

# **Committee on International Security and Arms Control**

## **Committee**

### **Persis S. Drell**

#### **Chair**

Persis S. Drell is the Provost Emerita and the James and Anna Marie Spilker Professor in the Stanford University School of Engineering, a professor of materials science and engineering, and a professor of physics. Prior to her appointment as provost, she was dean of the Stanford School of Engineering from 2014 to 2017 and director of the US Department of Energy's SLAC National Acceleratory Laboratory from 2007 to 2012.

### **Rose E. Gottemoeller**

#### **Vice Chair**

Ms. Rose Gottemoeller was the Deputy Secretary General of NATO from October 2016 to October 2019. She took up that position after serving nearly five years as the Under Secretary for Arms Control and International Security at the U.S. Department of State. As Under Secretary, Ms. Gottemoeller advised the Secretary of State on arms control, nonproliferation and political-military affairs. She was acting in this position from 2012 to 2014, while concurrently serving as Assistant Secretary of State for the Bureau of Arms Control, Verification and Compliance (2009-2014). In this capacity, she was the chief U.S. negotiator of the New Strategic Arms Reduction Treaty (New START) with the Russian Federation, which entered into force on February 5, 2011. During her time as Under Secretary of State, Ms. Gottemoeller focused on defense and security cooperation in Europe and Asia, peacekeeping policy and training, and weapons and mine abatement in post-conflict locales around the world. Prior to the Department of State, she was a senior associate with the Carnegie Endowment for International Peace, with joint appointments to the Nonproliferation and Russia programs. She served as the Director of the Carnegie Moscow Center in 2006-2008. From 1998 to 2000, Ms. Gottemoeller served as Deputy Under Secretary of Energy for Defense Nuclear Nonproliferation and before that, Assistant Secretary and Director for Nonproliferation and National Security at the U.S. Department of Energy. Ms. Gottemoeller served for three years as Deputy Director of the International Institute for Strategic Studies in London. From 1993 to 1994, she served on the National Security Council staff as Director for Russia, Ukraine and Eurasia Affairs. Previously, she was a social scientist at RAND and a Council on Foreign Relations International Affairs Fellow. She has taught on Soviet military policy and Russian security at Georgetown University and is fluent in Russian. Ms. Gottemoeller earned a B.A. from Georgetown University, and an M.A. from George Washington University's Elliott School of International Affairs.

## **Marvin L. Adams**

### **Member**

Marvin L. Adams is the HTRI Professor of Nuclear Engineering and director of the Institute for National Security Education and Research at Texas A&M University. Dr. Adams received his Ph.D. in Nuclear Engineering from the University of Michigan and is a Fellow of the American Nuclear Society. He was a physicist at Lawrence Livermore National Laboratory from 1986 to 1992 and has remained extensively engaged with the U.S. national security laboratories since then. He has served on a variety of review and advisory committees and panels, many of which advise the U.S. government on matters related to national security. Dr. Adams has served on several NRC/NAS committees including the Committee on Technical Issues Related to the Comprehensive Nuclear Test Ban Treaty, the Committee on Sustaining and Improving the Nation's Nuclear Forensics Capabilities, and the Committee on Evaluation of Quantification of Margins and Uncertainty (QMU) Methodology Applied to the Certification of the Nation's Nuclear Weapons Stockpile. He has also served as Co-Chair of the Committee on Mathematical Foundations of Validation, Verification, and Uncertainty Quantification. Dr. Adams currently serves as a member of the NAS Committee on International Security and Arms Control.

## **Andrew G. Alleyne**

### **Member**

Andrew G. Alleyne is the dean of the University of Minnesota College of Science and Engineering (CSE). His research interests encompass the modeling, simulation, and implementation of control systems for complex systems and nonlinear systems. His current focus is on the optimization of energy and power systems using model-based approaches. He has developed simulation tools for understanding and prediction the behavior of complex thermal systems and transitioned that to implementations of control systems for dynamic thermal management. In particular, he works at the interface of electrical and thermal power for mobile systems since many of the thermal management challenges arise from electrical power usage. His academic record includes supervision of over 80 M.S. and Ph.D. students and over 400 conference and journal publications. He is a Fellow of the American Society of Mechanical Engineers (ASME), IEEE, the American Association for the Advancement of Science (AAAS), and a member of the US National Academy of Engineering. He was a Fulbright fellow to the Netherlands and has held visiting Professorships at TU Delft, University of Colorado, ETH Zurich, and Johannes Kepler University. Dr. Alleyne has been active in external advisory and review boards including the Scientific Advisory Board for the U.S. Air Force, the US Navy S&T Board, and the NASEM Board on Army Research and Development (BOARD). Dr. Alleyne received his B.S. in Mechanical and Aerospace Engineering from Princeton University and an M.S. and Ph.D. in Mechanical Engineering from the University of California, Berkeley.

