CAPSTONE CONFERENCE AGENDA

Wednesday, March 4, 2015

Offutt Air Force Base, Nebraska
Dougherty Conference Center

7:30  CONFERENCE CHECK-IN AND BREAKFAST

8:00  CONFERENCE WELCOME
Clark Murdock, Director, Project on Nuclear Issues and Senior Adviser, Defense and National Security Group, Center for Strategic and International Studies

8:20  PANEL 1: NEXT STEPS FOR ARMS CONTROL
Panel Moderator: David Jarvis, Director, UK Project on Nuclear Issues

Baruch to Barack: Hegemony and the Politics of the Nuclear Nonproliferation Regime
Rebecca Davis Gibbons, Ph.D. Candidate, International Relations, Georgetown University

Justin Anderson, Ph.D., Senior Policy Analyst, Science Applications International Corporation

The Strategic Logic of Nuclear Restraint
Adam Mount, Stanton Nuclear Security Fellow, Council on Foreign Relations

9:50  BREAK

10:10 PANEL 2: CURRENT STATE OF AFFAIRS: NUCLEAR SECURITY AND NONPROLIFERATION
Panel Moderator: Clark Murdock, Director, Project on Nuclear Issues and Senior Adviser, Defense and National Security Group, Center for Strategic and International Studies

Escalation Links in South Asia: From Sub-Conventional to Nuclear War
Elizabeth Whitfield, Program Assistant, Nuclear Policy Program, Carnegie Endowment for International Peace

Nuclear Material at Risk: The Case for Threat Reduction in South Asia
Kaitlyn Duffy, Research Intern, Project on Nuclear Issues, Center for Strategic and International Studies

Consequences of Iranian Proliferation: Dominoes in the Middle East?
Evan Thompson, Masters Candidate, Security Studies, Georgetown University
Railing Against the West: Russia’s Reintroduction of Missile Trains
Timothy Stafford, Research Analyst, Royal United Services Institute

11:50 LUNCH & AFTERNOON KEYNOTE
Kenneth Myers, Director, Defense Threat Reduction Agency and U.S. Strategic Command Center for Combating Weapons of Mass Destruction

1:40 PANEL 3: TECHNOLOGY AND THE HUMAN EFFECT
Panel Moderator: Bryan Fearey, Director, National Security Office, Los Alamos National Laboratory

An Overview of Hydrodynamic Testing, Challenges and Advancements in Underwriting a State’s Nuclear Stockpile
Paul Willis-Patel, Hydrodynamic Scientist, Hydrodynamic Technology Centre, Atomic Weapons Establishment

Assessing Risk and the Human Factor in Avoiding Nuclear Catastrophe
Elise Rowan, Communications Officer, Nuclear Threat Initiative

Employment of Hypersonic Glide Vehicles: Proposed Criteria for Use
Abel Olguin, Technical Systems Analyst, Sandia National Laboratories

3:10 BREAK

3:30 PANEL 4: STRATEGIC STABILITY AND DETERRENCE IN THE 21ST CENTURY
Panel Moderator: Greg Weaver, Principal Deputy for Nuclear Missile Defense Policy, Office of the Under Secretary of Defense for Policy

U.S. Nuclear Deterrent: Does Size Matter?
Greg Terryn, Herbert Scoville Jr. Peace Fellow, Center for Arms Control and Non-proliferation

Going Monadic? Debating the Future of France’s Aircraft-Delivered Nuclear Weapons
Nicolas Giacometti, MScEcon in Strategic Studies, Aberystwyth University

America’s Delicate Dance between Deterrence and Assurance
John Warden, WSD-Honda Fellow, Pacific Forum, Center for Strategic and International Studies

5:00 END OF PRESENTATION PANELS

5:30 RECEPTION AT THE PATRIOT CLUB

6:30 DINNER & KEYNOTE
Lieutenant General James Kowalski, Deputy Commander, USSTRACOM

8:00 END OF CONFERENCE
Speaker Biographies

CONFERENCE WELCOME

Dr. Clark Murdock, Director, Project on Nuclear Issues and Senior Adviser, Defense and National Security Group, Center for Strategic and International Studies

