commencement this year, and include prizes and awards received by them in previous years.

MABEL BECKMAN PRIZE

Given in memory of Mabel Beckman's many years of commitment to Caltech's educational and research programs, this prize is awarded to an undergraduate woman (or women) who, upon completion of her junior or senior year at Caltech, has achieved academic excellence and demonstrated outstanding leadership skills, a commitment to personal excellence, good character, and a strong interest in the Caltech community.

2024 Rupa Kurinchi-Vendhan

FREDERIC W. HINRICHS, JR., MEMORIAL AWARD

This award, established by the Board of Trustees, is in memory of Frederick W. Hinrichs, Jr., who served for more than 20 years as dean and professor at Caltech. In remembrance of his honor, courage, and kindness, the annual award is given to the senior (or seniors) who, throughout their undergraduate years, made the greatest contribution to the student body and whose qualities of character, leadership, and responsibility have been outstanding. At the discretion of the dean, more than one award may be made in any year.

2024 Gabriella Patricia Twombly

GEORGE W. HOUSNER PRIZE FOR ACADEMIC EXCELLENCE AND ORIGINAL RESEARCH

This prize is given annually to a senior or seniors in the upper 20 percent of their class who have demonstrated excellence in scholarship and in the preparation of an outstanding piece of original scientific research. The students are selected by the deans and the Undergraduate Academic Standards and Honors Committee. At the discretion of the deans, more than one award may be given in any year. This prize is made possible by a gift from the late George W. Housner, Carl F Braun Professor of Engineering, Emeritus.

2024 Joseph Hakkyu Kim

MILTON AND FRANCIS CLAUSER DOCTORAL PRIZE

This prize is given to a Ph.D. candidate* whose thesis is judged by a committee of the Faculty Board to exhibit significant new work, ingenuity, and originality, and to have the greatest potential to open new avenues of human thought and endeavor.

** Name of recipient to be announced at commencement.*

The previous four prizes are announced at the commencement ceremony.

ADVOCATING CHANGE TOGETHER (ACT) AWARD

Given by the Caltech Y, this award allows students to learn about a global, national, or local issue by immersing themselves with activists working on a cause over the summer and then challenges them to educate others by creating and leading programs designed to raise awareness on campus the following year.

2022 *Peiwei Chen*

2023 *Rupa Kurinchi-Vendhan*

2024 *Tyler Elizabeth Fox, Alice Kutsyy*

APOSTOL AWARD FOR EXCELLENCE IN TEACHING IN MATHEMATICS

Named in honor of Tom Apostol, who taught at Caltech for over 50 years, this award recognizes excellence in teaching by graduate and undergraduate teaching assistants in mathematics.

2021, 2023 *Neeraja Raghavendra Kulkarni*

2023 *Andrei Cristian Staic*

CHARLES D. BABCOCK AWARD

Voted on by members of the aeronautics faculty, this award is given to a graduate student whose achievements in teaching or other assistance to students have made a significant contribution to the aeronautics department.

2019 *Wesley Minlai Yu*

2020, 2022 *Salvador Rey Gomez*

ROBERT P. BALLES CALTECH MATHEMATICS SCHOLARS AWARD

This award is given to the mathematics major finishing their senior year who has demonstrated the most outstanding performance in mathematics courses completed in the student's time at Caltech.

2024 *Stephanie Yuanying Chen*

WILLIAM F. BALLHAUS PRIZE

This prize recognizes aeronautics students for outstanding doctoral dissertations.

2024 *Salvador Rey Gomez, Benjamin Pierre Riviere*

ERIC TEMPLE BELL UNDERGRADUATE MATHEMATICS RESEARCH PRIZE

This prize is given to one or more juniors or seniors for outstanding original research in mathematics.

2024 *Brian Boan Yang*

THE BHANSALI FAMILY PRIZE IN COMPUTER SCIENCE

Established in 2001 by Vineer Bhansali (B.S. '87, M.S. '87) in memory of his grandfather, Mag Raj Bhansali, this prize is given to an undergraduate student for outstanding research in computer science in the current academic year. Awardees are selected by a committee of computer science faculty.

2024 *Manav Kant, Eric Yingke Ma, Andrei Cristian Staicu*

RICHARD G. BREWER PRIZE IN PHYSICS

This prize recognizes a first-year with the most interesting solutions to the Physics 11 "hurdles," demonstrating intellectual promise and creativity at the very beginning of their Caltech education.

2021 *Kevin Chang*

ROLF D. BUHLER MEMORIAL AWARD IN AERONAUTICS

This award is given to an aeronautics student for outstanding academic achievement in the master's program.