---

## **Alexandra Bell**

### **Member**

Alexandra Bell is the President and CEO of the Bulletin of the Atomic Scientists. Before joining the Bulletin, Bell served as the Deputy Assistant Secretary for Nuclear Affairs in the Bureau of Arms Control, Deterrence, and Stability (ADS) at the U.S. Department of State. She also served in various other roles in the department, including as a Senior Advisor to the Under Secretary of State for Arms Control and International Security, from 2010-2017. Bell has also held positions at the Center for Arms Control and Non-Proliferation and the Council for a Livable World, Ploughshares Fund, and the Center for American Progress. Bell received a master's degree in International Affairs from the New School and a bachelor's degree in Peace, War and Defense from the University of North Carolina at Chapel Hill. From 2001-2003, she was a U.S. Peace Corps Volunteer in Saint Elizabeth, Jamaica. Bell is a Member of the Council on Foreign Relations.

## **Kristie A. Boering**

### **Member**

Kristie Boering is a Professor of Chemistry and of Earth and Planetary Science. Her research focuses on the coupling of atmospheric chemistry and climate on Earth and other planets on time scales ranging from months to billions of years is studied through observations from aircraft, balloon and ground-based platforms, 2D and 3D computer simulations, and laboratory experiments. Of particular interest are studies of photochemical isotope effects. These studies range from crossed molecular beam laboratory experiments to observations in the stratosphere. Photochemistry and reaction dynamics experiments are aimed at providing an understanding of unusual isotope effects on the molecular scale. Global-scale field measurements and computer simulations are aimed at using stable isotopes as tracers of atmospheric chemistry and transport in today's atmosphere and of the exchange of gases between the atmosphere and biosphere on annual to millennial to billion year time scales from atmospheric, ice core, and rock measurements, respectively. This insight is extended to the early Earth and other planets through laboratory investigations of photochemical haze production and other atmospheric phenomena that could serve as significant regulators of climate and habitability.

## **Mariana Budjeryn**

### **Member**

Mariana Budjeryn is a Senior Research Associate with the Project on Managing the Atom (MTA) at the Harvard Kennedy School's Belfer Center. Formerly, she held appointments as a Stanton Nuclear Security Fellow at MTA, a fellow at Harvard Davis Center for Russian and Eurasian Studies, and as a visiting professor at Tufts University and Peace Research Institute Frankfurt. Mariana's research focuses on the international history and politics of nuclear nonproliferation, post-Soviet nuclear disarmament, arms control, and crisis escalation. Mariana's research and analytical contributions appeared in the *Journal of Cold War Studies*, *Nonproliferation Review*, *Foreign Affairs*, *Washington Post*, *Boston Globe*, *Bulletin of the Atomic Scientists*, and in the publications of the Woodrow Wilson Center where she is a global fellow. Mariana's book *Inheriting the Bomb: The Collapse of the USSR and the Nuclear Disarmament of Ukraine* is forthcoming in December 2022 with Johns Hopkins University Press. At MTA, Mariana leads a diversity and inclusion program, including Atomic Voices seminar series, a forum for marginalized voices and perspectives in the nuclear field. She is also a one of the creators and organizers of Arms Control Negotiations Academy, an international immersive executive education course to hone a new generation of arms control experts. Mariana has been a regular participant in the NAS CISAC Russia Dialogue discussions since July 2020. She holds a Ph.D. in political science from Central European University (formerly in Budapest, Hungary), MA in international relations from CEU, and BA in political science from Kyiv-Mohyla Academy in Ukraine.

## **Matthew G. Bunn**

### **Member**

Matthew Bunn is the James R. Schlesinger Professor of the Practice of Energy, National Security, and Foreign Policy at the Harvard Kennedy School. His research interests include nuclear deterrence and arms control; nuclear theft and terrorism; nuclear proliferation and measures to control it; the future of nuclear energy and its fuel cycle; and innovation in energy technologies. Before coming to Harvard, Bunn served as an adviser to the White House Office of Science and Technology Policy, as a study director at the National Academy of Sciences, and as editor of *Arms Control Today*. He is the author or co-author of more than 25 books or major technical reports (most recently *Revitalizing Nuclear Security in an Era of Uncertainty*), and over 150 articles in publications ranging from *Science* to *The Washington Post*.

