

# Public Policy & Nuclear Threats Boot Camp

**Institute on Global Conflict and Cooperation  
University of California**

**JULY 31 – AUGUST 12, 2022**



STANTON  
FOUNDATION

# PPNT Agenda

## Welcome

SUNDAY, JULY 31

7:00 am – 4:00 pm	Arrivals
5:00 pm	Welcome Dinner Great Hall, UC San Diego
5:30 pm	<b>Keynote Address</b> <i>Sig Hecker</i>

**Location: All lectures will take place in Great Hall at UC San Diego**

## Introduction

MONDAY, AUGUST 1

8:00 am	Welcome and Introductions <i>Brooks, Goldblum, IGCC Team</i>
8:15 am	A Practitioner's Approach to Nuclear Policy <i>Linton Brooks</i>
9:45 am	Break
10:00 am	Nuclear Devices and Effects <i>John Scott</i>
11:30 am	Lunch
1:00 pm	Proliferation: Causes and Consequences <i>Scott Sagan</i>
2:30 pm	Break
3:00 pm	Nuclear Fuel Cycle <i>Denia Djokic</i>
4:30 pm	Adjourn

## The Cold War and Hot Peace

TUESDAY, AUGUST 2

8:15 am	Principles of Nuclear Deterrence <i>Linton Brooks</i>
9:45 am	Break
10:00 am	The Legacy of the Cold War: Strategy, Policy and Forces <i>Linton Brooks</i>
11:30 am	Lunch
1:00 pm	Current US Nuclear Security Policy Extended <i>Elaine Bunn</i>
2:30 pm	Break
3:00 pm	NNSA Weapons Complex and Its Modernization <i>TBD</i>
4:30 pm	Adjourn
7:00 pm	Nuclear Jeopardy <i>Location: Faculty Club, Cecil's Lounge</i>

## Nuclear Forces Structure and Posture

WEDNESDAY, AUGUST 3

8:15 am	Arms Control <i>Mareena Robinson Snowden</i>
9:45 am	Break
10:00 am	Science-Based Stockpile Stewardship <i>Bruce Goodwin</i>
11:30 am	Lunch
1:00 pm	US Nuclear Command and Control <i>Maj Gen Harencak</i>
2:30 pm	Break
3:00 pm	Strategic Stability <i>Brad Roberts</i>
4:30 pm	Adjourn

## Legal and Ethical Issues of Nuclear Weapons

THURSDAY, AUGUST 4

8:15 am	Nuclear Ban Treaty and Civil Society <i>Heather Williams</i>
9:45 am	Break
10:00 am	Reconciling Nuclear Deterrence and the Law of Armed Conflict <i>Panel: Newell Highsmith and Nina Tannenwald</i>
11:30 am	Working Lunch
1:30 pm	Russia Today <i>Michael Kofman</i>
3:00 pm	Adjourn

## International Safeguards

FRIDAY, AUGUST 5

8:15 am	International Nonproliferation Regime <i>Laura Rockwood</i>
9:45 am	Break
10:00 am	Panel Discussion on Future Challenges to the NPT <ul style="list-style-type: none"><li>• Future proliferations   <i>Linton Brooks</i></li><li>• Disarmament   <i>Heather Williams</i></li><li>• Peaceful use   <i>Bethany Goldblum</i></li><li>• Legal issues   <i>Laura Rockwood</i></li></ul>
11:30 am	Lunch
1:00 pm	Lecture   IAEA Fuel Cycle Verification and Monitoring <i>Mark Schanfein</i>
2:30 pm	Break
3:00 pm	Hands on   IAEA Fuel Cycle Verification and Monitoring <i>Mark Schanfein</i>
4:30 pm	Adjourn

## Nuclear Risks and Responses

SATURDAY, AUGUST 6

8:15 am	Ballistic Missile Defence <i>Dean Wilkening</i>
9:45 am	Break
10:00 am	Nuclear Forensics <i>Panel: Kim Knight and Kevin Swearingen</i>
11:30 am	Lunch
1:00 pm	Authorization of Nuclear Use <i>Linton Brooks</i>
2:30 pm	Break
3:00 pm	Cyber Nuclear Risks <i>Jon Lindsay</i>
4:30 pm	Adjourn

## Free Day

SUNDAY, AUGUST 7

## National Security in Practice

Field Trip

MONDAY, AUGUST 8

8:15 am	Uses of Intelligence <i>John Lauder</i>
9:45 am	Break
10:00 am	Nuclear Terrorism <i>Rolf Mowatt-Larssen</i>
12:00 pm	Lunch at Pines Dining Hall
2:00 pm	<b>Field Trip</b>

## Nuclear Security

TUESDAY, AUGUST 9

8:15 am	International Nuclear Security <i>Will Tobey</i>
9:45 am	Break
10:00 am	National Security Implications of the Emerging Threat Environment <i>Matthew Bunn</i>
11:30 am	Lunch
1:00 pm	Counterterrorism and Counterproliferation <i>Jay Tilden</i>
2:30 pm	Break
3:00 pm	Nuclear Testing <i>Linton Brooks</i>
4:30 pm	Adjourn

## World Nuclear Forces

WEDNESDAY, AUGUST 10

8:15 am	China <i>Chris Twomey</i>
9:45 am	Break
10:00 am	India and Pakistan <i>Toby Dalton</i>
11:30 am	Lunch
1:00 pm	North Korea <i>John Warden</i>
2:30 pm	Break
3:00 pm	Iran <i>Matt Kroenig</i>
4:30 pm	Adjourn
7:00 pm	Film Screening: Command and Control <i>Location: GPS Auditorium</i>

## Nuclear Odds and Ends

THURSDAY, AUGUST 11

8:15 am	Impact of Space on Nuclear Deterrence <i>Victoria Samson</i>
9:45 am	Break
10:00 am	Biden Nuclear Posture Review <i>Paul Bernstein</i>
11:30 am	Lunch
1:00 pm	NNSA Nonproliferation in Post CTR Era <i>Corey Hinderstein</i>
2:30 pm	Break
3:00 pm	NATO Policy, British and French Nuclear Forces and Their Roles <i>Frank Miller</i>
4:30 pm	Adjourn

## Closing Session

FRIDAY, AUGUST 12

8:30 am	U.S. Nuclear Weapons Modernization <i>Panel: Linton Brooks and Joe Cirincione</i>
11:00 am	Simulation Pre-Brief <i>Linton Brooks</i>
11:30 am	Lunch
1:00 pm	Simulation <i>Linton Brooks, Andrew Reddie, and Bethany Goldblum</i>
3:00 pm	Break
3:15 pm	Group Presentations
5:15 pm	Closing Reception <i>Location: Faculty Club Courtyard</i>

# LEADERSHIP



## **Linton Brooks**

Former Undersecretary of the National Nuclear Security Administration & Scholar in Residence

Ambassador Linton F. 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 three other Department of Energy national laboratories. Ambassador Brooks has six decades of experience in national security, much of it associated with nuclear weapons. He served from July 2002 to January 2007 as Administrator of the U.S. Department of Energy's National Nuclear Security Administration, where he was responsible for the U.S. nuclear weapons program and for the Department of Energy's international nuclear nonproliferation programs. His government service includes service as Deputy Administrator for Nuclear Nonproliferation at the National Nuclear Security Administration, Assistant Director of the United States Arms Control and Disarmament Agency, Chief U.S. 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 U.S. Naval War College. Since 2008 he has served as an Expert in Residence during the annual Public Policy and Nuclear Threats program.





