

2018 BOOT CAMP

July 29–August 7

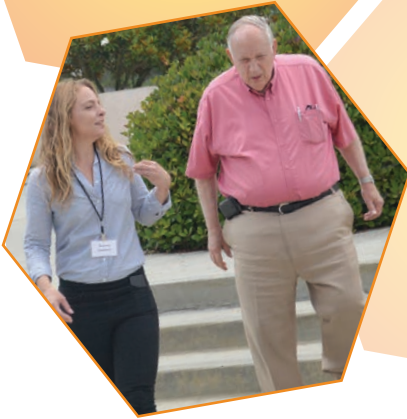
SPEAKERS



LEADERSHIP



Ambassador Linton BROOKS is an independent consultant on national security issues, a non-resident senior advisor at the Center for Strategic and International Studies, a distinguished research fellow at the National Defense University, a member of the National Academy of Sciences Committee on International Security and Arms Control, one of the Board of Managers overseeing the operations of the Sandia National Laboratories, and an advisor to five other Department of Energy national laboratories. He served from July 2002 to January 2007 as administrator of the US Department of Energy's National Nuclear Security Administration, where he was responsible for the US nuclear weapons program and for the Department of Energy's international nuclear nonproliferation programs.



Brooks's government service includes service as deputy administrator for nuclear nonproliferation at the National Nuclear Security Administration, assistant director of the US Arms Control and Disarmament Agency, chief US negotiator for the Strategic Arms Reduction Treaty, director of Defense Programs and Arms Control on the National Security Council staff, and a number of Navy and Defense Department assignments as a 30-year career naval officer.

Ambassador Brooks holds degrees in physics from Duke University and in government and politics from the University of Maryland, and is a distinguished graduate of the US Naval War College. Since 2008 he has served as an expert in residence during the annual Public Policy and Nuclear Threats program.



Bethany L. GOLDBLUM is an associate research engineer in the Department of Nuclear Engineering at the University of California Berkeley, where she leads the Bay Area Neutron Group, a research team focused on applied nuclear physics for nuclear security applications. Goldblum also serves as executive director for the Nuclear Science and Security Consortium, a multi-institution initiative established by the Department of Energy's National Nuclear Security Administration to conduct research and development supporting the nation's nonproliferation mission while expanding the talent pipeline. Her research focuses on fundamental and applied nuclear physics, neutron detection, scintillator characterization, multi-source analytics for proliferation detection, and nuclear security policy. Goldblum founded and directs the Nuclear Policy Working Group, an interdisciplinary team of students focused on developing policy solutions to strengthen global nuclear security. She has been involved with the Public Policy and Nuclear Threats Boot Camp nearly since its inception, and acted as director of the program since 2014.

Goldblum received a PhD in nuclear engineering from the University of California Berkeley in 2007 with perfect marks. She was a Project on Nuclear Issues Scholar at the Center for Strategic and International Studies and a member of the United States delegation to the 2008 China-India-United States Workshop on Science, Technology, and Innovation Policy in Bangalore, India. She served as a Clare Boothe Luce Chancellor's Postdoctoral Fellow at UC Berkeley before joining the nuclear engineering faculty at the University of Tennessee, Knoxville in August 2010. In January 2012, she returned to Berkeley as a member of the research faculty. She maintains active collaborations with the US DOE National Laboratories, and is an affiliate at Lawrence Berkeley, Lawrence Livermore, and Sandia National Laboratories. Goldblum is author or co-author of more than 60 scientific publications.





GEORGE ANZELON

George ANZELON is a physicist at Lawrence Livermore National Laboratory (LLNL). Since joining LLNL in 1977, he has worked on problems of nuclear nonproliferation, nuclear security, and international nuclear safeguards in capacities ranging from research analyst to associate division leader and, since early 2018, as a part-time retiree. He participated in the International Atomic Energy Agency's (IAEA) nuclear inspections in Iraq following the 1991 Gulf War, and during 2000–2002 he worked at IAEA headquarters in Vienna. Anzelon also participated on the ground in the verified elimination of Libya's former nuclear program during 2004–2006 and the monitoring of nuclear disablement activities in North Korea during 2007–2009. He is a recipient of the Intelligence Community Seal Medallion and the NNSA Administrator's Distinguished Service Gold Award. He holds a PhD in nuclear physics from UCLA.