## **Nancy D. Connell**

### **Member**

Nancy D. Connell is a Senior Scholar at the Johns Hopkins Center for Health Security and a visiting Professor in the Department of Environmental Health and Engineering at the Johns Hopkins Bloomberg School of Public Health. She is a microbial geneticist by training. Dr. Connell's work at the Center is focused on advances in life sciences and technology and their application to a number of developments in the areas of biosecurity, biosafety and biodefense. Her research projects analyze novel biotechnologies that might impact (1) the development of Global Catastrophic Biological Risks (GCBR) in ecosystems, (2) the development of surge capacity for medical countermeasure manufacturing and other response mechanisms in the event of global pandemics or global catastrophic events. Dr. Connell is a member of the Board on Life Sciences and is a National Associate of the National Academies of Sciences, and she completed a six-month sabbatical as Visiting Scholar at the Board on Life Sciences. Dr. Connell is a member of the US-CDC's Biological Agent Containment Working Group in the Office of Public Health Preparedness and Response and was recently appointed to serve on the National Science Advisory Board for Biosecurity.

Before joining the Center, Dr. Connell was Professor and Director of Research in the Division of Infectious Disease in the Department of Medicine at Rutgers New Jersey Medical School and the Rutgers Biomedical Health Sciences. Dr. Connell's major research focus was antibacterial drug discovery in respiratory pathogens such as *M. tuberculosis* and *B. anthracis*. Dr. Connell chaired the Institutional Biosafety Committee of Rutgers University and directed NJMS's biosafety level three containment laboratory beginning in 1997. Her recent work focused on the use of predatory bacteria as novel therapeutics for treatment of Gram negative bacterial infections, including MDR strains and select agents. Dr. Connell was continuously funded by the NIH, the Department of Defense and DARPA, industry, and/or other sources from 1992 to 2018.

## **Linda T. Elkins-Tanton**

### **Member**

Linda Elkins-Tanton is vice president of the Arizona State University Interplanetary Initiative, ASU Regents and Foundation Professor in the School of Earth and Space Exploration, the Principal Investigator of the NASA Psyche mission, and co-founder of Beagle Learning, Inc. She was Director of the Department of Terrestrial Magnetism at the Carnegie Institution for Science, and previously faculty at MIT. Her research is on the physical and chemical growth and evolution of rocky planets and on volcanic activity and extinctions on Earth, as well as on effective teams and future-facing educational practices. She has led four field seasons in central Siberia. She is a member of the National Academy of Sciences and the American Academy of Arts & Sciences, and is a fellow of the American Geophysical Union, the Meteoritical Society, and the American Mineralogical Society. She received the 2020 Arthur L. Day Prize and Lectureship from the NAS, and the 2010 Lowell Thomas award from the Explorers Club. Her S.B., S.M., and Ph.D. are from MIT.

## **Steven A. Fetter**

### **Member**

Steven Fetter is Associate Provost, Dean of the Graduate School, and professor of public policy at the University of Maryland. He is a member of the Council on Foreign Relations and a fellow of the American Physical Society. Fetter worked for five years in the White House Office of Science and Technology Policy during the Obama Administration, leading both the National Security and International Affairs and the Environment and Energy divisions. In 1993-94 he served as special assistant to the Assistant Secretary of Defense for International Security Policy and he worked in the State Department as an American Institute of Physics fellow. He has been a member of the Director of National Intelligence's Intelligence Science Board and DOE's Nuclear Energy Advisory Committee; served as president of the Association of Professional Schools of International Affairs and as vice chairman of the Federation of American Scientists; and has been a visiting fellow at Stanford's Center for International Security and Cooperation, Harvard's Center for Science and International Affairs, MIT's Plasma Fusion Center, and Lawrence Livermore National Laboratory. He holds an S.B. in physics from MIT and a Ph.D. in energy and resources from U.C. Berkeley.

## **Bethany Goldblum**

### **Member**

Bethany Goldblum is an associate professor in the Department of Nuclear Engineering at the University of California, Berkeley and faculty scientist in the Nuclear Science Division at Lawrence Berkeley National Laboratory. She is also a visiting scientist at Lawrence Livermore National Laboratory. Since 2017, Goldblum has served as Executive Director of the Nuclear Science and Security Consortium, a multi-institution initiative established by the National Nuclear Security Administration that includes 11 universities and 5 U.S. DOE National Laboratories working to train the next generation of nuclear security experts. From 2014 to 2024, she directed the Public Policy and Nuclear Threats Boot Camp, a program at the Institute on Global Conflict and Cooperation for graduate students and early-to-mid career professionals covering historical, legal, technical, and policy aspects of nuclear weapons issues. Her research focuses on applied nuclear physics with an emphasis on proliferation detection, with activities in experimental nuclear data inquiry, neutron detection, machine learning applications, and nuclear security policy. She received the 2020 James Corones Award in Leadership, Community Building, and Communication and was named Distinguished Alumni at Fort Lewis College in 2025. She is a member of the American Physical Society and currently serves on the IEEE Nuclear and Plasma Sciences Society's Radiation Instrumentation Steering Committee. Goldblum received a Ph.D. in nuclear engineering from the University of California, Berkeley.