2024 *Erina Yamaguchi*

THE CALTECH Y RISE SERVICE AWARD

Established in 2021, the Caltech Y Rise Service Award recognizes exceptional service provided by Rise Program tutors. This award highlights the dedication and outstanding contributions of individuals who exemplify the Caltech Y's commitment to service.

2024 *Zoila Estefani Jurado Quiroga*

THE W. P. CAREY & CO. PRIZE IN APPLIED MATHEMATICS

Established by William P. Carey and W. P. Carey & Co., Inc., this prize is awarded to outstanding doctoral dissertations in applied mathematics in the current academic year. Awardees are selected by a committee of applied mathematics faculty.

2024 *Daniel Victor Leibovici, Nicholas Hao Nelsen*

BONNIE CASHIN PRIZE FOR IMAGINATIVE THINKING

Awarded annually, this prize is given to the entering first-year who wrote the most imaginative essays in the application for their first-year admission.

2021 *Leah Sofia Soldner*

IAN CAMPBELL AWARD

The Ian Campbell Award is for outstanding performance in field geology courses during this academic year.

2024 *Paolo Rosario Sanchez, Maria Nicole Schmeer*

CENTENNIAL PRIZE FOR THE BEST THESIS IN MECHANICAL AND CIVIL ENGINEERING

This prize, awarded annually to a Ph.D. candidate in applied mechanics, civil engineering, or mechanical engineering, is given to a student whose doctoral thesis is judged to be the most original and significant by a faculty committee appointed annually by the executive officer for mechanical and civil engineering. This prize was established with gifts from alumni following the Mechanical Engineering Centennial Celebration in 2007.

2024 *Nicholas Hao Nelsen*

RICHARD BRUCE CHAPMAN MEMORIAL AWARD

This award is given to a graduate student in hydrodynamics who has distinguished themselves in research in the Division of Engineering and Applied Science.

2024 *Peter John Gunnarson, Matthew Xuhuai Yao*

BEN P.C. CHOU DOCTORAL PRIZE IN IST

This prize recognizes outstanding doctoral dissertations in the broad area of information science and technology. The prize was established by Ben P.C. Chou's wife, June, and his son, Scott (B.S. '86), as a lasting tribute to his lifetime dedication to the pursuit of scholarly research and foregoing personal gain in favor of always doing the right thing for society.

2023 *Jennifer Jianing Sun*

2024 *Hsin-Yuan Huang*

ROBERT F. CHRISTY PRIZE FOR AN OUTSTANDING FIRST-YEAR IN PHYSICS

This prize is awarded annually to a first-year who has demonstrated excellence in physics. Established in 2018, this prize honors the memory of Robert F. Christy, former provost and professor of theoretical physics at Caltech.

2022 *Stephanie Yuanying Chen*

ROBERT F. CHRISTY PRIZE FOR AN OUTSTANDING SENIOR IN THEORETICAL PHYSICS

This prize is awarded annually to a senior who has demonstrated excellence in theoretical physics through research and/or coursework. Established in 2018, this prize honors the memory of Robert F. Christy, former provost and professor of theoretical physics at Caltech.

2024 *Thomas Henry Clark, Andrei Călin Diaconu*

ROBERT F. CHRISTY PRIZE FOR AN OUTSTANDING DOCTORAL THESIS IN THEORETICAL PHYSICS

This prize is given annually to a student who has produced an outstanding thesis in theoretical physics. Established in 2018, this prize honors the memory of Robert F. Christy, former provost and professor of theoretical physics.

2024 *Shouzhen Gu, Keefe Edward Alden Mitman*

DONALD S. CLARK MEMORIAL AWARD

This award is given to two juniors in recognition of service to the campus community and academic excellence. Preference is given to students in the Division of Engineering and Applied Science and to those in chemical engineering. The awards honor the work of Professor Clark, class of 1929, both in the field of engineering and in his service to the Alumni Association.

2023 *Heidi Elizabeth Redmond, Parul R Singh*

CMS AND IST GRADIENT FOR CHANGE AWARD

The CMS and IST Gradient for Change Awards honor students, postdocs, staff, and faculty in the Caltech community who demonstrate exceptional efforts to make Caltech and/or the broader scientific community a more diverse, equitable, and inclusive environment. The awards recognize and highlight individual contributors or small teams who are considered agents of change, community leaders, and/or allies to historically marginalized group(s) in the information sciences, including computer science, applied mathematics, and beyond.

2022 *Apurva Srinivas Badithela, Joy Shi*

DONALD COLES PRIZE IN AERONAUTICS

This prize is given to the graduating Ph.D. student in aeronautics whose thesis displays the best design of an experiment or the best design for a piece of experimental equipment.

