

# REVOLUTIONS 250 IN SCIENCE

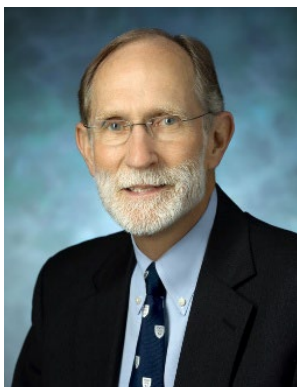
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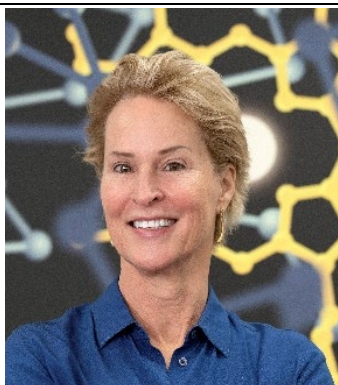
## ***Revolutions in Science: Discovery, Imagination, and the Future***

June 25, 2026, 8:30 am–5:00 pm ET · National Academy of Sciences Building · Washington, DC

### **Presenter and Organizing Committee Biographies**



**PETER AGRE** (Organizing Committee) joined the faculty at Johns Hopkins in 1984 and rose to Professor of Biological Chemistry and Professor of Medicine. In 1992, Agre's lab became widely known for discovering the aquaporins, a family of water channel proteins found throughout nature. Aquaporins are responsible for numerous human physiological processes and are implicated in multiple clinical disorders. For this Agre shared the 2003 Nobel Prize in Chemistry. After serving as Vice Chancellor of Science and Technology and James B. Duke Professor of Cell Biology (2005-2007), Agre returned to Johns Hopkins where he is a Bloomberg Distinguished Professor. From 2008-2023 Agre directed the Malaria Research Institute at the Bloomberg School of Public Health and led field research in rural Zambia, Zimbabwe, and DR Congo. Elected to the National Academy of Sciences and National Academy of Medicine, Agre chaired the Committee on Human Rights. From 2009-2011, Agre served as President and Chair of the Board of Advisors of the AAAS, and led visits by US scientists to North Korea, Cuba, Burma, and Iran. Since 2024, Agre has worked to develop programs in Science Diplomacy. Dr. Agre is a graduate of Johns Hopkins (M.D. 1974), medicine residency at University Hospitals Cleveland, and oncology fellowship at UNC Chapel Hill.



**FRANCES H. ARNOLD** is the Linus Pauling Professor of Chemical Engineering, Bioengineering, and Biochemistry and the Director of the Benjamin and Donna Rosen Bioengineering Center at the California Institute of Technology. Arnold served as external co-chair of the President's Council of Advisors on Science and Technology (PCAST) for President Joe Biden, from 2021 to 2025. She was the first American woman to receive the Nobel Prize in Chemistry (2018). Arnold pioneered directed enzyme evolution and has used directed evolution to optimize biocatalysts for applications in alternative energy, chemicals, and medicine. Her research has

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been recognized with numerous awards, including the Charles Stark Draper Prize of the National Academy of Engineering (2011), the US National Medal of Technology and Innovation (2011), and the Millennium Technology Prize (2016). She is a member of the US National Academies of Science, Medicine, and Engineering and was appointed to the Pontifical Academy of Sciences by Pope Francis in 2019.



**ANDREW BACZEWSKI** is a Distinguished Scientist in the Center for Computing Research at Sandia National Laboratories, a co-director of the Quantum Algorithms and Applications Collaboratory, and a Research Professor in physics and astronomy at the University of New Mexico. He received a PhD in physics and electrical engineering from Michigan State University in 2013. Andrew's technical background is in computational physics, and he has worked in areas ranging from nanophotonics, to plasma diagnostics, to qubit modeling and characterization. Since 2018, he has been leading a team of Sandia scientists who are developing a growing portfolio of scientific applications for future fault-tolerant quantum computers. Andrew is a member of the American Physical Society and still grateful for the support that he received as an early career scientist from the NSF's Graduate Research Fellowship. In his free time, he enjoys finding new and exciting ways to avoid screens in the great outdoors and has only had to be rescued by helicopter once.



**SARA BEERY** is the Homer A. Burnell Career Development Professor in the MIT Faculty of Artificial Intelligence and Decision-Making. She received her PhD in Computing and Mathematical Sciences at Caltech, where she was advised by Pietro Perona. Her research focuses on building computer vision methods that enable global-scale environmental and biodiversity monitoring across data modalities, tackling real-world challenges including geospatial and temporal domain shift, learning from imperfect data, fine-grained categories, and long-tailed distributions. Her work has been recognized with a Schmidt Sciences AI2050 Early Career Fellowship, an NSF CAREER Grant, the MIT EECS Outstanding Educator Award, the Amori Doctoral Prize, an Amazon AI for Science Fellowship, a PIMCO Data Science Fellowship, and an NSF GRFP. She partners with industry, nongovernmental organizations, and government agencies to deploy her methods in the wild worldwide. She works to increase access to AI skills through interdisciplinary capacity building and education, and has founded the AI for Conservation slack community, founded and directs the

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Workshop on Computer Vision Methods for Ecology, and co-PIs the NSF/NSERC Global Center on AI and Biodiversity Change.

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**TANYA BERGER-WOLF** is a Professor of Computer Science Engineering, Electrical and Computer Engineering, and Evolution, Ecology, and Organismal Biology at the Ohio State University, where she is also the Director of the Translational Data Analytics Institute. A pioneer in AI for ecology, biodiversity, and conservation, she leads the NSF-funded Imageomics Institute and the US-Canada co-funded AI and Biodiversity Change (ABC) Global Center. Dr. Berger-Wolf serves on advisory and governance bodies including the US National Academies Life Sciences and Biotechnology Program Advisory Committee, the Global Partnership on AI (GPAI)/OECD, National Ecological Observatory Network (NEON), and The Nature Conservancy. She co-led Wild Me (now part of Conservation X Labs), one of the first AI conservation nonprofits, where she co-created Wildbook, recognized by UNESCO for advancing the UN Sustainable Development Goals. Her contributions have earned numerous honors, including recognition as the AI 100 Global Thought Leaders by H20.ai. She is a Fellow of the Association for the Advancement of Artificial Intelligence (AAAI) and the American Association for the Advancement of Science (AAAS).

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**HEATHER BERLIN** (Emcee) is a neuroscientist, clinical psychologist, and Associate Clinical Professor of Psychiatry and Neuroscience at the Icahn School of Medicine at Mount Sinai in NY. She explores the neural basis of impulsive and compulsive psychiatric and neurological disorders with the goal of developing novel treatments. She is also interested in the brain basis of consciousness, dynamic unconscious processes, and creativity. Berlin is a committee member of the National Academy of Sciences and a passionate science communicator. Berlin received her doctorate from the University of Oxford, Master of Public Health from Harvard University, and Master's in Psychology from the New School for Social Research. She completed her NIMH post-doctoral fellowship at the Icahn School of Medicine at Mount Sinai and trained in clinical neuropsychology at Weill Cornell Medicine in the Department of Neurological Surgery. She was a Visiting Professor at the New York Psychoanalytic Society and Institute, Vassar College, the Swiss Federal Institute of Technology/University of Zurich, and The Hebrew University of Jerusalem.