# Margaret A. Hamburg

## Member

Dr. Margaret Hamburg is an internationally recognized leader in public health and medicine, including expertise in public health preparedness, biological threats and infectious disease. She is the former Commissioner of the U.S. Food and Drug Administration (F.D.A.), having stepped down from that role in April 2015 after almost six years of service. As FDA Commissioner she was known for advancing regulatory science, streamlining and modernizing FDA's regulatory pathways, and globalization of the agency. Before joining F.D.A., Dr. Hamburg was founding vice president and senior scientist at the Nuclear Threat Initiative, a foundation dedicated to reducing nuclear, chemical and biological threats. Previous government positions include Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services, Health Commissioner for New York City, and Assistant Director of the National Institute of Allergy and Infectious Diseases, National Institutes of Health. Dr. Hamburg earned her B.A. from Harvard College, her M.D. from Harvard Medical School and completed her medical residency at Weill Cornell Medical Center. She is a Fellow of the American Association for the Advancement of Science and the American College of Physicians, and is an elected member of the Council on Foreign Relations and the National Academy of Medicine (NAM). Within the National Academies of Science, Engineering and Medicine, Dr. Hamburg has served on numerous committees, chaired the IOM Board on Global Health and co-chaired the Forum on Emerging Microbial Threats to Health. As an Officer of NAM, she participates on the NAM and National Research (NRC) Councils. She is a former member of CISAC and currently also serves on the Committee on Human Rights. Dr. Hamburg currently sits on the board of the Commonwealth Fund, the Simons Foundation, the Urban Institute, and the American Museum of Natural History. She is also a member of the Harvard University Global Advisory Council, the Global Health Scientific Advisory Committee for the Bill and Melinda Gates Foundation, the Harvard Medical School Board of Fellows, and the World Dementia Council. She is the recipient of multiple honorary degrees and numerous awards.

## **Jill M. Hruby**

### **Member**

Jill Hruby is the former director of Sandia National Laboratories, having served in that role from July 2015 through May 2017. During her 34 years at Sandia, she served as vice president of the Energy, Nonproliferation, and High-Consequence Security Division; leader of Sandia's International, Homeland, and Nuclear Security Program; technical director in Materials and Engineering Sciences and in Homeland Security and Defense Systems; and held several leadership positions in materials science, weapon components, and micro-technologies.

Ms. Hruby has authored numerous publications and holds three patents. Her awards include an R&D 100 Award, the Suzanne Jenniches Upward Mobility Award from the Society of Women Engineers, the US Department of Energy Secretary's Exceptional Service Award, the National Nuclear Security Administrator's Distinguished Service Gold Award, and the Office of the Secretary of Defense Medal for Exceptional Public Service. In 2017, Business Insider named Ms. Hruby the second most powerful female engineer.

Ms. Hruby was NTI's inaugural Sam Nunn Distinguished Fellow, completing her year-long term in November 2019. She participates in engineering advisory councils for Purdue University and University of California at Berkeley and is a member of the National Academies Committee on International Security and Arms Control, having also previously served on the Board on Chemical Sciences and Technology and the Committee on Determining Core Capabilities in Chemical and Biological Defense Research and Development. Ms. Hruby holds a bachelor's degree from Purdue University and a master's degree from the University of California at Berkeley, both in mechanical engineering.

## **John C. Inglis**

### **Member**

The Honorable John Christopher Inglis serves on the boards of AIG, Mitre, and Huntington Bancshares and as an advisor to Paladin Capital and Ballistic Ventures. Mr. Inglis was U.S. National Cyber Director from 2021-23, National Security Agency Deputy Director from 2006-14, and member of the departments of Computer/Cyber Science, and Mechanical Engineering at the US Military, Naval, and Air Force Academies. He served on the Defense Science Board, Navy Science Board, National Intelligence University Board, and Cybersecurity and Infrastructure Agency Advisory Council. Mr. Inglis received graduate degrees in mechanical engineering and computer science from Columbia, Johns Hopkins, and George Washington Universities, and an honorary doctorate from the National Intelligence University. He was a US Air Force command pilot and a Brigadier General in active/reserve service. He serves as a member of the National Academies' Forum on Cyber Resilience, Cyber Security Working Group, and as Co-Chair for the Committee on an English-Chinese Chinese-English Glossary of Cybersecurity Terms. He previously served as a member of the Committee on International Security and Arms Control.

