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About the Speakers

Robert Allen is the program leader for the Nuclear Reachback and Response Operations (NRRO) program in the Global Security Directorate at Lawrence Livermore National Laboratory (LLNL). A component of Livermore’s nuclear counterterrorism portfolio, NRRO includes a variety of nuclear and radiological emergency preparedness and response capabilities that provide 24/7 operational support and emergency preparedness training to a number of federal agencies. Allen joined LLNL in 1978, supporting the Department of Energy’s Nuclear Assessment Program (NAP) as a computer scientist and information system architect. In the mid-1990s he became a NAP scientist/analyst working on illicit nuclear trafficking and communicated nuclear threat assessment. Allen was the program’s lead analyst and head of operations from 1999 through 2007, and directed the program for two years. In 2007 he became a program leader in LLNL’s Global Security directorate. Allen also serves as a labor-
atory emergency duty officer for LLNL, one of a cadre of senior Livermore managers trained to direct laboratory-wide operations during site emergencies. He is currently on temporary assignment at Department of Energy headquarters, supporting the National Nuclear Security Administration’s Office of Science and Policy.

George Anzelon is a physicist at Lawrence Livermore National Laboratory (LLNL). After receiving his Ph.D. in nuclear physics from UCLA in 1973 and spending four years as an Air Force captain with the Air Force Technical Applications Center, Anzelon joined LLNL’s “Z” Division in 1977 to work on detection of hidden nuclear materials. Since 1982, he has worked on analysis of nuclear proliferation, nuclear terrorism, and nuclear safeguards in various capacities from Associate Division Leader to research analyst. Among his other experiences, Anzelon has participated in the inspection of formerly undeclared nuclear programs in Iraq, Libya, North Korea, and elsewhere. From 2000–2002 he worked as a safeguards analyst for the IAEA in Vienna.

James Blankenship is a forensic examiner with the Federal Bureau of Investigation based at the FBI Laboratory at Quantico, Virginia, where he leads the forensic community in the analysis of weapons of mass destruction, specifically the threat of nuclear and radioactive dispersal devices. Among other positions, he was an executive officer in the Pentagon supporting the Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs and a program manager at the Defense Threat Reduction Agency, supporting the Radiation Hardened Microelectronics Advanced Technology program by providing technical oversight and programmatic guidance. He received his Ph.D. in chemistry from Texas A&M University.

Dr. Brian D. Boyer is the project leader of international safeguards in the Nuclear Nonproliferation Division at Los Alamos National Laboratory. He has been employed at Los Alamos since 2006 in the field of nuclear nonproliferation specializing in international safeguards, especially in the areas of enrichment safeguards, safeguards by design, and reactor safeguards. He has been active in supporting human capital development in the safeguards field by mentoring several students as Los Alamos during the last three years, lecturing at several safeguards courses, and developing and teaching a graduate-level course in nuclear fuel cycle and safeguards at the Pennsylvania State University through the distance learning program. From 2002 to 2006 he worked at Brookhaven National Laboratory as a nonproliferation and safeguards specialist, helping to create a safeguards approach with the International Atomic Energy Agency (IAEA) for the Chernobyl Shelter, and building a course for the IAEA at Brookhaven to train IAEA inspectors in the mechanics of complementary access activities for the Additional Protocol to the Nuclear Nonproliferation Treaty. He worked from 1997 to 2002 at the IAEA as a nuclear safeguard inspector doing inspections in Europe and as a nuclear safeguards analyst in the Section for System Studies. He holds a Ph.D. in nuclear engineering from the Pennsylvania State University.
Jonathan Brewer is currently a member of the UN Panel of Experts on Iran created pursuant to resolution 1929 (2010) based in New York. He is a visiting professor at King’s College London, specializing in proliferation issues. He retired after a 28-year career in the UK diplomatic service in March 2010, the last five years of which he led UK work on counter-proliferation. He holds a doctorate in geophysics from Cornell University.

Ambassador Linton Brooks is an independent consultant on national security issues, a senior advisor at the Center for Strategic and International Studies, a Distinguished Research Fellow at the National Defense University, and an advisor to four of the Department of Energy national laboratories. 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.

Amb. Brooks has five decades of experience in national security, much of it associated with nuclear weapons. 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. 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.

Robert L. Brown is assistant professor of political science at Temple University, where he teaches courses on international relations theory and international security. He received his Ph.D. in political science from UC San Diego in June 2008 after completing his dissertation on why countries use international organizations to cooperate on nuclear and chemical weapons but not for biological weapons. His research interests more broadly include international relations theory, international organizations, international security issues, nuclear deterrence, and sovereignty issues. He has an M.A. in international affairs from the George Washington University’s Elliott School, where his studies focused on security regimes in Northeast and Southeast Asia, and a B.A. in political science with a minor in Japanese studies from the University of California, where his studies focused on Northeast Asian political economy and development. He has also interned at the Center for Strategic and International Studies (CSIS) in Washington, D.C., and worked previously on nuclear and Northeast Asian security issues at the Nautilus Institute.

Dr. Kory Budlong-Sylvestre has worked at Los Alamos National Laboratory since 1998. He is presently the nonproliferation and international security program manager in the Global Security Directorate. Sylvestre is responsible for LANL programs in the areas of nuclear nonproliferation and arms control, including international safeguards, treaty verification, export controls, and
global security engagement. He has served as a senior technical advisor to the Office of International Regimes and Agreements at the U.S. National Nuclear Security Administration, focusing on the Next Generation Safeguards Initiative. As a fellow on the Senate Appropriations Committee, he spent a year working on nuclear nonproliferation and energy issues. Sylvester also spent a year on the staff of the Prevention of Nuclear and Biological Attack Subcommittee of the House Committee on Homeland Security. He received his Ph.D. in nuclear engineering from the Massachusetts Institute of Technology in 1997.

**Dr. Michael S. Chase** is an associate research professor in the Warfare Analysis and Research Department at the Naval War College. He also serves as director of the Mahan Scholars research group. Chase previously taught in the Strategy and Policy Department at the Naval War College and served as a research analyst with Defense Group Inc. and the RAND Corporation. Chase has published numerous articles and book chapters on China and Asian security issues. He attended Brandeis University and received his M.A. and Ph.D. from the Paul H. Nitze School of Advanced International Studies at Johns Hopkins University.


