



NATIONAL NUCLEAR SECURITY ADMINISTRATION

Nonproliferation Graduate Fellowship Program



Annual Report

Class of 2011



Pacific Northwest
NATIONAL LABORATORY

Proudly Operated by **Battelle** Since 1965

Fellows Talk About their **NGFP** Experience

... enhanced [my] understanding of how foreign policy is made and implemented in the U.S. interagency.

... gained experience into project management, as well as the scientific proposal submission and evaluation process ...

... had the opportunity to expand my technical knowledge beyond my area of expertise, radiation detection, into widely varying fields such as geophysics, hyperspectral imaging, spent nuclear fuel assay, and infrasound acoustics.

I came into the program with a pure policy background... I am much more knowledgeable about and comfortable with the technical aspects now.

... provided me the opportunity to form valuable professional relationships with individuals at and above my level.



Cover Photo: **Seated, left to right:** Paula Alfonso, Dorian Ramos, Sarah Weiss, Anna Tomaskovic-Devey, Caterina Fox, Valerie Brusilovsky, Brett Goode. **Standing, left to right:** Cameron Stanuch, Jamie Warburton, Justin Howland, Justin Clinton, Zachary Johnson, Victoria Swisher, Nicolas Fernandez, Dawn Verdugo, Joe Lardizabal, Peter Sprunger, Daniel Hanson, Brent Beatty, Meaghan Jennison, Stephen Herzog, Brian Gordon, Sarah Bilson, Kyler Turner.

Building Leadership for a More Secure World

“We must ensure that terrorists never acquire a nuclear weapon. This is the most immediate and extreme threat to global security. To protect our people, we must act with a sense of purpose without delay.”

President Barack Obama
Prague, Czech Republic, April 5, 2009

As long as the threat of nuclear terrorism exists, our nation will need innovative, adaptable leaders who are passionate about extinguishing that threat. That’s why the Nonproliferation Graduate Fellowship Program (NGFP) exists. We are dedicated to preparing the next generation of experts to achieve the global security mission of the National Nuclear Security Administration (NNSA). A continuing pipeline of highly qualified young professionals will help sustain our nation’s leadership position in international security for decades to come.

NGFP attracts the nation’s top technical and policy-oriented candidates for hands-on, year-long placements in NNSA offices. During that time, they apply their considerable talents and ingenuity to combat nuclear terrorism and proliferation. We also introduce them to career opportunities in NNSA and in the broader global security mission area.

It’s very gratifying when we hear from others about how valued the Fellows are in their assignments. Fellows have been called “absolutely vital to our office’s mission success,” who “hit the ground

running, thanks in large part to their excellent education and work experiences.” The program itself has been called “well-orchestrated and all-encompassing” and “the most successful [of its kind] not only in DOE, but possibly in all of government.”

Our Fellows deserve substantial credit for these lofty words. In the midst of complex, ever-changing, high-pressure environments, our tireless and talented Fellows make the seemingly impossible happen. We also credit the program’s success to strategic recruiting, our lifecycle management approach, best-practices program management, and our hands-on support that follows the Fellows throughout their assignments.

As these Fellows represent NNSA to hundreds of agency partners, industry, and nongovernment organizations, NNSA’s crucial mission and role become more visible in the global arena.

Exciting times are on the horizon. Beginning in FY13, NGFP will combine with another NNSA student program to serve the entire NNSA enterprise. We look forward to continuing to deliver exceptional leaders for a peaceful and more secure world.



Phyllis B. Byrd
Phyllis Byrd (right)

Federal Program Manager
National Nuclear Security Administration

Jana Fankhauser
Jana Fankhauser (left)
PNNL Program Manager
Pacific Northwest National Laboratory

Summary



The Class of 2011 stands in front of the world's first operating reactor, at the Hanford Site in Washington state.

The mission of the Nonproliferation Graduate Fellowship Program (NGFP) is to produce exceptional leaders in nonproliferation and international security.

In support of this mission, NGFP managed an integrated suite of activities for the Class of 2011. This included recruiting, interviewing, hiring, and providing career growth opportunities for the group throughout their year-long assignments from June 2011 through June 2012. Significant accomplishments included the following:

- **Applicants and placements.** 169 qualified, advanced-degree candidates applied. The 24 Fellows who were selected worked in seven National Nuclear Security Administration (NNSA) program offices, including, for the first time, the U.S. Department of Energy's (DOE's) **Office of Intelligence and Counterintelligence**.
- **Technical backgrounds.** A third of the class had **technical backgrounds**, with two completing their PhDs during their term. Such backgrounds are especially prized in NNSA for understanding and analyzing complicated technical issues.
- **University recruiting.** Those selected represented 16 universities across the nation, including **eight that were represented for the first time** – among those Harvard and the U.S. Naval War College. More than 20 universities now rely on the NGFP to recruit on campus annually, viewing the NGFP as the top program for students considering careers in international nuclear security.

- **Value to NNSA.** Fellows made significant contributions in areas of **policy, technology, and program management**. They supported dozens of programs and projects, worked directly with representatives in more than 40 partner countries, developed and presented at non-proliferation training workshops, participated in radiation detection testing, developed security analyses, and developed tools for greater efficiency and collaboration.
- **Career development.** NGFP sponsored three career growth events, where Fellows spoke with **16 diverse leaders from the security community** about their missions and career opportunities. At least one of these events led directly to a job offer. Separately, five organizations, unsolicited, asked to have their job openings shared with the Fellows. The fact that organizations are recruiting top talent from NGFP underscores the Program's outstanding reputation.
- **Continuing the mission.** Nearly half of this year's alumni were hired in federal and support services contractor positions in NNSA and DOE's national laboratories, **increasing the next-generation talent pool**. Other alumni continued their global security careers in other government agencies, industry, and academia, taking the NNSA perspective with them.

Through these accomplishments, NGFP is developing outstanding leaders who are dedicated to the NNSA mission: reducing the threat of nuclear terrorism worldwide.

NGFP met and exceeded each of its measurements of success for the Class of 2011:

- Promoting **awareness of careers in nonproliferation** at NNSA and DOE national laboratories
- Providing participants with **specialized training and valuable practical experience** in the field of nonproliferation
- Assisting NNSA in **achieving its mission**
- Developing a **talent pool** to support NNSA's international security and nonproliferation programs.

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About the Program

Overview

The Nonproliferation Graduate Fellowship Program (NGFP) is a National Nuclear Security Administration (NNSA) program with a mission to cultivate future technical and policy leaders in nonproliferation and international security. Through the NGFP, outstanding graduate students with career interests in nonproliferation are appointed to program offices within the Office of Defense Nuclear Nonproliferation (DNN). During their one-year assignment, Fellows participate in programs designed to detect, prevent, and reverse the proliferation of nuclear weapons.

fellowship classes: orienting and administering the current class of Fellows, recruiting and hiring the next class, and recruitment planning for the future class. This annual report covers program activities for the Class of 2011, from recruiting in summer 2010 through the assignments that began June 2011 and ended June 2012.

The Nonproliferation Graduate Fellowship Program is regularly benchmarked and used as a model within and outside of NNSA.

Organization

The NGFP is managed through DNN's Office of International Operations and administered by Pacific Northwest National Laboratory (PNNL), with roles shown in the chart at right.