## **Moriba K. Jah**

### **Member**

Moriba Jah is an Associate Professor of Aerospace Engineering and Engineering Mechanics at The University of Texas at Austin where he is the holder of the Mrs. Pearlie Dashiell Henderson Centennial Fellowship in Engineering. He's the director for Computational Astronautical Sciences and Technologies (CAST), a group within the Oden Institute for Computational Engineering and Sciences as well as the Lead for the Space Security and Safety Program at the Robert Strauss Center for International Security and Law. Prof. Jah earned his Ph.D. in Aerospace Engineering Sciences from the University of Colorado at Boulder, in 2005.

Moriba is a Fellow of multiple organizations: TED, American Institute of Aeronautics and Astronautics (AIAA), American Astronautical Society (AAS), International Association for the Advancement of Space Safety (IAASS), Royal Astronomical Society (RAS), and the Air Force Research Laboratory (AFRL). He has served on the US delegation to the United Nations Committee On Peaceful Uses of Outer Space (UN-COPUOS), is an elected Academician of the International Academy of Astronautics (IAA), and has testified to congress on his work as related to Space Situational Awareness and Space Traffic Management. He's an Associate Editor of the Elsevier Acta Astronautica, Space Safety Engineering, and Advances in Space Research journals, and serves on multiple committees: IAA Space Traffic Management, IAA Space Debris, AIAA Astrodynamics, IAF Astrodynamics, and IAF Space Security.

## **Raymond Jeanloz**

### **Member**

Dr. Raymond Jeanloz is a professor of earth and planetary science and astronomy at the University of California (UC) at Berkeley and Annenberg Distinguished Visiting Fellow at the Hoover Institution, Stanford University. In addition to his scientific research on the evolution of planetary interiors and properties of materials at high pressures, he works at the interface between science and policy in areas related to national and international security, resources and the environment, and education. Jeanloz is a member of the JASON group that provides technical advice to the U.S. government, and served on the Secretary of State's International Security Advisory Board; he is past chair of the National Research Council (NRC) Board on Earth Sciences and Resources. Jeanloz's scientific research has been recognized by a MacArthur Fellowship, an American Geophysical Union Macelwane Award, a Mineralogical Society of America Award, and the National Academy of Sciences Cozzarelli Prize. His policy-related work has been recognized by the American Physical Society (APS) Leo Szilard Lectureship and the Federation of American Scientists' Hans Bethe Award. He is an elected fellow of the American Academy of Arts and Sciences, American Association for the Advancement of Science, American Geophysical Union, APS, and Mineralogical Society of America, and elected member of the National Academy of Sciences. Jeanloz holds a Ph.D. from the California Institute of Technology and was on the faculty at Harvard University before moving to UC Berkeley in 1982.

## **Alastair I. Johnston**

### **Member**

Dr. Alastair Iain Johnston is the Governor James Albert Noe and Linda Noe Laine Professor of China in World Affairs at Harvard University. His research and teaching interests include ideational sources of foreign policy behavior, socialization in international institutions, and the analysis of identity in the social sciences, mostly with reference to China and East Asia. He is the author of *Cultural Realism: Strategic Culture and Grand Strategy in Chinese History* (Princeton 1995) and *Social States: China in International Institutions, 1980-2000* (Princeton 2008). He is also co-editor (with Robert Ross) of *Engaging China: The Management of an Emerging Power* (Routledge 1999); *New Directions in the Study of China's Foreign Policy* (Stanford 2006) (with Robert Ross); *Crafting Cooperation: Regional Institutions in Comparative Perspective* (Cambridge 2007) (with Amitav Acharya); *Chinese-English English-Chinese Glossary on Nuclear Security Terms* (Mianyang: Atomic Energy Press, 2008) (with NAS CISAC and the Chinese Scientists Group on Arms Control); and *Measuring Identity: A Guide for Social Scientists* (Cambridge 2009) (with Rawi Abdelal, Yoshiko Herrera, and Rose McDermott). Johnston co-directs the Princeton-Harvard China and the World program. Prof. Johnston holds a B.A. from the University of Toronto, an M.A. in East Asian Studies from Harvard University, and a Ph.D. in political science from the University of Michigan.