Delpech studied philosophy and is the author of seven books. She has written numerous articles on defense and strategic issues in journals such as *Politique Étrangère, Commentaire, Politique Internationale, Le Meilleur des Mondes* (France), *Internationale Politik* (Germany), *Survival (IISS)*, *Global* (Italy), *International Affairs* (UK), *Washington Quaterly and American Interest (US)*.

**Captain Chris Diller** is an officer in the United States Air Force and a PPNT 2008 alumnus. Currently stationed at Whiteman Air Force Base, he flies the Northrop B-2 Stealth Bomber, which is dual hatted as both a conventional and nuclear weapon delivery platform. He is a 2004 graduate of the United States Air Force Academy where he majored in political science. Capt. Diller holds a graduate certificate in advanced international affairs from the George Bush School of Government as well as a Masters in national security studies from American Military University. He is a past military academic research associate from Lawrence Livermore National Laboratory, where he researched the political implications and military necessity of the Robust Nuclear Earth Penetrator (RNEP). Most recently he was awarded a grant from the USAF Institute for National Security Studies to research the restructuring of the USAF nuclear Command Structure.
James E. Doyle has been a specialist in the Nuclear Nonproliferation Division at Los Alamos National Laboratory since 1997. His professional focus is on systems analysis, strategic planning and policy development. Dr. Doyle holds a Ph.D. in International Security Studies from the University of Virginia. At Los Alamos he managed projects with Russia’s nuclear weapons institutes on the joint development of technologies and procedures for verifying the dismantlement and storage of nuclear warheads and fissile materials. He has been focusing on this topic again, speaking and publishing on the prospects for another round of U.S.–Russian nuclear arms reductions following the New START Treaty.

Doyle has also focused on defining educational requirements for nuclear security specialists and developing university training courses in this area. He was the coordinator for Los Alamos activities related to the Human Capital Development project of NNSA’s Next Generation Safeguards Initiative. His edited Textbook “Nuclear Safeguards, Security and Nonproliferation: Achieving Security with Technology and Policy,” is in use at many university departments focusing on the integration of technical and policy issues in the field of nuclear security. Dr. Doyle designed and directed introductory nuclear safeguards and security courses for students and technical staff at Los Alamos. Lectures from this series of courses have been selected by the IAEA to be featured on a safeguards knowledge platform available to all member states. Doyle’s articles on nuclear security issues have appeared in Defense News, Science and Global Security, Nonproliferation Review, Arms Control Today, Comparative Strategy, Strategic Review and “Abolishing Nuclear Weapons: A Debate,” by James Acton and George Perkovich.

Thomas Doyle is currently a visiting lecturer in international security at the Josef Korbel School of International Studies at the University of Denver. His research interests are in nuclear ethics and in normative IR theoretic applications to other aspects of international security. He has published in Ethics and International Affairs, International Theory, and Ethics and Global Politics. He has a forthcoming article in the International Studies Association Compendium Project titled “Deontological International Ethics.” His works in progress include an article on the ethics of nuclear counter-terrorism policy. Doyle received his Ph.D. in political science from UC Irvine.

Joel Forrester is a research scientist at Pacific Northwest National Laboratory (PNNL). His work focuses on monitoring technologies for nuclear test-ban verification and preventing nuclear smuggling. Forrester led quantitative analysis method development efforts for biological and chemical weapons detection and classification in his first years at PNNL. He made the transition to nuclear nonproliferation projects when he joined the technical team developing noble gas processing and quantification systems in support of the CTBTO’s International Monitoring System. Forrester has helped manage PNNL’s noble gas (xenon) system development portfolio, has been recognized for his leadership in border interdiction programs in Eastern Europe and Central Asia, and was recently invited to contribute to the draft Concept of Operations plan for the CTBTO’s on-site inspection regime. A particular interest lies in bridging the gap between scientists and policy makers. Forrester has a B.S. in chemistry and is currently completing a M.S. in chemistry at Idaho State University.
Massimiliano Fratoni is a postdoctoral staff member at the Lawrence Livermore National Laboratory where he is part of the neutronic design group of the LIFE (Laser Inertial Fusion-based Energy) system. His main research interests reside in the area of reactor design and nuclear fuel cycle, with particular focus on nuclear systems for efficient resource utilization and waste minimization. Fratoni received a Laurea in nuclear engineering from University of Rome “La Sapienza” (2004), and a M.Sc. (2007) and a Ph.D. (2008) from UC Berkeley.

Robin Frost is an intelligence analyst with the Canadian government. He is the author of *Nuclear Terrorism after 9/11* (Adelphi Paper #378, December 2005) as well as a number of other publications and conference presentations on nuclear terrorism and nuclear strategy. Before taking his present role he worked variously as an academic, a radio, print, and industrial journalist, a technical writer and editor, a training officer, a bus driver, and a scuba instructor. He holds an M.A. in political science, specializing in international relations and strategic studies, and has also done post-graduate work in clinical psychology and human resources management. His undergraduate degree was in journalism and psychology.

Matthew Fuhrmann is an assistant professor of political science at Texas A&M University. During the 2010–11 academic year, he was a Stanton Nuclear Security Fellow at the Council on Foreign Relations in Washington, D.C. He has previously been an assistant professor at the University of South Carolina and a research fellow at Harvard University. Fuhrmann’s research focuses on international security, international institutions, and foreign policy. Much of his work examines the strategic implications of energy policy and the causes and consequences of nuclear proliferation. His research on these topics has been published in *International Security, Journal of Conflict Resolution, Journal of Peace Research, Conflict Management and Peace Science*, and *Foreign Policy Analysis*, among other journals. It has also been funded by Harvard University and the Council on Foreign Relations.