2024 *Wesley Minlai Yu*

FRANCE A. CÓRDOVA GRADUATE STUDENT FUND

This fund provides resources for one to three graduate students annually to support research-related expenses. Each awardee shall be recognized as either a Neugebauer, Garmire, or Tombrello Scholar. Preference shall be given to student(s) studying broadly in areas in which professors Gerry Neugebauer, Gordon Garmire, and Thomas Tombrello made contributions.

2022 *Nitika Yadlapalli Yurk, Garmine Scholar*

JAMES A. CULLEN MEMORIAL FELLOWSHIP FUND

This memorial fund is awarded annually to a graduate student or students who have demonstrated outstanding academic achievement in physics.

2019 *Cyuan-Han Chang*

2023 *Adam Lawrence Shaw*

2024 *Isaac Norman Legred*

DEANS' CUP

This award is presented to undergraduates whose concern for their fellow students has been demonstrated by their persistent efforts to improve the quality of undergraduate life and by effective communication with members of the faculty and administration.

2023 *Alexis Huiyu Wang*

2024 *Lucas Layne Brass Pabarcius, Winter Zed Pearson, Heidi Elizabeth Redmond*

DEMETRIADES-TSAFKA-KOKKALIS PRIZE IN BIOTECHNOLOGY OR RELATED FIELDS

This prize, awarded annually, recognizes a Ph.D. candidate for the best thesis, publication, or discovery in biotechnology or related fields at the Institute in the preceding 12 months. This prize is made possible by a gift from Anna Kokkalis Demetriades and Sterge T. Demetriades (Eng. '58).

2024 *Anand Kumar Muthusamy*

DEMETRIADES-TSAFKA-KOKKALIS PRIZE IN NANOTECHNOLOGY OR RELATED FIELDS

This prize, awarded annually, recognizes a Ph.D. candidate for the best thesis, publication, or discovery in nanotechnology or related fields at the Institute in the preceding 12 months. This prize is made possible by a gift from Anna Kokkalis Demetriades and Sterge T. Demetriades (Eng. '58).

2024 *Andrei Ruskuc*

CONSTANTIN G. ECONOMOU MEMORIAL PRIZE

This prize is awarded to a chemical engineering graduate student distinguished by outstanding research accomplishments and exemplary attitude while fulfilling candidacy requirements for the Ph.D. degree.

2019 *Marjorie Theresa Buss*

EVERHART DISTINGUISHED GRADUATE STUDENT LECTURER AWARD

This award recognizes graduate students for their exemplary presentation skills and research ability. Awardees participate in the Everhart Lecture Series, a forum that is meant to encourage interdisciplinary interaction among graduate students and faculty, to share ideas about recent research developments.

2023 *Kathryn Annette Plant*

2024 *Peiwei Chen, Keefe Edward Alden Mitman*

DORIS EVERHART SERVICE AWARD

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

2023 *Bertha Alicia Mireles Cisneros, Catherine Jeanette Ko*

LAWRENCE L. AND AUDREY W. FERGUSON PRIZE

The Ferguson prize is awarded to the graduating Ph.D. candidate in biology and biological engineering who has produced the outstanding doctoral thesis for the past year.

2024 *John Alan Ciemniecki*

RICHARD FEYNMAN PRIZE IN THEORETICAL PHYSICS

This prize is awarded to a senior on the basis of excellence in theoretical physics.

2024 *Ishaan Kannan*

HAREN LEE FISHER MEMORIAL AWARD IN JUNIOR PHYSICS

This recognizes a junior physics major who demonstrates the greatest promise of future contributions in physics.

2023 *Nachiket Dhiren Bhanushali*

HENRY FORD II SCHOLAR AWARD

This award recognizes either the engineering students with the best academic record at the end of the third year of undergraduate study or the engineering students with the best first-year record in the graduate program.

2023 *Kyle Andrew Lethander, Kyle Chang McCandless, Rithvik Reddy Musuku, Patrick K Rim*

JACK E. FROEHLICH MEMORIAL AWARD

This award, established by the family and friends of the late Jack E. Froehlich (B.S. ’47, Ph.D. ’50), who did his undergraduate and graduate work at Caltech and was later the project manager for Explorer I for the Jet Propulsion Laboratory, provides an award to one or two juniors in the upper 5 percent of their class who show outstanding promise for a creative professional career. The recipients are selected by the deans and the Undergraduate Academic Standards and Honors Committee.

2023 *Virginia Mae Canestraight*

DR. ALLEN AND CHARLOTTE GINSBURG SCHOLARS

This award is given to rising seniors demonstrating academic excellence and outstanding leadership skills as well as a commitment to the visual and performing arts program.