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**SAAD BHAMLA** is currently an associate professor in the School of Chemical and Biomolecular Engineering at Georgia Tech and will be joining CU Boulder's Department of Chemical and Biological Engineering and the BioFrontiers Institute as a faculty member in August 2026. He is also a co-founder of Piezo Therapeutics and a National Geographic Explorer. Bhamla's research spans biomechanics, bioinspired engineering, global health technologies, and science communication. His interdisciplinary work explores how biological systems across species can inspire new scientific understanding and engineering solutions, including studies of insect fluid dynamics, collective locomotion, and low-cost biomedical devices. He is widely recognized for developing accessible technologies such as the Paperfuge, an ultra-low-cost centrifuge, as well as other frugal innovations designed to expand access to healthcare worldwide. His research and inventions have been featured in major media outlets including The New York Times, The Economist, CNN, NPR, and Wired. His honors include the Schmidt Sciences Polymath Award, DARPA Young Faculty Award, Moore Inventor Fellowship, NIH Outstanding Investigator Award, NSF CAREER Award, and the National Academies' Eric and Wendy Schmidt Award for Excellence in Science Communication. In 2023, Newsweek named him one of ten innovators disrupting healthcare.



**EDWARD F. CHANG** is the Joan and Sanford I. Weill Chair and Margaret Liu Collins and Edward B. Collins Distinguished Professor in Neurological Surgery at the University of California, San Francisco. Dr. Chang's clinical expertise is surgical therapies for epilepsy, pain, and brain tumors. He specializes in advanced neurophysiologic brain mapping methods, including awake speech and motor mapping, to safely perform neurosurgical procedures in eloquent areas of the brain. His research focuses on the discovery of cortical mechanisms of high-order neurological function in humans. Dr. Chang's laboratory has demonstrated the detailed functional organization of the human speech cortex and has translated those discoveries towards the development of a speech neuroprosthetic device to restore communication for people living with paralysis. Dr. Chang is the 2015 Blavatnik National Laureate in Life Sciences and was elected to the National Academy of Medicine in 2020 and the National Academy of Sciences in 2025.

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**PAUL Z. CHEN** is a postdoctoral fellow in the labs of David R. Liu at the Broad Institute of MIT & Harvard and Robert S. Langer at MIT, where he has been supported by the Schmidt Science Fellowship, CIHR Banting Fellowship, and Early Career Award by the Thrasher Research Fund. He obtained his PhD in Chemical Engineering & Applied Chemistry from the University of Toronto, where he was an NSERC Vanier Scholar and Junior Fellow of Massey College. Paul's PhD research focused on using experimental and theoretical approaches to study how atoms form materials at the nanoscale, uncovering a pathway in which atoms migrate asymmetrically between crystal facets to direct the growth of nanocrystals. At the beginning of the COVID-19 pandemic, Paul pivoted his research to study SARS-CoV-2 transmission dynamics, providing insights into why superspreading drives the COVID-19 pandemic. As a postdoctoral fellow, Paul's research is advancing genome editing for applications in human therapeutics and developing approaches to investigate the determinants of in vivo macromolecule delivery. Long-term, Paul is interested in pioneering approaches for accelerated experimentation to uncover biological insights at a systems level and potentiate new therapeutics for genetic diseases.



**VED CHIRAYATH** is a National Geographic Explorer, the G. Unger Vetlesen Professor of Earth Sciences, Mechanical and Aerospace Engineering, and NASA Inventor. He directs the Aircraft Center for Earth Studies (ACES) at the University of Miami's Rosenstiel School of Marine and Atmospheric & Earth Science. Chirayath's research focuses on inventing, developing, and testing next-generation sensing technologies for studying the natural world. In 2024, he was selected as a Moore Inventor Fellow, and in 2021, was one of 30 finalists of 12,000 applicants for the NASA Astronaut Candidate Class of 2021. In 2020, he received the AGU Falkenberg Award for "contributions to the quality of life, economic opportunities, and stewardship of the planet through the use of Earth science information and to the public awareness of the importance of understanding our planet."

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**EMMA K. COSTA** is a Senior Biomedical Data Manager at Sage Bionetworks, where she works on biocuration workflows for the Alzheimer's Disease (AD) Knowledge Portal—a flagship open science resource supporting AD research and a key node in the ecosystem of portals managed by Sage. She holds a Ph.D. in Neuroscience from Stanford University, where her thesis research generated foundational datasets investigating the biological mechanisms of aging, and a B.S. in Brain and Cognitive Sciences from MIT.



**JOSEPH M. DeSIMONE** is the Sanjiv Sam Gambhir Professor of Translational Medicine and Chemical Engineering at Stanford University. He is also Co-Director of the Canary Center, Founding Faculty Director of the Center for STEMM Mentorship, and the Interim Vice Chair of Strategy in the Department of Radiology at Stanford. He holds primary appointments in Radiology and Chemical Engineering with courtesy appointments in Chemistry, Materials Science and Engineering, and the Graduate School of Business. Previously, DeSimone was a professor of chemistry at the University of North Carolina at Chapel Hill and of chemical engineering at North Carolina State University. He is also Co-founder, Board Member, and former CEO (2014 - 2019) of the additive manufacturing company, Carbon. DeSimone is responsible for numerous breakthroughs in his career in areas including green chemistry, medical devices, nanomedicine, and 3D printing. He has published >390 scientific articles and holds >240 patents. In 2016 DeSimone was recognized by President Obama with the National Medal of Technology and Innovation. He is one of only 25 individuals elected to all three branches of the U.S. National Academies (Sciences, Medicine, Engineering). DeSimone received his B.S. in Chemistry from Ursinus College (1986) and Ph.D. in Chemistry from Virginia Tech (1990).



**ABDUL DJIRE** is an Assistant Professor of Chemical Engineering at Texas A&M University and a member of the Texas PowerHouse Energy Policy Advisory Council. Before joining Texas A&M, he served as a Staff Scientist and Postdoctoral Researcher at the National Renewable Energy Laboratory (NREL). He earned his Ph.D. and M.S. in Chemical Engineering from the University of Michigan and his B.S. from Prairie View A&M University. Dr. Djire's research focuses on electrochemistry, catalysis, energy storage and conversion, nanomaterials synthesis, and operando spectroelectrochemistry. He is recognized as a pioneer in the development of nitride MXenes (MNenes) and has authored more

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than 50 peer-reviewed publications and delivered numerous invited talks at leading institutions and international conferences. At Texas A&M, he leads the Discovery Journey to Innovative Renewable Energy (DJIRE) Laboratory and Summer Research Program. His honors include the NSF CAREER Award, DOE ARPA-E SPARKS Award, DOD ARO Early Career Award, Alfred P. Sloan Research Fellowship, Camille Dreyfus Teacher-Scholar Award, C&EN Talented 12 recognition, DuPont GOLD Award, U.S.-Africa Frontiers Fellowship, Texas A&M College of Engineering Dean's Excellence Award, and the Outstanding Junior Faculty Award.



**BETHANY EHLMANN** is a planetary scientist whose research focuses on water in the solar system, the evolution of habitable worlds, and remote sensing techniques and instruments for planetary missions. She is a science team member of multiple missions, including the Jupiter-bound Europa Clipper; the Earth-orbiting EMIT imaging spectrometer; the Mars Science Laboratory Curiosity rover; the Mars2020 Perseverance rover; the upcoming ExoMars rover, and orbiting and landed spectrometers for the Artemis lunar program. Active in science policy and outreach, Bethany is President of the board of directors of The Planetary Society. She previously served as a member of the National Academies Planetary Science and Astrobiology Decadal Survey and the National Academies Committee on Astrobiology and Planetary Science. She has been elected to the National Academy of Sciences, is a fellow of the American Geophysical Union and the Mineralogical Society of America, and authored Dr. E's Super Stellar Solar System, a children's book with National Geographic.