Matt Gardner is an experimental nuclear physicist at the UK Atomic Weapons Establishment (AWE). His work centers on improving understanding of nuclear weapon operation via experimentation in the field of materials properties under weapons conditions, using AWE’s fusion-neutron source. This work forms part of the larger program to underwrite scientifically the UK’s nuclear weapons in the CTBT era, and to further understand the wealth of underground test data collected in the pre-treaty years. Gardner also worked on the design, testing, and commissioning of AWE’s Orion laser project, providing diagnostic facilities for the AGEX II Plasma Physics program. In addition, his work has spanned remote detection of special nuclear materials, laser-based ion acceleration methodologies and laser-driven radiography. Gardner was educated at the University of Birmingham in England, where he obtained a first degree in biophysics and a Ph.D. in nuclear physics. His thesis reported on the nuclear structure of radioactive yttrium isotopes and isomers produced at the Jyväskylä radioactive ion beam facility in Finland.
Erik Gartzke has held faculty positions at the Pennsylvania State University, Columbia University, and currently at UC San Diego. He received his Ph.D. in political science from the University of Iowa in 1997. A recent report by Thompson ISI (“Web of Science”) ranked him among the twenty most prolific and widely-cited scholars in conflict studies (out of a pool of 5,311 authors). His work focuses on peace, war, and international institutions. He has written extensively on the liberal determinants of interstate peace, suggesting that the largely forgotten role of markets and economic development—a capitalist peace—is a more decisive factor than representative democracy in making regions less war-prone. Published and ongoing research examines how bargains succeed or fail. Rather than relying on human nature, norms, culture, or material forces (power, incentives, constraints), bargaining theory emphasizes actors’ beliefs about such factors. His research appears in the American Political Science Review, American Journal of Political Science, International Organization, International Studies Quarterly, Journal of Conflict Resolution, Journal of Politics, World Politics, and elsewhere. Gartzke is currently working on a book manuscript tentatively titled The Futility of War: Capitalism, Democracy, and Peace.

Francis J. Gavin is the director of the Robert S. Strauss Center for International Security and Law and the first Tom Slick Professor of International Affairs at Lyndon B. Johnson School of Public Affairs at the University of Texas at Austin. He is also the director of “The Next Generation Project: U.S. Global Policy and the Future of International Institutions.” His book, Gold, Dollars, and Power: The Politics of International Monetary Relations, 1958–1971, was published in 2004. His current research project is entitled “Same as it Ever Was? Reassessing the History of the Nuclear Age.” In 2009, he was a senior research fellow at the Nobel Institute in Oslo, Norway.

Patrick M. Grant earned B.S. and Ph.D. degrees in chemistry from the University of California. He worked in radiochemistry and nuclear medicine at Los Alamos National Laboratory for eight years, and was an associate group leader for medical radioisotope research and production. He has been a staff member at Lawrence Livermore National Laboratory since 1983, serving as the deputy director and special ops and samples manager of the Forensic Science Center. In addition to numerous classified and law-enforcement reports, Grant has authored or co-authored more than 100 refereed publications in the open literature. He has served on three FBI scientific working groups focused on WMD counterterrorism, is a Fellow of the American Academy of Forensic Sciences, and a member of the editorial board of the Journal of Forensic Sciences. His most noteworthy recent accomplishments include co-authorship of the seminal text, Nuclear Forensic Analysis (CRC Press, 2005); reassessment and reinterpretation of the JFK assassination bullet evidence [J. Foren. Sci. 51: 717 (2006)]; and session organizer, chairman, and speaker at the international Global Initiative to Combat Nuclear Terrorism (Jerusalem, Israel 2010).
Dr. Daniel Goure is a vice president with the Lexington Institute, a nonprofit public-policy research organization headquartered in Arlington, Virginia. He is involved in a wide range of issues as part of the institute’s national security program. Dr. Goure has held senior positions in both the private sector and the U.S. government. Most recently, he was a member of the 2001 Department of Defense Transition Team. Dr. Goure spent two years as the director of the Office of Strategic Competitiveness in the Office of the Secretary of Defense. He also served as a senior analyst on national security and defense issues with the Center for Naval Analyses, Science Applications International Corporation, SRS Technologies, R&D Associates, and System Planning Corporation.

Prior to joining the Lexington Institute, Goure was deputy director of the International Security Program at the Center for Strategic and International Studies, where he was responsible for analyses of U.S. national security policy, the future of conflict and warfare, the information revolution, counter-proliferation, and defense industrial management. He directed analyses of emerging security issues with a special emphasis on U.S. military capabilities in the next century.

Goure also has done extensive consulting and teaching. He has taught or lectured at the Johns Hopkins University, the Foreign Service Institute, the National War College, the Naval War College, and the Inter-American Defense College. Since 2001, Dr. Goure has been an adjunct professor in graduate programs at the Center for Peace and Security Studies at Georgetown University, and an adjunct professor at National Defense University since 2002. Goure is a well-known and respected presence in the national and international media. He has been published extensively in over two dozen journals and periodicals. He is also an NBC national security military analyst. He holds Masters and Ph.D. degrees in international relations and Russian studies from Johns Hopkins University and a B.A. in government and history from Pomona College.

Now a consultant, Dr. William Hagan was the acting director of the Department of Homeland Security’s Domestic Nuclear Detection Office (DNDO) from 2009 to 2010. DNDO’s mission is to reduce the risk of domestic nuclear terrorism through research and development, testing, operations support, pilot programs, nuclear forensics, and coordination of government assets and operations. Prior to serving as acting director, Hagan was the acting deputy director, assistant director for the Transformational Research and Development (R&D) directorate, and chief science officer of DNDO. In the latter role he was responsible for long-term R&D seeking technologies that can make a significant or dramatic positive impact on the overall mission to prevent nuclear terrorism. Prior to DNDO, Hagan was a senior vice president at Science Applications International Corporation, where he worked for 30 years. Focus areas included nuclear technology, telecommunications, optics, transportation, system integration, and technology assessments. Business roles included group leadership, mergers and acquisitions, venture capital investment, and business development.

Hagan earned a B.S. in engineering physics in 1974, M.S. in physics in 1975, and M.S. in nuclear engineering in 1977 from the University of Illinois at Urbana. He received his Ph.D. in physics from the UC San Diego in 1986. He holds three patents.