ALEXANDRA BELL

Alexandra BELL is the senior policy director at the Center for Arms Control and Non-Proliferation. Her areas of focus include bilateral and multilateral arms control and nonproliferation, Euro-Atlantic security, diplomacy, and the legislative process. Previously, Bell served as a senior advisor in the Office of the Under Secretary of State for Arms Control and International Security. Before joining the Department of State in 2010, she worked on nuclear policy issues at the 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 to 2003, she was a Peace Corps volunteer in Saint Elizabeth, Jamaica. Bell is a member of the British American Security Information Council Board of Directors, a Truman National Security Fellow, a 2012–2017 Council on Foreign Relations term member, a 2017 Munich Security Conference Young Leader, and a member of the Project on Nuclear Issues Mid-Career Cadre and the Younger Generation Leaders Network on Euro-Atlantic Security. Bell has been quoted and published in the *Washington Post*, *Los Angeles Times*, *USA Today*, *Guardian*, *Raleigh News and Observer*, *Seattle Times*, *Bloomberg*, *Bulletin of the Atomic Scientists*, *Politico*, *Vox*, *Daily Beast*, *Time Magazine*, *Bustle*, *Huffington Post*, *Sinclair*, *Inkstick*, and more. Bell has provided commentary for MSNBC, CNBC, NPR, BBC, CGTN, and Al Jazeera.

JAMES BLANKENSHIP

James BLANKENSHIP is a forensic examiner with the Federal Bureau of Investigation at the FBI Laboratory at Quantico, Virginia, where he leads the exploitation efforts on weapons of mass destruction, specifically the threat of nuclear weapons and radioactive dispersal devices. As an US Air Force officer, he has been an executive officer in the Pentagon, supporting the assistant to the secretary of defense for nuclear, chemical, and biological defense programs. As a program manager at the Defense Threat Reduction Agency, he provided technical oversight and programmatic guidance to the Radiation Hardened Microelectronics Advanced Technology program, and he was deployed to the Iraq Survey Group as a part of Task Force DTRA. Blankenship received a PhD in chemistry from Texas A&M University, an MS in materials engineering from the University of Dayton, and a BS in chemistry from Virginia Military Institute.

M. ELAINE BUNN

M. Elaine BUNN is deputy assistant secretary of defense for nuclear and missile defense policy, appointed March 22, 2013. She directs the offices of the Under Secretary for Policy that develop and review departmental and national policies for nuclear and missile defense capabilities. These responsibilities include defining requirements for future capabilities, reviewing and adjusting operational planning, and leading discussions to develop strategies and options with allies and friends as well as international cooperation or agreements in the areas of nuclear forces, global strike, and missile defense. Prior to her appointment in 2013, Bunn was a distinguished research fellow in the Center for Strategic Research at National Defense University's Institute for National Strategic Studies (INSS), where she headed a project on future strategic concepts. Before joining INSS, she was a senior executive in the Office of the Secretary of Defense, where she worked for twenty years in international security policy. Bunn has published a number of articles and book chapters on deterrence, assurance of allies, strategic planning, nuclear policy, missile defense, and preemption, and has spoken frequently on these issues at US and international conferences.



MASSIMILIANO FRATONI

Massimiliano FRATONI is an assistant professor in the Department of Nuclear Engineering at the University of California Berkeley. Prior to joining the department, he held a research scientist position at Lawrence Livermore National Laboratory and a faculty position at Pennsylvania State University. Fraton's research interests are in advanced fuel cycles that maximize natural resource utilization and minimize nuclear waste enabling sustainable nuclear energy. His focus is on the design and analysis of advanced reactors such as molten salt reactors, fast spectrum reactors, reduced-moderation boiling water reactors, and fluoride-cooled high-temperature reactors. Fraton's group also develops computational methods to support reactor analysis, and in particular multi-physics modeling and uncertainty quantification. Additional research areas include accident tolerant fuel, nuclear fuel cycle analysis, geological repository/far-field criticality, and fusion blanket design. He received a Laurea in nuclear engineering from Università di Roma "La Sapienza" (Italy), and an MSc and PhD from UC Berkeley. He received an Early Career Reactor Physicist Award from the American Nuclear Society in 2018.