Clark Murdock is the senior adviser for the Defense and National Security Group at CSIS and director of the Project on Nuclear Issues (PONI). Joining CSIS in January 2001, Dr. Murdock has completed studies on a range of defense and national security issues, including strategic planning, defense policy and governance, and U.S. nuclear weapons strategy and policy. Dr. Murdock is currently leading a “track two” dialogue on nuclear policy issues involving the United States, United Kingdom, and France, and he recently finished directing a study titled “Building the 2021 Affordable Military.” Dr. Murdock has also completed studies on methodological approaches to building force-planning constructs and on nuclear posture implications of U.S. extended deterrence and assurance. His experience in defense and security policy spans decades, including serving in the Office of the Air Force Chief of Staff as Deputy Special Assistant to the Chief for Long-Range Planning. He served for several years on the House Armed Services Committee as a professional staff member and as a senior policy adviser to then-Chairman Les Aspin. Before turning to government services, Dr. Murdock taught for 10 years at the State University of New York at Buffalo. He is an honors graduate of Swarthmore College and holds a Ph.D. in political science from the University of Wisconsin at Madison.

PANEL 1: NEXT STEPS FOR ARMS CONTROL

Panel Moderator: David Jarvis, Director, UK Project on Nuclear Issues

Having retired from the Royal Navy in June 2009 following 36 years as a weapons engineer, David Jarvis CBE CEng FIET joined Lockheed Martin UK Ampthill as a Strategic Systems Advisor. His last post in the Service was as the Chief Strategic Systems Executive, being both the UK Project Officer for the Polaris Sales Agreement and responsible for the assurance of Continuous At-Sea Deterrence. Concurrently he held the post of Director of Strategic Weapons Systems in the DE&S, (now the Strategic Weapons Project Team), charged with the provision and support of the UK Trident II D5 system. Jarvis had previously created and led a specialist expert team in conducting the preliminary research into nuclear deterrence options—the findings of which informed the government's White Paper. He thereby became part of the initial programme for a potential successor SSBN. He also created and directed a Deterrence Customer Group in the MoD's Equipment Capability area for the current and future deterrent. Prior to that he served at US Strategic Command in Omaha Nebraska as the UK and NATO targeting officer, was the assistant director for nuclear policy in the MoD, and spent time at sea in Polaris-, Chevaline- and Trident-equipped SSBNs.
Rebecca David Gibbons, Ph.D. Candidate, International Relations, Georgetown University

Rebecca Davis Gibbons is a Ph.D. candidate in international relations at Georgetown University. Her dissertation, “Baruch to Barack: American Hegemony and the Politics of the Nuclear Nonproliferation Regime” examines variation in cooperation with nonproliferation efforts among members of the Treaty on the Nonproliferation of Nuclear Weapons (NPT). In 2013-2014, Gibbons was a Stanton Nuclear Security Fellow at the RAND Corporation. She currently provides contract support to the Air Force’s Strategic Stability & CWMD office (AF/A10-S).

Dr. Justin Anderson, Ph.D., Senior Policy Analyst, Science Applications International Corporation

Justin Anderson is a Senior Policy Analyst at the Science Applications International Corporation (SAIC), providing research and analysis support to Headquarters Air Force Strategic Plans and Policy. In that capacity, he also provides contractor support to the Air Force Institute for National Security Studies (AF INSS). His previous work includes research for STRATCOM, DTRA, and the OSD Office of Treaty Compliance. In addition, from 2009-2010 he served as editor of the OSD Office of General Counsel/International Affairs’ Law of War Manual. Recent publications (as co-author) include the AF INSS Occasional Paper “Extended Deterrence and Allied Assurance: Key Concepts and Current Challenges for U.S. Policy” and “International Space Negotiations, Emerging Space Powers, and U.S. Efforts to Protect the Military Use of Space” in the Winter 2014 edition of Space and Defense. Dr. Anderson received his Ph.D. in War Studies from King’s College London in 2009.

Dr. Adam Mount, Stanton Nuclear Security Fellow, Council on Foreign Relations

Dr. Adam Mount is a Stanton Nuclear Security Fellow at the Council on Foreign Relations, where he is writing a profile of nuclear disarmament in the United States. The book compares past disarmament debates with today's movement and shows how each has significantly impacted U.S. nuclear politics. He has spoken widely on the subject, including at the U.S. Senate, the United Nations, Lawrence Livermore National Laboratory, Chatham House, and at several academic meetings. Previously, Mount worked on nuclear elimination contingencies at the RAND Corporation. His writing is forthcoming in The Nonproliferation Review, and has appeared in The National Interest, the Bulletin of the Atomic Scientists, the Diplomat, Intelligence and National Security, Democracy, and other outlets. He holds a PhD in Government from Georgetown University.