## **James W. LeDuc**

### **Member**

Dr. James LeDuc is the director of the Galveston National Laboratory, the only full-suit BSL4 laboratory in operation on an academic campus in the United States, and professor in the Department of Microbiology and Immunology at University of Texas Medical Branch (UTMB) in Galveston. He holds the John Sealy Distinguished University Chair in Tropical and Emerging Virology and is the principal investigator for the National Biocontainment Training Center at UTMB. LeDuc joined UTMB in 2006 from the Centers for Disease Control (CDC) in Atlanta where he was the Influenza Coordinator. Before moving to UTMB, he served as CDC's director of the Division of Viral and Rickettsial Diseases and as the associate director for global health in the Office of the Director at the National Center for Infectious Diseases. Earlier he was a medical officer in charge of arboviruses and viral hemorrhagic fevers at the World Health Organization in Geneva. LeDuc also spent 23 years as a U.S. Army officer in the medical research and development command, with assignments in the United States and abroad, including the Walter Reed Army Institute of Research and USAMRIID. His career began as a field biologist with the Smithsonian Institution in West Africa. He is a fellow with the Infectious Diseases Society of America and has published over 200 scientific articles/book chapters. Dr. LeDuc earned his M.S.P.H and Ph.D. degrees from the University of California at Los Angeles.

## **Jeffrey Lewis**

### **Member**

Dr. Jeffrey Lewis is a Professor at the Middlebury Institute of International Studies on the Nonproliferation and Terrorism Studies faculty. He is also a scholar at the Institute's James Martin Center for Nonproliferation Studies. Previously, he served as director of the Nuclear Strategy and Nonproliferation Initiative at the New America Foundation and executive director of the Managing the Atom Project at the Belfer Center for Science and International Affairs at Harvard University.

At the Middlebury Institute, Dr. Lewis teaches courses on arms control issues in Northeast Asia and the role of open-source information. He is the author of two scholarly books, *The Minimum Means of Reprisal: China's Search for Security in the Nuclear Age* (MIT Press, 2007) and *Paper Tigers: China's Nuclear Posture* (International Institute of Strategic Studies, 2014), as well as a novel of speculative fiction, *The 2020 Commission on the North Korean Nuclear Attacks on the United States* (Mariner, 2018). He is the founder of ArmsControlWonk.com, a leading blog and podcast on disarmament, arms control and nonproliferation issues.

Dr. Lewis received a B.A. in Philosophy and Political Science from Augustana College and a Ph.D. in Policy Studies from the University of Maryland.

## **Herbert S. Lin**

### **Member**

Since December 2014, Dr. Herb Lin has been senior research scholar for cyber policy and security at the Center for International Security and Cooperation and Hank J. Holland Fellow in Cyber Policy and Security at the Hoover Institution, both at Stanford University. His research interests relate broadly to policy-related dimensions of cybersecurity and cyberspace, and he is particularly interested in the use of offensive operations in cyberspace as instruments of national policy and in the security dimensions of information warfare and influence operations on national security. He is an elected fellow of the American Association for the Advancement of Science and a member of the Science and Security Board of the Bulletin of Atomic Scientists. In 2016, he served on President Obama's Commission on Enhancing National Cybersecurity. He was also Chief Scientist for the Computer Science and Telecommunications Board of the National Academies before moving to Stanford, and before that he was professional staff member and staff scientist for the House Armed Services Committee (1986-1990), where his portfolio included defense policy and arms control issues. He received his doctorate in physics from MIT.

## **Douglas L. Loverro**

### **Member**

Mr Loverro, President, Loverro Consulting, LLC, has over 45 years of policy, science, technology, and acquisition leadership in support of the US national security both as an active-duty member and civil servant in the US Air Force, the NRO, NASA and the DoD, including 30 years of uniformed service. He served in Senior Executive roles as the Assoc Admin for Human Exploration & Operations at NASA, the Dep Asst Sec of Def for Space Policy in DoD, the Exec Dir at the AF Space & Missile Systems Center, and the Dep for Sys Eng at the NRO. He has a Master in Political Science from Auburn University, an MS in Physics from Univ of NM, an MBA from the Univ of West FL (1979) and a BS in Chem from the US Air Force Acad. Since leaving government he has been an active leader in national and international space policy and security as a member of the US delegation to UNIDIR in Geneva, advisor to the NATO ministerial on Space Policy, key presenter at the Biennial Prague Space security Institute, amongst many other space policy and security activities. He was one of the key intellectual voices in the debate to form the US Space Force. He has served as an expert consultant to CISAC since 2017 in their strategic stability dialogue with Russia.