2024 *Tanmay Gupta, Riley Lauren Tam*

BARRY M. GOLDWATER SCHOLARSHIP

This scholarship program honoring Senator Barry Goldwater was designed to foster and encourage outstanding students to pursue careers in the fields of mathematics, the natural sciences, and engineering. The Goldwater Scholarship is the premier undergraduate award of its type in these fields.

2021 *Patryk Tomasz Kozlowski*

2023 *Thomas Henry Clark, Lily Kathleen DeBell, Krishna Kishore Reddy Pochana*

GPS AWARD FOR ACADEMIC EXCELLENCE IN RESEARCH

Awarded to a GPS graduate student for outstanding research achievements.

2024 *Krittanon Sirorattanakul, Sarah Soojin Zeichner*

GRADUATE DEAN'S AWARD

This award is given to a Ph.D. candidate or candidates who, throughout their graduate study at the Institute, have made great contributions to graduate life and whose qualities of leadership and responsibility have been outstanding.

2024 *David Abraham Cagan*

GEORGE W. AND BERNICE E. GREEN MEMORIAL PRIZE

This prize, awarded annually, recognizes an undergraduate student in any class for original research, an original paper or essay, or other evidence of creative scholarship beyond the normal requirements of specific courses. The student is selected by the deans and the Undergraduate Academic Standards and Honors Committee.

2024 *Cameron Elise Scantlin, Amy-Doan Phuong Vo*

THE LUCY GUERNSEY SERVICE AWARD

This award is awarded to one or two students who have provided exceptional service to the Caltech Y and/or the community, are involved with service projects, have demonstrated leadership in community and volunteer service efforts, and exemplify a spirit of service.

2018 *Zoila Estefani Jurado Quiroga*

2019 *Kyle Allen Virgil*

2023 *Peiwei Chen, Suchitra Sakuntala Dara*

HANS G. HORNUNG PRIZE

This prize is awarded for the best oral Ph.D. defense presentation by a student advised by aerospace faculty. The decision is made by a committee of students who attend all thesis presentations for the year.

2024 *Alexander Huai-Cheng Wen*

THE HOUSES AND RESIDENCES IDEA (INCLUSION, DIVERSITY, EQUITY, AND ACCESSIBILITY) AWARD

The Houses and Residences Award celebrates exceptional individuals who excel in fostering a vibrant and inclusive environment within the houses and residences. Their unwavering commitment ensures that each resident feels a deep sense of belonging and support. These leaders drive positive transformation by nurturing inclusive dialogues and instilling a strong sense of community through their advocacy. Through their efforts, they create an environment where everyone can flourish in houses and residences.

2024 *Emily Hyein Choe, Suchitra Sakuntala Dara, Cameron Elise Scantlin*

PATRICK HUMMEL AND HARRY GRAY TRAVEL FUND

Established as a joint gift from Carla and Paul Hummel, Patrick Hummel, and Shirley and Harry Gray, Caltech's Arnold O. Beckman Professor of Chemistry and founding director of the Beckman Institute, the endowed fund supports undergraduate and graduate travel opportunities that promote professional and leadership development and broaden students' perspectives as engaged, responsible citizens of the world.

2022 *Turner McNeal Bumbary, Brandon Guo*

2023 *Niyati Desai*

2024 *Elliott Patrick Mueller, Riley Lauren Tam*

RICHARD H. JAHNS TEACHING AWARD

The Richard H. Jahns Teaching award is given in recognition of outstanding achievement as a graduate teaching assistant. Dick Jahns got his B.S. and Ph.D. in Geology from Caltech and from 1946–1960 was faculty here. He was known for giving superb lectures, legendary field trips, and spending long hours mentoring students. Dick said, "the most exciting and rewarding aspect of teaching is seeing already able young people come alive intellectually and seeing the emergence in them of a basic drive, enthusiasm, and enjoyment."

2020 *William Richard Palfey*

2021 *Ren Thomas Caburnay Marquez, Clare Emilie Elmendorf Singer*

BIBI JENTOFT-NILSEN MEMORIAL AWARD

Family and friends of Bibi Jentoft-Nilsen (B.S. '89) have provided this award in her memory. This award recognizes a junior or senior who exhibits outstanding qualities of leadership and who actively contributes to the quality of student life at Caltech.

2024 *Suchitra Sakuntala Dara*

IDEA (INCLUSION, DIVERSITY, EQUITY, AND ACCESSIBILITY) ALLYSHIP & ADVOCACY AWARD

This award is given to an individual who promotes the needs and experiences of all members of the Caltech community and challenges systemic barriers that impede members of marginalized identities from contributing their skills and talents at Caltech. Such actions include raising awareness, inspiring action, cultivating an inclusive environment, advocating for an equitable campus climate, and leading efforts to dismantle structural barriers that uphold oppression and discrimination.