FRANCIS J. GAVIN

Francis J. GAVIN is the Giovanni Agnelli Distinguished Professor and the inaugural director of the Henry A. Kissinger Center for Global Affairs at SAIS-Johns Hopkins University. In 2013, Gavin was appointed the first Frank Stanton Chair in Nuclear Security Policy Studies and professor of political science at MIT. Before joining MIT, he was the Tom Slick Professor of International Affairs and the director of the Robert S. Strauss Center for International Security and Law at the University of Texas. From 2005 until 2010, he directed the American Assembly's multiyear, national initiative, The Next Generation Project: US Global Policy and the Future of International Institutions. Gavin's writings include *Gold, Dollars, and Power: The Politics of International Monetary Relations, 1958–1971* (University of North Carolina Press, 2004) and *Nuclear Statecraft: History and Strategy in America's Atomic Age* (Cornell University Press, 2012).





JOHN R. HARVEY

John R. HARVEY is a physicist with more than 35 years of experience working nuclear weapons and national security issues, first at Lawrence Livermore National Laboratory, then at the Center for International Security and Arms Control and in senior positions in the US Departments of Defense and Energy. From 2009 to 2013, he served as principal deputy assistant secretary of defense for nuclear, chemical, and biological defense programs under then Undersecretary Ashton Carter. He was Carter's "go to" person for the 2010 Nuclear Posture Review, as well as for interactions with the Department of Energy on joint oversight of the US nuclear weapons stockpile. Harvey also provided oversight to Department of Defense acquisition programs to sustain and modernize nuclear weapons delivery systems and systems for their command and control. Since retiring from government service in 2013, he consults with the Institute for Defense Analysis, Los Alamos National Laboratory, the National Institute for Public Policy, the Center for Strategic and International Studies, and the Strategic Command Strategic Advisory Group's Panel on Nuclear Weapons Command and Control.



SIEGFRIED S. HECKER

Siegfried S. HECKER is a professor emeritus (research) in the Department of Management Science and Engineering and a senior fellow emeritus at the Freeman Spogli Institute for International Studies and the Center for International Security and Cooperation (CISAC) at Stanford University. Hecker was co-director of CISAC from 2007 to 2012. He served as the fifth director of the Los Alamos National Laboratory from 1986 to 1997. Hecker received his BS, MS, and PhD in metallurgy from Case Western Reserve University. His current professional interests include nuclear weapons policy, plutonium research, global nuclear risk reduction with Russia, China, Pakistan, India, North Korea, and Iran, the safety and security implications of the global expansion of nuclear energy, and threats of nuclear terrorism. In 2016, Hecker published two edited volumes documenting the history of Russian-US laboratory-to-laboratory nuclear cooperation since 1992.



NEWELL HIGHSMITH

Newell HIGHSMITH served for 30 years as an attorney at the US Department of State, with primary responsibility for legal issues related to arms control and the nonproliferation of weapons of mass destruction and missiles. He headed the legal office responsible for such issues from 2002 to 2013 before taking on broader responsibilities as a deputy legal adviser from 2013 to 2017. He served as primary or sole legal adviser on the US delegations that negotiated the 1994 Agreed Framework with North Korea, the 2008 Agreement for Nuclear Cooperation with India, and the 2015 Joint Comprehensive Plan of Action with Iran. In addition, he was directly involved in negotiating the New START treaty with Russia, analyzing the legal issues raised by Syria's use of chemical weapons and its construction of a clandestine nuclear reactor, establishing dual-use export controls in the Nuclear Suppliers Group, responding to Indian and Pakistani nuclear testing, facilitating Libya's renunciation of weapons of mass destruction, and responding to the revelations regarding Iraq's nuclear weapons program. He was responsible for the legal interpretation of numerous arms control and nonproliferation statutes and treaties, including the Nuclear Nonproliferation Treaty, the Statute of the IAEA, the Atomic Energy Act, relevant UN Security Council resolutions, and various US sanctions laws. Prior to joining the State Department, Highsmith worked in private practice and was a teaching fellow at George Washington University Law School. He received a BA in English from the University of North Carolina at Chapel Hill, a JD from Harvard Law School and an LLM in international law from the George Washington University Law School.

SHERYL HINGORANI

Sheryl HINGORANI leads Sandia's Systems Analysis and Engineering organization in Livermore, California. Hingorani started her career at Sandia in 1986, as a mechanical design engineer, and has spent most of her career working in a variety of positions in Sandia's nuclear weapons program, including as Sandia's nuclear weapons chief of staff and as chair of the independent Red Team for the Annual Assessment of the state of health of the US nuclear stockpile. Hingorani received a special appointment to Distinguished Member of Technical Staff at Sandia in 1998, and moved into management in 2004. She completed studies as a fellow with the Massachusetts Institute of Technology Center for International Studies, and was the recipient of the Leadership Foundation Fellowship from the International Women's Forum. Between 2000 and 2005, Hingorani was the executive director of the Albuquerque Committee on Foreign Relations; she also served as secretary for the American Committees on Foreign Relations for two years. Hingorani is a laboratory advisor to the Defense Science Board Special Task Force on Weapons of Mass Destruction, and is a laboratory affiliate to the California Council on Science and Technology. She is member of the Society of Women Engineers.