Organization for Class of 2011

Annual Lifecycle and Report Scope

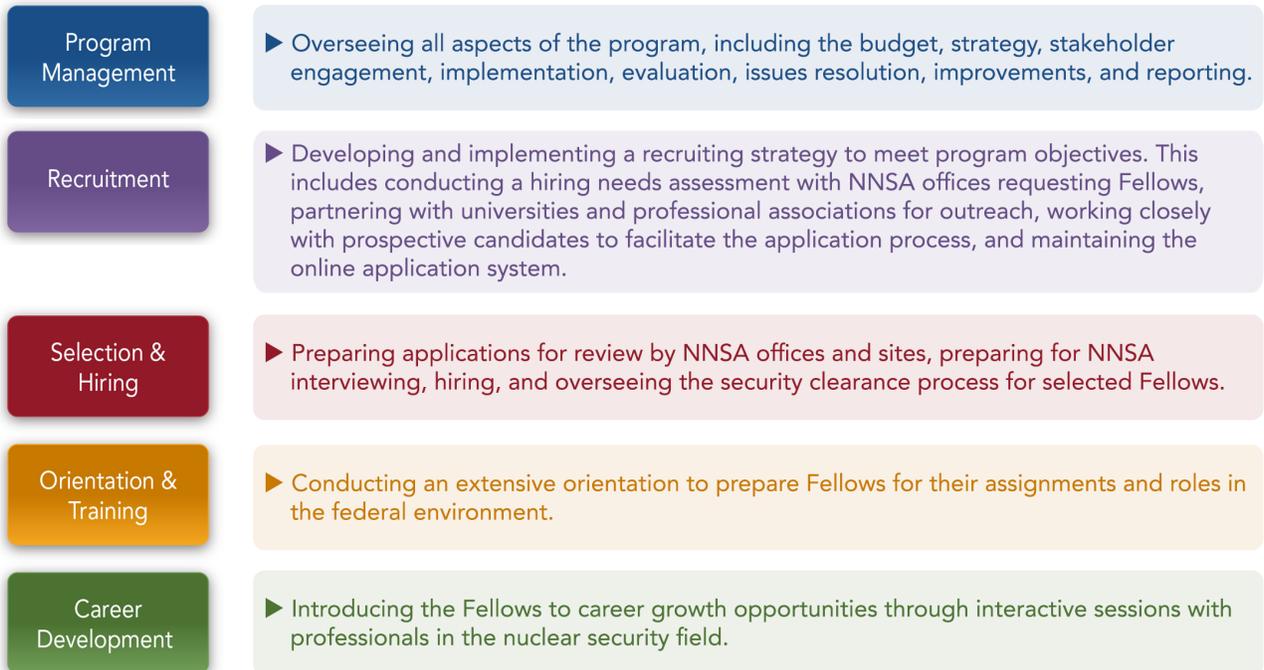
Each year, the NGFP's annual lifecycle involves planning, administration, and implementation of three different



Responsibilities

The Federal and PNNL Program Managers share a unified approach based on a common vision and framework. The operational structure is organized into five program elements as shown in the figure below.

Program Responsibilities



Class of 2011

Recruiting and Hiring

The NGFP team has a saying: It's not enough to cast a wide net; you have to catch the right "fish." That's why NGFP strategically applies its resources to yield the best candidates that will achieve program goals. The program focuses on universities that

- Meet NNSA Program Office hiring needs
- Offer the nation's top academic programs in nonproliferation, security, international relations, and/or nuclear engineering
- Have historically provided a significant percentage of NGFP's candidate pool
- Have consistently worked to promote NGFP and are established partners
- Show a commitment to student diversity.

To recruit the Class of 2011, NGFP used established university partnerships and professional associations, and also formed new relationships based on the recruiting criteria. NGFP recruiters used a variety of methods, including on-campus engagements, online outreach, and strategic connections through former NGFP Fellows and current stakeholders. The team made improvements that simplify the process of identifying Program Office hiring needs and the application process itself.

University Partnerships

The NGFP continued its well-established partnerships with the nation's top schools in mission-relevant programs. To increase the number of candidates with technical backgrounds, NGFP now is targeting *U.S. News'* top-ten rated nuclear engineering schools, including Georgia Institute of Technology; Massachusetts Institute of Technology; North Carolina State University; Oregon State University; Texas A&M University; Universities of Florida, Michigan, and Tennessee; and University of Wisconsin Madison.

For the Class of 2011, new recruiting relationships were formed with Harvard and Columbia Universities, among others.

Face to Face

Statistics show that information sessions and colloquia held at universities are the single most significant way applicants become aware of the program. These in-person events also increase visibility and interest in NNSA's mission. For the Class of 2011, NGFP participated in five career fairs, conducted 13 information sessions, and conducted seven colloquia at universities across the nation. These venues often capture the most highly engaged students; for example, at Texas A&M University, the amazing turnout led to standing room only.



NGFP established a new recruiting relationship with U.S. Naval War College, where Caterina Fox received her master's degree in national security and strategic studies. Ms. Fox, formerly with the Carnegie Endowment for International Peace and a Congressional staffer, exemplifies the highly qualified candidates that NGFP attracts.

Online Outreach

A significant number of applications—20%—were submitted as a result of NGFP's online outreach. NGFP engaged 67 universities and associations with mission-relevant programs—eight of them new this year—through an online tracking and scheduling system. Including the NGFP's presence on these university websites vastly expands the program's outreach with minimal cost.

New Online Tools

The NGFP team continually evaluates program operations and seeks ways to improve activities and systems. The increase in Fellow applicants made it increasingly important to easily track and review applications of 200 or more candidates in real time. In addition, Fellows needed more efficient ways to access employee training, policies, and guidelines. In response, the NGFP team created a secure, access-controlled NGFP Application System, then leveraged the same platform to create The Source, an interactive resource for onboarding and Fellow communication during their placements.

The Application System (left side of figure below) greatly simplifies and streamlines the application and review process. It walks candidates through the five-part process and shows them their application status at any time. NGFP team members can track application submissions, and Program Office managers can review candidates for employment matching.

Most importantly, the Application System enables Program Office managers to target the candidates they need—those with the right mix of skills, experience, degrees, foreign language fluency, and other characteristics.

The Source (right side of figure below) centralizes all policies, procedures, training, and other communications to Fellows, making the onboarding and guidance process more effective and ensuring

consistency. Fellows can submit questions that may also benefit their peers as they prepare for and serve out their year. The Source can also be used in an emergency; for example, after the D.C.-area earthquake in August 2011, Fellows could check The Source to see whether to return to work the next day.

“So far all the candidates we’ve interviewed have been top notch. Your team does an awesome job recruiting these people.”

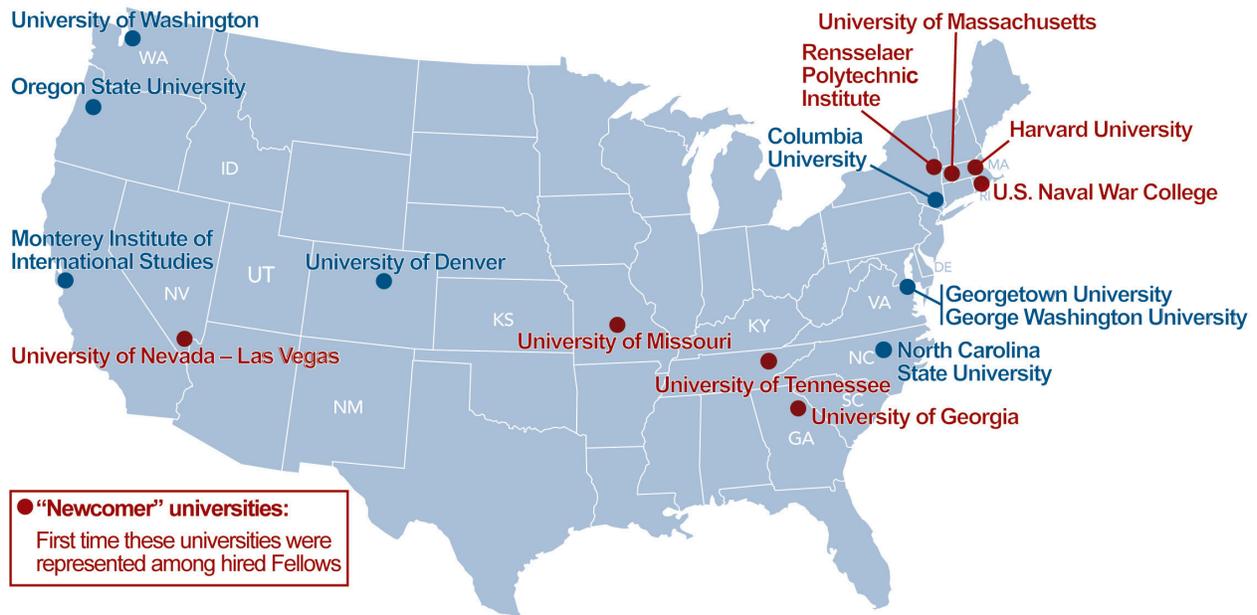
*Peter Tensmeyer, Senior Project Manager,
Global Threat Reduction, National
Nuclear Security Administration*