## **Bethany Goldblum**

### Program Director

Dr. Bethany Goldblum is a staff scientist in the Nuclear Science Division at Lawrence Berkeley National Laboratory and an associate research engineer in the Department of Nuclear Engineering at the University of California, Berkeley. As Executive Director of the Nuclear Science and Security Consortium, she provides strategic direction for an effort bringing together seven universities and five U.S. DOE National Laboratories to train the next generation of nuclear security experts. Her research focuses on low-energy nuclear physics, neutron detection, and artificial intelligence for nuclear security applications. Goldblum leads the Bay Area Neutron Group, a research team focused on applied neutron physics for nuclear security applications, and founded and directs the Nuclear Policy Working Group, an interdisciplinary team of scholars 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. She is author or co-author of more than 80 publications on nuclear science and policy issues and recipient of the 2020 Coronas Award in Leadership, Community Building and Communication. Goldblum received a Ph.D. in Nuclear Engineering from the University of California, Berkeley.



## **Neil Narang**

### Principal Investigator

Neil Narang is Research Director at the Institute on Global Conflict and Cooperation and Associate Professor in the Department of Political Science at the University of California, Santa Barbara. He is currently faculty PI for the PPNT program. Previously, he served as a Senior Advisor in the Office of the Secretary of Defense for Policy on a Council on Foreign Relations International Affairs Fellow. His research primarily focuses on international security, conflict management and peacebuilding, and the relationship between international institutions and conflict. He is the editor of the books *Emerging Technologies and International Stability*

(2021) and *Nuclear Posture and Nonproliferation Policy: Causes and Consequences for the Spread of Nuclear Weapons* (2015), and his articles have appeared in the *Journal of Politics*, *International Studies Quarterly*, *Journal of Conflict Resolution* among others. He received his Ph.D. in political science from UC San Diego and he holds a B.A. in molecular cell biology and political science from the University of California, Berkeley. He has been a fellow at the University of Pennsylvania's Browne Center for International Politics, a nonproliferation policy fellow at the Los Alamos National Laboratory, and a junior faculty fellow at Stanford University's Center for International Security and Cooperation.

# PARTICIPANTS



## **Jasmin Alsaied**

### Nuclear Scholar

Lieutenant Jasmin Alsaied graduated from North Carolina State University with a Bachelor of Science in Nuclear Engineering and a minor in mathematics. She earned her commission through the NROTC program and was subsequently stationed onboard USS LASSEN (DDG 82). During her four years attached to USS LASSEN, she completed a Middle East deployment with the TRUMAN Strike Group, participated in the maiden voyage for HMS Queen Elizabeth, GERALD R. FORD shock trials, and engaged in Caribbean counter-narcotic operations. Jasmin is currently pursuing a Master of Science in Foreign Service (MSFS) at Georgetown University with a focus in Global Politics and Security and Diplomatic Studies. Her current research interests are counterproliferation challenges and security issues in the Indo-Pacific. Jasmin has recently worked on Capitol Hill, with the Institute for the Study of War, and at H+K Strategies. She is a Nuclear Scholar at CSIS. She speaks Arabic and English.



## **Anu Anwar**

### Fellow

Anu Anwar is a fellow at the Faculty of Arts and Sciences and an associate in research at the John K. Fairbank Center for Chinese Studies at Harvard University. Before joining Harvard, Anwar worked as a research fellow at the U.S. Department of Defense Daniel K. Inouye Asia-Pacific Center for Security Studies. Anwar was educated at Tsinghua University, the University of Geneva, the University of Dhaka, and is currently pursuing a Ph.D. in international relations at the Johns Hopkins School of Advanced International Studies. He has traveled around 50 countries and has extensive experience living and traveling in China. He speaks Chinese, Hindi, and Bengali.



**Ava Benkhatar**  
Program Manager

Ava Benkhatar is program manager for the Nuclear Science and Security Consortium. As program manager, Ava's main initiative is to facilitate consortium engagement through strengthening the partnerships between universities and national laboratories. She implements consortium programming through: planning and facilitating academic conferences, webinars, and summer schools; tracking and creating database metrics; and functioning as the central point of contact for all program communications. Ava graduated from the University of Central Florida where she received a bachelor's degree in Political Science, and two certificates in "Intelligence and National Security" and "Diplomacy." Before starting her position at UC Berkeley, Ava was an intern at Lawrence Livermore National Laboratory. While at LLNL, she researched x-ray irradiator alternatives to Cs-137 and Co-60 sources for the Global Security directorate. She also created data management systems and an internal website for the Supply Chain and Management department.



**Yu Bin Kim**  
Ph.D. Candidate

Yu Bin Kim is currently a Ph.D. candidate in political science at the Harry S Truman School of Government & Public Affairs at the University of Missouri. He is also a Graduate Fellow at the MU Institute for Korean Studies. His research interests include both *interstate* and *intrastate* conflicts. At the *interstate* level, he focuses on nuclear proliferation and on nuclear latency. At the *intrastate* level, his focus is on conflict management and on UN peacekeeping operations; he is interested in rebel group dynamics, particularly rebel governance and diplomacy, as well. Kim holds a M.A. in East Asian Studies from Stanford University and a B.A. in Asian Studies, International Studies, and Political Science from the University of Wisconsin-Madison.



## **Niklas Brännström**

### Deputy Head

Niklas Brännström works for the Swedish Defence Research Agency, FOI, where he is the deputy head of the division of CBRN Defence and Security. The division is a research division that monitors and analyses the current CBRN-threat, strengthens protection against CBRN-incidents and enhances nonproliferation work. He joined FOI about 10 years ago as an atmospheric dispersion modeller, and later lead that research group before becoming head of department for threat analysis (CB), radioactive substances and dispersion modelling. He received his Ph.D. in mathematics from the University of Warwick, UK.