## **Cherry A. Murray**

### **Member**

Cherry Murray is Benjamin Peirce Professor of Technology and Public Policy and Professor of Physics, Emerita, Harvard University. She was Professor of Physics and Deputy Director of Research at Biosphere2 at University of Arizona; Professor of Physics and Dean of Harvard University School of Engineering and Applied Sciences; Principal Associate Director for Science Technology and Engineering at Lawrence Livermore National Lab, and held multiple positions at Bell Laboratories, concluding as Senior Vice President for Physical Sciences and wireless Research. Her research interests have evolved from experimental condensed matter and surface physics to nanotechnology, innovation, R&D of telecommunications networks, policy for science, technology, energy and national security, science diplomacy and global sustainable development. She is a member of NAS and NAE and served in the past on NRC Governing Board and on NAS and NAE Councils, She is a fellow and past board and council member of the American Academy of Arts and Sciences, past board member of the American Association for the Advancement of Science, past president of the American Physical Society, treasurer and past co-chair of the InterAcademy Partnership and past co-chair of the United Nations 10-Member Group. Murray has received the US National Medal of Technology and Innovation as well as the American Physical Society Maria Goeppert-Mayer Award and George E. Pake Prize. Murray's past US government service included numerous federal advisory committees and commissions and an appointment as the Director of the US Department of Energy Office of Science. She has also served on advisory committees for Singapore National Science Foundation, the Max Planck Society and the Helmholtz Association in Germany, and RIKEN in Japan. She is past chair of the governing board of Okinawa Institute of Science and Technology Graduate University, Japan and is currently serving as a trustee of Nanyang Technological University, Singapore. Murray obtained B.S. (1973) and Ph.D. (1978) degrees in physics from the Massachusetts Institute of Technology. She has multiple years of volunteer service to the Academies. Her term on the NAE Council concludes in June 2026, after which she will assume the position of NAS International Secretary. She is currently co-chair of the NASEM Report Review Committee and co-chair of the Roundtable on Sustainability.

# Stuart J. Russell

## Member

Stuart Russell received his B.A. with first-class honours in physics from Oxford University in 1982 and his Ph.D. in computer science from Stanford in 1986. He then joined the faculty of the University of California at Berkeley, where he is Professor (and formerly Chair) of Electrical Engineering and Computer Sciences and holder of the Smith-Zadeh Chair in Engineering. He is also an Adjunct Professor of Neurological Surgery at UC San Francisco and Vice-Chair of the World Economic Forum's Council on AI and Robotics.

Russell is a recipient of the Presidential Young Investigator Award of the National Science Foundation, the IJCAI Computers and Thought Award, the World Technology Award (Policy category), the Mitchell Prize of the American Statistical Association and the International Society for Bayesian Analysis, the ACM Karlstrom Outstanding Educator Award, and the AAAI/EAAI Outstanding Educator Award. In 1998, he gave the Forsythe Memorial Lectures at Stanford University and from 2012 to 2014 he held the Chaire Blaise Pascal in Paris. He is a Fellow of the American Association for Artificial Intelligence, the Association for Computing Machinery, and the American Association for the Advancement of Science.

His research covers a wide range of topics in artificial intelligence including machine learning, probabilistic reasoning, knowledge representation, planning, real-time decision making, multitarget tracking, computer vision, computational physiology, global seismic monitoring, and philosophical foundations. His books include "The Use of Knowledge in Analogy and Induction", "Do the Right Thing: Studies in Limited Rationality" (with Eric Wefald), and "Artificial Intelligence: A Modern Approach" (with Peter Norvig). His current concerns include the threat of autonomous weapons and the long-term future of artificial intelligence and its relation to humanity.