Recruiting Results

Driven by the multi-pronged, strategic recruiting strategy, NGFP increased applicants by 30% for a record high of 169, with 29 (17%) of those applicants boasting advanced technical degrees, double from the previous year. As a result, NGFP delivered the largest-yet slate of high-quality candidates that met Program Office criteria.

Of the 59 universities represented among the applicants, an impressive 32 of those, or 54%, appeared for the first time, indicating the growing reach and reputation of the program. The following map shows the home universities of the 24 Fellows in the Class of 2011.

A new online system, with interfaces for applicants, Fellows, the NGFP Team, and Program Offices, streamlines and simplifies applying, hiring, training, and communicating.



The Class of 2011 hailed from 16 universities, including eight that were represented for the first time.

Interviews, Hiring, and Clearances

During their fellowship year, NGFP Fellows are hired as employees of Battelle, the company that operates PNNL for the DOE. Thus, PNNL administers all pre-employment and employment activities for NGFP, including pre-interview background checks, required drug testing, security clearance processing through DOE’s Chicago Office, and interview facilitation for NNSA. Having PNNL handle this process frees NNSA Program Office personnel to focus their full attention on selecting the best candidates for their needs. Hired Fellows enter with all their employment details completed, enabling them to “hit the ground running” in their assignments.

For the Class of 2011, Program Offices selected 72 interviewees from 169 total applicants, seven more interview candidates than last year’s 65. Being able to choose the most promising interviewees from a pool of already high-quality candidates that met NGFP’s criteria means Program Offices get the “cream of the crop.”

Eighteen NNSA Program Offices conducted a total of 131 interviews, ten fewer than the previous year, over the seven working days from November 30 through

December 8, 2010. More than 70 NNSA reviewers and hiring managers chose to participate in this year’s interview and selection process, the largest involvement to date. Feedback from the participating offices and candidates indicated that the entire process was seamless.

After the NNSA Program Offices selected their hiring choices, the Federal and PNNL Program Managers worked with NNSA Program Office teams to assign candidates who were chosen by multiple offices, for a total of 24 Fellows hired. All but one Fellow had received their security clearances when they began their appointments in June 2011.

Two improvements made this year’s interview process more effective and efficient. First, the results of the hiring needs assessment were incorporated into the online tool that helped Program Offices clarify what they needed in recruits and target those skills in their review of applications. Second, the Federal Program Manager arranged with the Office of Personnel Security and the badging office to obtain NGFP interviewee badges in advance. This eliminated waiting time and got candidates to their interviews more quickly.

Assigned Program Offices

Program Offices carefully select Fellows whose combinations of academic backgrounds, skills, and experience can make the most significant contribution to their mission areas.

The 24 Fellows who comprise the Class of 2011 boast the following impressive statistics:

- Placement in seven DOE NNSA Program Offices, including, for the first time ever, a Fellow serving in DOE's Office of Intelligence and Counterintelligence
- Eight advanced technical degrees in engineering, chemistry, and radiochemistry, including four Ph.Ds, two Ph.D. candidates, and two master's
- Previous positions with Congress (staffers), U.S. Departments of State and Homeland Security, U.S. Navy (officer), national laboratories, Comprehensive Test Ban Treaty Organization, National Academy of Sciences, and nongovernment organizations
- Degrees from Harvard University, Massachusetts Institute of Technology, Rensselaer Polytechnic Institute, Georgetown University, Columbia University, U.S. Naval War College, and Monterey Institute of International Studies, among others
- Fluency in Russian, Mandarin Chinese, Spanish, and French.

Individual biographies for the Class of 2011 are provided in the Appendix. The Class of 2011 Fellows and their assigned Program Offices were

Paula Alfonso: Office of Nuclear Controls, Confidence Building Measures Team

Brent Beatty: Office of Fissile Materials Disposition

Sarah Bilson: Office of Defense Nuclear Nonproliferation

Valerie Brusilovsky: Office of International Material Protection and Cooperation

Justin Clinton: Office of Nonproliferation Research and Development

Nicolas Fernandez: Office of Global Threat Reduction, North and South American Threat Reduction

Caterina Fox: Office of Nonproliferation and International Security

Brett Goode: Office of Nuclear Controls, Global Initiatives for Proliferation Prevention Team

Brian Gordon: Office of Nuclear Controls, Counter Trafficking System Development Team

Daniel Hanson: Office of Fissile Materials Disposition

Stephen Herzog: Office of Nuclear Controls

Justin Howland: Office of Global Threat Reduction, European and African Threat Reduction

Meaghan Jennison: Office of Global Threat Reduction, North and South American Threat Reduction

Zachary Johnson: Office of the Second Line of Defense, Core Program

Joe Lardizabal: DOE's Office of Intelligence and Counterintelligence

Dorian Ramos: Office of the Second Line of Defense, Megaports Program

Peter Sprunger: Office of Nonproliferation Research and Development

Cameron Stanuch: Office of Nuclear Safeguards and Security, Safeguards Policy Team

Victoria Swisher: Office of Nuclear Safeguards and Security, Safeguards Technology Team

Anna Tomaskovic-Devey: Office of Global Threat Reduction, European and African Threat Reduction

Kyler Turner: Office of Global Threat Reduction, European and African Threat Reduction

Dawn Verdugo: Office of Nuclear Controls, International Nonproliferation Export Control Program

Jamie Warburton: Office of Nonproliferation Research and Development

Sarah Weiss: Office of Nuclear Safeguards and Security, Nuclear Security Team

Orientation and Career Development

Orientation prepares the Fellows for success in their new roles and introduces them to the NGFP, the NNSA, and the DOE. It includes two weeks of administrative processes, roundtables with seasoned experts, training in the field, visits to specialized nuclear facilities, and meetings to familiarize them with their assigned Program Offices.



During NGFP orientation (left to right), Fellows Nick Fernandez, Justin Clinton (striped shirt), Brian Gordon, Meaghan Jennison, and Tim Hubler from PNNL check a vehicle for radiation during a radiation detection exercise.

The first part of the orientation was at PNNL in Richland, Washington, and the second part was at NNSA Headquarters in Washington, D.C. Immediately following the orientation at NNSA, Fellows began working in their assignments.



Joe Lardizabal, foreground, listens intently as he prepares to speak at a mock Senate hearing. The event simulated the give-and-take of a lively legislative interaction.