## **Mary Burkey**

### Staff Scientist

Mary Burkey is staff scientist at Lawrence Livermore National Laboratory working in national security applications after recently transitioning from postdoc position in the Planetary Defense Group. Before coming to LLNL, she was a Mirzayan Fellow at the National Academies of Sciences for the Committee on International Security and Arms Control. She earned her Ph.D. in Physics at the University of Chicago and Argonne National Laboratory and her bachelors' degrees at North Carolina State University.



## **Justin Key Canfil**

### Postdoctoral Fellow

Justin Key Canfil is a postdoctoral fellow with the Harvard Belfer Center's International Security Program. His research examines the legal and security implications of emerging technologies. He is especially interested in past and present efforts to future-proof arms control regimes. His book project asks why some militarily impactful technologies are considered more legally problematic than others, and explains how states manage these emergent controversies in times of rapid change. Justin was previously a

postdoctoral fellow with the Columbia-Harvard China and the World Program, a predoctoral fellow with the Harvard Cyber Project and USC's U.S.-Asia Grand Strategy Program, a China Fulbright Scholar, as well as an affiliate of Peking University, Fudan University, Oxford, the Wilson Center, and the London School of Economics. He holds a Ph.D. in Political Science from Columbia University.



### **Jane Darby Menton**

Ph.D. Student

Jane Darby Menton is a Ph.D. candidate at Cambridge in the Department of Politics and International Studies. Her research looks at the domestic politics of international diplomacy, focusing in particular on the agreement and unravelling of the JCPOA. Prior to Cambridge, she worked as a journalist at *CNN* and *Foreign Affairs*. She has an MPhil in Modern Middle Eastern Studies from Oxford and a B.A. from Yale.



### **John Thomas Deacon**

Ph.D. Student

John Thomas Deacon is a political science Ph.D. student advised by Dr. Etel Solingen at UC Irvine studying Chinese foreign policy and the politics of nuclear weapons. His research seeks to understand the motivations and aims underlying China's efforts to expand and modernize its nuclear arsenal, as well as the implications for nuclear proliferation in East Asia. He plans to develop expertise on Chinese nuclear weapons policy and pursue a career as an academic researcher.



**Nour Eid**  
Master's Student

Nour Eid is an International Security master's student at Sciences Po in Paris. Her concentrations are on Middle Eastern Studies and Intelligence. Prior to her master's degree, she completed an internship in the Nuclear Power Engineering Section of the International Atomic Energy Agency (IAEA). She graduated in 2020 with a bachelor's degree in Political Studies and International Law, from the American University of Beirut (AUB), in Lebanon. Her past work and publications are associated with the development of nuclear capabilities, both from the perspective of energy and the capacity for diversion in the pursuit of nuclear weapons. She therefore developed experience on geopolitical and strategic considerations across the Middle East.



**Jennifer Hart**  
Research Analyst

Jennifer Hart is a Research Analyst at the Pacific Northwest National Laboratory (PNNL) working on a range of projects supporting the National Nuclear Security Administration's work on International Atomic Energy Agency safeguards policy, safeguards concepts and approaches, Nuclear Suppliers Group industry engagement, and radiological security. Prior to PNNL, Jenn held research positions at the United Nations Institute for Disarmament Research and the Naval Postgraduate School. Jenn holds a Master of Arts in Nonproliferation and Terrorism Studies from the Middlebury Institute of International Studies, where she specialized in financial crime management, and a Bachelor of Science in Psychology from Jacksonville State University. Jenn is also Certified Anti-Money Laundering Specialist.



## **Caroline Kearney**

Ph.D. Candidate

Caroline Kearney is beginning the third year of her Ph.D. program in Korean Studies at Yonsei University in Seoul. Her dissertation is focused on North Korean politics and the decision-making process. She is also a contributing analyst for NK Pro. Previously, Caroline was the Program Manager for the Korean Peninsula at the Centre for Peace and Conflict Studies (CPCS) in Cambodia. In this capacity, she hosted CPCS' partner organizations from the DPRK for bilateral exchanges, co-organized roundtable discussions, and authored analysis for the Institute for Security and Development Policy (ISDP) and Jeju Peace Institute. She is also a member of the National Committee on North Korea (NCNK).



## **Haneen Khalid**

Ph.D. Candidate

Haneen is a policy and research expert focusing on regional and international systems to promote international security. She is a Ph.D. candidate at the Princeton School of Public and International Affairs and Board Fellow at the Bulletin of Atomic Scientists, as well as Board Member at International Student Young Pugwash. She completed her master's at the University of Chicago as an Obama Foundation Scholar and later the Innovation Fellowship at N-Square. She previously led grassroots and policy initiatives to advance nuclear nonproliferation and arms control in South Asia and the United States. She is connected to the Centre for International Strategic Studies and the Program on Science and Global Security at Princeton, and works on bringing science and diplomacy together for greater security and peace.





## **Dilan Ezgi Koc**

### **Nuclear Scholar**

Dilan Ezgi Koc has recently completed her master's studies at Yale University, focusing on nuclear policy, arms control, cybersecurity, and emerging technologies. She is a 2022 Nuclear Scholar at the Project on Nuclear Issues, CSIS, and a UN Youth Champion for Disarmament selected by the UN Office for Disarmament Affairs. During her time at Yale, Dilan worked on the JCPOA as a Kerry Fellow for Secretary John Kerry's team and conducted research on nuclear strategy, arms control policies and practices, and the impact of emerging technologies on the nonproliferation regime. She will be joining NATO's Nuclear Policy Directorate in the fall of 2022



## **Dylan Land**

### **Master's Graduate**

Dylan Land just completed his Master of Arts in Law and Diplomacy at the Fletcher School, concentrating on International Security and Nuclear Deterrence and Technological Innovation. Dylan's research revolves around disruptive technologies' impact on strategic nuclear deterrence, with a focus on multi-domain/integrated deterrence and novel weapons delivery systems. Dylan is particularly interested in exploring if/how the United States can credibly communicate escalation thresholds and buttress strategic deterrence under a national security strategy of multi-domain/integrated deterrence. Dylan is looking forward to creating connections with fellow participants at the PPNT bootcamp that extend beyond this course and into future professional careers. When Dylan is not studying nuclear deterrence, he enjoys watching and playing football, particularly the English Premier League.

## **Taylor Loy**

### **Ph.D. Candidate**

Taylor Loy brings a diverse academic/professional background to the problems of nonproliferation and disarmament. He worked in



operations and training in the nuclear power industry for 6+ years. As a Ph.D. candidate in the Department of Science, Technology, & Society (STS) at Virginia Tech, his dissertation research focuses on the potential for and value of tritium control in nonproliferation regimes. He has presented tritium-related research at the Society for History of Technology (SHOT) 2021 Conference (co-authored with Sonja Schmid) and The Future of Disarmament Workshop in 2021 (University of Glasgow). Currently, he is a member of the Nuclear Futures Working Group (NFWG) with the New America Political Reform program.