Anne Harrington was sworn in as Deputy Administrator for Defense Nuclear Nonproliferation for the National Nuclear Security Administration in October 2010. Previously, she was the director of the U.S. National Academy of Sciences Committee on International Security and Arms Control (CISAC) a position she held from March 2005 to October 2010. While at CISAC, she managed several key studies on a variety of nonproliferation, threat reduction, and other nuclear security issues.

Harrington served for 15 years in the U.S. Department of State, where she was acting director and deputy director of the Office of Proliferation Threat Reduction and a senior U.S. government expert on nonproliferation and cooperative threat reduction. She has dedicated much of her government career to developing policy and implementing programs aimed at preventing the proliferation of WMD and missile expertise in Russia and Eurasia, and also launched similar efforts Iraq and Libya.

Harrington was selected to attend the National Defense University’s National War College in 2002–2003, where she was also a research fellow and authored the paper, “Reducing the Threat from Biological Weapons: Perspectives on U.S. Policy.” She has been author or co-author on a number of papers on countering biological threats.

Harrington graduated with a B.A. from St. Lawrence University, an M.A. from the University of Michigan, and an M.S. from the National Defense University National War College.

Michael C. Horowitz is an associate professor of political science at the University of Pennsylvania. His primary research revolves around international conflict and security issues. He is also interested in the intersection of religion and international relations, the role of leaders in international politics, and international security issues in East Asia. Horowitz spent the 2006–2007 academic year as a postdoctoral fellow at the Belfer Center for Science and International Affairs at Harvard University. He completed his Ph.D. in the Department of Government at Harvard University, where his dissertation examined the diffusion of military power and the consequences for international politics. His other academic projects include studies of how attributes of international leaders influence their decision-making concerning international conflict, the empirical impact of weapons of mass destruction proliferation on international behavior, North Korean negotiating patterns, and U.S.–Australian relations.

Horowitz was the Sidney R. Knafel Fellow at the Weatherhead Center for International Affairs in 2005–2006. During the 2004–2005 academic year, he was a predoctoral fellow at the Olin Institute for Strategic Studies at Harvard. He has previously worked at Science Applications Inter-
national Corporation and at the Center for Strategic and International Studies as a research Assistant in the international security program. He has also served as a consultant on national security topics. His work has been published in *International Organization, Journal of Conflict Resolution, Journal of Strategic Studies, Orbis,* and the *Washington Quarterly.* His teaching interests include courses on warfare, religion, the international security environment, and the use of statistics to study international conflict. His first book, *The Diffusion of Military Power: Causes and Consequences for International Politics,* is being published by Princeton University Press.

**Jeff Kaplow** is a Ph.D. student in political science at UC San Diego, where his research interests include international conflict, nuclear nonproliferation, and conflict bargaining. Before coming to UC San Diego, Kaplow worked for the U.S. government on nuclear proliferation issues. He has also evaluated regional economic development efforts for a national policy research firm and analyzed international environmental negotiations for Cambridge Energy Research Associates. Kaplow earned his master’s degree in international security policy from Harvard’s Kennedy School and has a B.A. in political science from Yale.

**S. Paul Kapur** is professor in the Department of National Security Affairs at the United States Naval Postgraduate School. His research and teaching interests include nuclear weapons proliferation, deterrence, Islamist militancy, and the security environment in South Asia. In addition to the Naval Postgraduate School, Kapur has taught at the U.S. Naval War College, the Claremont Colleges, and the University of Chicago, where he received his Ph.D. in political science. His most recent publications include *India, Pakistan and the Bomb: Debating Nuclear Stability in South Asia* (with Sumit Ganguly, Columbia University Press, 2010); and “More Posture than Review: Indian Reactions to the United States Nuclear Posture Review,” *Non-Proliferation Review* (February 2011).

**Robert Kelley** is a nuclear engineer from the United States who has worked in the U.S. Department of Energy complex for more than 30 years. He currently consults on nuclear proliferation after working in defense nuclear programs at Livermore and Los Alamos National Laboratories and was director of the Remote Sensing Laboratory in Las Vegas, Nevada. Kelley was a director at the IAEA in Vienna and has field experience as a chief inspector for IAEA in Iraq, in the evaluation of South Africa’s nuclear weapons in 1993, and the inspections of the vestiges of Libya’s nuclear weapons program in 2004. He recently published evidence of a nuclear program in Burma for the Democratic Voice of Burma. He has carried out IAEA inspections in Libya, Iraq, and South Africa, Egypt, Turkey, South Korea, Taiwan, Syria, Tanzania, Pakistan, India, and DR Congo. Kelley’s practical laboratory experience includes plutonium metallurgy, gas centrifuge design, weapons engineering, nuclear emergency response and remote sensing.
Matthew Kroenig is an assistant professor in the Department of Government at Georgetown University and a research affiliate with the Project on Managing the Atom at Harvard University. He is the author of Exporting the Bomb: Technology Transfer and the Spread of Nuclear Weapons (Cornell, 2010) and co-author of The Handbook of National Legislatures (Cambridge, 2009). His writings on international politics have appeared in such publications as American Political Science Review, Democratization, Foreign Affairs, Foreign Policy, Journal of Conflict Resolution, Perspectives on Politics, Security Studies, The New Republic, USA Today, and the Washington Post. He has held fellowships from the Council on Foreign Relations, the National Science Foundation, the Belfer Center for Science and International Affairs at Harvard University, the Center for International Security and Cooperation at Stanford University, and the UC Institute on Global Conflict and Cooperation. Kroenig has also served as a strategist on the policy planning staff in the Office of the Secretary of Defense where he authored the first-ever U.S. government-wide strategy for deterring terrorist networks. For his work, Kroenig received the Office of the Secretary of Defense’s Award for Outstanding Achievement. He is a term member of the Council on Foreign Relations.

Elaine Jennings is a veteran member of California’s Homeland Security team. She currently serves as the director of planning, preparedness, and emerging threats for the California Emergency Management Agency. Jennings manages a wide variety of homeland security projects including the Large Stadium Initiative, which works to protect special events and stadium venues, and the development of CBRNE operational protocols. She serves as the chair to the Statewide Preventive Radiological/Nuclear Detection Task Force, is the lead executive for all RAD/NUC prevention and response for the State of California, and manages the State’s NPP program. Her current projects include working with the White House to develop a program on executive leadership and communication following an IND incident.