The NGFP is committed to creating opportunities for the Fellows' career advancements in fields related to nonproliferation. The Class of 2011 participated in the following career development events during their assignments:

- **National Laboratories Roundtable** (October 2011). Fellows heard from DOE national laboratory representatives about how each one supports the mission of nonproliferation. Fellows talked with the panelists about career advice and work at the laboratories. Participants included:
 - › Jay Disser, Project Engineer, International Safeguards Project Office, Nonproliferation and National Security Department, Brookhaven National Laboratory
 - › Dr. Leslie Fishbone, MPC&A Cooperative Programs Division, Nonproliferation and National Security Department, Brookhaven National Laboratory
 - › Kristin Laurin-Lovitz, Argonne National Laboratory
 - › Nancy Jo Nicholas, Nuclear Nonproliferation Program Director, Los Alamos National Laboratory
 - › Dr. Larry Satkowiak, Director of Global Security and Nonproliferation, Oak Ridge National Laboratory.
- **Alumni Roundtable** (January 2012). Fellows received career planning insights from successful NGFP alumni. Participants included:
 - › Richard Nephew, Class of 2003, Director for Iran, National Security Staff, Executive Office of the President
 - › Toby Dalton, Class of 2002, now Deputy Director, Nuclear Policy Program, Carnegie Endowment for International Peace
 - › Thomas Deters, Class of 2003, now Vice President and Director, First International Resources
 - › Dr. Clark Cully, Class of 2008, now Policy Analyst, Office of Nuclear Policy, Office of the Secretary of Defense
 - › Jessica Drum, Class of 2008, Senior Analyst, Gryphon Scientific.

Fellowship Highlights

Fellows are given significant mission responsibilities. Their value increases as they contribute in areas of policy, technology, and program management. Here are a few highlights from the Class of 2011:

- Safeguarding nuclear and radioactive sources from theft is the first line of defense in nonproliferation. **Nicolas Fernandez** assessed nuclear security at sites in Panama and worked with DOE and the Panama Ministry of Health to agree on further cooperation to protect radioactive sources. Laying groundwork for the future, **Victoria Swisher** supported NNSA's development of a \$2.5 million portfolio of safeguards technology projects across four national laboratories.



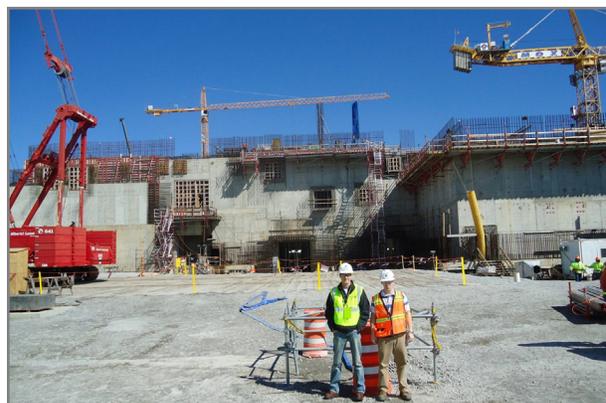
Fellows said the career development opportunities were practical and valuable, and led to at least one job offer from a State Department contractor.

- **Career Networkshop** (March 2012). Fellows spoke with nonproliferation and global security professionals and had one-on-one informational interviews with them. Participants included:
 - › Mary Alice Hayward, Vice President, Strategy, Government and International Affairs, AREVA, Inc.
 - › Dr. Karen Henderson, Senior-Level Policy Advisor, U.S. Nuclear Regulatory Commission
 - › Robert M. Huelskamp, Deputy Director, Remote Sensing and Verification Program, Sandia National Laboratories
 - › Aiste Ray, Team Lead, Country Councils and Outreach Unit, Overseas Security Advisory Council, U.S. Department of State
 - › Dr. Elizabeth Turpen, Lead Associate, Booz Allen Hamilton.

Career development goes beyond NGFP-sponsored networking events. Thanks to the Program's outstanding reputation, organizations now come to NGFP to recruit top talent. For the Class of 2011, five organizations asked to have their job openings shared with the Fellows.



Valerie Brusilovsky (center, grey skirt), observes radiation portal monitors at an airport security conference in Athens, Greece.



Brent Beatty (left) and Dan Hanson assess construction performance at the Mixed Oxide Fuel Fabrication Facility being built at the Savannah River Site.



Anna Tomaskovic-Devey and Kyler Turner (far right) meet with the reactor conversion team in Santiago, Chile.

- NNSA works cooperatively with partner countries to advance nuclear security goals worldwide. **Paula Alfonso, Caterina Fox, and Cameron Stanuch** engaged with NNSA's Chinese counterparts to advance nonproliferation goals under the U.S.-China Peaceful Uses of Nuclear Technology Agreement. **Anna Tomaskovic-Devey** supported and participated in the NNSA-Rosatom Joint Working Group meetings to convert Russian research reactors to use low-enriched uranium. She also planned and organized an international meeting in Santiago, Chile, on reducing uranium enrichment, involving hundreds of international partners and stakeholders.
- **Brett Goode** prepared, organized, ran, and presented at grant writing workshops in Kazakhstan, Kyrgyzstan, and Tajikistan. The purpose was to help scientists identify peaceful nuclear energy funding sources for their work. **Valerie Brusilovsky** supported a U.S.-Russia nuclear material security exchange in Azerbaijan. **Dawn Verdugo** trained participants in Japan and Estonia on recognizing and responding to chemical threats when authorizing commodities for transport. **Paula Alfonso** planned and organized an international workshop on nuclear forensics for participants from 12 countries.



Sarah Bilson (striped sweater) and Sarah Weiss (blue scarf) join colleagues to view the Sedan Crater, a former nuclear test area at the Nevada National Security Site.



Victoria Swisher stands at the U.S. Mission, overlooking the Vienna International Centre. The U.S. Mission works with United Nations organizations in Vienna to improve international cooperation in nuclear technology, crime, terrorism, space, and free trade.

- Radiation detection systems help deter nuclear smuggling. **Zachary Johnson** participated in acceptance testing for detection systems deployed in Estonia, Kyrgyzstan, and Mongolia. **Dorian Ramos** traveled to Vietnam to participate in a radiation detection installation and engineering survey.
- Accurate security analyses are essential for U.S. government decisionmaking. **Joe Lardizabal's** analyses were provided to high-level officials including the President, Secretary of State, and the Deputy Secretary. **Cameron Stanuch** authored a paper for the Deputy Secretary's briefing book for a National Security Council meeting.

- Many Fellows contribute directly to programs and projects, and some develop tools for greater efficiency and collaboration. **Stephen Herzog** supported the management of daily operations of seven seismic monitoring engagement portfolios in support of the Comprehensive Nuclear Test Ban Treaty. **Kyler Turner** supported NNSA's budget structure for six DOE national lab sites to develop technologies for domestic production of the isotope molybdenum-99 without using highly enriched uranium.
- Innovative tools promote program efficiency and collaboration. **Justin Howland** proposed an improved model to track program accomplishments and milestones for the Global Threat Reduction Initiative. **Paula Alfonso** presented the concept of national nuclear forensics libraries at a meeting of U.S. and China experts. **Sarah Weiss** developed a database of physical protection assessments of nuclear and radiological materials.



Doing some fieldwork, Stephen Herzog (left) and Rengin Gok (center, Los Alamos National Laboratory) speak with the Director of the Iraq Seismological Network (right). Countries use seismic monitoring to detect underground explosions that could indicate nuclear testing.



Cameron Stanuch and Paula Alfonso participated in the 7th Joint Coordinating Committee meeting of the U.S.–China Peaceful Uses of Nuclear Technology Agreement.

Where They Are Now

Class of 2011

NGFP alumni are highly sought after by employers in the nuclear security community. After completing their assignments, many Fellows from the Class of 2011 accepted positions where they continue to support the global security mission – whether in government, industry, the private sector, or academia. The list below shows where they were as of summer 2012.