LAURA S. H. HOLGATE

Ambassador Laura S. H. HOLGATE is currently vice president for materials risk management at the Nuclear Threat Initiative, a nongovernment organization dedicated to reducing nuclear, biological, chemical, and radiological threats. She served as US representative to the Vienna Office of the United Nations and the International Atomic Energy Agency from July 2016 to January 2017. In this role, Holgate advanced international cooperation to reduce global threats and seize opportunities in the areas of nuclear nonproliferation, nuclear security, verification of the Iran deal, nuclear testing, counterterrorism, anti-corruption, drug policy, export control, and the Nuclear Suppliers Group. Holgate was previously special assistant to the president and senior director for weapons of mass destruction, terrorism, and threat reduction on the National Security Council. Holgate received a BA in politics from Princeton University and an MS in political science from the Massachusetts Institute of Technology. She spent two years on the research staff at Harvard University's Center for Science and International Affairs, where she is now a nonresident senior fellow. She is a member of the Strategic Advisory Group to Oak Ridge National Laboratory, past president of Women in International Security, and a member of the Council on Foreign Relations.



KIM KNIGHT

Kim KNIGHT is a staff scientist at Lawrence Livermore National Laboratory (LLNL), where her work focuses on nuclear forensic research through analysis of nuclear and associated materials for clues about material origins. A geochemist by training, she remains endlessly fascinated with radioactive materials. She is primarily involved with the analysis of nuclear and associated materials to understand clues about origins, locations or processes. She has also been instrumental in the renaissance of historical fallout research to understand better fallout formation and interpretation in near surface nuclear events. In addition to her own research, Knight leads several collaborative technical efforts in the area of nuclear forensics, including with colleagues in the former Soviet Union. She has been involved in the design and delivery of many training courses in technical nuclear forensics, as well as the development and revision of international guidelines as a participant in IAEA consultancies and workshops. Knight received her PhD from the University of California Berkeley in 2006 and worked as a post-doctoral researcher at the University of Chicago and Argonne National Laboratory before joining LLNL in 2008.





MATTHEW KROENIG

Matthew KROENIG is an associate professor in the Department of Government and the Edmund A. Walsh School of Foreign Service at Georgetown University and the deputy director for strategy in the Scowcroft Center for Strategy and Security at the Atlantic Council. His work has covered a wide range of topics in national security policy. Kroenig is the author or editor of six books, including *The Logic of American Nuclear Strategy* (Oxford University Press). His articles have appeared in a wide range of publications, including *American Political Science Review*, *Foreign Affairs*, *Foreign Policy*, *International Organization*, the *Wall Street Journal*, and the *Washington Post*. He has served in a variety of positions in the US Department of Defense and the intelligence community and regularly consults with a wide range of US government entities. He formerly held research positions at the Council on Foreign Relations, Harvard University, and Stanford University. Kroenig provides regular commentary for major media outlets, including PBS Newshour, Fareed Zakaria GPS, BBC, CNN, Fox News, NPR, and C-SPAN. He is a life member of the Council on Foreign Relations and holds an MA and PhD in political science from the University of California Berkeley.



ALEXANDER H. MONTGOMERY

Alexander H. MONTGOMERY is an associate professor of political science at Reed College. He has been a Council on Foreign Relations International Affairs Fellow in Nuclear Security with a placement in the US Office of the Secretary of Defense (Policy) working for the deputy assistant secretary of defense for countering weapons of mass destruction. His portfolio included writing a new Department of Defense strategy for countering weapons of mass destruction. He has been a residential fellow at the Woodrow Wilson International Center for Scholars, a joint International Security Program/Managing the Atom Project Research Fellow at the Belfer Center for Science and International Affairs, Harvard University, and a post-doctoral fellow and visiting assistant professor at the Center for International Security and Cooperation, Stanford University. Montgomery has published articles on nuclear proliferation and on the effects of social networks of international organizations on interstate conflict. He is the co-editor of the *Oxford Handbook of Political Networks* (2017) with Jennifer Nicoll Victor and Mark Lubell. He has a BA in physics from the University of Chicago, an MA in energy and resources from the University of California Berkeley, and an MA in sociology and PhD in political science from Stanford University.