Jennings received her bachelor’s degree in political science with an emphasis in international relations from California State University, Northridge, and attended the Graduate School of International Relations at the University of Denver to study national security and nuclear nonproliferation. She is currently a master’s candidate in homeland security and defense at the Naval Post Graduate School in Monterey, California. Her research emphasis is nuclear terrorism and post-detonation response.

Michael May is professor emeritus (research) in the Stanford University School of Engineering and a senior fellow with the Freeman-Spogli Institute for International Studies at Stanford University. He is the former co-director of Stanford University’s Center for International Security and Cooperation, having served seven years in that capacity through January 2000. Dr. May is director emeritus of the Lawrence Livermore National Laboratory. He has held a number of government advisory positions, was a member of the U.S. delegation to the Strategic Arms Limitations Talks, and is a fellow of the American Physical Society and the American Association for the Advancement of Science. Among other awards, May had received the Distinguished Public Service and Distinguished Civilian Service Medals from the Department of Defense, and the Ernest Orlando Lawrence Award from the Atomic Energy Commission. May’s
current research interests are in nuclear security, energy, environment and terrorism, and the relation of nuclear weapons and foreign policy. He has recently written on nuclear forensics, on the stability of deterrence at low numbers or zero nuclear weapons, on nuclear postures in the nuclear-weapon states, and on the prospects for nuclear power. He currently co-heads a project on the possible game changers in the nuclear power area.

Catherine McArdle Kelleher has had a distinguished career both in academia and in government. She is a College Park Professor, University of Maryland at College Park, and also holds both a research appointment as senior fellow at the Watson Institute and the honorary title of research professor emeritus at the U.S. Naval War College. She is a member of the Naval Studies Board of the National Academies of Sciences. She was also named an honorary professor at the Free University of Berlin, and was a senior faculty associate for 2004–2009 at the Geneva Center for Security Policy in Geneva, Switzerland. She serves as a senior fellow at the Center for Naval Analysis in Washington.

Kelleher’s areas of policy analysis have included the development of cooperative European security, American-Russian relations, the evolution of NATO, the acquisition of theater nuclear forces, the verification of a comprehensive nuclear test ban, and European defense and security policies, both at the level of the Union and Paris, Berlin, and London. In the Clinton administration she was the personal representative of the Secretary of Defense in Europe and Deputy Assistant Secretary of Defense for Russia, Ukraine, and Eurasia. Professor Kelleher’s other governmental experience includes a position on the National Security Council staff during the Carter administration and a series of consulting assignments under Republican and Democratic administrations in the Office of the Secretary of Defense, the Arms Control and Disarmament Agency, and the Department of the Army. She was professor of military strategy at the National War College.

Kelleher has had a wide range of academic involvement in the field of national security studies. She has taught at Columbia, Illinois-Chicago, Michigan, and the Graduate School of International Studies at Denver, and was founding director of the Center for International Security Studies at Maryland (CISSM), as well as a professor in the School of Public Affairs at the University of Maryland. She is the author of more than seventy books, monographs, and articles. She is the founder of Women in International Security program (wiis.org), dedicated to developing career opportunities for women in this field. She has served on many international research boards, including those of the SIPRI and the IISS, as well as the Carnegie Commission for a European Security Initiative (EASI).

Kelleher holds degrees from Mt. Holyoke College (A.B. and D.Litt) and from the Massachusetts Institute of Technology (Ph.D.). She is the recipient of the Medal for Distinguished Public Service of the Department of Defense, the Director’s Medal from the Defense Intelligence Agency, and the Cross of Honor in Gold of the Federal Armed Forces of Germany. In 2004, she was awarded the Manfred Woerner Medal by the German Ministry of Defense for her contributions to peace and security in Europe.
Samantha E. Kentis is a program manager at the U.S. Department of Homeland Security (DHS) Domestic Nuclear Detection Office’s (DNDO’s) National Technical Nuclear Forensics Center. She manages the National Nuclear Forensics Expertise Development Program; leads the center’s interagency coordination efforts on national-level nuclear forensics policy and planning among the Departments of Defense, Energy, Homeland Security, Justice, State, the Office of the Director of National Intelligence, and the White House National Security Staff; and works closely with the State Department and others as the DNDO lead for nuclear forensics-related international activities. Prior to joining DHS, Kentis worked in the private sector primarily supporting nuclear forensics R&D efforts at the Defense Threat Reduction Agency. She holds a B.A. in foreign affairs from the University of Virginia and an M.A. in security studies from Georgetown University’s Edmund A. Walsh School of Foreign Service.

Alexander H. Montgomery is assistant professor of political science at Reed College. He has a B.A. in physics from the University of Chicago, an M.A. in energy and resources from UC Berkeley, and an M.A. in sociology and a Ph.D. in political science from Stanford University. While at Stanford, his work was supported by a National Science Foundation Graduate Fellowship. He has been a joint International Security Program/Managing the Atom Project Research Fellow at the Belfer Center for Science and International Affairs and a post-doctoral fellow at the Center for International Security and Cooperation at Stanford University. He has published articles on nuclear proliferation and on the effects of social networks of international organizations on interstate conflict, most recently in International Organization and the Journal of Conflict Resolution. His research interests include political organizations, social networks, weapons of mass disruption and destruction, social studies of technology, and interstate social relations.