Paula Alfonso	NNSA – Support Services Contractor (supporting the Office of Nuclear Controls)
Brent Beatty	Oak Ridge National Laboratory
Sarah Bilson	International Atomic Energy Agency
Valerie Brusilovsky	NNSA – Support Services Contractor (supporting the Office of International Material Protection and Cooperation)
Justin Clinton	U.S. Department of Defense – U.S. Air Force
Nicolas Fernandez	U.S. Department of Defense – Defense Threat Reduction Agency
Caterina Fox	U.S. Department of Defense – Support Services Contractor (supporting the U.S. Africa Command)
Brett Goode	U.S. Department of State – Support Services Contractor (supporting the Bureau of International Security)
Brian Gordon	Enrolled in Ph.D. program with Rand Corporation
Daniel Hanson	Pacific Northwest National Laboratory (supporting the Office of Fissile Materials Disposition)
Stephen Herzog	NNSA – Support Services Contractor (supporting the Office of Nuclear Controls)
Justin Howland	U.S. Department of State – Support Services Contractor (supporting the Bureau of Diplomatic Security)
Meaghan Jennison	NNSA – Federal Position (Office of Global Threat Reduction)
Zachary Johnson	U.S. Department of Defense – Defense Threat Reduction Agency
Joe Lardizabal	U.S. Department of State – Foreign Service
Dorian Ramos	NNSA – Support Services Contractor (supporting the Office of Second Line of Defense)
Peter Sprunger	U.S. Department of State – Bureau of International Security and Nonproliferation
Cameron Stanuch	Pacific Northwest National Laboratory (supporting the Office of Nuclear Safeguards and Security)
Victoria Swisher	Pacific Northwest National Laboratory (supporting the Office of Nuclear Safeguards and Security)
Anna Tomaskovic-Devey	U.S. Department of State – Support Services Contractor (supporting the Bureau of Diplomatic Security)
Kyler Turner	U.S. Department of Defense – Defense Threat Reduction Agency
Dawn Verdugo	Brookhaven National Laboratory
Jamie Warburton	Oak Ridge National Laboratory
Sarah Weiss	U.S. Department of Defense – Defense Threat Reduction Agency

Alumni Spotlight

More than 214 NGFP alumni have continued to apply their NNSA mission knowledge worldwide since 1997. Here we proudly highlight two outstanding NGFP alumni from past years.

Toby Dalton – Class of 2002 Deputy Director, Nuclear Policy Program, Carnegie Endowment for International Peace



Toby Dalton is a recognized expert on nonproliferation and nuclear energy. His research focuses on cooperative nuclear security initiatives and the management of nuclear challenges in South Asia and East Asia.

His NGFP fellowship in 2002-2003 was an important stepping stone in Mr. Dalton’s early career. At what was then called the Office of Nonproliferation Policy, he worked on the Regional Security team, focusing on cooperative programs in East Asia and the Middle East. Not only did the experience give him a “foot in the

door” of government, it enabled him to see first-hand the challenges of making and implementing policy on complex national security issues.

For the next seven years, Mr. Dalton continued to expand his expertise and contributions in safeguards, nonproliferation, and arms control. Along with his growing reputation came a series of leadership opportunities in NNSA and DOE. He was a Senior Policy Advisor to NNSA’s Office of Nonproliferation and International Security. He was also detailed to the Senate Foreign Relations Committee to provide support and guidance on nonproliferation and arms sales issues.

Mr. Dalton established and led DOE’s office at the U.S. embassy in Pakistan, managing critical bilateral and multilateral nonproliferation issues. He also served as Acting Director for NNSA’s Office of Nuclear Safeguards and Security. Today, he is in demand for his commentary and analysis at the Carnegie Endowment.

Sean Dunlop – Class of 2010 Action Officer, NNSA’s Office of Nonproliferation and International Security



During his NGFP fellowship, Sean Dunlop worked with retired military officials and next-generation scholars from South Asia and the Middle East to facilitate regional security confidence-building measures. This experience made it easy to step into a role planning for high-profile international events such as the International Atomic Energy Agency General Conference and the Nuclear Security Summit.

His significant contributions at NNSA brought more opportunities for advancement. Now, as the Action Officer in NNSA’s Office of Nonproliferation and International Security, he organizes activities within NIS’s programs and interfaces with other parts of the federal government.

His NGFP fellowship was an important foundation for his continuing career in nuclear security. “That’s where I gained an understanding of how U.S. nonproliferation, arms control, and disarmament policy are actually developed and implemented on a day-to-day basis,” he said. “I also developed relationships with a network of people who were eager to see me succeed and made me aware of potential career opportunities.”

Appendix: Class of 2011 Biographies



Entering Class of 2011 Fellows boasted impressive credentials, including former positions as Congressional staffers, as well as previous work for the U.S. Departments of State and Homeland Security, U.S. Navy, national laboratories, the Comprehensive Test Ban Treaty Organization, National Academy of Sciences, and non-government organizations.

Photo: (left to right) Valerie Brusilovsky, Dorian Ramos, Brett Goode, and Brent Beatty.



The NGFP Class of 2011 celebrates a year of accomplishments at the closing ceremony in Washington, D.C. Program managers Phyllis Byrd and Jana Fankhauser stand at the far left and right, respectively.



Appendix

Class of 2011 Biographies



Paula Alfonso

Office of Nuclear Controls, Confidence Building Measures Team

Paula Alfonso studied at the Columbia University School of International and Public Affairs with a concentration in international security policy and a specialization in Latin America. She completed her master's degree in international affairs in May 2011.

As an undergraduate at the University of Notre Dame with roots in Argentina, Paula studied political science, with a concentration in international relations, and Spanish. She also specialized in the history and politics of Latin America. She continued this interest in graduate studies of Latin American financial systems; economic policies; and social, political, and security issues, including the evolving nuclear programs of Argentina and Brazil. Paula's commitment to nuclear nonproliferation has contributed to her desire for a career in international security.

In the spring of 2010, Paula worked as an assistant at the Institute of Latin American Studies at Columbia University, coordinating academic events hosted by the institute and conducting research on Brazil for faculty members. Later that summer, Paula managed logistics for the cultural and education programs of the U.S. Department of State's U.S. Consulate General in Rio de Janeiro, working with Foreign Service Officers as a Public Affairs Intern. She speaks fluent Spanish and has a working knowledge of Portuguese.



Brent Beatty

Office of Fissile Materials Disposition

On the path to his doctorate in nuclear engineering at North Carolina State University, Brent Beatty completed his master's degree in 2011 with a research focus on the development of techniques to improve the effectiveness of nuclear safeguards.

Brent worked the four summers from 2007 to 2010 at Oak Ridge National Laboratory, first as an intern at the Radio Chemical Engineering Center and later as a nuclear engineering graduate student. There he both designed components for chemical processes and explored the safeguards vulnerability of those processes, developing his current interests in applied engineering, nonproliferation research, international export controls, and international security engagement. Brent's interests are pointing him toward a career where he can contribute to ensuring that nuclear energy reaches its full and fully safeguarded potential for meeting global energy demands.

In 2010, Brent co-founded the student chapter of the Institute of Nuclear Materials Management (INMM) in his locale, presented the chapter at the INMM annual meeting, and collaborated with the Triangle Institute for Security Studies, a consortium of North Carolina universities that promotes cooperative research and education in national and international security.



Sarah Bilson **Office of Defense Nuclear Nonproliferation**

In May 2011, Sarah Bilson completed a master's degree of international affairs at Columbia University's School of International and Public Affairs with a concentration on international security policy and a specialization in the Middle East.

