



CLASS OF 2018–2019

**National Nuclear Security Administration**  
**Graduate Fellowship Program**  
**2018–2019 Annual Report**



**Pacific Northwest**  
NATIONAL LABORATORY

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## Cover Photo

**Back row, from left:** Cameron Douglas, Nikolas Economy, Colton Oldham, Jonathan Gill, Adria Peterkin, Mark Walker, Daniel Edward T. Enriquez, Joshua Cunningham, Kristen Townsend, Sarah Pevey, John Fenton, Jessica Hartman

**2nd row:** Isabelle Weisman, Bobby Wetherington, Matthew Tweardy, Jon Vreede, Merritt Earle, Catherine Kuhnheim, Matthew Marsh, Michael Sharp, J. Seth Dustin, Lauryn Williams

**3rd row:** Gabriella King, NNSA NGFP Federal Program Manager Dr. Dave Rude, Savannah Blalock, Lora Dushanova, Sarah Fenn, Jared Godby, Mary Soule, Candace Harris, Maeghan Brundrett, Victoria Sanchez, Margaret Williams, Allan Martin, Tedros Abraham

**4th row:** Eric Matthews, Dale Karas, Sarah Sarnoski, Thais A. Ramo, Tyler Cousins, Hannah Buffenbarger, Kyle Pilutti, Karen Ventura, Ramon Reyes Rodriguez, Zoe Chicketti, Juliette Bronchtein, PNNL NGFP Program Manager Melanie Godinez

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# *A Message from NNSA Leadership*

## **Enabling the NNSA Mission While Building the Leadership Continuum with Exceptional Talent**

At the U.S. Department of Energy's (DOE's) National Nuclear Security Administration (NNSA), our people are our number one asset. With our ever-evolving national and international security landscape, our workforce—just like our technology and policies—must be adaptable and resilient. Through the NNSA Graduate Fellowship Program (NGFP), we develop high-potential professionals to strengthen our nation through nuclear security.

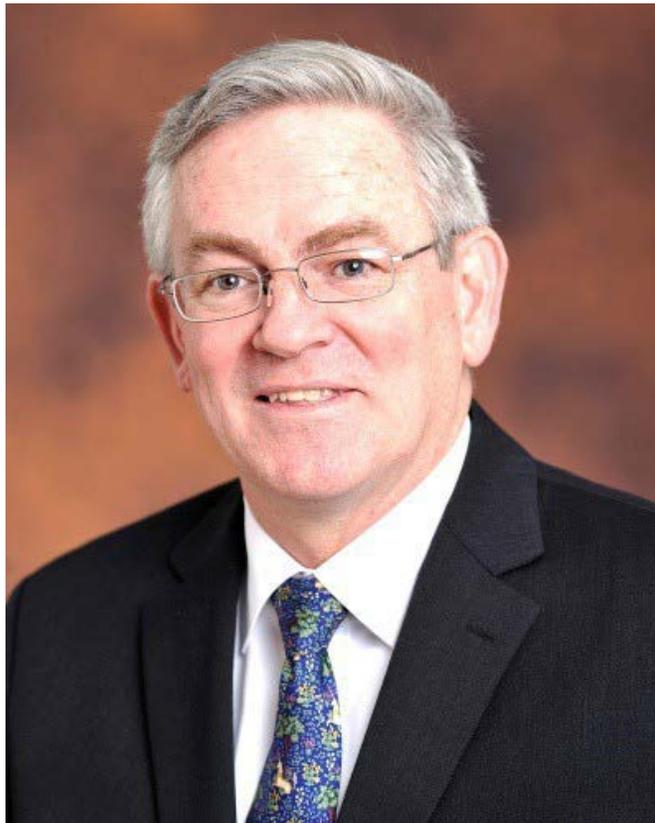
From its humble beginnings over 20 years ago, NGFP has become a robust and renowned institution for recruiting, developing, and retaining top talent in the Nuclear Security Enterprise. I have been privileged to work with this program for many years and witnessed the program's evolution. In this report, you will read about the Class of 2018-2019, 45 fellows hand-picked from 31 universities around the world to serve in program, functional, and field offices across our organization and the Department of State (DOS).

