



The University of New Mexico



WIIS Women In
International
Security

The Reliable Replacement Warhead Program and The Future of the U.S. Nuclear Weapons Complex

**29 September 2006
1:30-4:30 PM**

**University of New Mexico
Student Union Building
Santa Ana A & B**

Brought to you by:

OPST
Office for Policy,
Security, and
Technology

WIIS
Women in
International
Security

SNL
Sandia
National
Laboratories

12:15 - 1:15 Women in International Security (WISS) informational meeting

1:30 – 1:45 Welcome

Vera L. Norwood, Interim Dean, College of Arts & Sciences and Professor, American Studies, University of New Mexico

Clare E. Belcher, Development and Publications Coordinator, Women in International Security

Andrew L. Ross, Director, Office for Policy, Security, and Technology, and Professor of Political Science, University of New Mexico

1:45 – 3:15 pm Panel Presentations

Susan Stoner, Science Advisor, Defense Programs, National Nuclear Security Administration

Bruce C. Walker, Director, NM Weapon Systems Engineering Center, Sandia National Laboratories

Celeste Drewien, System Studies Department, Sandia National Laboratories

Linda J. Branstetter, Advanced Concepts Group, Sandia National Laboratories

Joseph C. Martz, Project Director, Reliable Replacement Warhead; Principle Associate Director for Weapons Programs. Los Alamos National Laboratories

Elizabeth A. Stanley, Assistant Professor, Edmund A. Walsh School of Foreign Service and the Department of Government, Georgetown University

3:15 – 3:30 pm Break

3:30 – 4:30 pm Question & Answer Session with Panelists

Reception to follow

Rapporteurs:

Prakash Adhikari

Yury Bosin

Rongal Darnall Nikora

Speaker Biographies:

Clare E. Belcher is the Development and Publications Coordinator at WIIS, coordinating development efforts and responsible for WIIS publications which disseminate the findings of WIIS programs to members, policymakers, journalists, and the general public. Ms. Belcher joined the WIIS staff in April of 2005. Previously, she has worked at Watson Wyatt Worldwide as a consulting associate; the Association of Schools of Public Health as a grants coordinator and policy analyst; the Bretton Woods Committee; and the Association of Supervision and Curriculum Development. Ms. Belcher has interned at the Department of State, and at NATO headquarters in Brussels, Belgium. She received her B.A. in International Relations from Goucher College and her M.A.L.S. in International Policy and Human Rights from Georgetown University.

Linda J. Branstetter has been a member of the Advanced Concepts Group at Sandia National Laboratories since March 2006, where she is considering broad issues related to the U.S. national and international security environment. She arrived at Sandia in 1980 having received a Masters degree in Civil Engineering from Purdue University. Six years into her Sandia career, she returned to Purdue and subsequently completed her Doctorate in 1988. She has held a variety of positions at Sandia. From 1980 through 1991, with interruptions for her doctorate and for a work visitation in Sandia's Vibration Testing organization, she performed numerical and computational analyses in support of a variety of Sandia programs involving nuclear waste disposal, weapon components and weapon systems, as well as missile system flight dynamics. From 1991 through 1995, she rotated through a variety of positions performing analysis and project management in secure transportation systems, solar energy, and nuclear reactor safety. In late 1995, Dr. Branstetter joined Sandia's Systems Studies organization, first for five years as a staff member, and then for five years as a manager after having been promoted to the level of Distinguished Member of the Technical Staff. While in Systems Studies, she performed and managed independent program analysis of wide-ranging technical and strategic projects under the purview of Sandia and the NNSA – many of which directly concerned pending decisions affecting the nuclear weapons stockpile and the nuclear weapons complex. In particular, her work has influenced the national debate and decisions around the need for renewed production of tritium for the US nuclear arsenal, as well as for the need for a revitalized plutonium parts manufacturing infrastructure.

This past winter, Dr. Branstetter completed a five month rotation supporting Dr. John R. Harvey in NNSA's Office of Policy and Planning in Washington D.C., where she was exposed to many of the political and policy aspects surrounding the RRW program, as well as overall NNSA efforts to transform the nuclear weapons Complex to achieve a more responsive infrastructure.

Dr. Branstetter is a past collegiate golfer at Purdue, a past Indiana State Women's Amateur golf champion, still competes on occasion, and currently serves on the Purdue University Athletics Advisory Council. She has published a variety of articles and reports.

Celeste Drewien is a Principal Member of the Technical Staff at Sandia National Laboratories where she works in the System Studies Group. During the 18-month RRW study, Celeste, at the request of the Navy's Strategic Studies Program, provided technical support to the RRW Requirements Subcommittee. In this role, she initiated the draft RRW Military Characteristics document and was the technical lead for identifying environments for the RRW Stockpile-To-Target Sequence document. Previously, Celeste had served as Sandia's representative to the Robust Nuclear Earth Penetrator (RNEP) Requirement's Subcommittee. During her tenure in the System Studies Group, Celeste has led or been involved in a wide range of weapons-related work including defining weapon security options, advising NNSA on beryllium issues, and suggesting facility options and analyzing risk reduction strategies for pit production. Celeste spent two years working with the US Nuclear Detonation Detection System project at Sandia. Presently, Celeste is supporting Sandia's Packaging Advisory Board in performing design reviews and establishing

design guidelines for packaging of nuclear weapon components. Celeste has been at Sandia for 14 years. She received her Ph.D. in Materials Science and Engineering from Lehigh University.