**Laura Luca**  
Ph.D. Candidate

Laura Luca is currently a third year Ph.D. candidate in International Security at UCLA with her research interests covering arms control and nonproliferation, emerging technologies (LAWS) and nuclear weapons policy. Luca has also been practicing IR, covering the Conference on Disarmament and the CCW at the UN in Geneva for two years, and currently working as a diplomat for the European Union. This has influenced her research to be policy-oriented and highly practical in the field.



**Kimberly Peh Zi En**  
Ph.D. Candidate

Kimberly Peh Zi En is a Ph.D. candidate in the Political Science Department at the University of Notre Dame. Her research is centered on conflict prevention and de-escalation. Her dissertation looks specifically at explaining and preventing election violence through studying the phenomenon in post-conflict countries. The three-article dissertation will propose a way to measure the levels of election violence; examine the relationship between post-conflict constitutions and election

violence; and analyze how political parties affect election violence in post-conflict countries. Prior to joining the University of Notre Dame, she received her B.A. (Hons) in Political Science, which is jointly endorsed by the University of North Carolina – Chapel Hill and the National University of Singapore. Outside of her dissertation, she writes on topics related to nuclear politics; international crises and negotiations; and non-great power foreign policies. She has published in the *European Journal of International Security*, *International Studies Perspectives*, and *North Korean Review*.



### **Joel Petersson Ivre**

#### **Policy Fellow**

Joel Petersson Ivre is a Policy Fellow at the Asia-Pacific Leadership Network for Nuclear Non-Proliferation and Disarmament, located in Seoul. His research interests are in Chinese foreign policy and nuclear proliferation issues surrounding the Korean Peninsula. He received his master's degree from Yonsei University's Graduate School of International Studies for East Asian Studies and International Security and Foreign Policy, and his bachelor's degree in Chinese Language and Culture from Stockholm University.



### **Charlie Prior**

#### **Ph.D. Candidate**

Charlie Prior is a fourth-year doctoral candidate at Duke University. His research focuses on improving neutrino detectors' sensitivity. Prior is interested in the applications of neutrino and other nuclear detectors to nuclear safeguards and weapons reductions treaties, and he's looking forward to learning more about the public policy of nuclear threat reduction. Prior was born and raised in Melbourne, Australia. He studied Maths and Astrophysics for his bachelor's and master's degrees at the University of Cambridge, UK.



## **Maclyn Senear**

### Master's Student

Maclyn Senear is a second-year Master of Science in Foreign Service candidate at Georgetown University concentrating in Science and Technology in International Affairs. His research interests and professional background center around mitigating the threat of Weapons of Mass Destruction, with particular focus on nuclear nonproliferation, disarmament, biological weapons, and health security. Maclyn has worked for a federal contractor in Alexandria, VA in support of wide-ranging efforts within the Defense Threat Reduction Agency's Research and Development and Cooperative Threat Reduction directorates. Prior to his contractor role, Maclyn also interned at the Arms Control Association in Washington, DC, where he authored or contributed to publications on U.S. missile defense in the Asia-Pacific, the 2018 Nuclear Posture Review, and the status of the Iran nuclear deal, among other topics. Originally from Southern California, Maclyn studied International Relations at Tufts University before moving to the Washington, DC area.



## **Ryan Smith**

### Ph.D. Candidate

Ryan Smith is a Ph.D. candidate in physics at UC Berkeley. He studies radiation detection, especially low energy nuclear recoils, using noble liquids. He works on the dark matter direct detection experiments LUX-ZEPLIN and SPICE/HeRALD. Aside from physics, Ryan enjoys competitive long distance running.



## Alice Spilman

### Postdoctoral Fellow

Alice Spilman is a Ph.D. candidate at the University of Birmingham and a Policy Fellow at the British American Security Information Council (BASIC). Her thesis research focuses on normative ideas and discourse around nuclear weapons, and in particular looks at the concept of nuclear responsibility. At BASIC, Alice has been a part of the Programme on Nuclear Responsibilities since 2019. She has co-facilitated a number of Track 2 and Track 1.5 dialogues and co-authored the recently published [Nuclear Responsibilities Toolkit](#). Alice is also currently co-deputy director of International Student Young Pugwash, and a member of the inaugural P5 Young Professionals Network representing the UK.



## Gabriela Maria Maier Tolic

### Master's Student

Gabriela Maria Maier Tolic is a graduate student in the Master of International Relations program at Charles University in Prague. In her final thesis, she is researching the legal status of nuclear weapons under international law. As a dual citizen of Croatia and Germany, Maier Tolic's interest in finding solutions for global problems has always been strong. Currently, Maier Tolic is interning at two nuclear disarmament nonprofit organizations which focus on youth engagement and political activism. She also holds a B.A. in business administration with a focus on service management which she pursued in a corporate program while working at IBM.



## Alex Vazsonyi

### Physicist

Alex Vazsonyi earned his B.S. in Mechanical Engineering at the University of Kentucky and his M.S./Ph.D. in Aerospace Engineering from the University of Michigan. There, his research focused on computational gas and plasma dynamics relevant to electric propulsion for spacecraft. Outside of his graduate research, he was an elected Representative on the Rackham

Student Government's Physical Sciences and Engineering Division. Further, he served as Vice Chair of Student Advocates for Graduate Education, a coalition of graduate students who engage in federal level advocacy on behalf of graduate students at public R1 institutions nationwide. Upon graduating, he joined Lawrence Livermore National Laboratory as a Physicist in July 2021, and has since gained an interest in becoming better versed and more involved in the policy surrounding the field of nuclear weapons. In his free time, Alex enjoys chasing his cat around the house, whispering to his plants in the garden, camping, and video gaming, among other things.



### **Spenser A. Warren**

Ph.D. Candidate

Spenser A. Warren is a Ph.D. Candidate studying Political Science at Indiana University Bloomington. His broader research interests include nuclear politics and strategy, Russian foreign policy, great power competition, and European and Eurasian security. His dissertation project examines the factors driving Russian nuclear modernization. His work has been published or is forthcoming in *Asia Survey* and the *Oxford Handbook Series*.



### **Jamie Withorne**

Research Assistant

Jamie Withorne is a graduate affiliate and research assistant with the Oslo Nuclear Project at the University of Oslo. She is pursuing her MPhil in Peace and Conflict Studies at the University of Oslo. With the Oslo Nuclear Project, Jamie's work focuses on nonproliferation, verification, and open-source analysis of North Korean nuclear issues. In addition to her University of Oslo commitments, Jamie is an International Atomic Energy Agency Marie Skłodowska-Curie fellow. She is a Leader for Tomorrow with the Youth for Disarmament initiative hosted by the United Nations Office for Disarmament Affairs and the Ministry of Foreign Affairs of the Republic of Korea. Previously, Jamie worked as a Research

Assistant at the James Martin Center for Nonproliferation Studies (CNS). Jamie is from South Dakota and received her B.A. in Political Science from Columbia University.