ROLF MOWATT-LARSEN

Rolf MOWATT-LARSEN is director of the Intelligence Project for Belfer Center for Science and International Affairs at Harvard University. Prior to his appointment as a senior fellow for Harvard in 2009, Mowatt-Larssen served more than three years as the director of intelligence and counterintelligence at the US Department of Energy, and for 23 years as a Central Intelligence Agency intelligence officer in numerous domestic and international posts, to include chief of the Europe division in the Directorate of Operations; chief of the Weapons of Mass Destruction Department, Counterterrorist Center; and deputy associate director of central intelligence for military support. Mowatt-Larssen served as an officer in the US Army. He is a graduate of the US Military Academy at West Point. He returned to the United States in 2016 after living for five years in Jordan and Saudi Arabia.

VIPIN NARANG

Vipin NARANG is an associate professor of political science at MIT and a member of MIT's Security Studies Program. He received his PhD from the Department of Government, Harvard University, in May 2010, where he was awarded the Edward M. Chase Prize for the best dissertation in international relations. He holds a BS and MS in chemical engineering with distinction from Stanford University and an MPhil with distinction in international relations from Balliol College, Oxford University, where he studied on a Marshall Scholarship. He has been a fellow at Harvard University's Olin Institute for Strategic Studies, a predoctoral fellow at Harvard University's Belfer Center for Science and International Affairs, and a Stanton junior faculty fellow at Stanford University's Center for International Security and Cooperation. His research interests include nuclear proliferation and strategy, South Asian security, and general security studies. His first book, *Nuclear Strategy in the Modern Era* (Princeton University Press, 2014), on the deterrence strategies of regional nuclear powers, won the 2015 ISA International Security Studies Section Best Book Award. He is currently working on his second book, *Strategies of Nuclear Proliferation* (Princeton University Press, under contract), which explores how states pursue nuclear weapons. His work has been published in several journals including *International Security*, *Journal of Conflict Resolution*, *Washington Quarterly*, and *International Organization*.



RICHARD NEPHEW

Richard NEPHEW is a senior research scholar at the Center on Global Energy Policy at Columbia University's School for International and Public Affairs. He is also a nonresident senior fellow at the Brookings Institution. He assumed both of those roles in February 2015. He served as principal deputy coordinator for sanctions policy at the US Department of State from February 2013 to February 2015. Nephew also served as the lead sanctions expert for the US team negotiating with Iran, starting with the private-channel talks in August 2013. From May 2011 to January 2013, Nephew served as the director for Iran on the National Security Council staff at the White House. Earlier in his career, he served in the Bureau of International Security and Nonproliferation at the Department of State and in the Office of Nonproliferation and International Security at the Department of Energy. Nephew holds a master's in security policy studies and a bachelor's in international affairs, both from the George Washington University. He is the author of *The Art of Sanctions*, published by Columbia University Press in 2018.



JOSEPH PILAT

Joseph PILAT is a program manager in the National Security Office at Los Alamos National Laboratory and global fellow of international security studies at the Wilson Center. Pilat served as representative of the secretary of defense to the Fourth Review Conference of the Nuclear Non-Proliferation Treaty (NPT) and to the Open Skies negotiations, and as an advisor to the US delegation at the 1995 NPT Review and Extension Conference. Previous positions include working in the Office of the Deputy Assistant Secretary of Defense for Negotiations Policy, the Congressional Research Service, and at the International Institute for Strategic Studies. Pilat has taught at Cornell University, the College of William and Mary, and Georgetown University. He is a Fellow of the Institute of Nuclear Materials Management, and has been a senior associate member of St. Antony's College, University of Oxford, a visiting fellow at Cornell's Peace Studies Program, and a Philip E. Mosely Fellow at the Center for Strategic and International Studies. He has written numerous articles for US and European scholarly journals and newspapers, and is the author or editor of several books.