**LINDSAY EJOH** is a PhD Candidate in Neuroscience at the University of Pennsylvania, where she conducts research in the laboratory of Dr. Gregory Corder. Her research investigates the neural circuits underlying pain and pain relief, with a particular focus on the medial thalamus and endogenous opioid signaling. Using molecular, anatomical, and behavioral approaches in mice, she studies how pain-processing circuits change across acute and chronic pain states and how endogenous analgesic mechanisms may be leveraged to improve pain treatment. In addition to her research, Ejoh is a science communicator who translates neuroscience and chronic pain research for broad public audiences through digital media. Through her platform, @neuro\_melody, she shares evidence-based neuroscience content and promotes public engagement with science, with a particular interest in combating misinformation and increasing access to STEM opportunities. Ejoh is a recipient of the National Academies and Eric and Wendy

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Schmidt Award for Excellence in Science Communications, and the NIH F99/K00 D-SPAN Predoctoral to Postdoctoral Transition Award. Her work in science communication has also been recognized by Nature News and Society for Neuroscience.

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**CYNTHIA FRIEND** is president and CEO of The Kavli Foundation and was named as a top leader in philanthropy by TIME magazine in 2026. Before joining Kavli in January 2021, Dr. Friend was a member of Harvard University faculty where she is the T.W. Richard Professor of Chemistry *Emerita*. Friend previously served in other leadership positions, including Chair of the Department of Chemistry and Chemical Biology, Associate Dean of the Faculty of Arts and Sciences, and Director of The Rowland Institute at Harvard. She was an Associate Lab Director (2011-12) at SLAC National Accelerator Lab, a preeminent international facility for X-ray science at Stanford University. She was a member of the Board of Directors of Bruker Instruments for a decade (2016-26). Friend's research focused on nanoscience applied to energy sciences, sustainability, and environmental chemistry. Friend is currently a member of the Office of Science Advisory Committee for the Department of Energy and is Chair of the Board of the Science Philanthropy Alliance. She is a member of the NAS and a fellow of the American Academy of Arts and Sciences, American Chemical Society, and AAAS. She was a postdoctoral researcher in Chemical Engineering at Stanford, earned her Ph.D. from U.C. Berkeley, and her B.S. from U.C. Davis.

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**HARVEY V. FINEBERG** is Professor emeritus of Health Policy and Management at Harvard T. H. Chan School of Public Health. He previously served as president of the Gordon and Betty Moore Foundation and of the National Academy of Medicine (then called the Institute of Medicine), as provost of Harvard University, and dean of the Harvard T.H. Chan School of Public Health. His academic career has been devoted mostly to health policy and medical decision-making, with research focused on global health, assessing medical technology, evaluating vaccines, and disseminating medical innovations. Fineberg is currently chair of the CMB (China Medical Board) Foundation and of the Peterson Center on Healthcare's advisory board. He co-chairs the international advisory board of the Tsinghua Vanke School of Public Health and serves on the scientific advisory board of the Singapore National Research Foundation. He serves on the boards of the Charles Darwin Foundation and of the California Council on Science and Technology, and he is a member of the editorial board

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of the New England Journal of Medicine. Fineberg previously chaired the boards of the Carnegie Endowment for International Peace and the William and Flora Hewlett Foundation and helped found the Society for Medical Decision Making, where he served as president.

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**STUART FELDMAN** is President and Chief Scientist of Schmidt Sciences where he is responsible for shaping fellowship and award programs and executing larger research programs to support talented scientists who address major questions, build new platforms, and change the way research is done. The major programs focus on AI and Advanced computing, Astrophysics & Space, Biosciences, Climate, and the Science System. Stuart Feldman did his academic work in astrophysics and mathematics and earned his AB at Princeton and his PhD at MIT. He was awarded an honorary Doctor of Mathematics by the University of Waterloo and an Honorary Doctorate by the Technion. He is former President of ACM (Association for Computing Machinery) and former member of the board of directors of the AACSB (Association to Advance Collegiate Schools of Business). Feldman is best known for writing "Make" and other essential tools. He received the 2003 ACM Software System Award. He is a Fellow of the IEEE, ACM, and AAAS. He is Board Chair of the Center for the Minorities and Disabled in IT, serves on a number of university advisory boards and National Academy panels, and has served on a wide variety of government and research advisory committees.

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**CECILIA GARRAFFO** is the founder and director of the AstroAI Institute at the Smithsonian Astrophysical Observatory. Awarded the Presidential Early Career Award for Scientists and Engineers (PECASE), Dr. Garraffo leads research in AI-driven astrophysical. Previously, Cecilia conducted research in machine learning and artificial intelligence at Harvard's Institute for Applied Computational Science and in astrophysics at the Center for Astrophysics | Harvard & Smithsonian. Cecilia obtained an MS in Astronomy from the National University of La Plata and a PhD in Physics from University of Buenos Aires, Argentina. Cecilia's main research interests include symmetry-aware generative models for astrophysics, the search for biosignatures in exoplanet atmospheres, and theoretical aspects of gravity and black holes.

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**AMY GLADFELTER** is a quantitative cell biologist interested in fundamental mechanisms of cell organization. She is currently a Distinguished Duke Health Science and Technology Professor in the Cell Biology and Biomedical Engineering Departments at Duke University. Previously she was Professor of Biology and Associate chair at the University of North Carolina at Chapel Hill from 2016-2023. She remains a longstanding fellow of the Marine Biological Laboratory in Woods Hole, MA and is currently the course director of the Physiology Course. In her research program, she uses microscopy, biophysical and genetic approaches to study syncytial cells and how these large cells spatially organize the cytoplasm via biomolecular condensates and sense their shape. She has been honored with the 2014 Graduate Mentoring Award from Dartmouth, the 2015 Mid-Career Award for Excellence in Research from the American Society of Cell Biology, the 2020 Graduate school mentoring award from UNC and was a Howard Hughes Medical Institute Faculty Scholar. She is an elected fellow of AAAS, the American Academy of Microbiology and the American Academy for Arts and Sciences and member of the National Academy of Sciences.



**MILENA BOBEA GRAZIANO** is the Director of the Lunar Surface Innovation Consortium, or LSIC, and Chief Engineer of the Space Environmental Effects Group at the Johns Hopkins University Applied Physics Laboratory. She holds a Bachelor's degree in Physics from the University of Puerto Rico and a master's and Ph.D. in Materials Science and Engineering from North Carolina State University. Her work focuses on materials and process selection, qualification, and testing for spaceflight programs, and has worked on several subsystems for Dragonfly, Psyche, Europa Clipper, and Interstellar Mapping and Acceleration Probe. She is also a Systems Engineer for a gamma ray and neutron sensor instrument going on the JAXA Martian Moons Exploration spacecraft. Within LSIC, she led the development of a lunar resource for scientists and engineers that can aid the design and test of lunar surface systems, titled Lunar Engineering 101. As LSIC Director, she hopes to continue to engage membership and participation across government, industry, academia, and nonprofit institutions to further LSIC's mission: to harness the creativity, energy, and resources of the nation and its partners to help NASA keep the United States at the forefront of lunar exploration.