# SPEAKERS



## **Paul Bernstein**

### **Distinguished Fellow**

Paul I. Bernstein is a Distinguished Fellow at the Center for the Study of Weapons of Mass Destruction, National Defense University in Washington, DC, and a member of the university's Research Faculty. He works in collaboration with the Office of the Secretary of Defense, Joint Staff, Services, combatant commands, and defense agencies. He is currently Senior Advisor to the Office of the Secretary of Defense (Nuclear Deterrence Policy) in support of the 2022 Nuclear Posture Review. Mr. Bernstein is a contributing author of the 2014 Department of Defense Strategy for Countering Weapons of Mass Destruction and has been an adviser to the Defense Science Board and the DoD Threat Reduction Advisory Committee. He is an instructor in the CAPSTONE program, guest lectures at other military education venues, and has developed multiple curricula for nuclear and WMD instruction.



## **Elaine Bunn**

### Consultant

M. Elaine Bunn is a consultant on strategic issues with 40 years of experience in the U.S. government working on defense policy. She addresses international audiences on nuclear policy, extended deterrence, and missile defense. Her writings include articles and book chapters on deterrence, assurance of allies, strategic planning, nuclear policy, missile defense, arms control, and preemption. She is a non-resident senior associate fellow at the Royal United Services Institute in London and member of the Nuclear Deterrence External Advisory Board at Sandia National Laboratories. Bunn served as deputy assistant secretary of defense for nuclear and missile defense policy (DASD/NMD) from 2013 to early 2017. Bunn, a graduate of the National War College, received an M.A. from Johns Hopkins University's School of Advanced International Studies. She was a Fulbright scholar at the Université de Neuchâtel in Switzerland after graduating from the University of Georgia with a B.A. in international political communications.



## **Matthew Bunn**

### Professor

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 theft and terrorism; nuclear arms control and strategic stability; 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.



### **Joseph Cirincione**

#### **Distinguished Non-Resident Fellow**

Joseph Cirincione is a Distinguished Non-Resident Fellow at the Quincy Institute and a national security analyst and author with 40 years of experience working these issues in Washington, DC. He is the author or editor of seven books, including *Nuclear Nightmares: Securing the World before It Is Too Late* (2015) and *Bomb Scare: The History and Future of Nuclear Weapons* (2008). Cirincione served previously as president of the Ploughshares Fund, vice president for national security at the Center for American Progress and director for nonproliferation at the Carnegie Endowment for International Peace, among other positions. He worked for over nine years on the professional staff of the Armed Services Committee and the Government Operations Committee in the U.S. House of Representatives. He served on the International Security Advisory Board for Secretaries of State Hillary Clinton and John Kerry, and is a member of the Council on Foreign Relations.



### **Toby Dalton**

#### **Analyst**

Toby Dalton is co-director and a senior fellow of the Nuclear Policy Program at the Carnegie Endowment. An expert on nonproliferation and nuclear energy, his work addresses regional security challenges and the evolution of the global nuclear order. Dalton's research and writing focuses in particular on South Asia and East Asia. He is author (with George Perkovich) of *Not War, Not Peace? Motivating Pakistan to Prevent Cross-Border Terrorism* (Oxford University Press, 2016), which provides in-depth analysis of the conflict spectrum in South Asia. He also wrote (with

Michael Krepon) A Normal Nuclear Pakistan and “Beyond Incrementalism: Rethinking Approaches to CBMs and Stability in South Asia.” He co-edited Perspectives on an Evolving Nuclear Order and wrote “South Korea Debates Nuclear Options,” (with Byun Sunggee and Lee Sang-Tae) and “South Korea’s Search for Nuclear Sovereignty” (with Alexandra Francis). From 2002 to 2010, Dalton served in a variety of high-level positions at the U.S. Department of Energy.



### **Denia Djokic**

#### Assistant Research Scientist

Denia Djokić is an Assistant Research Scientist at the University of Michigan's Fastest Path to Zero Initiative, and a former Postdoctoral Research Fellow at the Project on Managing the Atom at the Belfer Center for Science and International Affairs. She is broadly interested in governance of nuclear energy technology, and her current research explores topics in responsibility and liability in the context of severe nuclear accidents.

Prior to her appointment at Harvard, Denia worked as an advisor on issues in policy and governance of science, technology and innovation for the government of Ecuador. She holds an M.S. and a Ph.D. in Nuclear Engineering with a Designated Emphasis in Energy Science and Technology from the University of California, Berkeley, where she was a U.S. Department of Energy Office of Civilian Radioactive Waste Management Graduate Student Fellow. She also holds a B.S. in Physics from Carnegie Mellon University.



## **Bruce Goodwin**

### Senior Fellow

Bruce Goodwin is a Senior Fellow at the Center for Global Security Research at the Lawrence Livermore National Laboratory. Before becoming a Senior Fellow, he was the Associate Director-at-Large for National Security Policy and Research. In this, role he was responsible for LLNL policy research and liaison with the U.S. military, U.S. government and non-governmental organizations. He has been a key player in the success of the nuclear weapons program since 1981, first at Los Alamos National Laboratory and since 1985 at LLNL. While at both Labs, he was design physicist on five nuclear tests. As the Principal Associate Director, he led the process to certify LLNL nuclear weapons and was responsible for establishing priorities, developing strategies, and designing and maintaining LLNL's nuclear weapons. Goodwin received his doctorate and master's in Aerospace Engineering from the University of Illinois, and his bachelor's degree in Physics from City College of New York.



## **Garrett Harencak**

### Vice President

Garrett Harencak joined the Jacobs leadership team in 2018 upon retiring from the U.S. Air Force and has been engaged in several strategic activities for our Aerospace, Technology and Nuclear (ATN) line of business. USAF Major General (retired) Harencak enjoyed a distinguished career with the USAF prior to joining Jacobs. He has flown and commanded B-52, B-1 and B-2 units and the USAF Nuclear Weapons Center. At the time of his retirement, he was Commander of the Air Force Recruiting Service. He is an experienced, trusted and tested leader with over 35 years of military service delivering motivational mission accomplishment and consistently succeeding in high stress, high tempo environments. His program leadership and management expertise in diverse and challenging roles driving positive

operational and cultural change has delivered proactive, high-caliber solutions through identification, problem resolution, policy creation and implementation of standard operating procedures for complex organizations.



**Siegfried S. Hecker**  
Professor Emeritus

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 (FSI). He was co-director of CISAC from 2007–2012. From 1986–1997, Dr. Hecker served as the fifth Director of the Los Alamos National Laboratory. Dr. Hecker is an internationally recognized expert in plutonium science, global threat reduction, and nuclear security. Dr. Hecker’s current research interests include nuclear nonproliferation and arms control, nuclear weapons policy, nuclear security, the safe and secure expansion of nuclear energy, and plutonium science.