In just one year, our fellows made valuable programmatic contributions in some of our key efforts, including:

- Providing outstanding operational support to our partners at events worldwide;
- Evaluating the use of new software and other tools to achieve mission objectives;
- Assisting with assurance visits and vulnerability and threat assessments to advance radiological and nuclear incident response capabilities;
- Coordinating portfolios and engagements with different international partners; and
- Participating in development of the Stockpile Stewardship Management Plan (SSMP).

Upon completing their fellowships in June 2019, nearly a quarter of the fellows joined our NNSA team as federal employees, and the vast majority of the total class remained within national security.

Our fellows' commitment to grow as leaders revitalizes our Nuclear Security Enterprise to sustain our critical national and nuclear security missions. I would like to thank all our program participants for their commitment to serve and to uphold the values of this long-standing program.



**Frank Lowery**  
Associate Administrator for Management and Budget  
National Nuclear Security Administration

# About NGFP

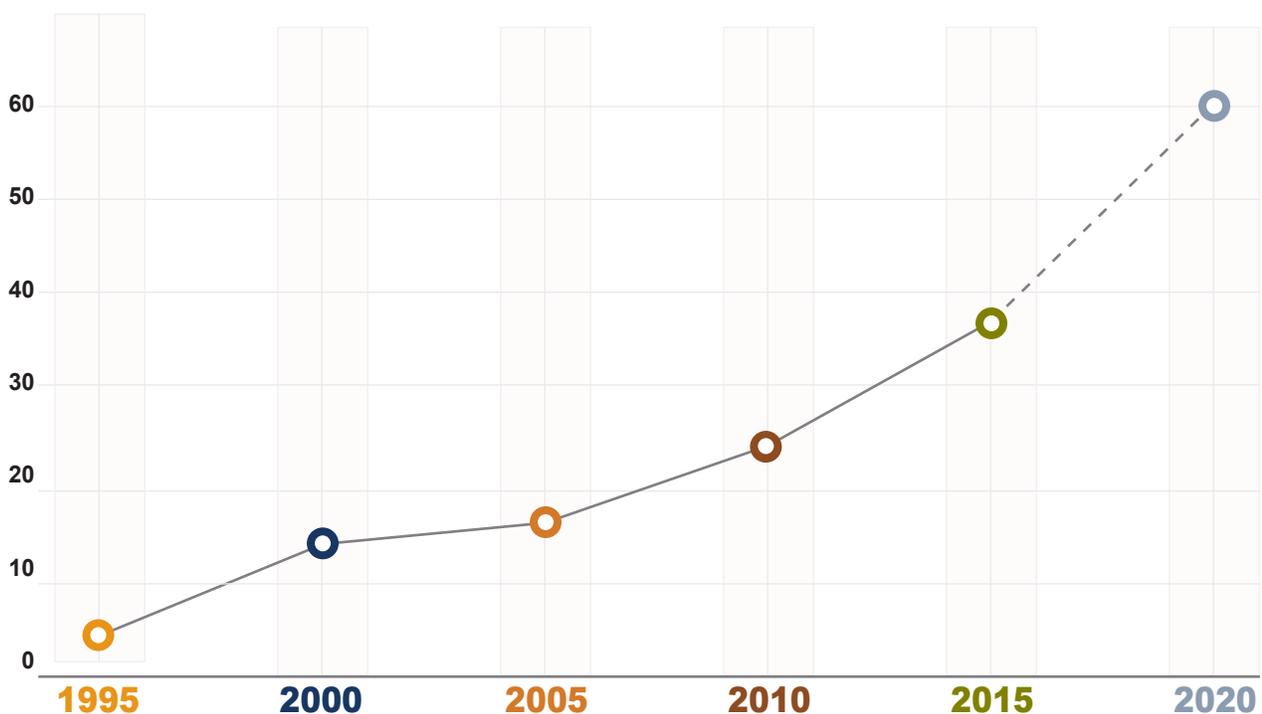
As a centerpiece of its future leadership strategy, NNSA sponsors and funds the NGFP. The program is administered by Pacific Northwest National Laboratory (PNNL), a DOE national laboratory specialized in recruiting next-generation talent for national security missions.