Panel 2: Current State of Affairs: Nuclear Security and Nonproliferation

Panel Moderator: Dr. Clark Murdock, Director, Project on Nuclear Issues and Senior Adviser, Defense and National Security Group, Center for Strategic and International Studies
Elizabeth Whitfield, *Program Assistant, Nuclear Policy Program, Carnegie Endowment for International Peace*

Elizabeth Whitfield is the program assistant for the Nuclear Policy program at the Carnegie Endowment for International Peace. She holds a B.A. in Peace, War and Defense from the University of North Carolina, where she graduated with highest distinction. Whitfield is a former PONI intern and was also a 2013 recipient of the State Department’s Critical Language Scholarship, which allowed her to study Urdu in Lucknow, India. Partly as a result of this experience, she is particularly interested in strategic stability in South Asia, including the links between terrorism and nuclear deterrence.

Kaitlyn Duffy, *Research Intern, Project on Nuclear Issues, Center for Strategic and International Studies*

Kaitlyn Duffy is a Research Intern for the Project on Nuclear Issues at the Center for Strategic and International Studies. She graduated from Northeastern University in May 2014 with a B.S. in Chemistry and a B.S. in Political Science. Through the cooperative education program at Northeastern, Duffy completed a number of internships, including with the Department of State’s Office of the Coordinator for Threat Reduction Programs under Ambassador Bonnie Jenkins. Her previous work experience includes time spent with the Naval Postgraduate School Field Experimentation group and the Drug Division at INTERPOL Washington. In 2012, she spent five weeks in Geneva, Switzerland studying disarmament diplomacy, international negotiations and humanitarian action, a program supported by the United Nations Institute for Disarmament Research (UNIDIR).

Evan Thompson, *Candidate, M.A. in Security Studies, Georgetown University*

Evan Thompson is a second year Master’s candidate in Security Studies at Georgetown University, with concentrations in Unconventional Weapons and Nonproliferation. Thompson began his career in nonproliferation while studying International Affairs as an undergraduate at the University of Georgia. In his senior year, Thompson worked with the Center for International Trade and Security as a Security Leadership Fellow. The research he conducted at CITS on strategic trade control violations led to his next fellowship with the Bulletin of the Atomic Scientists as a Leonard M. Rieser Fellow. Thompson continued his work in nonproliferation this summer at the U.S. Department of State’s Office of Export Control Cooperation, and he transitioned to the nonprofit CRDF Global in September. He will graduate from Georgetown in spring 2015 and hopes to continue in the field of nonproliferation and international security.

Timothy Stafford, *Research Analyst, Royal United Services Institute*
Timothy Stafford is a Research Analyst at RUSI, contributing research and project support to the Proliferation and Nuclear Policy team. He also acts as coordinator for the UK Project on Nuclear Issues. His research interests include deterrence issues, international alliance dynamics, and U.S. foreign policy. Stafford previously worked in the House of Commons as Research Assistant to the Chairman of the Intelligence and Security Committee. He holds an M.A. in Security Studies from Georgetown University in Washington D.C, and a B.A. in History and Politics from St. Anne’s College, Oxford.

Lunch Keynote Address

Kenneth Myers, Director, Defense Threat Reduction Agency and U.S. Strategic Command Center for Combating Weapons of Mass Destruction

Ken Myers, a member of the Senior Executive Service, is the Director of the Defense Threat Reduction Agency (DTRA) and the U.S. Strategic Command Center for Combating Weapons of Mass Destruction (SCC-WMD), located at Fort Belvoir, VA. Mr. Myers is the fourth and longest serving Director of DTRA/SCC having assumed responsibilities on July 27, 2009. Mr. Myers has expanded DTRA/SCC-WMD operations to Africa, Southeast Asia, and the Middle East as well as increased international R&D cooperation, and transformed the Agency/Center into a “whole of government” resource. Under Mr. Myers’ leadership, DTRA/SCC-WMD has been awarded with two Joint Meritorious Unit Awards. Prior to arriving at DTRA, Mr. Myers served from 2003 to 2009 as a senior professional staff member on the U.S. Senate Committee on Foreign Relations. He also served as the senior adviser to Senator Dick Lugar, the Committee’s ranking minority member, on European, former Soviet Union and Central Asian affairs, and the Caucasus, as well as for arms control, arms sales, and combating weapons of mass destruction (CWMD) matters. Mr. Myers assisted Senator Lugar on the Nunn-Lugar Cooperative Threat Reduction (CTR) program, the U.S.-Russian relationship, arms control, security and confidence-building measures, and NATO and European Union issues. He had a leading role in several critical foreign policy debates including NATO enlargement, the Moscow and Strategic Arms Reduction treaties, U.S. nonproliferation and counterproliferation policies, export controls, the U.S.-India Peaceful Atomic Energy Cooperation Act, and the Lugar-Obama Cooperative Proliferation Detection, Interdiction Assistance, and Conventional Threat Reduction Act. In addition, Mr. Myers was a regular adviser on U.S. policy towards the Middle East, South Asia, and North Korea and was also responsible for reviewing nominees for ambassadorial posts in Europe and the former Soviet Union.