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**PAULA HAMMOND** (Organizing Committee) is Institute Professor at the Massachusetts Institute of Technology and a member of MIT's Koch Institute for Integrative Cancer Research and serves as Dean of the School of Engineering at MIT. She investigates electrostatic polymer systems for the delivery of drugs to specific parts of the body, including thin film coatings to release proteins that regenerate bone, dressings that release RNA to assist in wound healing, and her current primary area of work on nanoparticles that can bind to tumors specifically to treat cancer. She has had a particular focus on the development of new therapies for ovarian cancer that arm the immune system to help address both primary and recurrent tumors. She received her S.B. at MIT, her M.S. at Georgia Institute of Technology, and her Ph.D. at MIT, with all her degrees in Chemical Engineering, followed by a postdoctoral fellowship in Chemistry at Harvard University. Hammond is an elected member of the National Academy of Science (2019), the National Academy of Engineering (2017), the National Academy of Medicine (2016), and the American Academy of Arts and Sciences (2013).



**KALLI KAPPEL** (Organizing Committee) is an Assistant Professor and HHMI Hanna Gray Faculty Fellow at UCLA. She received her B.S. in Physics from UCSD, where she worked with Professor Andrew McCammon to study protein dynamics and protein-ligand interactions using computational approaches. She received her Ph.D. in Biophysics from Stanford University, where she focused on developing computational methods to predict RNA structures and RNA-protein interactions with Professor Rhiju Das. Her graduate work was supported by an NSF Graduate Research Fellowship and a Gabilan Stanford Graduate Fellowship. Subsequently, as an HHMI Hanna Gray Postdoctoral Fellow and Schmidt Science Fellow at the Broad Institute of MIT and Harvard, she developed and applied a high-throughput experimental approach to characterize the relationships between protein sequences and nuclear condensate formation. Currently, Dr. Kappel leads a lab at UCLA, which focuses on developing predictive sequence-organization-function models of RNA, proteins, and their interactions by combining high-throughput experiments, machine learning, and computational biophysical methods. Her work aims to elucidate fundamental principles of biology, to understand how mutations cause human disease, and to design novel functional protein and RNA sequences.

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**ISHI KEENUM** is an environmental engineer whose research focuses on the microbiology of engineered environmental systems, including wastewater, water reuse, and agricultural systems. Her work integrates environmental biotechnology, metagenomics, and bioinformatics to develop comparable and reproducible measurements of complex microbial communities. A central theme of her research is improving how microbial data are generated, analyzed, and interpreted to support applications such as wastewater-based surveillance, environmental monitoring, and emerging public health threats. Prior to joining Michigan Technological University in Fall 2023, Dr. Keenum worked at the National Institute of Standards and Technology (NIST), where she contributed to advances in measurement science for environmental and microbial systems. Her research has been published in *Environmental Science & Technology*, *Nature Sustainability*, *Microbiome*, and *Critical Reviews in Environmental Science and Technology*, among others. Dr. Keenum is a recipient of the National Academy of Engineering Frontiers of Engineering Gilbreth Lectureship and a Department of Commerce Gold Medal for her work developing a rapid Mpox control material while at NIST.



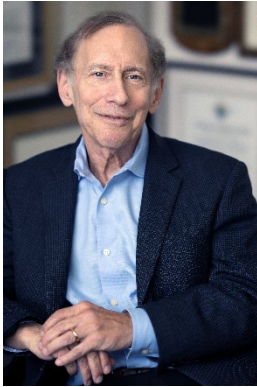
**MEGAN KENNA** (Organizing Committee) is the Founding Executive Director of Schmidt Science Fellows, where she provides the strategic, financial, and operational leadership for one of the world's leading postdoctoral fellowship programs. Since its inception, she has guided the organization's growth into an internationally recognized initiative that supports emerging scientific leaders pursuing interdisciplinary research. She also serves as a member of the senior leadership team of the Rhodes Trust, contributing to the strategic direction of the organization. Kenna's expertise lies at the intersection of scientific innovation, interdisciplinary research, leadership development, and higher education. Under her leadership, Schmidt Science Fellows has expanded its global reach and impact, supporting fellows who have gone on to secure major research funding, launch companies, publish influential research, and obtain faculty appointments at leading universities worldwide. She has also championed international efforts to advance interdisciplinary science, including the development of a global university ranking focused on institutional support for cross-disciplinary research. Recognized by the BBC as one of five women "shaking up the science world," Kenna holds doctorates in Neuroscience from the University of Oxford, where she was a Rhodes Scholar, and Clinical Psychology from The Catholic University of America. Her academic and professional experience includes leadership roles at Dartmouth

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College and extensive work as a clinical psychologist and researcher.

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**ROBERT LANGER** is an Institute Professor at the Massachusetts Institute of Technology (MIT), the highest faculty distinction awarded by the Institute. A chemical engineer by training, he has been a member of the MIT faculty since 1974 and has served on numerous national advisory bodies, including the U.S. Food and Drug Administration's Science Board, which he chaired from 1999 to 2002. Langer is a pioneering researcher in biotechnology, biomaterials, drug delivery, tissue engineering, and nanomedicine. He has authored more than 1,600 scientific publications and holds over 1,500 issued and pending patents worldwide, many of which have been licensed to hundreds of pharmaceutical, biotechnology, chemical, and medical device companies. Widely regarded as one of the most influential engineers in history, his work has transformed the development of drug delivery systems and biomedical technologies. His many honors include the U.S. National Medal of Science, the U.S. National Medal of Technology and Innovation, the Charles Stark Draper Prize, the Millennium Technology Prize, the Kyoto Prize, the Queen Elizabeth Prize for Engineering, the Kavli Prize in Nanoscience, and the Breakthrough Prize in Life Sciences. Langer is a member of the National Academy of Medicine, the National Academy of Engineering, the National Academy of Sciences, and the National Academy of Inventors.

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**LAURIE LESHIN** (Organizing Committee) is a space scientist with extensive leadership experience in academia and government. She is currently the University Professor for Space Futures at Arizona State University, where she advises the President and University leadership on opportunities in space exploration, higher education transformation, and the future of the nation's research enterprise. Leshin was director of NASA's Jet Propulsion Laboratory from 2022 to 2025 where she oversaw the successful development and launch of major NASA missions including Psyche, Europa Clipper, and SPHEREx. As president of Worcester Polytechnic Institute from 2014 to 2022, she elevated WPI's distinctive project-based approach to STEM education and research, and she earlier served in senior leadership roles in NASA's science and human spaceflight programs. Leshin is currently Chair of the Board of FIRST, the largest robotics competition organization in the world. She serves on the Academic Council of the Schmidt Science Fellows Program. Leshin holds a bachelor's degree in chemistry from Arizona State University, and master's and doctoral degrees in geochemistry from

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Caltech. The International Astronomical Union named asteroid 4922 Leshin to honor her contributions to planetary science.

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**JENNIFER LEWIS** is the Jianmin Yu Professor of Arts and Sciences, the Hansjörg Wyss Professor for Biologically Inspired Engineering in the Paulson School of Engineering and Applied Sciences, and a core faculty member of the Wyss Institute at Harvard University. Her research focuses on advancing the frontiers of soft and living materials. Lewis is an elected member of the U.S. National Academy of Sciences (NAS), the U.S. National Academy of Engineering, the U.S. National Academy of Inventors, and the American Academy of Arts and Sciences. She has received numerous awards, including the NAS James Prize for Science and Technology Integration, the Sigma Xi Gold Key Award, the Lush Prize for Scientific Research, the Materials Research Society Medal, and the Department of Defense Vannevar Bush Faculty Fellowship. Multiple startups are commercializing technology from her research lab ranging from printed electronics to kidney tissue therapeutics.