John Mueller holds the Woody Hayes Chair of National Security Studies at the Mershon Center, and is professor of political science at Ohio State University, where he teaches courses in international relations. He is currently working on terrorism and particularly on the reactions (or over-reactions) it often inspires. His most recent book, Atomic Obsession: Nuclear Alarmism from Hiroshima to Al Qaeda (Oxford University Press, 2010), suggests that atomic terrorism is highly unlikely and that efforts to prevent nuclear proliferation frequently have damaging results. His book, Terrorism, Security, and Money: Balancing the Risks, Benefits, and Costs of Homeland Security (with Mark Stewart) applies cost-benefit analysis to issues of homeland security and will be published in 2011 by Oxford University Press. Additionally, he is the author of War and Ideas: Selected Essays (Routledge, 2011); Terrorism Since 9/11: The American Cases (Mershon Center, 2011); War, Presidents and Public Opinion (Wiley, 1973); Retreat from Doomsday (Basic Books, 1989); Policy and Opinion in the Gulf War (University of Chicago, 1994); Quiet Cataclysm: Reflections on the Recent Transformation of World Politics (HarperCollins, 1995); Capitalism, Democracy, and Ralph’s Pretty Good Grocery (Princeton, 1999); and The Remnants of War (Cornell, 2004). He has published scores of articles in such journals as International Security, American Political Science Review, American Interest, Security Studies, Orbis, American Journal of Political Sci-

Mueller has been a visiting fellow at the Brookings Institution and the Cato Institute in Washington, D.C., the Hoover Institution at Stanford University, and the Norwegian Nobel Institute in Oslo. Before coming to Ohio State in 2000, Mueller was on the faculty at the University of Rochester for many years. He is a member of the American Academy of Arts and Sciences, has been a John Simon Guggenheim Fellow, and has received grants from the National Science Foundation and the National Endowment for the Humanities. He has also received several teaching prizes, and in 2009 received the International Studies Association’s Susan Strange Award that “recognizes a person whose singular intellect, assertiveness, and insight most challenge conventional wisdom and intellectual and organizational complacency in the international studies community.” In 2010, he received Ohio State University’s Distinguished Scholar Award.

Ernest E. Muenchau currently serves as assistant director of the Operations Support Directorate in the Department of Homeland Security’s (DHS) Domestic Nuclear Detection Office (DNDO). The Operations Support Directorate (OSD) conducts training, exercises, outreach and technical assistance in support of preventive radiological and nuclear detection programs and provides operational information and alarm adjudication services to and for the Global Nuclear Detection Architecture. Previously Muenchau served as assistant director of the Product Acquisition and Deployment Directorate. He was responsible for carrying out the engineering development, production, developmental logistics, procurement, and deployment of current and next-generation nuclear detection systems for DHS.

With more than thirty years of experience, Muenchau has held positions in engineering, product operations, and product development in a variety of technology and consulting companies concentrating on delivery of systems to operational units.

Muenchau earned a B.S. in engineering physics and an M.S. in electrical engineering from the University of Kansas, Lawrence in 1978 and 1980, respectively. He holds five patents. He was appointed to Senior Executive Service in 2008.

Dr. Michael Nacht has had three tours of government service and stepped down in mid-2010 after serving as Assistant Secretary of Defense for Global Strategic Affairs for more than a year. He also served a three-year term as a member of the U.S. Department of Defense Threat Reduction Advisory Committee, for which he chaired panels on counter terrorism and counter proliferation of weapons of mass destruction, reporting to the deputy secretary of defense. He continues to consult with Los Alamos and Lawrence Livermore Na-
tional Laboratories on national security and homeland defense. From 1994–1997, Nacht was assistant director for Strategic and Eurasian Affairs at the Arms Control and Disarmament Agency, leading its work on nuclear arms reduction negotiations with Russia and initiating nuclear arms control talks with China. He participated in five summit meetings with President Clinton—four with Russian President Boris Yeltsin and one with Chinese President Jiang Zemin. Nacht has testified before Congress on subjects ranging from arms control to the supply and demand for scientists in the workplace.

Vipin Narang is an assistant professor of political science at the Massachusetts Institute of Technology. He received his Ph.D. from the Department of Government at Harvard University in May 2010. His dissertation project systematically explores the effect of nuclear postures in deterring conflict and develops a theory for their origins in regional nuclear powers; it was awarded Harvard’s Edward M. Chase prize. He holds a B.S. and M.S. in chemical engineering with distinction from Stanford University and an M. Phil with distinction in international relations from Balliol College, Oxford University, where he studied on a Marshall Scholarship. He has been a fellow at the Olin Institute for Strategic Studies, Harvard University and a predoctoral fellow at the Belfer Center for Science and International Affairs, Harvard University.

Judith Norton is a Ph.D. candidate in the School of Public and International Affairs at the University of Georgia (UGA) while teaching courses in international affairs and serving as a research associate at the Center for International Trade and Security (CITS-UGA). Norton conducts research and analyses on strategic trade issues for reports for the U.S. Departments of Commerce, State, and Energy; in addition she worked in China for six months implementing nonproliferation standards at a Chinese enterprise.

Prior to joining UGA-CITS, Norton studied and worked abroad for nearly a decade, acquiring field experience in 28 countries. She lived in China for four years, where she managed a business publication for the American Chamber of Commerce (Shanghai) and wrote more than 80 articles on China-related trade and business issues. She also wrote a series on doing business in China for Fortune magazine. She has done independent contract work for foreign companies operating in China, the Ministry of Trade of Luxembourg, and the U.S. Department of Energy. Presently she consults for TradeSecure LLC on nonproliferation and business issues with a specific focus on China.

Norton earned her M.A. in international policy studies from the Monterey Institute of International Studies with a focus on Asian security, an M.A. in conflict resolution from the University of Bradford (UK), and a B.A. in Asian studies from Wheaton College. She has a certificate in advanced Chinese from Beijing Capital Normal University and Middlebury College Summer Intensive Language Program (SILP). Her research interests include the relationship between nonproliferation and multinational corporations, China’s modernization, and East Asia political and security issues. She has several forthcoming academic works including a paper developing a new theory of state behavior and one on supply side restraint. She is an alumna of IGCC’s SITC summer training program (2011) and PPNT (2010).
Laura Rockwood is the section head for non-proliferation and policy making in the Office of Legal Affairs of the IAEA, where she has served since 1985. She has been involved in all aspects of the negotiation, interpretation, and implementation of IAEA safeguards agreements for more than 20 years (notably, those of Iraq, Iran, DPRK, South Africa, Argentina/Brazil), and was the principal author of the document that became the Model Additional Protocol. She has participated, inter alia, in: the Director General’s Expert Group on Multilateral Approaches to the Nuclear Fuel Cycle; three NPT Review Conferences; and trilateral negotiations between the IAEA, Russia, and the United States on an agreement for the verification of materials released from weapons programs (the Trilateral Initiative). Prior to working for the IAEA, Rockwood was employed by the U.S. Department of Energy as a trial attorney principally in radiation injury cases, and as counsel in general legal matters. Rockwood received her B.A. from UC Berkeley, in 1973, and her J.D. from the University of California’s Hastings College of the Law in San Francisco in 1976. She is a member of the State Bar of California and of the Washington, D.C., Bar Association.