**Newell Highsmith**  
Adjunct Professor

Newell Highsmith is an adjunct professor of law at Georgetown University. He served as an attorney at the U.S. Department of State for 30 years on issues of arms control and nonproliferation, most recently as Deputy Legal Adviser from 2013 to 2017. He served as primary legal adviser to the U.S. negotiating teams for the 2015 Joint Comprehensive Plan of Action with Iran and for the 1994 Agreed Framework with North Korea. Mr. Highsmith was also involved with negotiating the 2008 agreement for peaceful nuclear cooperation with India, analyzing the legal issues raised by Syria's use of chemical weapons and its construction of a clandestine nuclear reactor, evaluating Russia's violations of its arms control obligations, 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 earned his B.A. in English from the University of North Carolina at Chapel Hill and his J.D. from Harvard Law School.



**Corey Hinderstein**  
Deputy Administrator

Corey Hinderstein was sworn in on Dec. 6, 2021, as Deputy Administrator for Defense Nuclear Nonproliferation at the National Nuclear Security Administration, where she leads NNSA's efforts to prevent state and non-state actors from developing nuclear weapons or acquiring weapons-usable nuclear or radiological materials, equipment, technology, and expertise. Prior to assuming her current role, she was vice president of International Fuel Cycle Strategies at the Nuclear Threat Initiative based in Washington, D.C., where she focuses on international nuclear fuel cycle and nonproliferation policy, global nuclear security, and arms control and nonproliferation monitoring and verification. From February 2015 through November 2017, Hinderstein was senior coordinator for nuclear security and nonproliferation policy affairs at the Defense Nuclear Nonproliferation office of the NNSA. She also has served in advisory capacities for multiple national laboratories and has published widely on nuclear nonproliferation, verification and monitoring and nuclear security.



**Kim Knight**  
Staff Scientist

Kim Knight is a staff scientist at Lawrence Livermore National Laboratory focused on nuclear forensic research. A geochemist by training, she remains endlessly fascinated with radioactive materials. Knight worked as a postdoctoral researcher at the University of Chicago and Argonne National Laboratory prior to joining LLNL in 2008. Knight is primarily involved with the analysis of nuclear and associated materials to better understand clues about the origins, locations, or processes. She has been instrumental in the renaissance of historical fallout research to better understand fallout formation and interpretation of historic nuclear events. She presently leads a Strategic Initiative focused on the fundamental science to understand the influence of different environments on the chemistry and physics of a nuclear explosion. This work develops the scientific basis necessary for improved interpretation of radiochemical data, supporting national goals in stockpile stewardship and nuclear threat reduction as well as operational response and environmental transport.



**Michael Kofman**  
Research Program Director

Michael Kofman serves as Research Program Director in the Russia Studies Program at CNA and as a Fellow at the Kennan Institute, Woodrow Wilson International Center in Washington, DC. His research focuses on the Russia and the former Soviet Union, specializing in Russian armed forces, military thought, capabilities, and strategy. Mr. Kofman is also a Senior Editor at War on the Rocks, where he regularly authors articles on strategy, the Russian military, Russian decision-making, and related foreign policy issues. He runs a personal blog on the Russian armed forces at <https://russianmilitaryanalysis.wordpress.com/>.

Mr. Kofman has published numerous articles on the Russian armed forces, security issues in Russia/Eurasia, and analyses for the U.S. government. He holds an M.A. in International Security from the Edmund A. Walsh School of Foreign Service at Georgetown University.



## **Matthew Kroenig**

### Professor

Matthew Kroenig is the deputy director of the Atlantic Council's Scowcroft Center for Strategy and Security at the Atlantic Council and a tenured associate professor of government and foreign service at Georgetown University. He previously served in several positions in the U.S. government, including in the Strategy Office in the Office of the Secretary of Defense and the Strategic Assessments Group at the Central Intelligence Agency. He regularly consults with a range of U.S. government entities. He is the author or editor of seven books, including "The Return of Great Power Competition: Democracy versus Autocracy from the Ancient World to the United States, Russia, and China Today" and "A Time to Attack: The Looming Iranian Nuclear Threat." His articles and opinion pieces have appeared in American Political Science Review, Foreign Affairs, Foreign Policy, International Organization, Politico, the Wall Street Journal, the Washington Post and many other outlets. He has previously worked as a fellow at the Council on Foreign Relations, Harvard University and Stanford University. Kroenig provides regular commentary for major media outlets, including PBS, NPR, BBC, CNN and C-SPAN. He is a life member of the Council on Foreign Relations and holds an M.A. and Ph.D. in political science from UC Berkeley.



## John Lauder

Retired

Mr. Lauder is a leading authority on weapons of mass destruction, nonproliferation, arms control, homeland security, and intelligence analysis and collection. Mr. Lauder retired from the United States government in the fall of 2004 with over 33 years of managerial, analytical and policy experience in the Central Intelligence Agency, National Reconnaissance Office, and as an arms control negotiator. He served subsequently for nine years as a senior manager and corporate officer within Arete' Associates, a research and development company. Mr. Lauder has been awarded the Distinguished Career Intelligence Medal, the Distinguished Intelligence Medal, the NRO Gold Medal, and the Director of Central Intelligence's Award for his leadership and innovation in collection systems, analytical approaches and vital national security initiatives and decisions. He has a B.A. summa cum laude from Hiram College and an MA.



## Jon Lindsay

Associate Professor

Jon Lindsay is an Associate Professor at the School of Cybersecurity and Privacy at the Georgia Institute of Technology (Georgia Tech). He has a joint appointment in the Sam Nunn School of International Affairs and a courtesy appointment in the School of Public Policy. He is the author of *Information Technology and Military Power* (Cornell University Press, 2020) and co-editor of *Cross-Domain Deterrence: Strategy in an Era of Complexity* (Oxford University Press, 2019), with Erik Gartzke, and *China and Cybersecurity: Espionage, Strategy, and Politics in the Digital Domain* (Oxford University Press, 2015), with Tai Ming Cheung and Derek Reveron, and well as publications in international relations, intelligence studies, and the sociology of technology. He is currently working on a book entitled *Age of Deception: Cybersecurity in International*



*Relations.* He holds a Ph.D. in political science from the Massachusetts Institute of Technology and an M.S. in computer science and B.S. in symbolic systems from Stanford University.