2024 *Tsam Mang Melinda Chan*

IDEA (INCLUSION, DIVERSITY, EQUITY, AND ACCESSIBILITY) OUTREACH & EDUCATION AWARD

This award is given to an individual who teaches and inspires interest in inclusion, diversity, equity, and accessibility in the community at large through learning experiences and service. This person takes the initiative to participate in civic engagement through volunteerism, service-learning, and teaching initiatives as a change agent in the community outside of Caltech.

2024 *Joy Shi*

SCOTT RUSSELL JOHNSON GRADUATE DISSERTATION PRIZE IN MATHEMATICS

This prize is awarded for the best graduate dissertation in mathematics.

2024 *Ismail Abouamal*

KALAM PRIZE FOR AEROSPACE ENGINEERING

This prize, made possible by Dr. Abdul Kalam, the 11th president of India and an aerospace engineer, is awarded to a student in the aerospace engineering master's program whose academic performance was exemplary and who shows high potential for future achievements at Caltech.

2024 *William Frederick Francis Feasey, Tara Kamala Venkatadri*

R.K. KAR AWARD FOR RESEARCH IN PHYSICS

This award is given annually to an outstanding graduate student who is exceptional in their physics studies and research (emphasis on condensed matter physics).

2023 *Yuchen Han*

DR. JAMES KING JR. STUDENT DIVERSITY AWARD

The Dr. James King Jr. award is given to individuals who stand out as strong supporters of diversity within the Caltech student body. Dr. King is the first African American to receive a Ph.D. from Caltech in chemical physics (at that time it was chemistry and physics). Along with his many accomplishments as a scientist and the Assistant Laboratory Director at JPL, he had a reputation for mentoring students and encouraged diversity in the Caltech student body.

2021 *Renee Zurui Wang*

D. S. KOTHARI PRIZE IN PHYSICS

This prize is awarded to a graduating senior in physics who has produced an outstanding research project during the year.

2024 *Patill Takouhi Daghlian, John Edward Parker, Zitian Ye*

MARGIE LAURITSEN LEIGHTON PRIZE

This prize is awarded to one or two undergraduate women who are majoring in physics or astrophysics, and who have demonstrated academic excellence.

2023 *Riley Lauren Tam*

JOHN O. LEDYARD PRIZE FOR GRADUATE RESEARCH IN SOCIAL SCIENCE

The prize rewards the best second-year paper by a graduate student in Social Science or Social and Decision Neuroscience. The prize was established by Susan G. Davis in recognition of John O. Ledyard's dedication to developing graduate students as independent researchers and his service to the Division of the Humanities and Social Sciences. The prize is awarded annually by a committee of social science faculty to a sole-authored work.

2019 *Joanna Nanami Huey*

2020 *Meng-Jhang Fong*

2021 *Po-Hsuan Lin*

2023 *Zhenlin Kang*

MARI PETERSON LIGOCKI '81 MEMORIAL AWARD

This award is given to a student who has improved the quality of student life at Caltech through their personal character. It recognizes the student who provides quiet support and kind encouragement to peers. This fund was established by Mr. Jose F. Helu Jr. (B.S. '79) to honor the memory of Mari Peterson Ligocki, who possessed these qualities.

2024 *Cameron Elise Scantlin*

GORDON MCCLURE MEMORIAL COMMUNICATIONS PRIZE

This prize is awarded to undergraduate students for excellence in written and oral communication skills. Awards will be given in the following fields: English, history, and philosophy.

2024 *Heidi Elizabeth Redmond, English*

THE HERBERT NEWBY MCCOY AWARD

This award is given to one or more chemistry doctoral students for outstanding contributions to the science of chemistry.

2024 *Marjorie Theresa Buss, Alexander Cusumano*

MARY A. EARL McKINNEY PRIZE IN LITERATURE

The Mary A. Earl McKinney Prize in Literature was established in 1946 by Samuel P. McKinney, M.D., of Los Angeles. Its purpose is to promote proficiency in writing. The terms under which it is given are decided each year by the literature faculty. It may be awarded for essays submitted in connection with regular literature classes or awarded on the basis of a special essay contest.

2022 *Lily Kathleen DeBell, poetry*

2024 *Joseph Hakkyu Kim, prose*

MECHANICAL ENGINEERING AWARD

This award recognizes a B.S. candidate in mechanical engineering whose academic performance has demonstrated outstanding original thinking and creativity, as judged by a faculty committee appointed each year by the executive officer for mechanical engineering.