Sarah began pursuing her interest in nonproliferation during her undergraduate studies, when she worked as an intern at the U.S. Department of State's Office of Weapons of Mass Destruction Terrorism, supporting the Global Initiative to Combat Nuclear Terrorism in 2009. Enhancing her graduate studies, she served as an early summer intern at the Center for Arms Control and Nonproliferation, where her duties included reporting on nonproliferation activities and on Iran-related security issues while working with the Center's top Iran analyst.

Fluent in French, Sarah also knows Arabic, which she improved while working two summers in Beirut. In 2009, she researched Lebanese election security for the International Foundation for Electoral Systems and in 2010 worked as a reporting officer for the United Nations Relief and Works Agency for Palestine Refugees in the Near East, serving the refugee camps of Beirut and South Lebanon.



Valerie Brusilovsky **Office of International Material Protection and Cooperation**

Valerie Brusilovsky completed her dual bachelor's and master's degrees in international studies at the University of Denver in 2010. She focused her studies on international security and conflict resolution as a foundation for a desired career in security and nonproliferation.

Transplanted from the former Soviet Union to the United States at an early age, Valerie has maintained her bicultural and bilingual heritage. She is fluent in both Russian and Spanish. In 2009 Valerie interned for the U.S. Department of State at the Bureau of International Security and Nonproliferation and was awarded a parallel fellowship with the Council of American Ambassadors International Affairs Fellowship program. While working with projects in the Nonproliferation and Disarmament Fund office, she also received mentoring from former ambassadors and attended Georgetown University for the summer program at the Engalitcheff Institute on Comparative Political and Economic Systems.

In 2010 Valerie interned with the Truman National Security Project in Washington D.C., developing materials and grant proposals to support fundraising for the organization's work in promoting national security leadership.



Justin Clinton **Office of Nonproliferation Research and Development**

In the course of his academic career in nuclear engineering and health physics, Justin Clinton focused on the detection and characterization of radioactive materials. After completing his undergraduate studies in nuclear engineering at Rensselaer Polytechnic Institute, Justin received a master's degree in medical physics at the University of Florida and then returned to Rensselaer to complete his doctoral degree in nuclear engineering in the fall of 2011.

Justin's academic work culminated in the development of a novel solid-state neutron detection system designed to detect special nuclear materials such as weapons-grade plutonium or enriched uranium. He applied analytical and Monte Carlo computational methods to model microstructure neutron detectors and served as primary lead on a project to develop the prototype system from its conception and modeling to its manufacture, testing, and implementation. In the formation and implementation of nonproliferation policy, his sharpest interest is in the determination of nuclear site security policy—where the technical challenge of deploying detection systems interacts with the decision-making processes of how and where to deploy them.

In 2010, Justin was a lecturer at the Department of Mechanical, Aeronautical, and Nuclear Engineering, serving as a resident expert on the GEANT4 computational code for simulating the passage of particles through matter.



Nicolas Fernandez
Office of Global Threat Reduction, North and South American Threat Reduction

Nicolas Fernandez completed his master of public administration degree in policy analysis at the University of Georgia in 2010, following his undergraduate studies there in political science and international affairs.

While an undergraduate fellow in the Security Leadership Program at the Center for International Trade and Security (CITS), Nicolas analyzed chemical, biological, radiological and nuclear weapons systems; nonproliferation; arms control; and export control issues. He also published an article in the Spring 2008 issue of the *Journal of Nuclear Materials Management* on the physical protection of radioactive materials, and a co-authored piece in the August 2008 issue of *Jane's Intelligence Review* on the changing status of Russia's closed nuclear cities.

While pursuing his degree, Nicolas continued with CITS as a graduate research associate, collaborating on projects with CITS experts on such topics as nuclear terrorism and strategic trade controls. After obtaining his MPA, Nicolas joined CITS as a research associate, working on nuclear terrorism issues and conducting strategic trade control analyses of countries in the Caribbean, Africa, and Southeast Asia.



Caterina Fox
Office of Nonproliferation and International Security

Caterina Fox completed her master's degree in national security and strategic studies at the U.S. Naval War College in 2011. She completed core studies of national security challenges, policymaking, and international affairs with a concentration in the Asia-Pacific region.

Following her undergraduate studies majoring in foreign affairs and Italian at the University of Virginia, Caterina became a research assistant on nonproliferation issues for the Carnegie Endowment for International Peace. There her many responsibilities included writing policy analyses, researching weapons, and designing and editing Carnegie's *Proliferation News* website.

Prior to her NGFP fellowship, Caterina worked as a Congressional staffer for the Armed Services Committee of the U.S. House of Representatives since 2007, supporting activities of the policy unit of the full committee. Among her duties in that role, she conducted policy research on security and nonproliferation issues, coordinated committee briefings from U.S. Department of Defense (DoD) officials, drafted legislative language for the House of Representatives' DoD budget authorization bill, and participated in Congressional oversight of the U.S. Pacific Command.



Brett Goode
Office of Nuclear Controls, Global Initiatives for Proliferation Prevention Team

Brett Goode graduated with a master's degree in international affairs at the George Washington University Elliott School, with a concentration in international security studies.

While completing graduate coursework, Brett worked with several groups on nuclear nonproliferation and other security issues. In 2010, Brett served an internship at the U.S. Department of State's Bureau of International Security and Nonproliferation in the Office of Weapons of Mass Destruction Terrorism. Later, he worked as a research intern for the Institute for the Study of War in Washington, D.C., researching the war

in Afghanistan, tracking terrorist attacks to identify emerging trends, and providing detailed research and analysis of the Haqqani network of insurgents.

Most recently, Brett was a nonproliferation intern at the U.S. Civilian Research and Development Foundation, supporting programs that foster international scientific collaboration as a means of reducing proliferation concerns. He also participated in the 2010 NNSA-sponsored course at Brookhaven National Laboratory on Nuclear Nonproliferation, Safeguards, and Security in the 21st Century.



Brian Gordon
Office of Nuclear Controls, Counter Trafficking
System Development

Brian Gordon completed his master's degree in international affairs at Columbia University in 2011, specializing in security policy and the Middle East. He has a working knowledge of Arabic and a basic proficiency in Russian.

Prior to attending Columbia, Brian was a Surface Warfare Officer in the U.S. Navy serving as Navigator and Combat Information Center Officer on USS ANZIO (CG-68), stationed in Norfolk, Virginia. During his time on ANZIO, the ship deployed to the Arabian Gulf as part of a Carrier Strike Group with Brian serving as an Air Defense Tactical Action Officer throughout the deployment. His responsibilities included direction of five ships and numerous aircraft to maintain the Strike Group's air defense posture. He was subsequently assigned to the Multi-National Security Transition Command-Iraq in Baghdad, where he was aide-de-camp to the U.S. general in charge of manning, equipping, and training the Iraqi Army.

Brian spent the summer of 2010 as an intern to the Military Staff Committee of the U.S. Mission to the United Nations, representing the committee at meetings pertaining to the Middle East, the Balkans, and nonproliferation. His responsibilities included providing a daily summary and analysis of Security Council events and initiatives to the U.S. Joint Staff Strategic Plans and Policy Directorate.



Daniel Hanson
Office of Fissile Materials Disposition

Having completed the master's degree program for nuclear engineering at the University of Tennessee, Dan Hanson plans to continue his graduate work, doing research in nuclear security and nonproliferation technologies as he earns his doctorate in nuclear engineering.

Intrigued by the challenge of bridging the gap between the potential of nuclear power and its safe and secure production, Dan is including in his graduate work a certificate in nuclear security science and analysis to study both the technical and policy sides of nonproliferation. Dan's engineering experience includes undergraduate employment as a process engineer intern for Honeywell Federal Manufacturing & Technologies at the U.S. Department of Energy's Kansas City Plant.