BRAD ROBERTS

Brad ROBERTS is director of the Center for Global Security Research at Lawrence Livermore National Laboratory. From April 2009 to March 2013, he served as deputy assistant secretary of defense for nuclear and missile defense policy. In this role, he served as policy director of the Obama administration's Nuclear Posture Review and Ballistic Missile Defense Review. From September 2013 through December 2014, Roberts was a consulting professor and William Perry Fellow at the Center for International Security and Cooperation at Stanford University. Prior to joining the Obama administration, Roberts was a member of the research staff at the Institute for Defense Analyses and an adjunct professor at the George Washington University. His recent publications include *The Case for US Nuclear Weapons in the 21st Century* (Stanford University Press, 2015); *Extended Deterrence and Strategic Stability in Northeast Asia* (Tokyo: National Institute for Defense Studies, 2013); and *On the Strategic Value of Ballistic Missile Defense* (Paris: Institut Français des Relations Internationales, 2014). Roberts has a BA from Stanford University, an Msc from the London School of Economics and Political Science, and a PhD from Erasmus University, Rotterdam.



LAURA ROCKWOOD

Laura ROCKWOOD is the executive director of the Vienna Center for Disarmament and Non-Proliferation. Before assuming that position in June 2015, she was a senior research fellow with the Managing the Atom Project at the Belfer Center at Harvard University. Rockwood retired in November 2013 from the International Atomic Energy Agency (IAEA) as the section head for nonproliferation and policymaking in the Office of Legal Affairs, where she had served since 1985. At the IAEA, she was responsible for all legal aspects of the negotiation, interpretation, and implementation of the IAEA safeguards, and was the principal author of the document that became the Model Additional Protocol. Prior to working for the IAEA, she was employed by the US Department of Energy as a trial attorney in radiation injury cases, and as counsel in general legal matters. Rockwood received a JD in 1976 from the University of California's Hastings College of Law, San Francisco, and a BA in 1973 from the University of California Berkeley. She is a member of the State Bar of California and of the Washington DC Bar Association.



MARK SCHANFEIN

Mark SCHANFEIN is a senior nonproliferation advisor at Idaho National Laboratory, where he works on a broad range of safeguards and nonproliferation issues. At Idaho National Laboratory (INL), he focuses on pyrosafeguards for electro-chemical separation and other safeguards related research. Prior to INL, he worked on international safeguards and arms control issues at Pacific Northwest National Laboratory. He had a 20-year career at Los Alamos National Laboratory (LANL) where, in his last role, he served as program manager for nonproliferation and security technology. Schanfein also spent 10 years at the LANL plutonium facility managing all the non-destructive assay systems used for domestic accountability measurements. He started his career at LANL conducting domestic safeguards inspections and managing the overall measurement control program for the accountability measurement systems at LANL as well as running the portal monitoring program. He served as a technical expert on the ground in North Korea during the disablement activities resulting from the Six-Party Talks. Schanfein also has eight years of experience working in Department of Safeguards at the International Atomic Energy Agency in Vienna, Austria, both as an inspector and the team leader for the Unattended Monitoring Systems team.

JOHN SCOTT

John SCOTT started at Los Alamos National Laboratory (LANL) in 1998 as a postdoc in the weapon design division after completing his PhD in nuclear engineering at the University of California Berkeley. He became a staff member in 2000. During his career, Scott served as the system point of contact for two weapons systems and was the lead secondary designer for the Reliable Replacement Warhead project at LANL. Previously, Scott led the secondary design group at LANL. Currently, he is the X-Theoretical Design Deputy Division Leader managing LANL's physics assessments of stockpile performance.



ROB SOOFER

Rob SOOFER is the deputy assistant secretary of defense for nuclear and missile defense policy, supporting the Under Secretary of Defense for Policy and the Assistant Secretary of Defense for Strategy, Plans, and Capabilities by developing strategies, creating policies, and conducting oversight of national nuclear policy, treaty negotiations, and missile defense policy. Soofer was previously a professional staff member and Republican staff lead for the Subcommittee on Strategic Forces of the Senate Armed Services Committee, with oversight responsibility for missile defense, nuclear forces, arms control, nonproliferation policy, US Strategic Command, and Department of Energy nuclear weapons and non-proliferation activities. Between January 2009 and December 2012, he served as strategic forces policy advisor to Senator Jon Kyl, the Republican whip. In this capacity, he was a senior advisor to the Republican caucus during Senate consideration of the 2010 New START Treaty. He also served as a military legislative assistant to Senator Slade Gorton (R-WA) and as professional staff member on the Senate Republican Policy Committee. Soofer received his PhD in international relations from the University of Southern California and is a graduate of the National War College. He received the Department of Defense Exceptional Civilian Service Medal and is the author of *Missile Defenses and Western European Security* (Greenwood Press, 1988).