2024 *Kyle Andrew Lethander*

MERCK INDEX AWARD

This award is given to one or more graduating students who have demonstrated outstanding achievement in the field of chemistry.

2024 *Carlos Eduardo Del Angel Aguilar*

NEW HORIZONS DIVERSITY, EQUITY AND INCLUSION AWARD

With the New Horizons Award, the Division of Engineering and Applied Science annually recognizes and honors individuals within the EAS community who have actively contributed to our goal to be a diverse, equitable, and inclusive engineering community. The award is available to members of the EAS community, including current students, postdoctoral scholars, staff, and faculty, whose activities have impact and may include demonstrated leadership, advocacy and community organizing, development of equity and inclusion resources, and engagement in engineering outreach to local schools or communities.

2024 *Ankita Nandi*

PARK S. NOBEL PRIZE FOR EXCELLENCE IN BIOLOGY AND BIOLOGICAL ENGINEERING

This prize recognizes one or two undergraduate students demonstrating outstanding achievements within the Division of Biology and Biological Engineering at Caltech.

2024 *Alex Burr, Christopher Peter Pukszta*

ROBERT L. NOLAND LEADERSHIP AWARD

This award is given to one or more undergraduate students who exhibit qualities of outstanding leadership, which are most often expressed as personal actions that have helped other people and that have inspired others to fulfill their capabilities. The scholarship was set up by Ametek in 1978 in honor of its president, Robert L. Noland (BS '41), a Caltech alumnus.

2023 *David J. Melisso, Gabriella Patricia Twombly*

2024 *Alex Burr, Nachiket Dhiren Bhanushali, Emily Hyein Choe*

OFFICE OF STUDENT EXPERIENCE AWARDS

These awards recognize student leaders who have made a significant impact on their Caltech community by demonstrating their efforts to improve the quality of campus life by displaying effective communication with Caltech administration and their peers. These leaders can be at any student level or within a team. They are determined by and at the discretion of the Office of Student Experience. The Office of Student Experience has presented awards such as: Student (Residential) Experience Leadership Award, Student (Residential) Experience Team Award, Student (Residential) Experience Outstanding Leader, Student (Residential) Experience Emerging Leader, Student Residential Life Award, and Student Experience Emerging Leadership.

2023 *Cameron Elise Scantlin—Residential Experience*

2024 *Sarah Amal Kabboul, Katelyn Angela Sulett, Kayton Khan Truong—Outstanding Leadership Awards*

2024 *Eric Yingke Ma—Outstanding Club/Organization Award, Science Olympiad*

2024 *Rishabh Bose. Emily Hyein Choe, Andrew Hans Pasco, Aditee Amit Prabhutendolkar, Megan Laura Robertson, Parul R Singh, Tomás Ariel Wexler, Leo Alexander Williams—Outstanding Team Award, IHC*

DR. NAGENDRANATH REDDY BIOLOGICAL SCIENCES THESIS PRIZE

The Reddy prize is awarded to the graduating female Ph.D. candidate in the Division of Biology and Biological Engineering who has produced the outstanding thesis in the biological sciences or bioengineering for the past year.

2024 *Mengyu Liu*

HOWARD REYNOLDS MEMORIAL PRIZE IN GEOLOGY

This prize is awarded to an undergraduate student who demonstrates the potential to excel in the field of geology and who actively contributes to the quality of Caltech student life.

2022 *Megan Laura Robertson*

2024 *Alexander Koutsoukos*

HERBERT J. RYSER MEMORIAL SCHOLARSHIP

This scholarship is awarded to undergraduate students for academic excellence, preferably in mathematics.

2022 *Necef Alp Kavrut*

2023 *Charlotte Helen Borcherds, Yakov Shalunov*

SANPIETRO TRAVEL PRIZE

This prize is awarded to one or more sophomores, juniors, or seniors to fund an adventurous and challenging summer travel experience that expands the recipients' cultural horizons and knowledge of the world.

2022 *Lily Kathleen DeBell, Hannah Mary Fisher*

2024 *Andrew Hans Pasco, Perry Florent Samimy*

RICHARD P. SCHUSTER MEMORIAL PRIZE

This prize is awarded to one or more juniors or seniors in chemistry or chemical engineering on the basis of financial need and academic promise.

2024 *Tiba Hussain Hamza, Catherine Jeanette Ko*

ELEANOR SEARLE PRIZE IN LAW, POLITICS, AND INSTITUTIONS

The Eleanor Searle Prize was established in 1999 by friends and colleagues to honor Eleanor Searle, who was the Edie and Lew Wasserman Professor of History at Caltech. The prize is awarded annually to an undergraduate or graduate student whose work in history or the social sciences exemplifies Eleanor Searle's interests in the use of power, government, and law.