During his graduate studies, Dan has worked since 2009 as a graduate research assistant at the University of Tennessee, focusing on applications for nuclear forensics and research in fast radiochemical separations.



Stephen Herzog
Office of Nuclear Controls

Stephen Herzog received a master of arts with honors in security studies from Georgetown University, where he concentrated in unconventional weapons and nonproliferation. He was valedictorian of his undergraduate class at Knox College and received his bachelor's degree in international relations.

Prior to his fellowship, he worked as a research associate with the Strategic Security Program at the Federation of American Scientists (FAS). He has also served as an arms control consultant and intern with FAS and held an internship with the British American Security Information Council while an undergraduate.

Stephen is co-author of a forthcoming FAS monograph on the Comprehensive Test Ban Treaty. In addition, he has published reports and journal articles, and his commentary has been featured in the *Financial Times*, *The Hill*, and the *San Francisco Chronicle*, among others.

Stephen traveled abroad extensively while researching for his bachelor's degree thesis on U.S. tactical nuclear weapons in Europe and his master's thesis on neutral state contributions to nonproliferation diplomacy. He interviewed senior-level government officials and nongovernmental defense policy experts in Belgium, the Czech Republic, Denmark, Sweden, Switzerland, and the United Kingdom.



Justin Howland
Office of Global Threat Reduction, European and African Threat Reduction

In March of 2010, Justin Howland completed his master's degree in the international security program at the University of Denver, Josef Korbel School of International Studies.

After obtaining his bachelor's degree in finance in 2005, Justin worked as the Chief of Staff for a Texas state representative and founded his own business for efficiency, financial, and project impact analysis. In 2009, Justin obtained a Certificate of Advanced International Affairs from Texas A&M University before starting graduate-level research and studies in nonproliferation, international security, under-secured and unaccounted nuclear materials and weapons, counterterrorism, intelligence, national security, and homeland defense.

Starting in the fall of 2009, Justin served as project manager and communications director for the Institute for the Study of Israel in the Middle East in Denver, Colorado. In 2010, as an intelligence analyst and critical infrastructure protection intern with the Colorado Information Analysis Center (CIAC), Justin conducted open source analyses on active criminal and terrorist cases throughout Colorado. He also assisted the Colorado infrastructure team with threat analysis to identify threats, vulnerabilities, and countermeasures pertinent to visited sites. Most recently Justin trained as a terrorism liaison officer for the CIAC, FBI-Denver.



Meaghan Jennison
Office of Global Threat Reduction, North and South American Threat Reduction

While completing her master's degree in public policy at the John F. Kennedy School of Government at Harvard University, Meaghan Jennison focused both her academic studies and work experiences on environmental and energy policy.

Meaghan augmented her public policy coursework at the University of North Carolina (UNC)-Chapel Hill with summer internships, including a Congressional internship in the office of Senator Elizabeth Dole in 2006 and an Environmental Protection Agency internship with the Office of Stratospheric Protection in 2007. In the summer of 2008, she researched plug-in hybrid electric vehicles as an Aaron Foundation Intern at the Center for American Progress in Washington, D.C. Meaghan then traveled to Cambridge, England, where she served as a consultant of the UNC Center for the Environment, analyzing the EcoCity scheme proposed by the British government.

As a journalism fellow from the Shorenstein Center on Press, Politics, and Public Policy at the Harvard Kennedy School, Meaghan was selected to work on the Carnegie-Knight Initiative for revitalizing journalism education. She developed content for the UNC-Chapel Hill News21 incubator project on *Powering a Nation*, an investigative multimedia website that explores the political, economic, and scientific tensions in the future of U.S. energy.



Zachary Johnson
Office of the Second Line of Defense, Core Program

Zachary Johnson completed a master's degree in nonproliferation and terrorism studies at the Monterey Institute of International Studies, where he also completed a master's in business administration with an emphasis in international management. He completed his undergraduate degrees in political science and economics at Utah State University.

Zachary's graduate study included an internship at the Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization in Austria, where he completed extensive research projects and drafted statements for the organization's executive leaders. Through the internship, Zachary also assisted the worldwide nonproliferation efforts of the United States and the United Nations. He is fluent in Russian and competent in Korean and German.

From 2009, Zachary was a content specialist at the Center for Homeland Defense and Security, where he contributed to the Homeland Security Digital Library and wrote briefs and articles related to homeland security. Zachary also supported the James Martin Center for Nonproliferation Studies as a graduate research assistant from 2009; his responsibilities included publishing reports on weapons of mass destruction relative to the Nuclear Threat Initiative and composing timelines for missile proliferation in the Middle East.



Joe Lardizabal
DOE's Office of Intelligence and Counterintelligence

Joe Lardizabal graduated with a master's degree from Georgetown University's School of Foreign Service and concentrated in international relations and security. There, he focused on nuclear weapons and nonproliferation and U.S. foreign policy formulation.

Joe was an assistant project coordinator and researcher at the Center for Strategic and International Studies (CSIS), where, among other activities, he researched nuclear issues pertaining to U.S. nuclear strategy and policy, arms control, nonproliferation, and geographical regions. In 2009-2010, he served as section editor for conflict and security for the *Georgetown Journal of International Affairs*, collaborating with policymakers, academics, and analysts.

Most recently, Joe interned at the U.S. Department of State's Bureau of International Security and Nonproliferation, working on U.S. nonproliferation policies and strategic negotiations with various U.N. disarmament bodies. Activities included supporting the coordination of U.S. policy on multilateral arms control, nonproliferation, and disarmament issues; supporting the Non-Proliferation Treaty review process; and collaborating with officers managing International Atomic Energy Agency issues including safeguards, nuclear security, and technical cooperation. Joe has traveled extensively throughout Latin America and is fluent in Spanish.



Dorian Ramos
Office of the Second Line of Defense, Megaports Program

Dorian Ramos is a master's candidate in the international affairs program at Georgetown University. She completed her undergraduate studies in political science at St. Olaf College in Minnesota.

During her undergraduate studies, Dorian studied ethnic and cultural achievements of Turkish, Arab, Christian, and Moslem peoples in Turkey, Egypt, Morocco, and Greece at Bogazici University, Istanbul, and American University in Cairo, Egypt. Dorian also participated in American University's Washington Semester Program, where she researched the importance of remittances in Central America and examined international socio-economic development issues and global economics. She is proficient in Spanish and has a working knowledge of Portuguese.

Dorian also interned at the U.S. Department of Homeland Security, where, among other activities, she evaluated discrepancies between legislation and actual immigration processing and provided actionable information to government economists. Most recently, Dorian supported the European Aeronautic Defense and Space Company (EADS North America), where she planned activities such as industry innovation events and symposia. She was also responsible for coordinating activity within the Transport and Mission Aircraft Line of Business.

Dorian is an active member of Women in International Security, where she serves as Director of Leadership for the Washington, D.C. Chapter.



Peter Sprunger
Office of Nonproliferation Research and Development

Peter Sprunger has a Ph.D. in experimental nuclear physics from Oregon State University. He completed his undergraduate studies in physics and minored in mathematics at Goshen College in Indiana.

While completing his graduate degree, Peter investigated open-source nuclear weapons information to analyze clandestine generation of nuclear weapons. This sparked an interest in applying his nuclear expertise to either develop instrumentation to detect and verify nuclear threats or to support the technical basis for nonproliferation policy.