JACQUELYN G. SCHNEIDER

Jacquelyn G. SCHNEIDER is an assistant professor at the US Naval War College and a core faculty member of the Center for Cyber Conflict Studies. Her research focuses on the intersection of technology, national security, and political psychology with a special interest in cyber, unmanned technologies, and Northeast Asia. Her work has appeared in print in the *Journal of Conflict Resolution*, *Strategic Studies Quarterly*, and *Security Studies* and online at *Foreign Affairs*, *CFR*, *Cipher Brief*, *War on the Rocks*, *Washington Post*, *Bulletin of the Atomic Scientists*, *National Interest*, and the Center for a New American Security. Schneider is an active member of the defense policy community with adjunct positions at the Center for a New American Security and previously at the RAND Corporation. Before beginning her academic career, she spent six years as an Air Force officer in South Korea and Japan and is currently a reservist assigned to US Cyber Command. She has a BA from Columbia University, an MA from Arizona State University, and a PhD from the George Washington University.





NINA TANNENWALD

Nina TANNENWALD is director of the International Relations Program at Brown University's Watson Institute for International Studies and a senior lecturer in political science. Her research focuses on the role of international institutions, norms, and ideas in global security issues, efforts to control weapons of mass destruction, and human rights and the laws of war. Her book *The Nuclear Taboo: The United States and the Non-use of Nuclear Weapons Since 1945* was awarded the 2009 Leppgold Prize for best book in international relations. Her current research projects include targeted killing, the future of the nuclear normative order, and the effectiveness of the laws of war. In 2012–2013, she served as a Franklin Fellow in the Bureau of International Security and Nonproliferation in the US State Department. She holds a master's degree from the Columbia School of International and Public Affairs and a PhD in international relations from Cornell University.



WILLIAM TOBEY

William TOBEY was deputy administrator for defense nuclear nonproliferation at the National Nuclear Security Administration from 2006 to 2009. There, he managed the US government's largest program to prevent nuclear proliferation and terrorism by detecting, securing, and disposing of dangerous nuclear material. Tobey also served on the National Security Council Staff under three presidents, in defense policy, arms control, and counter-proliferation positions. He has participated in international negotiations ranging from the START talks with the Soviet Union to the Six-Party Talks with North Korea. He also has ten years' experience in investment banking and venture capital. He serves on the Nuclear and Radiation Studies Board of the National Academies of Sciences Engineering and Medicine and chairs the board of the World Institute for Nuclear Security.



CHRISTOPHER P. TWOMEY

Christopher P. TWOMEY is an associate professor with tenure in the Department of National Security Affairs at the Naval Postgraduate School. His research interests center on security studies, Chinese foreign policy, modern nuclear affairs, strategic culture, statecraft, and East Asian security in theory and practice. He is the author of *The Military Lens: Doctrinal Differences and Deterrence Failure in Sino-American Relations* (Cornell University Press, 2010) and editor of *Perspectives on Sino-American Strategic Nuclear Issues* (Palgrave Macmillan, 2008). Twomey manages a track II diplomatic exchange on Sino-American nuclear issues involving several PLA flag officers, academics, and civilian policymakers. This project is in its second decade. He works on a range of diplomatic projects in Asia for the Office of the Secretary of Defense (in coordination with the State Department) and has consulted for the Office of Net Assessment on the future of security competition in Asia. Before joining NPS, he taught on the faculty at Boston College and was a fellow at Harvard University. He received his PhD in political science from MIT in 2005.

JOHN K. WARDEN

John K. WARDEN is a US defense policy and strategy analyst in the Strategy, Forces and Resources Division at the Institute for Defense Analyses, where he focuses on deterrence and escalation, nuclear weapons, US alliances, East Asian security, and related issues. He is author, coauthor, and editor of a number of studies, reports, and articles, including "The Least Bad Option: Damage Limitation and U.S. Deterrence Strategy toward North Korea" (with Vince Manzo, *Texas National Security Review*, February 7, 2018), "The Strategic Rationale for Maritime Tension Reduction in the Yellow Sea" (with Darcie Draudt, *Washington Quarterly*, winter 2018), and "North Korea's Nuclear Posture: An Evolving Challenge for US Deterrence" (Ifri Proliferation Papers, March 2017). Warden previously worked at Science Applications International Corporation, the Center for Strategic and International Studies, and the Pacific Forum CSIS. He holds an MA in security studies from Georgetown University and a BA in political science and history from Northwestern University.