Panel 3: Technology and the Human Effect

Panel Moderator: Dr. Bryan Fearey, Director, National Security Office, Los Alamos National Laboratory
Bryan Fearey is Director of the National Security Office at Los Alamos National Laboratory. He has served at Los Alamos for over 25 years in a variety of roles including Senior National Security Science Adviser. He also served as Arms Control R&D Program Manager for the Department of Defense (DOD) and as U.S. Science Adviser for START and INF Treaty negotiations in Geneva. Fearey’s current responsibilities include addressing national security technical-policy issues including, inter alia, arms control (CTBT, FMCT, new START, etc.), verification, transparency, nonproliferation, the nuclear deterrent (e.g., NPR), and nuclear energy futures. He has received numerous awards including two Distinguished Performance Awards and three NNSA Awards of Excellence, as well as the highest non-career DOD award for Exceptional Public Service.

Paul Willis-Patel, *Hydrodynamic Scientist, Hydrodynamic Technology Centre, Atomic Weapons Establishment*

Paul Willis-Patel is a Hydrodynamic Scientist working within the Hydrodynamics Technology Centre at the Atomic Weapons Establishment, located in the United Kingdom. His work is primarily on the undertaking of hydrodynamic experiments both in the United Kingdom and collaboratively in the United States. Mr. Willis-Patel’s research interests include international negotiations and proliferation of nuclear technologies. He is Chairman of the Nuclear Weapons Policy Discussion Programme (NWPDP) at AWE where he discusses and debates matters primarily concerning nuclear policy, nuclear weapons and associated national and international interests. Mr. Willis-Patel is currently researching how emerging technologies can influence strategic nuclear policy. He is a Chartered Engineer with an M.Sc. from Cranfield University in Operations Excellence and a B.Eng. from Bristol University in Aerospace Manufacturing.

Elise Rowan, *Communications Officer, Nuclear Threat Initiative*

As communications officer, Elise Rowan contributes to the Nuclear Threat Initiative’s (NTI) public education and outreach to reduce the threats from nuclear, chemical and biological weapons. Prior to joining NTI in 2011, Rowan held positions with the Senate Foreign Relations Committee, the U.S. Department of State’s Office of Weapons of Mass Destruction Terrorism, and the Ploughshares Fund, where she co-authored articles for The Hill and Foreign Policy. Rowan has also worked with the Stimson Center’s Managing Across Boundaries Program, where she contributed to Stimson’s efforts to match states needing assistance in UNSCR 1540 implementation with states capable of providing assistance. Earlier in her career, Rowan worked for an Indianapolis, IN-based nonprofit organization in marketing, outreach and public relations. Rowan holds an M.A. in Security Policy Studies with concentrations in Transnational Security Policy and Strategic Communication from The Elliott School of International Affairs at The George Washington University. She holds a B.S. in International Business Management and French from Butler University in Indianapolis. Rowan is a member of Women in International Security and the 2014 class of the PONI Nuclear Scholars Initiative.
Abel Olguin, Technical Systems Analyst, Sandia National Laboratories

Abel Olguin is a Technical Systems Analyst at Sandia National Laboratories in his native Albuquerque, NM. Abel obtained his B.S. in Mechanical Engineering from the University of New Mexico and M.S. in Mechanical Design from Kettering University. Olguin spent six years working as a design engineer with Lockheed Martin, where he worked for the Atlas V, the Targets and Countermeasures, and the Airborne ISR/Senior Scout programs. He has worked for the last four years at Sandia, first in the Nuclear Safety Assurance organization, and is currently working in the Systems Studies/Analysis group.