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**JEFFREY MARLOW** is an Assistant Professor of Biology at Boston University, where his lab studies the ways in which complex microbial communities shape and are shaped by their surroundings. From active volcanoes to hypersaline lakes and deep sea methane seeps and hydrothermal vents, his work has explored the limits of biological possibility and revealed general rules governing microbes' interactions with their microenvironments. He has led or participated in ten deep-sea research expeditions, and worked on the science team of three of NASA's Mars rover missions. Jeff has served as a science advisor at the United Nations' negotiations for the High Seas Treaty, and is a member of the National Academies of Sciences New Voices leadership program. As a science writer and journalist, he has written for publications including *The New Yorker*, *The New York Times*, and *Scientific American*. His first book, *The Dark Frontier: Unlocking the Secrets of the Deep Sea*, was published by Random House in 2026. Jeff is a National Geographic Explorer and a fellow of The Explorers Club and the Royal Geographical Society.

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**ALICIA R. MARTIN** is an Assistant Investigator at Massachusetts General Hospital, Assistant Professor at Harvard Medical School, and Associate Member of the Broad Institute. She is a population and statistical geneticist studying how human history shapes genetic and phenotypic diversity, with a focus on improving the generalizability of genomic findings across ancestries. Her work develops methods and resources for multi-ancestry studies to advance equitable genomic medicine, and more broadly seeks to distinguish correlation from causation across genetic and molecular signatures of complex diseases.



**MARCIA McNUTT** (Organizing Committee) is a geophysicist and the 22nd president of the National Academy of Sciences. From 2013 to 2016, she was editor-in-chief of Science journals. McNutt was director of the U.S. Geological Survey from 2009 to 2013, during which time USGS responded to a number of major disasters, including the Deepwater Horizon oil spill. For her work to help contain that spill, McNutt was awarded the U.S. Coast Guard's Meritorious Service Medal. She is a fellow of the American Geophysical Union, Geological Society of America, the American Association for the Advancement of Science, and the International Association of Geodesy. McNutt is a member of the National Academy of Engineering, the American Philosophical Society and the American Academy of Arts and Sciences, a Foreign Member of the Royal Society, UK, the Russian Academy of Sciences, and the Chinese Academy of Sciences, and a Foreign Fellow of the Indian National Science Academy. In 1998, McNutt was awarded the AGU's Macelwane Medal for research accomplishments by a young scientist, and she received the Maurice Ewing Medal in 2007 for her contributions to deep-sea exploration. McNutt earned a B.A. in physics from Colorado College and a Ph.D. in Earth sciences from Scripps Institution of Oceanography.



**JOEL MOKYR** is the Robert H. Strotz Professor of Arts and Sciences and Professor of Economics and History at Northwestern University, and Sackler Professor (by special appointment) at the Eitan Berglas School of Economics at the University of Tel Aviv. A member of the Northwestern faculty since 1974, he has also held visiting appointments at Harvard University, Stanford University, the University of Chicago, and several leading international institutions. Mokyr is a leading economic historian whose research focuses on the economic history of technological change, innovation, population dynamics, and long-run economic growth. His influential scholarship has shaped understanding of the

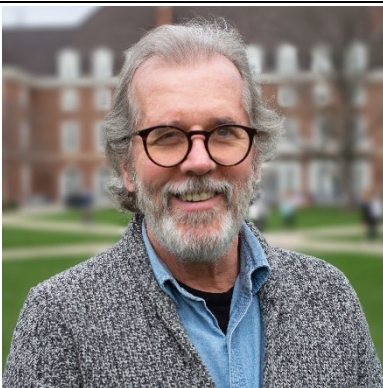
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Industrial Revolution, the origins of the knowledge economy, and the relationship between culture, institutions, and prosperity. He is the author of numerous landmark books, including *The Lever of Riches*, *The Gifts of Athena*, *The Enlightened Economy*, and *A Culture of Growth*, and has published more than 120 books and articles. His honors include the 2006 Heineken Prize for History, the 2015 Balzan Prize in Economic History, and the 2025 Nobel Prize in Economic Sciences. He is a Fellow of the American Academy of Arts and Sciences, the Econometric Society, and the Cliometric Society, and a Distinguished Fellow of the American Economic Association.



**PRIYAMVADA NATARAJAN** is the inaugural Joseph S. and Sophia S. Fruton Professor of Astronomy & Physics at Yale, with a secondary appointment in Physics. A member of the Yale faculty since 2000, she currently chairs the Department of Astronomy and serves as an external Principal Investigator at Harvard's Black Hole Initiative. Natarajan has made seminal contributions to understanding dark matter through gravitational lensing and to tracing the assembly of supermassive black holes across cosmic time. Her recent cluster-lensing work has stress-tested the LCDM paradigm on small scales, revealing a significant discrepancy between lensing-inferred substructure and predictions from cosmological simulations: the Galaxy-Galaxy Strong Lensing anomaly. Her pioneering theoretical predictions for early black hole seeding—via direct collapse of gas and runaway growth in dense nuclear star clusters—have recently been validated by JWST and Chandra observations. Her honors include fellowships of the APS, AAS, AAAS, and American Academy of Arts and Sciences; Guggenheim and Radcliffe Fellowships; the 2022 Liberty Science Center Genius Award; the 2025 Dannie Heineman Prize in Astrophysics; and inclusion in the 2024 TIME100 list. She has also led major service efforts, including dual-anonymous review reform, and currently directs Yale's Franke Program in Science and the Humanities.



**RALPH G. NUZZO** (Organizing Committee) is the G. L. Clark Professor of Chemistry Emeritus at the University of Illinois at Urbana Champaign. He is the author or coauthor of more than 370 peer-reviewed papers and 51 awarded U.S. Patents. Most recently (until 2022) he was the G. L. Clark Professor of Chemistry at the University of Illinois at Urbana-Champaign, a faculty he joined in 1991 and where he also held an appointment as a Professor of Materials Science and Engineering. In 2014 he was appointed as an affiliated member of the Chemistry Faculty at the KTH Royal Institute of Technology in Stockholm Sweden. He was a Faculty

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Associate in Applied Physics and Materials Science at The California Institute of Technology, where he served as the Director of the Department of Energy Light-Materials Interactions in Energy Conversion Energy Frontier Research Center. He received an AB degree with High Honors from Rutgers College in 1976 and earned a Ph.D. in Organic Chemistry from The Massachusetts Institute of Technology in 1980. He accepted the position of Member of Technical Staff in Materials Research at Bell Laboratories in 1980, where he was named a Distinguished Member of the Staff in Research in 1987. He joined the Illinois faculty in 1991. He is an elected Member of the National Academy of Sciences, the American Academy of Arts and Sciences, and the Norwegian Academy of Science and Letters. He is a named Fellow of the American Association for the Advancement of Science, the American Chemical Society, the American Vacuum Society, and the Royal Society of Chemistry. He was named the Kavli Laureate in Nanotechnology in 2022.