2024 *Sarah Hashash*

ERNEST E. SECHLER MEMORIAL AWARD IN AERONAUTICS

This award recognizes an aeronautics student who has made the most significant contribution to the teaching and research efforts of GALCIT (Graduate Aerospace Laboratories of the California Institute of Technology). Preference is given to students working in structural mechanics.

2022 Josefine Berta Marie Graebener

RENUKA D. SHARMA AWARD

This award recognizes a sophomore chemistry major for outstanding performance as a first-year.

2022 Lucas Enrico Abounader, Catherine Jeanette Ko

C. S. SHASTRY PRIZE

This prize is awarded to a sophomore Ph 11 alumnus, majoring in physics, to provide support for a summer research project conducted at Caltech. The winner is chosen based on passion, curiosity, and demonstrated ability.

2021 Patill Takouhi Daghlian

JOHN STAGER STEMPLE MEMORIAL PRIZE IN PHYSICS

This prize is awarded annually to a graduate student in physics for outstanding progress in research as demonstrated by an excellent performance on the oral Ph.D. candidacy exam.

2022 Keefe Edward Alden Mitman

2023 Hyunjin Kim, Nabha Shah

PAUL STUDENSKI MEMORIAL FUND

This travel grant is awarded by the Caltech Y to a Caltech undergraduate who would benefit from time away from the academic community in order to obtain a better understanding of self and of their plans for the future.

2023 Ekta Mukeshkumar Patel

2024 Athena Kolli, Ellen Min

TAUSSKY-TODD MATHEMATICS PRIZE FUND

This prize provides support to a female undergraduate math major for a summer experience to enrich their mathematical education.

2022, 2023 Stephanie Yuanying Chen

THREE MINUTE THESIS

Originally conceived by the University of Queensland and jointly sponsored by the Caltech Library and the Graduate Studies Office, the Three Minute Thesis (3MT®) competition challenges Caltech graduate students to explain their research in an engaging and clear three-minute talk intended for a non-specialist audience.

2022 *Skyler Danielle Ware, Third Place*

2023 *Niyati Desai, First Place*

Skyler Danielle Ware, Second Place

2024 *Elliott Patrick Mueller, Third Place*

Ryan Asa Rubenzahl, People's Choice

THOMAS A. TISCH PRIZE FOR UNDERGRADUATE TEACHING IN COMPUTING AND MATHEMATICAL SCIENCES

The Undergraduate Teaching in CMS Awards were established in 2016 with a gift from Microsoft and then endowed through the generosity of Thomas A. Tisch (BS '61). The prize and honorarium are awarded to an undergraduate student for outstanding teaching and course development in computing and mathematical sciences. Awardees are selected by a committee of CMS faculty members.

2024 *Neil C Janwani*

FREDRICK J. ZEIGLER MEMORIAL AWARD

The Fredrick J. Zeigler Memorial Award was established in 1989 to honor Fredrick J. Zeigler (B.S. '76), an applied mathematics major. This award recognizes an outstanding sophomore or junior in pure or applied mathematics for their excellence in scholarship as demonstrated in class activities or in the preparation of an original paper or essay in any subject area.

2022 *Brian Boan Yang*

2023 *Stephanie Yuanying Chen, Theresa Zhang*

Caltech | Alumni

Congratulations, 2024 graduates! Through hard work and talent, you have earned a degree that places you among the most accomplished and dynamic communities in the world. The resilience and agility you demonstrated to persevere through the COVID-19 pandemic adds to the already solid foundation for your success in this ever-changing world. Since 1891, Institute alumni have been making profound and positive impacts on the world. Your experience at Caltech has prepared you to carry on the legacy, and the Caltech Alumni Association (CAA) is honored to help you with your journey. We keep you connected to a community of 25,757 Techers living around the world who share your experiences and know your capabilities. We also believe that our best work results from living our best lives, so the Caltech alumni community uplifts the human element of the Caltech experience. We are dedicated to offering Techers more than just connection. Are you looking for the right job? Do your relationships foster your inspiration? Through programs like the Techer Professional Network, Caltech In… (regional events), Tables for Techers, Seminar Day, Alumni Weekend and Reunions, Techer Alumni Tours, and so much more, the CAA will help you realize the full potential of your extended Techer family, personally and professionally. We encourage you to get involved with the CAA and stay connected with your Caltech community. When your efforts are multiplied by the power of this community, so much more is possible.

On behalf of the Caltech Alumni Association, I welcome you as members of the alumni community. Please visit alumni.caltech.edu to see how the CAA can help in this next phase of your Caltech journey.