Panel 4: Strategic Stability and Deterrence in the 21st Century

Panel Moderator: Greg Weaver, Principal Deputy for Nuclear Missile Defense Policy, Office of the Under Secretary of Defense for Policy

Before joining OSD/Policy, Mr. Weaver was the Deputy Director of Plans and Policy, U.S. Strategic Command, Offutt Air Force Base, Neb. He was the senior technical adviser for policy, strategy, and plans to the Director, Plans and Policy, and the Commander, USSTRATCOM. In this capacity he was responsible for shaping and implementing national security policies, strategies and plans in accordance with the execution of the command’s assigned missions. He also assisted in formulating and implementing strategy for USSTRATCOM’s Unified Command Plan assigned missions, which include strategic deterrence and global strike; space operations; cyberspace operations; combating weapons of mass destruction; missile defense; and intelligence, surveillance and reconnaissance. Mr. Weaver earned a bachelor's degree at Georgetown University School of Foreign Service, a master's degree at the University of Pennsylvania, and is nearing completion of a doctoral degree at the University of Nebraska-Lincoln. Mr. Weaver was a legislative assistant for Foreign and Defense Policy for Congressmen Pete Stark and Charles Bennett, and legislative assistant for Defense Policy for Senator Carl Levin. He worked at Science Applications International Corporation for 18 years as a Senior Analyst, Project Manager, Division Manager and Assistant Vice President.

Greg Terryn, Herbert Scoville Jr. Peace Fellow, Center for Arms Control and Non-Proliferation

Greg Terryn is a Scoville Fellow at the Center for Arms Control and Non-Proliferation, where his work focuses on nuclear threat reduction and nonproliferation issues. Terryn graduated Summa Cum Laude with a B.A. in Public Policy from the Gerald Ford School of Public Policy at the University of Michigan.

Nicolas Giacometti, M.Sc. Econ. in Strategic Studies, Aberystwyth University

Nicolas Giacometti holds a Masters in European External Security and Defense Policy from Sciences Po and an M.Sc. Econ. in Strategic Studies from Aberystwyth University where he wrote
his Master’s thesis on the articulation between ballistic missile defense and nuclear deterrence in French Defense strategy. Giacometti has worked in several defense-related institutions including the Institute for Higher National Defense Studies, the nuclear deterrence unit in the French Ministry of Defense’s strategic affairs directorate, the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization, and the Armaments and Aerospace Capabilities Directorate at NATO Headquarters. He regularly publishes articles on defense/nuclear issues for websites and reviews and has participated in conferences on nuclear deterrence, nuclear disarmament, and non-proliferation at Sciences Po Strasbourg.

John Warden, WSD-Honda Fellow, Pacific Forum, Center for Strategic and International Studies

John K. Warden is a WSD-Handa fellow at the Pacific Forum CSIS where he works on Asia-Pacific security issues including U.S. alliances, Japan’s island disputes, extended deterrence, and nonproliferation. He received his M.A. in Security Studies from Georgetown University, where he also served as a research assistant and as the editor-in-chief of the Georgetown Security Studies Review. Previously, Mr. Warden worked as a program coordinator and research assistant at the Center for Strategic and International Studies, contributing to projects on nuclear deterrence, arms control, and U.S. alliances. He served as executive director for working groups on U.S.-Russian arms control and U.S.-China nuclear relations, managed a project on the U.S. nuclear posture, coordinated a U.S.-Japan-ROK Track-II dialogue, and twice directed the Nuclear Scholars Initiative, including editing the accompanying journals. Mr. Warden has published articles in The Diplomat, Infinity Journal, The National Interest, PacNet, and Proceedings Magazine. He earned his B.A. in Political Science and History from Northwestern University.

Dinner Keynote Address

Lieutenant General James Kowalski, Deputy Commander, United States Strategic Command

Lt. Gen. James M. Kowalski assumed duties as deputy commander of U.S. Strategic Command in October 2013. General Kowalski entered active duty in 1980 through the ROTC program at the University of Cincinnati. He has held a variety of operational commands, including a bomb squadron, an operations group, a bomb wing, an air control wing, and an Air Force Major Command. His contingency and wartime experience include command of the 2nd Operations Group when they deployed B-52s for combat during operations Noble Anvil and Allied Force, and command of the 28th Bomb Wing when they deployed B-1Bs for Operation Iraqi Freedom. From January 2003 to May 2004, General Kowalski commanded the 405th Air Expeditionary Wing in Southwest Asia where he led a combined wing of B-1Bs, E-3s and KC-135s to provide strike, battle management and air refueling for operations Iraqi Freedom, Enduring Freedom and Southern Watch. His previous staff assignments include Headquarters Air Combat Command, Headquarters U.S. Air Force and the Joint Chiefs of Staff. Prior to his current assignment, he served as Commander, Air Force Global Strike.