DEAN WILKENING

Dean WILKENING is a physicist at the Johns Hopkins University Applied Physics Laboratory. From 2011 to 2016, he worked at the Lawrence Livermore National Laboratory and before that, he was the director of the science program at the Center for International Security and Cooperation at Stanford University for 16 years. From 1982 to 1995, he held several management positions at the RAND Corporation in Santa Monica, California. Wilkening's major research interests include nuclear strategy and policy, arms control, the proliferation of nuclear and biological weapons, bioterrorism, ballistic missile proliferation, ballistic missile defense, and advanced conventional weapons. Wilkening has participated in several US National Academy of Science committees on biological terrorism and ballistic missile defense, as well as several Defense Science Board task forces. He received his PhD in physics from Harvard University. He is a fellow of the American Physical Society and has published more than 60 journal articles, book chapters, and monographs.



HEATHER WILLIAMS

Heather WILLIAMS is a lecturer in the Defense Studies Department and Center for Science and Security Studies at King's College London. She is also an adjunct research staff member in the Strategy, Forces, and Resources Division of the Institute for Defense Analyses in Alexandria, Virginia, where she has worked since 2008. Until January 2015, Heather was a research fellow on nuclear weapons policy at Chatham House and led projects on the nuclear non-proliferation treaty and the humanitarian impacts of nuclear weapons initiative. She is also a co-president of Women in International Security (UK). Williams currently leads research projects on asymmetric arms control and emerging technologies, the impact of social media on conflict escalation, and US messaging strategies on arms control and disarmament. Williams has a PhD from the Department of War Studies at King's College London, an MA in security policy studies from the George Washington University, and a BA in international relations and Russian studies from Boston University. Her most recent publications include "Strategic Stability, Uncertainty, and the Future of Arms Control," *Survival*, March 2018, "The Nuclear Babel: Narratives Around the Treaty on the Prohibition of Nuclear Weapons," *Nonproliferation Review*, June 2018, and "Tailored Assurance: Balancing Deterrence and Disarmament in Response to NATO-Russia Tensions," IFRI Proliferation Papers, July 2018.



HISTORY



“Public Policy and Nuclear Threats: Training the Next Generation” started as a training program for PhD students throughout the UC system, funded through NSF’s competitive Integrative Graduate Education and Research Training program.

The program was designed by the UC Institute on Global Conflict and Cooperation (IGCC) to encourage UC PhD students to: study public policy and technology issues related to nuclear weapons, re-engage UC departments in research on these issues, foster the interests of current students and enable the recruitment of additional top students, and promote cooperation between the campuses and the Lawrence Livermore (LLNL) and Los Alamos (LANL) National Laboratories. IGCC Director Susan Shirk served as principal investigator, and the program was housed at IGCC’s main office at UC San Diego.

The first summer workshop-in-residence at UC San Diego, known familiarly as the PPNT boot camp, was held in 2003. Nuclear physicist and IGCC founding director Herbert F. York was among the distinguished roster of speakers. Two cohorts of IGERT PPNT fellows and associates participated in the program, policy events, and an associated annual student-run conference, forming the nucleus of network of young nuclear policy experts from across the University of California.



After the initial NSF funding ended, IGCC leaders in 2007 opened the summer program to a wider audience, including junior faculty, technical staff from LLNL and LANL, and policy practitioners. IGCC drew on the expertise of its growing network by inviting past PPNT fellows to return as speakers and discussion leaders. PPNT alumnus Robert Brown (2003) served as leader for the 2009–2011 programs, and Neil Narang (2007) served in the same role in 2012 and 2013. Since 2014, PPNT alumna Bethany Goldblum (2004) has served as the program’s director.

In 2008 Ambassador Linton Brooks joined the team as consultant and expert in residence during the boot camp. He continues in this role today.

From 2011 through 2016, IGCC was part of the Nuclear Science and Security Consortium housed in the Department of Nuclear Engineering at UC Berkeley under the leadership of Professor Jasmina Vujic. The consortium's mission to train undergraduate and graduate students in the fields of nuclear physics, nuclear and radiation chemistry, nuclear engineering, nuclear instrumentation, and public policy has been supported by IGCC through the summer boot camp and administration of a number of awards for nuclear policy-related faculty and student research.

Now in its thirteenth summer, PPNT continues to bridge gaps in the knowledge and modes of thinking of social scientists, policy analysts, physical scientists, and engineers by bringing them under one roof to work together and forge long-term personal and professional ties.





PUBLIC POLICY AND NUCLEAR THREATS 2018 BOOT CAMP