## Lora Lannan Saalman

### Member

Dr. Lora Saalman is an associate senior fellow at the Stockholm International Peace Research Institute's (SIPRI) Armament and Disarmament Program. Her research focuses on China's cyber, nuclear and advanced conventional weapon developments in relation to India, Russia, and the United States. Formerly she served as Vice President of the Asia-Pacific Program and a Senior Fellow with the Global Cooperation in Cyberspace Program at the EastWest Institute and as Director of the China and Global Security Program at SIPRI. She has also worked at the Daniel K. Inouye Asia-Pacific Center for Security Studies, Carnegie-Tsinghua Center for Global Policy, Tsinghua University, Wisconsin Project on Nuclear Arms Control, Observer Research Foundation, and Center for Nonproliferation Studies from which she earned a one-year fellowship at the IAEA. She earned her bachelor's degree with honors from the University of Chicago in 1995, her master's degree with a certificate in nonproliferation from the Monterey Institute of International Studies in 2004, and her doctoral degree with an outstanding dissertation and graduate student award at Tsinghua University in Beijing in 2010, where she was the first American to earn a Ph.D. from its Department of International Relations completing all of her coursework in Chinese. She was an observer at the U.S.-Russia CISAC Dialogue: Russian and U.S. Concerns Regarding China on April 29, 2020 and presented on "US-China Strategic Dynamics and the Indo-Pacific" and "The Emerging Nature of Warfare: Leaning on Machine Learning and Autonomy" at the CISAC-NIAS event on India-US Cooperation on Global Security: Strategic Security Threats of the 21st Century on January 27-29, 2020. She has organized and presented at 275 Chinese- and English-language events. She has published 58 Chinese- and English-language articles, book chapters, and op-eds in such periodicals as The Wall Street Journal, Columbia University's Journal of International Affairs, [Journal of the Forum of World Economics & Politics], [Chinese Journal of International Politics], [Contemporary Asia Pacific], [South Asian Studies], and [International Herald Tribune].

## Victoria A. Samson

### Member

Victoria Samson is the Chief Director, Space Security and Stability for Secure World Foundation (SWF) and has nearly thirty years of experience in military space and security issues. She is the editor of "Global Counterspace Capabilities: An Open Source Assessment," SWF's annual report examining counterspace capabilities around the world. Before joining SWF, Ms. Samson served as a Senior Analyst for the Center for Defense Information (CDI), where she leveraged her expertise in missile defense, nuclear reductions, and space security issues to conduct in-depth analysis and media commentary. Prior to her time at CDI, Ms. Samson was the Senior Policy Associate at the Coalition to Reduce Nuclear Dangers, a consortium of arms control groups in the Washington, D.C. area, where she worked on issues related to missile defense and nuclear weapons reductions. Before that, she was a researcher at Riverside Research Institute, where she worked on war-gaming scenarios for what is now the Missile Defense Agency's Directorate of Intelligence. Ms. Samson holds a Bachelor of Arts (B.A.) degree in political science with a specialization in international relations from UCLA and a Master of Arts (M.A.) in international relations from the Johns Hopkins School of Advanced International Studies.

## **Rachel A. Segalman**

### **Member**

Rachel Segalman is the Vice Chancellor for Research and the Kramer Professor of Materials in the Departments of Chemical Engineering, Materials, and Chemistry & Biochemistry at UC Santa Barbara. She was previously a Professor of Chemical Engineering at UC Berkeley and Director of Materials Sciences at Lawrence Berkeley Labs. Among other awards, Dr. Segalman received the E.O. Lawrence Prize from the Department of Energy, the Andy Acrivos Award for Professional Progress from the American Institute of Chemical Engineers, the Dillon Medal from the American Physical Society. She was also elected to the American Academy of Arts and Sciences and the National Academy of Engineering.

Dr. Segalman is a co-author of the recent National Academies study, "Chemical Engineering: Challenges and Opportunities in the 21st Century. She also previously served on the UC Board of Governors Science and Technology Committee for Lawrence Livermore and Los Alamos Laboratories. Dr. Segalman's research involves designing, synthesizing, and controlling the hierarchical structure and properties of energy-relevant polymers including battery electrolytes and binders, semiconducting polymer devices, and separation membranes. She holds a B.S. from the University of Texas, a Ph.D. from UC Santa Barbara.

## **James P. Timbie**

### **Member**

Dr. James Timbie is a retired senior advisor to the Under Secretary for Arms Control and International Security with the Department of State. He received his Ph.D. in physics from Stanford University in 1971. Dr. Timbie has held several positions since receiving his Ph.D., all within the Department of State. According to Secretaries of State George Shultz and John Kerry, Timbie has played an important role in the negotiations of every arms controls agreement since 1974, including the Strategic Arms Limitation Talks (SALT), SALT II, Strategic Arms Reduction Treaty (START), New START, and the Intermediate-Range Nuclear Forces Treaty. Most recently, he was essential to negotiation of the Joint Comprehensive Plan of Action with Iran, working closely with both Secretary Kerry and Secretary of Energy Ernest Moniz. He has directly advised every secretary of state since the first Ronald Reagan administration. His contributions to arms control and non-proliferation at the Department of State are considered invaluable and his work was recognized by the APS as they awarded him the Leo Szilard Lectureship.

## **Jennifer Heimberg**

### **Director**