Joseph C. Martz has been with Los Alamos National Laboratory since 1983, when he joined the Controlled Thermonuclear Research (CTR) division as a summer intern. From 1986 to 1990, he performed his dissertation research at Los Alamos in the field of plasma processing of plutonium while assigned to the Nuclear Materials Technology (NMT) division. Joe returned to Los Alamos after receiving his Ph.D. and lead several important efforts in plutonium storage, including the project that lead to the nationwide mandate to stabilize stored nuclear materials, known as 94-1. In 1994, Joe was named one of the youngest group leaders in Los Alamos history, taking charge of pit operations at TA-55. In 1997, Joe was assigned as the program manager for weapon materials and enhanced surveillance, a position he held for nearly 7 years, during which time he lead a number of special projects including the important Octave test series at the request of Harold Agnew. In 2003, Joe was named the deputy division leader for X-division, the principle nuclear weapons design division at Los Alamos. He served in that role until June 2005, when he was asked to lead the Reliable Replacement Warhead (RRW) Program as the Project Director, a position he currently holds. Joe is an internationally-recognized expert in the topics of weapons materials and plutonium aging; he maintains an active research interest in these areas and is a frequent consultant and contributor to a variety of intelligence programs.

Andrew L. Ross joined the University of New Mexico as Director of the Office for Policy, Security, and Technology, a joint UNM-Sandia National Laboratories program, and Professor of Political Science in September 2005. Professor Ross arrived at UNM after 16 years at the U.S. Naval War College in Newport, RI, where he held a variety of positions. From 2000-2005, he was a Research Professor in the Strategic Research Department (SRD) of the Naval War College's Center for Naval Warfare Studies, serving as the Department's Director of Studies from 2002-2004. Dr. Ross was the Director of the Naval War College's project on "Military Transformation and the Defense Industry After Next" and during the 2001-2002 academic year served as the Acting Director of the College's Advanced Research Program and as Co-Leader of the College's Strategy Task Group, one of four task groups established to support the Chief of Naval Operations after 11 September 2001. His work with the Strategy Task Group led to a Department of the Navy Meritorious Civilian Service award in September 2002. From 1989 to 2000, Dr. Ross served as first a Secretary of the Navy Senior Research Fellow and then a Professor of National Security Affairs in the Naval War College's National Security Decision Making Department, where he taught the College's core course on Strategy and Force Planning.

His work on U.S. grand strategy, national security and defense planning, regional security, weapons proliferation, security and economics, and public policy has appeared in numerous journals and books. Professor Ross is the editor of *The Political Economy of Defense: Issues and Perspectives* (1991) and co-editor of three editions of *Strategy and Force Planning* (1995, 1997, 2000). His current work focuses on the U.S. grand strategy debate, military transformation, and military space requirements.

Dr. Ross has held research fellowships at Cornell, Princeton, Harvard, the University of Illinois, and the Naval War College; he also taught in the Political Science Departments of the University of Illinois and the University of Kentucky. He earned his MA and PhD at Cornell University and his BA, *summa cum laude*, at American University.

Elizabeth A. Stanley is Assistant Professor in the Edmund A. Walsh School of Foreign Service and the Department of Government, Georgetown University. Professor Stanley has previously served as Associate Director of Georgetown's Security Studies Program and the Center for Peace and Security Studies. She has served in Bosnia, Germany, Macedonia, Italy and Korea as a U.S. Army military intelligence officer, leaving service with the rank of Captain. Dr. Stanley has co-edited a book with Risa Brooks, *Creating*

Military Power: The Causes and Consequences of Military Effectiveness (Stanford University Press, forthcoming). Her publications include articles, book chapters and monographs about U.S. military innovation, the impact of peace operations on military readiness and force structure, the media and the military, and military professionalism. She is a member of the National Security Advisory Board of the Sandia National Laboratories and the U.S. Army Science Board. Dr. Stanley has also served on the executive board of Women in International Security (WIIS), and she has been a post-doctoral fellow at the John M. Olin Institute for Strategic Studies at Harvard. She holds a PhD in Government from Harvard, an MBA focused on technology strategy from MIT's Sloan School of Management, and a BA in Soviet and East European Studies from Yale.

Susan Stoner joined the Office of Defense Programs, in the National Nuclear Security Administration (NNSA), as a Science Advisor in August 2004. She is on detail to NNSA from Lawrence Livermore National Laboratory (LLNL). She currently serves as Communications Manager and DoD Liaison for Defense Program's Office of Transformation, where she is responsible for message development and communication on topics of relevance to nuclear weapons enterprise transformation. She also assists in the development of nuclear weapons stockpile and infrastructure transformation strategies and facilitates interactions with DoD organizations to enhance partnership and communication on transformation objectives.