Most recently, Peter was a program assistant at the American Association for the Advancement of Science's Center for Science, Technology and Security Policy. There he researched the scenario of hiding a nuclear explosion in an underground cavity, a topic directly applicable to the Comprehensive Test Ban Treaty. Peter presented this work at the Symposium on Science and World Affairs in Hamburg, Germany and at the University of California's Institute for Global Conflict and Cooperation's Public Policy and Nuclear Threats summer school.



Cameron Stanuch
**Office of Nuclear Safeguards and Security,
Safeguards Policy Team**

Cameron Stanuch holds a master's degree in international policy studies with a certificate in nonproliferation studies from the Monterey Institute of International Studies. There, he studied a range of topics including security in Northeast Asia, Mandarin Chinese, and extremist ideologies. He completed his undergraduate work in studies in war and peace at Norwich University.

Cameron studied at Fudan University in Shanghai as a David L. Boren Fellow, where he also translated Mandarin Chinese articles on that country's nuclear doctrine and force structure. Additionally, he participated in the Next Generation Safeguards Initiative internship at Lawrence Livermore National Laboratory, where he researched China's nuclear cooperation agreements and the International Atomic Energy Agency's Technical Cooperation Program. He also attended numerous National Nuclear Security Administration-sponsored lectures on safeguards technology.

Most recently, Cameron was an associate all-source analyst at BAE Systems, where he covered the nuclear and health sectors of the *Daily Open Source Infrastructure Report* in support of the U.S. Department of Homeland Security.



Victoria Swisher
Office of Nuclear Safeguards and Security,
Safeguards Technology Team

Victoria Swisher is a master's candidate in the nonproliferation and terrorism studies program at the Monterey Institute of International Studies, where she has built a solid understanding of the regimes and core issues in nonproliferation.

Victoria worked at Lawrence Livermore National Laboratory as a Next Generation Safeguards Initiative intern, focusing on policy-related safeguards vulnerabilities as applied to spent fuel at pressurized water reactors. She also worked as a research associate at the Space Studies Board of the National Academy of Sciences, including contributing to congressional testimony on the relationship between the civil space policy program and international security issues.

In 2011, she undertook an internship at the Comprehensive Test Ban Treaty Organization in the Public Information section of the Legal and External Affairs Division. She has a working knowledge of Japanese and lived in Japan for four years.



Anna Tomaskovic-Devey
Office of Global Threat Reduction, European and African
Threat Reduction

Having graduated from the masters of business administration program at the University of Massachusetts, Amherst, Anna Tomaskovic-Devey also holds a master's degree in public policy and administration from the same university. Her master's thesis research was on U.S.

policy on arms control for tactical nuclear weapons and NATO nuclear policy. She completed her undergraduate degree in Russian and East European studies at the University of North Carolina, Chapel Hill.

Throughout her educational career, Anna studied the federal budget process, budget management, managerial accounting, organizational behavior, management science, statistics, and economics. She also cultivated a broad understanding of the former Soviet states, in part through studies at the Moscow State University of International Relations. She has a working knowledge of Russian and Spanish.

Anna interned at the British American Security Information Council, Washington, D.C., where she researched Iran's nuclear program. Additional internship experience includes the NATO International School of Azerbaijan, where she worked directly with the Azerbaijan Ministry of Foreign Affairs and NATO Public Diplomacy Division while developing and implementing nongovernmental organizational activity within the NATO International School of Azerbaijan.



Kyler Turner
Office of Global Threat Reduction, European and African
Threat Reduction

Kyler Turner, a Ph.D. candidate in mechanical engineering at the University of Missouri, holds mechanical engineering and nuclear engineering master's degrees from the University of Missouri.

After completing his undergraduate studies, Kyler began work on a project related to the production of molybdenum-99 at the University of Missouri research reactor; his work for the project continues to include creating models that describes the thermal-mechanical behavior of new low enriched uranium. He expanded that project into an internship at the Y-12 National Security Complex in Oak Ridge, Tennessee, where he became intrigued by the field of nuclear nonproliferation, in particular reducing nuclear armaments and materials. These experiences provided him with a background in the high-performance research reactors and molybdenum-99 convert programs that come under NNSA's Global Threat Reduction organization.

Kyler was vice president of the American Society of Mechanical Engineers from 2006 to 2007, and he was an assistant regional conference director in 2008. He is also an associate member of Sigma Xi: The Scientific Research Society.



Dawn Verdugo

Office of Nuclear Controls, International Nonproliferation Export Control Program

Dawn Verdugo graduated from the nonproliferation and terrorism studies program at the Monterey Institute of International Studies (MIIS) in May 2011, where she focused on nuclear nonproliferation issues centered on the Russian Federation and countries of the former Soviet Union. At MIIS, she founded the Science Within Policy Working Group—comprised of scientists and policy-analysts seeking to build bridges in communication between these different disciplines that work on shared policy issues. She also created and co-instructed the “Science and Technology of WMDs for Policy Analysts,” a first of its kind required course for Masters candidates at MIIS, which focuses on the fundamental science underpinning nonproliferation and terrorism studies.

A Ph.D. chemist, Dawn worked as a scientist and project manager for seven years, including serving as a global project manager for one of the largest international biopharmaceutical companies in Moscow, Russia. She also volunteered in Kazakhstan through the U.S. Peace Corps as an English and biochemistry instructor at the Aktobe Pedagogical Institute. She is a competent Russian speaker.

Dawn is interested in strengthening cooperative dialogue between scientists and policy makers focused upon the political and scientific aspects of nonproliferation research and nuclear safeguarding of advanced nuclear fuel cycle technologies. This interest led to her participation in the National Security Internship Program at the Pacific Northwest National Laboratory, where working in the radiochemical processing laboratory, she helped develop novel online, real-time safeguarding technologies for reprocessing of spent nuclear fuel. At MIIS, she also serves as a subject matter expert in chemistry and radiochemistry for a multidisciplinary project assessing local and state public health preparedness for chemical, radiological, and nuclear emergencies with the University of California Berkeley, School of Public Health.



Jamie Warburton

Office of Nonproliferation Research and Development

Jamie Warburton, was awarded a Ph.D. in radiochemistry from the University of Nevada, Las Vegas. She studied nuclear physics, radiation detection technology, weapons technology and policy, radiochemistry, reprocessing, and American foreign policy.

Jamie completed her undergraduate work at the Massachusetts Institute of Technology, majoring in nuclear science and engineering, where she researched pebble bed reactors, studied nuclear fuel modeling, and helped design a breeder/burner reactor. She is a Domestic Nuclear Detection Office and Defense Threat Reduction Agency Nuclear Forensics Graduate Fellow.

Jamie has completed internships at Idaho National Laboratory, Argonne National Laboratory, General Atomics, Archimedes Technology Group, and the Massachusetts Institute of Technology’s Department of Nuclear Science and Engineering.



Sarah Weiss

Office of Nuclear Safeguards and Security, Nuclear Security Team

Sarah Weiss graduated from the Security Studies Program at Georgetown University in May 2011, where she studied nuclear nonproliferation and arms control with a focus on the former Soviet Union. She received a graduate certificate in Eurasian, Russian, and East European studies, and she has a basic knowledge of Russian.

In 2010, she interned at the U.S. Department of State's Bureau of International Security and Nonproliferation via the Export Control and Related Border Security program. Previously, she provided analytical support on nuclear and political issues as an intern at the Center for Arms Control and Nonproliferation and the Arms Control Association. She also supported analysis on regional geopolitics at the Georgian Foundation for Strategic and International Studies in Tbilisi, and for the Foreign Affairs Committee of Georgia's parliament.

Beginning in 2006, Sarah worked for BAE Systems (previously DFI International / Detica) where, among other things, she provided analytical, training, and outreach support to the U.S. Department of Homeland Security as well as state and local homeland security agencies.

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