## **Frank Miller**

### Principal

A Principal of The Scowcroft Group, Franklin C. Miller provides clients both strategic and tactical advice on defense, national security, foreign affairs, and intelligence policy. He is an internationally recognized expert on nonproliferation, nuclear deterrence and arms control policy, and defense. Mr. Miller served for thirty-one years in the U.S. government, including twenty-two years in the Department of Defense and four years as a Special Assistant to President George W. Bush and Senior Director for Defense Policy and Arms Control on the National Security Council staff. For his government service, Mr. Miller received the Defense Department's highest civilian award, the Defense Distinguished Civilian Service Medal, five times. Mr. Miller currently serves on the U.S. Strategic Command Advisory Group. He is a member of the Council on Foreign Relations and a Director of the Atlantic Council of the United States. He is Chairman Emeritus of the Board of The Charles Stark Draper Laboratory in Cambridge, Massachusetts, and also serves on the Board of Directors of Airbus U.S. Space and Defense and Sandia National Laboratory.



## **Rolf Mowatt-Larsen**

### Senior Fellow

Rolf Mowatt-Larsen is a Senior Fellow at Harvard Belfer Center, having served until July 2019 as Director of the Center's Intelligence Project. Prior to that he was also a Senior Fellow. Before coming to the Belfer Center, Mowatt-Larsen served over three years as the Director of Intelligence and Counterintelligence at the U.S. Department of Energy. Prior to this, he served for 23 years as a CIA intelligence officer in various 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. He is a graduate of the United States Military Academy, West Point, NY. He is a recipient of the CIA Director's Award, the George W. Bush Award for Excellence in Counterterrorism, the Secretary of Energy's Exceptional Service Medal, the Distinguished Career Intelligence Medal, Secretary of Defense Civilian Distinguished Service Medal, and the National Intelligence Superior Performance Medal, among others.



## **Andrew Reddie**

### Assistant Professor of Practice

Dr. Andrew Reddie is an Assistant Professor of Practice in Cybersecurity at the University of California, Berkeley's School of Information where he works on projects related to cybersecurity, nuclear weapons policy, wargaming, and emerging military technologies. He is also the founder and faculty director for the Berkeley Risk and Security Lab.

Andrew is currently a Bridging the Gap New Era fellow, Hans J. Morgenthau fellow at Notre Dame University, a non-resident fellow at the Brute Krulak Center at Marine Corps University, faculty director at the Center for Long-Term

Cybersecurity, and deputy director at the Berkeley APEC Study Center.

Previously, Andrew has served in roles at Sandia National Laboratories, Lawrence Livermore National Laboratory's Center for Global Security Research, and as an associate at the Council on Foreign Relations in Washington, DC.



## **Brad Roberts**

### Director

Dr. Brad Roberts has served as director of the Center for Global Security Research at Lawrence Livermore National Laboratory since 2015. From 2009 to 2013, he was 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 and led their implementation. Prior to entering government service, Dr. Roberts was a research fellow at the Institute for Defense Analyses and the Center for Strategic and International Studies, editor of *The Washington Quarterly*, and an adjunct professor at George Washington University. Between leaving the Office of the Secretary of Defense in 2013 and assuming his current responsibilities, Dr. Roberts was a consulting professor at Stanford University and William Perry Fellow at the Center for International Security and Cooperation (CISAC). While at CISAC, he authored a book entitled *The Case for U.S. Nuclear Weapons in the 21st Century*, which won the Choice Award for Outstanding Academic Title in 2016.



## **Mareena Robinson Snowden**

### Senior Advisor

Dr. Mareena Robinson Snowden is a senior advisor in the Bureau of Arms Control, Verification, and Compliance (AVC) at the U.S. Department of State. She joined AVC in 2022, after serving as a senior engineer in the National Security Analysis Department at the Johns Hopkins Applied Physics Laboratory (JHU APL). Prior to joining JHU APL, Mareena was a Stanton Nuclear Security Fellow with the Nuclear Policy Program at the Carnegie Endowment for International Peace.

In 2017–2018, Robinson Snowden served as a National Nuclear Security Administration (NNSA) Graduate Fellow (NGFP) in the Office of Major Modernization Programs. Robinson Snowden was awarded the NNSA Stockpile Stewardship Graduate Fellowship (SSGF) in 2012, a four-year fellowship that supported her graduate work in the MIT Laboratory for Nuclear Security and Policy.

Robinson Snowden holds a Ph.D. from the Massachusetts Institute of Technology in nuclear engineering, and a B.S. in physics from Florida A&M University.



## **Laura Rockwood**

### Director

Laura Rockwood is the Director of Open Nuclear Network (ONN), a program of One Earth Future. In July 2012, she was honored with the Distinguished Service Award by the Institute of Nuclear Materials Management (INMM) for long-term noteworthy accomplishments in, and service to, the nuclear materials management profession. During her employment with the International Atomic Energy Agency (IAEA), she was the senior legal advisor on all aspects of the negotiation, interpretation and implementation of IAEA safeguards, and was the principal author of the document that became the Model Additional Protocol. She participated

in high-level negotiations on Iran, Iraq and North Korea, and in the IAEA/US/Russian Federation negotiations on the Trilateral Initiative and the Plutonium Management and Disposition Agreement. Laura came to ONN from her position as Executive Director of the Vienna Center for Disarmament and Non-Proliferation (VCDNP) between 2015 and 2019. She received her B.A. degree from the University of California, Berkeley, and her Juris Doctor from the University of California's Hastings College of Law in San Francisco.



### **Scott Sagan**

**Caroline S. G. Munro Professor of Political Science**

Scott D. Sagan is the Caroline S.G. Munro Professor of Political Science, the Mimi and Peter Haas University Fellow in Undergraduate Education, and Senior Fellow at the Center for International Security and Cooperation and the Freeman Spogli Institute at Stanford University. He also serves as Chairman of the American Academy of Arts and Sciences' Committee on International Security Studies. Before joining the Stanford faculty, Sagan was a lecturer in the Department of Government at Harvard University and served as special assistant to the director of the Organization of the Joint Chiefs of Staff in the Pentagon. Sagan has also served as a consultant to the office of the Secretary of Defense and at the Sandia National Laboratory and the Los Alamos National Laboratory.



## **Victoria Samson**

### Washington Office Director

Victoria Samson is the Washington Office Director for Secure World Foundation and has twenty years of experience in military space and security issues. 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 with Congressional staffers, members of the media, embassy officials, citizens, and thinktanks on issues surrounding dealing with national missile defense and nuclear weapons reductions. She is also a member of the International Astronautical Federation (IAF) committee on space security and the Space Security Working Group of the National Academies of Sciences, Engineering, and Medicine (NASEM)'s Committee on International Security and Arms Control (CISAC).