From 2000-2004, Ms. Stoner was assigned to the Office of the Deputy Assistant to the Secretary of Defense for Nuclear Matters, on detail from LLNL. She managed a landmark conference on nuclear weapons stockpile stewardship and policy issues associated with the Administration's Nuclear Posture Review. She also represented her office with NATO organizations on key nuclear weapons issues. After 9/11, she was selected as Executive Secretary for the DoD Combating Terrorism Technology Task Force, where she coordinated efforts to advance technologies to assist in the war on terrorism.

Just prior to her Washington, D.C. assignments, Ms. Stoner resided in California for two years, and conducted analysis for LLNL of foreign nuclear weapons program. From 1994-1998, Ms. Stoner served on the International Thermonuclear Experimental Reactor Joint Central Team, in Naka, Japan. In this position, she was responsible for equipment layout and integration issues for the design of an experimental magnetic fusion reactor. From 1992-1994, Ms. Stoner managed the design and installation of a Diffusion Bonding Machine at LLNL, designed and built a system for testing superplastic materials, and conducted research and testing on metal matrix composites. From 1985-1992 she worked on a variety of nuclear weapons engineering design and test efforts, including directing the assembly of nuclear devices for underground nuclear tests.

Ms. Stoner received her MS Mechanical Engineering (ME) degree from the University of California in 1991 and her BSME from New Mexico State University in 1985.

Bruce C. Walker has been at Sandia National Laboratories since 1977 where he has held a variety of management and staff positions. He currently serves as the Director of the NM Weapon Systems Engineering Center. Prior to this position, from 2002 to 2005, he was the Director of the Surety Components and Instrumentation Center. From 1998 to 2002 he served as the Deputy Director for RF Remote Sensing where he led advanced development work in synthetic aperture radars and RF tags. From 1987 to 1998, he was the Manager of the Synthetic Aperture Radar (SAR) Department, managing the system design, software and hardware development, integration, and flight test for numerous SAR programs. From 1984 to 1987, he was the Manager of the Sensor Systems Department leading the development of ground-based sensor programs. From 1977 to 1984 he was a member of the technical staff responsible for the design of numerous radar programs. He is a Fellow Member of the Microwave Sensing Symposia. Mr. Walker received a B.S. degree in electrical engineering from Oklahoma State University in 1976 and an M.S. degree in electrical engineering from the University of Texas at Austin in 1977.

Women in International Security Georgetown University

WIIS is a non-profit, non-partisan membership organization dedicated to increasing the influence of women in foreign and defense affairs by raising their numbers and visibility, while enhancing dialogue on international security issues. WIIS offers a comprehensive set of programs designed to foster and promote women in all fields related to international security, and in a variety of sectors.

Today WIIS has more than 1,300 members—women and men—in over 35 countries from academia, think tanks, the diplomatic corps, the intelligence community, the military, government, non-governmental organizations, international organizations, the media, and the private sector. Members work on and are interested in diverse issues affecting international security, ranging from non-proliferation of weapons of mass destruction (WMD), to terrorism, human rights, sustainable development, environmental security, and conflict resolution.

WIIS is a part of the Center for Peace and Security Studies (CPASS), in the Edmund A. Walsh School of Foreign Service, Georgetown University. The School of Foreign Service is the oldest and largest school of international affairs in the United States. CPASS, which encompasses WIIS and the internationally renowned Security Studies Program, is Georgetown's organizational home for teaching, research, events, and publications in international peace and security studies.

Additional information about Women in International Security may be obtained by visiting its website at <http://wiis.georgetown.edu/>.

Office for Policy, Security, and Technology University of New Mexico

The Office for Policy, Security, and Technology is a joint venture of the University of New Mexico and Sandia National Laboratories. Launched in 2003, OPST has worked to develop research and educational programs across a broad range of public policy and science and technology issues. OPST emphasizes an interdisciplinary—indeed, multidisciplinary—approach that brings together the public policy expertise that resides in political science, economics, history and other social science and humanities disciplines with the expertise of scientists and engineers. It provides a unique vehicle for the development of collaborative efforts between a leading government laboratory and a major research university. Increasingly, OPST's work focuses on three central areas: (1) Science, Technology, and Security; (2) Science and Technology Policy; and (3) Science, Technology, and Society.

Through its curriculum development initiatives, OPST has helped put in place new courses on topics such as "Communicating Science," "Strategy and Policy," and "National Security and Defense Planning." It also sponsors public forums on important public policy issues. In collaboration with UNM's Feminist Research Institute, OPST convened the 29 March 2006 "Forum on Opportunities and Challenges for Women in Science and Engineering." On 11 September 2006, it cosponsored, with UNM's Institute for Public Policy and Department of Political Science, an event on "September 11: Five Years Later."

Additional information about OPST may be obtained by contacting Dr. Andrew L. Ross, Professor of Political Science and Director, OPST, at 505-277-7391 or aross@unm.edu; or Ms. Stephanie Grant, OPST Group Administrator, at 505-277-1397 or slgrant@unm.edu; or by visiting its website at <http://www.unm.edu/~opst/>.