**JAMAJI NWANAJI-ENWEREM** is an Emergency Medicine Physician and a Presidential Assistant Professor at the University of Pennsylvania. He graduated Phi Beta Kappa, Valedictorian from Morehouse College with a BS in Biology. He earned his PhD in the Harvard University Biological Sciences in Public Health program, his masters in public policy (MPP) from Harvard Kennedy School, and his MD from Harvard Medical School. He completed his postdoctoral research fellowship in Environmental Health Sciences at UC Berkeley School of Public Health. He completed his residency in emergency medicine at Emory University School of Medicine and served as chief resident. Much of his work leverages molecular health biomarkers to improve our understanding of how chemical, physical, and social environmental exposures impact human aging and health. His work also emphasizes the need for public policy solutions. As an advocate of health for all, he collaborates with international organizations and governments to drive impactful health solutions. Dr. Nwanaji-Enwerem has served as a member of the White House Environmental Justice Advisory Council, the White House Office of Public Engagement Roundtables on Clinical Innovation and Health Equity, and the World Health Organization technical advisory group for the occupational burden of disease estimation.

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**TERI W. ODOM** (Organizing Committee) is the Joan Husting Madden and William H. Madden, Jr. Professor of Chemistry at Northwestern University. She is an expert in designing structured nanoscale materials that exhibit extraordinary size and shape-dependent optical and physical properties. Odom was founding Chair of the Noble Metal Nanoparticles Gordon Research Conference and founding Executive Editor of ACS Photonics. Currently, Odom is Editor-in-Chief of Nano Letters. Odom is a Member of the National Academy of Sciences and the American Academy of Arts and Sciences. She is a Fellow of the American Chemical Society, the Royal Society of Chemistry, the Materials Research Society, the American Institute for Medical and Biological Engineering, the American Physical Society, Optica, and the American Association for the Advancement of Science and is a Senior Member of SPIE. Select awards include: a Guggenheim Fellowship, the SPIE Mozi Award, the RSC Centenary Prize, the ACS National Award in Surface Science, a Department of Defense Vannevar Bush Faculty Fellowship, a Radcliffe Institute for Advanced Study Fellowship, an NIH Director's Pioneer Award, the MRS Outstanding Young Investigator Award, the National Fresenius Award from Phi Lambda Upsilon, an Alfred P. Sloan Research Fellowship, and a David and Lucile Packard Fellowship in Science and Engineering.



**LYMAN A. PAGE JR.** (Organizing Committee) is the James S. McDonnell Distinguished University Professor of Physics at Princeton University. He received his B.A. in physics at Bowdoin College, Ph.D. from Massachusetts Institute of Technology, and has been at Princeton since. His primary research is on measurements of the cosmic microwave background from ground-based, balloon-borne, and satellite platforms with high-electron-mobility transistor amplifiers, superconductor-Insulator-superconductor mixers, and bolometers. More recently he has begun work on an experiment to search for axionic dark matter. Page is one of the original co-investigators on the Wilkinson Microwave Anisotropy Probe (WMAP) satellite, the founding director of the Atacama Cosmology Telescope (ACT) project, and a founding member of the Simons Observatory. He is on the advisory committee for CIFAR's GEU program and on the board of directors of RCSA. Page is a member of the NAS, an APS Fellow, and a Fellow of the American Academy of Arts & Sciences. His honors include the Marc Aaronson and Marcel Grossmann Awards, the Shaw and Breakthrough Prizes with the WMAP team, the Gruber Prize, and the Lemaitre Prize.

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**NIPAM PATEL** (Organizing Committee) is director of the Marine Biological Laboratory (MBL) and a professor at the University of Chicago. He joined the MBL in 2018 from University of California, Berkeley, where he was professor and co-chair of the Department of Molecular and Cell Biology and professor in the Department of Integrative Biology. He is a leading scholar in modern evolutionary and developmental biology with specific focus on the evolution of body patterning and segmentation, regeneration of the germline, and structural coloration. His scientific expertise encompasses the development of novel, genetic model organisms for biological study, which can reveal much about human biology; and the application of advanced imaging technologies to probe the fundamental dynamics of living systems. Patel received an A.B. in Biology from Princeton University and a Ph.D. in Biology from Stanford University. Patel is a member of the National Academy of Sciences and an elected fellow of the American Association for the Advancement of Science and has been awarded numerous honors, including the Schubert Endowed Chair and the William V. Power Endowed Chair at UC Berkeley, the McKnight Scholars Neuroscience Fellowship Award, and the A.O. Kowalevsky Medal and election to the Society for Developmental Biology Academy.



**ELLIE PAVLICK** is the Bridger Family Distinguished Associate Professor of Computer Science at Brown University and a Research Scientist at Google. She directs the Brown NLP Group and serves as Director of the NSF AI Research Institute on Interaction with AI Assistants (ARIA). Dr. Pavlick's research sits at the intersection of artificial intelligence, linguistics, and cognitive science, with a focus on understanding the internal workings of large language models — what computational structures underlie their behavior, how meaning is encoded in neural representations, and whether AI systems generalize in ways that resemble human cognition. Her work has been featured in *The New York Times Magazine*, *The New Yorker*, and *Quanta Magazine*, and she has spoken at venues ranging from the Guggenheim Museum to the Naval War College on the nature and limits of artificial intelligence.

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**KATIE POLLARD** is Director of the Gladstone Institute of Data Science & Biotechnology, Investigator at the Chan Zuckerberg Biohub, and Professor of Bioinformatics at UCSF. Her lab develops machine learning models and open-source bioinformatics software for predictive understanding and AI-guided experimentation with an emphasis on human genetics and genomics. Previously, Dr. Pollard was an assistant professor in the University of California, Davis Genome Center and Department of Statistics. She earned her PhD in Biostatistics from the University of California, Berkeley and was a comparative genomics postdoctoral fellow at the University of California, Santa Cruz. She was awarded the Thomas J. Watson Fellowship, the Sloan Research Fellowship, and the Alumna of the Year from UC Berkeley. She has been elected as a member of the National Academy of Medicine and a Fellow of the American Association for the Advancement of Science, International Society for Computational Biology, American Institute for Medical and Biological Engineering, and California Academy of Sciences.



**ARCHANA RAJA** is a Staff Scientist in the Imaging and Manipulation of Nanostructures Facility at the Molecular Foundry, and a faculty member at the Kavli Energy NanoScience Institute, Lawrence Berkeley National Laboratory. Her research focuses on how energy, charge, and information can be manipulated in nanoscale quantum materials and their heterostructures for device functionality. Using multimodal photon- and electron-based characterization techniques, she bridges fundamental understanding of optoelectronic phenomena from the application scale to the atomic scale. She is the recipient of the Berkeley Lab Director's Award for Exceptional Early Scientific Career Achievement, the Kavli ENSI Heising-Simons Junior Fellowship, the Blanche R. and David Kasindorf Fellowship in Physical Chemistry at Columbia University, and the Institute Silver Medal at the Indian Institute of Technology Bombay.



**GERALDINE (GERI) RICHMOND** (Organizing Committee) holds the Presidential Chair in Science and Professor of Chemistry at the University of Oregon. Richmond served as President Biden's Undersecretary for Science and Innovation at the U.S. Department of Energy from 2021-2025, as a President Obama and President Trump appointee to the National Science Board, and as the U.S. State Department Science Envoy for the Lower Mekong River Countries (2025-2016). Richmond's career-long experimental and theoretical research has explored the molecular structure of complex surfaces, with impact in areas such as environmental remediation,

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atmospheric chemistry, and alternative energy systems. Richmond is the founding and current director of COACH, a grassroots organization that has provided career advancement programs for more than 26,000 women scientists and engineers in the United States and over two dozen developing countries. Richmond is a member of the National Academy of Sciences, a Fellow of the American Academy of Arts and Sciences and former President of the American Association for the Advancement of Science. She has received numerous recognitions for her research and service impact including the National Medal of Science from President Obama, the Priestley Medal of the American Chemical Society, and the Davison–Germer Prize of the American Physical Society.