## **Mark Schanfein**

### Senior Nonproliferation Advisor

Mark Schanfein is Senior Nonproliferation Advisor at Idaho National Laboratory (INL). He has over 40 years' experience in nonproliferation and safeguards including a 20-year career at Los Alamos National Laboratory (LANL) in the weapons and nonproliferation programs. He served as a technical expert on the ground in the DPRK during the disablement activities resulting from the 6-Party Talks under the Bush administration. He has previously worked for Pacific Northwest National Laboratory (PNNL) and oversight at Lawrence Livermore National Laboratory (LLNL). Mark has 8 years of experience working at the International Atomic Energy Agency (IAEA) in Vienna, Austria, 4 years as a

safeguards inspector and 4 years as the Unit Head for Unattended Monitoring Systems (UMS), responsible for the installation of all IAEA unattended autonomous systems in nuclear fuel cycle facilities worldwide. He supports multiple safeguards training programs including International Nuclear Safeguards Engagement Program and Human Capital Development and has recently supported projects on pandemic considerations for the IAEA and State Regulatory Authorities. His current focus is on emerging technologies for applications in international safeguards with a current interest in digital twins, artificial intelligence and machine learning. In 2020, Mark was elected as the Vice President for the Institute of Nuclear Materials Management.



### **John Scott**

#### Deputy Director

John Scott is Deputy Director of the Office of National Security and International Studies at the Los Alamos National Laboratory (LANL). John started at LANL in 1998 as a postdoc in the weapon design division after completing his Ph.D. in nuclear engineering at the University of California Berkeley. During his career, John has 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. John served as a member of the ASC Predictive Science Panel from 2009 to 2013 and was the project leader for weapons performance metrics in the Advanced Certification program from 2009–2017. He served as the group leader for the Integrated Design and Assessment Group within the Theoretical Design Division and as the deputy division leader for stockpile work in the Theoretical Design Division.

### **Kevin Swearingen**

#### Radiological and Nuclear Chemist Forensic Examiner

Kevin Swearingen has been a Radiological and Nuclear Chemist Forensic Examiner at the FBI Laboratory in Quantico,

Virginia for the past 4 years. His duties include the analysis of any radioactive or nuclear material and directing conventional forensic examinations of evidence contaminated with radioactive material. This work is done in support of FBI investigations and to assist any local, state, federal, or international law enforcement organizations. Prior to joining the FBI, he received his Ph.D. from Washington State University, with a focus on analytical radiochemistry. Before starting graduate school, he spent time at Pacific Northwest National Laboratory researching fission product separation and nuclear waste glass.



## **Nina Tannenwald**

### Director

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 Leggold 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 U.S. State Department. She holds a master's degree from the Columbia School of International and Public Affairs and a Ph.D. in international relations from Cornell University.





**Jay Tilden**  
Associate Administrator

Since 2016, Jay Tilden has served as NNSA's Associate Administrator for Counterterrorism and Counterproliferation with responsibility in preparing for, responding to, and successfully resolving nuclear and radiological accidents and incidents worldwide. The mission includes providing technically informed policy and operational recommendations required to advance U.S. nuclear counterterrorism and counterproliferation objectives, while informing U.S. government agencies on nuclear threat devices (i.e., improvised nuclear devices, proliferant devices, and lost or stolen nuclear devices outside of state control). The office applies the Department of Energy's (DOE) and NNSA's existing nuclear expertise, science, technology, and engineering capabilities to support relevant whole-of-government activities, while sustaining deployable assets for both nuclear incident response and nuclear forensics activities. Mr. Tilden is a retired Army Chief Warrant Officer (counterintelligence and all-source intelligence) and served in both active and reserve capacities including the Desert Shield/Desert Storm and Enduring Freedom/Noble Eagle operations.



**Will Tobey**  
Director

Will Tobey directs the Office of National Security and International Studies at the Los Alamos National Laboratory. He is also a Senior Fellow with the Avoiding Great Power Wars Project at Harvard Kennedy School's Belfer Center. From 2009–2021, Tobey was a Senior Fellow and Lecturer at the Harvard Kennedy School's Belfer Center for Science and International Affairs. Tobey served as Deputy Administrator for Defense Nuclear Nonproliferation at the National Nuclear Security Administration from 2006–2009. There, he managed the U.S. government's largest program to prevent nuclear proliferation

and terrorism by detecting, securing, and disposing of dangerous nuclear material. He 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. Tobey also has a decade of experience in investment banking and venture capital. He currently chairs the Nuclear and Radiation Studies Board of the National Academies of Sciences Engineering and Medicine, and the board of the World Institute for Nuclear Security. He is also on the executive committee of the nonproliferation division of the American Nuclear Society.



### **Chris Twomey**

#### **Associate Professor**

Christopher P. Twomey is an associate professor in the Department of National Security Affairs at the Naval Postgraduate School, where he focuses on Chinese foreign policy and East Asian security issues in his teaching and research. He authored *The Military Lens: Doctrinal Differences and Deterrence Failure in Sino-American Relations* (Cornell University Press, 2010) and articles in journals such as *Security Studies*, *Journal of Contemporary China*, *The Washington Quarterly*, and *Asian Survey*. He has edited two books and published chapters in a dozen others, including most recently, “China’s Nuclear Doctrine and Deterrence Concept,” in Paul Bolt and James Smith, eds., *China’s Strategic Arsenal: Worldview, Doctrine, and Systems* (Washington, DC: Georgetown University Press, 2021). His work has supported of the Office of the Secretary of Defense, the State Department, INDOPACOM, RAND, NBR, and others. He has led a track 2 diplomatic engagement with China centering on strategic issues since its inception in 2005. Dr. Twomey received his BA and Masters degrees from the University of California San Diego, his Ph.D. in Political

Science from the Massachusetts Institute of Technology, and conducted postdoctoral research at Harvard.



### **John Warden**

#### Researcher

John K. Warden is a U.S. 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 U.S. Deterrence" (Proliferation Papers, Ifri, 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**

#### Physicist

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. 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 U.S. National Academy of Science committees on biological terrorism and ballistic missile defense, as well as several Defense Science Board task forces. He received his Ph.D. in physics from Harvard University.



## **Heather Williams**

### Visiting Fellow

Dr Heather Williams is currently a visiting fellow at the Harvard Kennedy School Project on Managing the Atom until summer 2022. From 2020–2021 she was a Stanton Nuclear Security Fellow at the Massachusetts Institute of Technology Security Studies Program. She is a Senior Lecturer in the Defence Studies Department and Centre for Science and Security Studies (CSSS). She is also an Associate Fellow at the Royal United Services Institute (RUSI), a Senior Associate Fellow at the European Leadership Network and serves on the Wilton Park Advisory Council. She serves on the boards of the Nonproliferation Review and the UK Project on Nuclear Issues (PONI). She has a Ph.D. from the Department of War Studies at King's College London, a B.A. in International Relations and Russian Studies from Boston University, and an M.A. in Security Policy Studies from The George Washington University.