Mehdi Sarram came to the United States as a young man to study nuclear engineering. He completed his post-graduate studies at the University of Michigan in 1967 and received the U.S. Atomic Energy Commission Senior Reactor Operator License in 1963. In 1967, he returned to Iran and served as supervisor of the 5 MW research reactor at the University of Tehran from 1967 to 1973. During the same period, he was assistant professor of nuclear engineering at the University of Tehran. In 1973, Sarram became one of the eight directors of the newly established Atomic Energy Organization of Iran, reporting to Iran’s Deputy Prime Minister of Iran. He was responsible for nuclear safeguards and security.

In 1981, Sarram left Iran and worked for the the Department of Safeguards at the International Atomic Energy Agency in Vienna. He moved to the United States in 1982 and continued to work in the U.S. nuclear industry (Raytheon, Duke Energy, and AREVA). He became a U.S. citizen in 1988 and worked at US DoE nuclear sites with a Q Clearance from 1988 to 1995. He has 44 years of nuclear experience and has traveled to 34 countries, mostly with nuclear programs. He has published over 30 scientific papers. Since his retirement in 2008, Sarram has continued to work as a nuclear consultant on domestic and international nuclear projects. In November 2010, he worked for the IAEA on a nuclear safeguards/security project funded by the U.S. Department of State. He is currently writing a book on the nuclear conflicts in the extended Middle East including Iran, Syria, Israel, Pakistan, and India.

Mark Schanfein joined Idaho National Laboratory in September 2008 as their senior nonproliferation advisor, after a twenty-year career at Los Alamos National Laboratory where, in his last role, he served as program manager for nonproliferation and security technology. He spent ten years as the team leader for all non-destructive assay measurements at the LANL plutonium facility and at the Chemistry and Material Research Facility, running more than 100 instruments. He served as a technical expert on the ground in the DPRK during the disablement activities resulting from the Six-Party Talks.
Schanfein has eight years of experience working at the International Atomic Energy Agency in Vienna, Austria, in the Department of Safeguards where he served four years as a safeguards inspector and as inspection group leader in Operations C, and four years as the unit head for unattended monitoring systems (UMS) in Technical Support. In this position he was responsible for the installation of all IAEA unattended systems in nuclear fuel cycle facilities worldwide.

With more than 30 years of experience in international and domestic safeguards, his current focus is on leveraging INL technology, facilities, and nuclear material to build an international safeguards program. His highest priority is conducting R&D to develop the foundation for effective international safeguards on pyro-processing. This includes the acquisition and installation of authorized IAEA UMS in the INL pyro-facility. Another recent project is the establishment of a training course for U.S. nationals on a suite of IAEA UMS and attended systems, to encourage them to apply for IAEA nuclear safeguards positions.

Allison M. Shelton is currently a doctoral student in the Department of International Affairs at the University of Georgia. A 2010 Presidential Management Fellowship finalist, she currently serves as assistant editor on the academic journal Intelligence and National Security. She previously worked as a teaching assistant and graduate research associate for the ongoing “Mapping the Trajectories of Military Intervention and Occupation” project through the Office of Naval Research. Her current research interests include applications of cognitive psychology to restraint in international affairs, alliance risk, intelligence studies, and international relations pedagogy.

Susan Shirk is director of the University of California system-wide Institute on Global Conflict and Cooperation and Ho Miu Lam Professor of China and Pacific Relations at the School of International Relations and Pacific Studies at UC San Diego. Shirk first traveled to China in 1971 and has been doing research there ever since. During 1997–2000, Shirk served as Deputy Assistant Secretary of State in the Bureau of East Asia and Pacific Affairs, with responsibility for China, Taiwan, Hong Kong and Mongolia. She founded in 1993 and continues to lead the Northeast Asia Cooperation Dialogue (NEACD), an unofficial “track-two” forum for discussions of security issues among defense and foreign ministry officials and academics from the United States, Japan, China, Russia, and the Koreas. Shirk’s publications include her books China: Fragile Superpower; How China Opened Its Door: The Political Success of the PRC’s Foreign Trade and Investment Reforms; The Political Logic of Economic Reform in China; and Competitive Comrades: Career Incentives and Student Strategies in China. An volume edited by Shirk, Changing Media, Changing China, was published by Oxford University Press in 2010.

Shirk served as a member of the U.S. Defense Policy Board, the Board of Governors for the East-West Center (Hawaii), the Board of Trustees of the U.S.-Japan Foundation, and the Board of Directors of the National Committee on United States-China Relations. She is a member of the Trilateral Commission, China Council of the World Economic Forum, Council on Foreign
Relations, and an emeritus member of the Aspen Strategy Group. As senior adviser to the Albright-Stonebridge Group, Shirk advises private sector clients on China and East Asia.

**Jonathan S. Snider** is a research fellow at the Defense Threat Reduction Agency (DTRA), where he manages a number of projects related to nuclear arms control, deterrence and nuclear forensics, and a research associate at Penn State University. Previously, he was a technical scholar at the Center for Global Security Research at the Lawrence Livermore National Laboratory and a research assistant at the Japan Nuclear Cycle Development Institute. He received a master’s degree from the University of Virginia and a bachelor’s degree from the Edmund A. Walsh School of Foreign Service at Georgetown University. Currently, he is finishing his doctoral degree in political science at UC Davis. His doctoral dissertation addresses the question of whether the elimination of nuclear weapons is strategically desirable or not. His research on this question is supported by a fellowship from the George C. Marshall Foundation.