Jennifer Lee, PhD (PhD '10)
Chair, Board of Directors, Caltech Alumni Association
alumni.caltech.edu

ACADEMIC REGALIA AT CALTECH

The symbolism in the academic regalia worn by graduates at Commencement dates back many centuries. Although some aspects of the costume vary among academic institutions, many basic elements are similar. The cap or mortarboard is based on the medieval biretta worn by scholars and artists. The gown's cut and velvet trimming indicate academic rank. The doctoral hood may display the academic field of the wearer's degree and the institution from which it was received. In addition, tassels, cords, and medallions denote various honors awarded by the institution or academic societies.

Caltech graduates receiving a doctorate wear a black velvet cap, robes trimmed in blue velvet, and a blue velvet doctoral hood lined in a chevron pattern of orange and white. Those receiving a bachelor's or master's degree wear a simple black gown and a black mortarboard or cap.

In addition to these traditional items, an undergraduate may also choose to wear a colored stole to the graduation ceremony. While orange stoles denote Caltech pride, other colors may be chosen to represent the undergraduate's residential affiliation.

There are currently eight undergraduate houses at Caltech (**Avery**, **Blacker**, **Dabney**, **Fleming**, **Lloyd**, **Page**, **Ricketts**, and **Venerable**), and three undergraduate residences (**Bechtel**, **Braun**, and **Marks**).

- The students of the **Bechtel**, **Braun**, and **Marks** residences who affiliate with a house may choose to wear that house's tassel or stole.
- A ***purple stole or a purple and white tassel*** designates **Avery House**; Avery's house color is purple.
- A ***silver stole or a black and white tassel*** designates **Blacker House**; Blacker's house color is black.

- A ***green stole or tassel*** designates **Dabney House**; Dabney's house color is green.
- A ***red stole or tassel*** designates **Fleming House**; Fleming's house color is red.
- A ***gold stole or a yellow and white tassel*** designates **Lloyd House**; Lloyd's house color is gold.
- A ***blue stole or tassel*** designates **Page House**; Page's house color is blue.
- A ***maroon stole or tassel*** designates **Ricketts House**; Ricketts's house color is maroon.
- A ***navy blue stole or tassel*** designates **Venerable House**; Venerable's house color is navy blue.

GAUDEAMUS IGITUR (LET US REJOICE, THEREFORE)

The song *Gaudeamus igitur* has become an academic standard, sung around the world at graduations and other university ceremonies. Some verses of this anthem go back to 13th-century France, where they appear in a Latin hymn on the transitory nature of life. By the middle of the 18th century, students at German universities had combined the original medieval verses with new ones—including the now famous opening verse that begins *Gaudeamus igitur, juvenes dum sumus* ("Let us rejoice, therefore, while we are young")—to create a song that celebrated youth and the student life, in all of its highbrow (and lowerbrow) aspects. In the mid-19th century, the song crossed the Atlantic to Yale, where still more verses were added for use at academic ceremonies.

Since then, verses have been added or subtracted for different occasions. The song also has been translated into many different languages, sometimes faithfully, sometimes quite imaginatively.

The verses below (which have been translated as closely as possible from Latin into English) combine the youthful energy and irreverent attitude towards authority that characterize Caltech students with a ringing endorsement of the academic enterprise to which they are devoted. The verses celebrate the Institute and the community of scholars—past, present, and future—who have done and will continue to do its work.

Gaudeamus igitur Iuvenes dum sumus. Post iucundam iuventutem Post molestam senectutem Nos habebit humus.	Let us rejoice, therefore, While we are young. After a pleasant youth After a troubling old age The earth will have us.
Ubi sunt qui ante nos In mundo fuere? Vadite ad superos Transite in inferos Hos si vis videre.	Where are they who, before us, Were in the world? Go to the heavens Cross over into the infernal regions If you wish to see them.
Vivat academia! Vivant professores! Vivat membrum quodlibet; Vivant membra quaelibet; Semper sint in flore.	Long live the academy! Long live the professors! Long live each student; Long live the whole community; For ever may they flourish!
Alma Mater floreat, Quae nos educavit; Caros et commilitones, Dissitas in regiones Sparsos, congregavit.	May our Alma Mater flourish, Who taught us; Who gathered together Dear ones and comrades, Scattered in remote places.

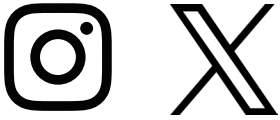
Translation by Warren C. Brown, Professor of History

HAIL CIT

(Caltech alma mater)

arranged by Raymond Burkhart

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



JOIN THE CELEBRATION ON SOCIAL MEDIA!

We invite you to celebrate and honor our 2024 graduates. Post your well-wishes, words of wisdom, and congratulations with #Caltech2024 on Instagram and X (Twitter).