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**JOHN A. ROGERS** obtained BA and BS degrees in chemistry and in physics from the University of Texas, Austin, in 1989. From MIT, he received SM degrees in physics and in chemistry in 1992 and a PhD degree in physical chemistry in 1995. From 1995 to 1997, Rogers was a Junior Fellow in the Harvard University Society of Fellows. He joined Bell Laboratories in 1997 and served as Director of the Condensed Matter Physics Research Department from 2000 to 2002. He then spent thirteen years on the faculty at the University of Illinois at Urbana/Champaign, finally as the Swanlund Chair Professor and Director of the Seitz Materials Research Laboratory. In the Fall of 2016, he joined the faculty at Northwestern University where he is Director of the Querrey-Simpson Institute for Bioelectronics. His research has been recognized by many awards, including a MacArthur Fellowship (2009), the Lemelson-MIT Prize (2011), the Smithsonian Award (2013), the Benjamin Franklin Medal (2019), a Guggenheim Fellowship (2021), the James Prize (2022) and the Bakerian Medal of the Royal Society (2025). He is a member of the US National Academy of Engineering, of Sciences and of Medicine, the American Academy of Arts and Sciences and the Royal Society.

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**ARPITA ROY** is an astrophysicist whose work spans fundamental discovery, astronomical instrumentation, space missions, and research ecosystems that enable science. She is Lead of the Astrophysics & Space Center at Schmidt Sciences, and Head of the Science Mission Office for the Lazuli Space Observatory. Previously, she was a tenure-track Astronomer at the Space Telescope Science Institute and a Millikan Prize Postdoctoral Fellow at Caltech. Dr. Roy specializes in exoplanet discovery and characterization and has spent more than a decade developing the tools and techniques needed to detect and study planets beyond our Solar System. She has contributed to major ground- and space-based initiatives,

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including as Project Scientist for the Keck Planet Finder, an Instrument Scientist for the James Webb Space Telescope, and Chair of the NASA–NSF Extreme Precision Radial Velocity Working Group. Her work connects astronomical instrumentation, space missions, scientific strategy, and the search for habitable worlds beyond Earth. Alongside her work in science philanthropy, Dr. Roy remains an active researcher and has authored more than 250 scientific publications. Her honors include the NASA Hubble Fellowship, NSF Astronomy and Astrophysics Postdoctoral Fellowship, and the American Astronomical Society's Rodger Doxsey Dissertation Prize.

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**CARLA J. SHATZ** (Organizing Committee) is Sapp Family Provostial Professor of Biology and Neurobiology and the Director Emerita of Bio-X, Stanford University's pioneering interdisciplinary biosciences program. She received her B.A. in Chemistry from Harvard and an M.Phil. in Physiology from University College London on a Marshall Scholarship. She received her Ph.D. in Neurobiology from Harvard Medical School, mentored by David Hubel and Torsten Wiesel. She previously held faculty appointments at both the University of California, Berkeley and Harvard Medical School. Dr. Shatz is a neuroscientist who has devoted her career to understanding the dynamic interplay between genes and environment that shapes brain circuits - the very essence of our being. Shatz has earned many honors and awards, including election to the National Academy of Sciences, the National Academy of Medicine, the American Philosophical Society and the Royal Society of London. She received the Gruber Neuroscience Prize in 2015. In 2016, she was the recipient of the Champalimaud Vision Prize, as well as the Kavli Prize in Neuroscience for the discovery of mechanisms that allow experience and neural activity to remodel brain circuits. In 2018, she received the Harvey Prize in Science and Technology.

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**BROOKE SMITH** (Organizing Committee) is Senior Director of Science and Society at The Kavli Foundation, where she leads initiatives designed to strengthen the relationship between science and society. In this role, she oversees the Foundation's science engagement and public connection strategies, including stewardship of the Kavli Prize in partnership with the Norwegian Academy of Science and Letters and the Norwegian Ministry of Education and Research. She also serves as Vice Chair of the Civic Science Funder Collaborative and helps guide the Civic Science Fellows program.

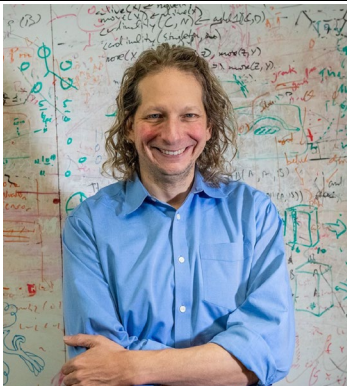
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Smith's expertise spans science communication, public engagement, philanthropy, science policy, and organizational leadership. Prior to joining The Kavli Foundation in 2018, she was the founding Executive Director of COMPASS, a nonprofit organization dedicated to helping scientists communicate and engage effectively with diverse audiences. Throughout her career, she has worked across academia, government, and the nonprofit sector to strengthen the societal relevance and public impact of scientific research. She is a frequent writer and speaker on civic science, public engagement, and the future of science-society relationships. Smith is a Fellow of the American Association for the Advancement of Science (AAAS) and recipient of the 2021 Broader Impacts Champion Award from Advancing Research in Society (ARIS). She holds degrees from Duke University and Oregon State University.



**ELLEN STOFAN** (Organizing Committee) is the Under Secretary for Science and Research at the Smithsonian Institution, where for over 175 years scientists have pursued and shared knowledge worldwide. In this role, Stofan oversees the Smithsonian's science research centers as well as the National Air and Space Museum, National Museum of Natural History, the National Zoo and Conservation Biology Institute and the Smithsonian Libraries and Archives. Her focus includes advancing the Institution's "Our Shared Future: Life on a Sustainable Planet" initiative and Smithsonian research focused on unlocking the mysteries of the universe from black holes to life beyond Earth. Stofan earned her bachelor's degree in geology from the College of William & Mary and her master's and doctoral degrees in geological sciences from Brown University. She began her career at NASA's Jet Propulsion Laboratory (JPL) as deputy project scientist for the Magellan Mission to Venus, later serving as JPL's chief scientist for the New Millennium Program. She has also held senior research roles at Proxemy Research and continues as an honorary professor at University College London.



**JOSH TENENBAUM** is Professor of Computational Cognitive Science at the Massachusetts Institute of Technology in the Department of Brain and Cognitive Sciences, the Computer Science and Artificial Intelligence Laboratory (CSAIL) and the Center for Brains, Minds and Machines (CBMM). His long-term goal is to reverse-engineer intelligence in the human mind and brain, and use these insights to engineer more human-like machine intelligence. In cognitive science, he is best known for theories of cognition as Bayesian inference, with a focus on explaining how humans can learn so much so quickly, from so little data. In AI, he has

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developed influential approaches to dimensionality reduction, unsupervised learning and structure discovery, and probabilistic programming. His current research focuses on probabilistic program models of common sense in humans and machines, grounding language and perception in these representations, and learning based on program synthesis. His papers have been recognized with more than fifteen awards at major conferences in Cognitive Science and AI, and he is the recipient of the Troland Award from the National Academy of Sciences, the Warren Medal from the Society of Experimental Psychologists, a MacArthur Fellowship, the Fyssen Foundation International Prize, and membership in the American Academy of Arts and Sciences.