**Etel Solingen** is Chancellor’s Professor at UC Irvine and president-elect of the International Studies Association. Her most recent book, *Nuclear Logics: Contrasting Paths in East Asia and the Middle East*, was awarded the APSA’s Woodrow Wilson Foundation Award and the Robert Jervis and Paul Schroeder Award for Best Book on International History and Politics. Solingen was chair of the steering committee of the UC Institute on Global Conflict and Cooperation and serves as review essay editor of *International Organization* and president of the APSA’s International History and Politics Section.

Solingen has been the recipient of many awards, including a MacArthur Foundation Research and Writing Award on Peace and International Cooperation, Social Science Research Council-Mac Arthur Foundation Fellowship on Peace and Security in a Changing World, Japan Foundation/SSRC Abe Fellowship, East Asia Institute Fellowship, Center for Global Partnership/Japan Foundation fellowship, APSA Excellence in Mentorship Award, and a UCI Academic Senate Distinguished Teaching Award. She was a member of APSA’s Task Force on U.S. Standing in World Affairs, president of ISA’s International Political Economy Section, and participates in conflict resolution tracks in various regions.

**Henry Sokolski** is the executive director of the Nonproliferation Policy Education Center (NPEC), a Washington, D.C.-based nonprofit organization founded in 1994 to promote a better understanding of strategic weapons proliferation issues among policymakers, scholars, and the media. He currently serves as an adjunct professor at the Institute of World Politics in Washington, D.C.

Sokolski previously served as deputy for nonproliferation policy in the Department of Defense, for which he received a medal for outstanding public service from Secretary of Defense Dick Cheney. He also worked in the Office of the Secretary of Defense’s Office of Net Assessment, as a consultant to the National Intelligence Council, and as a member of the Central Intelligence Agency’s Senior Advisory Group. In the U.S. Senate, Sokolski served as a special assistant on nuclear energy matters to Senator Gordon Humphrey (R-NH), and as a legislative military aide to Dan Quayle (R-IN).

**Dane Swango** is a lecturer in the Department of Political Science at UCLA. His research examines how the Nuclear Nonproliferation Treaty operates to limit nuclear proliferation. He also has significant experience in East Asian security issues, a secondary research interest. He received undergraduate degrees in economics and physics from Duke University.

**Jerry A. Taylor** is the director of the Office of Strategic Affairs, Bureau of Arms Control, Verification and Compliance. As the director, he is responsible for ensuring the verifiability of all arms control and nonproliferation agreements and commitments related to strategic nuclear forces, intermediate-range nuclear forces, ballistic missile proliferation, and related issues as they are being formulated and negotiated. Specific treaties and agreements for which his office has responsibility include the Intermediate-Range Nuclear Forces Treaty and the New START Treaty.

Taylor entered federal civil service immediately upon retirement from the U.S. Army in 1995 and became the director of the Strategic Treaties Implementation Task Force in the Office of Verification and Compliance, Arms Control and Disarmament Agency. In this capacity he was responsible for the technical guidance and direction in policy to ensure the proper management, planning, and execution of the ACDA mission related to strategic arms control treaty verification, compliance, and implementation. Prior to assuming these duties, Taylor served as the Department of State Special Advisor for Verification to the INF and START Treaty implementing commissions in Geneva. From October 2005 until its expiration in December 2009, Taylor served as the U.S. representative to START.

Taylor received his B.A. in economics from Hendrix College, where he also received a regular army commission as a second lieutenant of field artillery in the U.S. Army. In 1981, Taylor received his M.A. in personnel management from Webster University. During his military service, he held numerous jobs in operation and command assignments. During Operation Desert Shield/Desert Storm, Taylor commanded the 1st Battalion, 319th Airborne Field Artillery Regiment, which deployed to Saudi Arabia during August 1990 with the 82d Airborne Division. Following the conclusion of Desert Storm, Taylor returned to the United States and attended the National War College, where he received a Diploma of National Strategic Studies.
Taylor’s last active-duty assignment was with the Nuclear Arms Control Division, J-5, Joint Chiefs of Staff, as the chief of the Nuclear Treaties branch where he was the Chairman’s representative to the INF and START Treaty implementing commissions in Geneva. His awards and decorations include the Defense Superior Service Medal, Bronze Star Medal, Meritorious Service Medal with four oak leaf clusters, Army Commendation Medal with two oak leaf clusters, National Defense Service Medal, South Asia Service Ribbon, Civilian Superior Performance Award, Civilian Superior Honor Award, Department of State Meritorious Honor Award, Master Parachutist Badge, Ranger Tab, Army Staff Identification Badge, and Joint Chiefs of Staff Identification Badge.

Richard (Rick) Wallace has 28 years of experience in nuclear weapons analysis, nuclear materials use and protection, nuclear safeguards systems, and technical program management. Currently, he is group leader for the N-4 Safeguards Systems Group at Los Alamos National Laboratory, overseeing a staff of experts in advanced safeguards systems development, nonproliferation policy analysis, international engagement activities related to the nuclear fuel cycle and safeguards, and IAEA activities related to developing potential proliferation indicators. In 2010–2011, Wallace spent four months on rotation as a senior policy advisor for the administrator of the National Nuclear Security Agency. From 2002 to 2005, Wallace was a senior analyst with the International Atomic Energy Agency (IAEA), working to collect, evaluate, and analyze open source and proprietary information on nuclear activities of various countries in order to identify and assess indicators of potential clandestine nuclear weapons activities. He shared in the 2005 Nobel Peace Prize that was awarded to the IAEA. He also acted as a technical expert and resource on nuclear physics, various processes in the nuclear fuel cycle, weaponization processes, export controls, and nuclear material and radionuclide trafficking issues.

From 1995 to 2001, Wallace was a project leader for the U.S.–Russian Nuclear Materials Protection, Control, and Accounting program at LANL and acting program manager for Russian nonproliferation programs. In 1995, he provided technical advice to DOE during negotiations of the Comprehensive Test Ban Treaty. From 1981 to 1994, he was involved in nuclear weapons physics simulation modeling. He received his B.S. in physics and astronomy from Louisiana State University in 1975, his M.S. in astronomy from the University of California in 1978, and his Ph.D. in nuclear astrophysics from the University of California in 1981.