**RYAN TRUBY** (Organizing Committee) is the June and Donald Brewer Junior Professor and Assistant Professor of Materials Science and Engineering and Mechanical Engineering at Northwestern University. He is also a Senior Schmidt Science Fellow. His research aims to advance machine intelligence through material design. He and his team in the Robotic Matter Lab are developing biologically informed actuators and sensors for robots, advanced 3D printing methods, and machine learning-based control strategies for soft robots. Prior to Northwestern, Ryan was a Postdoctoral Associate at MIT's Computer Science and Artificial Intelligence Lab, and he received his PhD in Applied Physics from Harvard University. Ryan is the recipient of a DARPA Director's Fellowship, DARPA Young Faculty Award, Office of Naval Research Young Investigator Award, Air Force Office of Scientific Research Young Investigator Award, an Inaugural Schmidt Science Fellowship, and the Gold Award for Graduate Students from the Materials Research Society. He was listed on the American Society of Mechanical Engineering's 2026 Watch List in Mechanical Engineering magazine.



**ZACHARIAH A. VICE** is a PhD Candidate and Graduate Research Assistant in the Department of Animal Science at Texas A&M University. Prior to his doctoral studies, he spent time as an FDA-commissioned Feed & Fertilizer Investigator with the Office of the Texas State Chemist, where he enforced state and federal commodity laws. He holds both a Bachelor of Science in Agricultural Leadership and Development and a Master of Science in Animal Science from Texas A&M University. His research and professional expertise sit at the intersection of agricultural policy, regulatory enforcement, and food systems safety. His current work integrates wet-lab, bioinformatic, and advanced statistical approaches to investigate microbial ecology, pathogen mitigation, and the effects of antimicrobial interventions within industrial food

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processing environments. This combination of frontline regulatory experience and rigorous scientific training uniquely positions him to bridge compliance practice with science policy development. Zachariah is a Foundation for Food and Agriculture Research (FFAR) Fellow and a former Christine Mirzayan Science and Technology Policy Fellow with the National Academies of Sciences, Engineering, and Medicine, where he supported the Board on Agriculture and Natural Resources.



**SARA IMARI WALKER** is Deputy Director of the Beyond Center for Fundamental Concepts in Science and Professor in the School of Earth and Space Exploration at Arizona State University. She also holds an External Faculty appointment at the Santa Fe Institute. A theoretical physicist and astrobiologist, Walker develops new approaches to the origins of life, artificial life, and the detection of alien life on other worlds. She is a co-developer of assembly theory, a framework for quantifying selection and complexity, and her work spans biosignature detection, efforts to create life de novo in the laboratory, and the foundational question of what constitutes life. She is the author of *Life as No One Knows It: The Physics of Life's Emergence* (Riverhead, 2024), which argues for a radically new understanding of life. Her honors include the Stanley Miller Early Career Award from the International Society for the Study of the Origin of Life (2021) and a Schmidt Science Polymath Fellowship (2023).



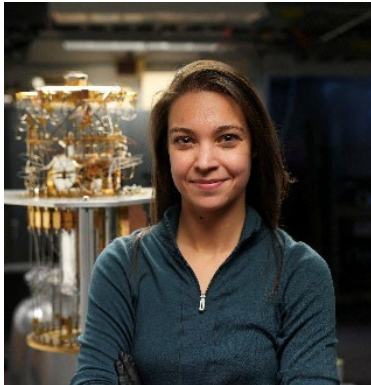
**CONOR WALSH** is the Paul A. Maeder Professor of Engineering and Applied Sciences at the Harvard John A. Paulson School of Engineering and Applied Sciences and the founder of the Harvard Biodesign Lab. He leads a multidisciplinary research program that brings together expertise from engineering, industrial design, apparel, biomechanics, physical therapy, and business to develop and translate wearable robotic technologies. Dr. Walsh's research lies at the intersection of engineering, biology, and medicine, with a focus on augmenting and restoring human performance through soft wearable robotics. His work spans applications including enhancing mobility in healthy individuals, restoring movement for people with gait impairments, assisting individuals with upper-extremity weakness in activities of daily living, and reducing injury risk for workers performing physically demanding tasks. His innovations have been successfully translated into commercial products through collaborations with companies including ReWalk Robotics, WurQ, Verve Motion, and Imago Rehab. Dr. Walsh has received numerous honors for his contributions to robotics, rehabilitation engineering, and technology innovation, including

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the Presidential Early Career Award for Scientists and Engineers (PECASE), the Blavatnik National Award for Young Scientists, the IEEE Robotics and Automation Society Early Academic Career Award in Robotics and Automation, and the MIT Technology Review Innovators Under 35 Award.

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**JESSICA AVVA ZEBROWSKI** is a KICP Fellow at the Kavli Institute for Cosmological Physics at the University of Chicago and a Lederman Fellow at Fermilab. She will join the Department of Astronomy and Astrophysics at the University of Chicago as an Assistant Professor in July 2026. She received her Ph.D. in Physics in 2022 from the University of California, Berkeley, and was a NASA Hubble Fellowship Program Einstein Fellow from 2022 to 2025. She is an experimental cosmologist who builds and analyzes data from millimeter- and submillimeter-wave telescopes to study the early universe, cosmic expansion, and the growth of structure. Her research spans learning about inflation from cosmic microwave background polarization, probing the less explored middle years of cosmic history with line-intensity mapping, and the development of superconducting detector technologies for next-generation observatories. She has played leading roles in analyses and instrumentation for the South Pole Telescope and SPT-SLIM, and she is a Co-Investigator on the NASA balloon mission the Terahertz Intensity Mapper.

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**HUDA ZOGHBI** is Distinguished Service Professor at Baylor College of Medicine, Investigator with the Howard Hughes Medical Institute, and founding Director of the Jan and Dan Duncan Neurological Research Institute at Texas Children's Hospital. Dr. Zoghbi graduated from the American University of Beirut, received her medical degree from Meharry Medical College, and completed her residency and postdoctoral research training at Baylor College of Medicine. Dr. Zoghbi's work spans neurodevelopment to neurodegeneration. With Dr. Harry Orr, she showed Spinocerebellar Ataxia type 1 stems from a polyglutamine expansion that drives mutant-protein accumulation—a paradigm for many late-onset disorders that inspired her Alzheimer research, where she identified tau regulators enabling tau-lowering therapeutics. She discovered MECP2 mutations cause Rett syndrome, revealing the importance of MeCP2 levels for brain function, and identified Math1/Atoh1, which governs proprioceptive, respiratory, and auditory networks, including inner-ear hair cells. Dr. Zoghbi has trained over 115 scientists and physician-scientists and is committed to educating the next generation. She has been elected to the National Academy of

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Medicine, the National Academy of Sciences, and the American Academy of Arts and Sciences. Dr. Zoghbi's honors include the Breakthrough Prize in Life Sciences; the Canada Gairdner International Prize; the Lundbeck Foundation's Brain Prize; and the Kavli Prize.



**MARIA ZUBER** is MIT's E. A. Griswold Professor of Geophysics and presidential advisor for science and technology policy, tracking trends and seizing opportunities to inform and advance enlightened state and federal policy. Zuber served as vice president for research from 2013 to 2024, responsible for research administration and policy, and oversight of more than a dozen interdisciplinary research laboratories and centers. She has held appointments in four U.S. Presidential administrations, including chair of the National Science Board in the first Trump administration and co-chair of President Biden's Council of Advisors on Science and Technology (PCAST).