As a model program within NNSA, NGFP identifies and develops exceptional future leaders through a best-in-class program management approach designed to:

- Recruit exceptional graduate students from top universities,
- Transform and develop students into future leaders to advance NNSA and national security missions, and
- Provide an agile approach to meet dynamic NNSA needs.

The demand for fellows has evolved with the NNSA's increasing need for leading-edge talent in diverse mission spaces. The program has grown from three fellows in 1995 to 60 anticipated in 2020 with placements across various program and site offices.

Number of Fellows by Class Year



In over 20 years of operations, increased demand resulted in an increased number of fellows per year.

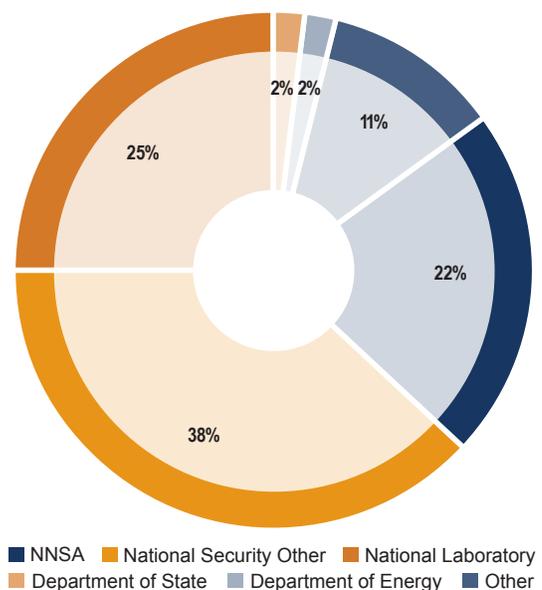
## Executive Summary

Since the early 1990s, NGFP has been hiring high-performing graduate students to grow as future leaders for DOE's NNSA. This annual report showcases activities for the Class of 2018-2019, from outreach in spring of 2017 through assignments that ended in June 2019.

Key accomplishments include:

- **Recruitment.** NGFP received more than 230 completed applications and conducted over 370 interviews with 144 candidates over two weeks.
- **Hiring.** NGFP hired 45 master's and doctoral-level students with diverse technical and policy backgrounds from 31 different universities. Detailed biographies of all of the fellows are available at the end of this report.
- **Mission Impact.** The fellows were placed with 11 different program, functional, and field offices across DOE, NNSA, and DOS where they gained hands-on experience contributing to technical and policy mission needs, including the following:
  - Preparing NNSA senior leaders for their participation in diverse events around the world such as Austria, China, England, and Peru;
  - Creating a tool for tracking hundreds of milestones across multiple SSMPs;
  - Conducting oversight activities in several areas, such as stockpile stewardship, safeguards and security, and infrastructure;
  - Aiding NNSA's Nuclear Smuggling Detection and Deterrence (NSDD) Program in working more efficiently with other partners such as the International Atomic Energy Agency (IAEA), European Union, and Canada;
  - Supporting the Minority-Serving Institutions Partnership Program (MSIPP) technical meeting, another key effort to build NNSA's future talent pipeline;
  - Participating on U.S. delegations in places such as Timor-Leste for the International Nuclear Safeguards Outreach Workshop and at the London Plenary meeting of the International Partnership for Disarmament Verification; and
- Bolstering their skills and networks through conferences, training, and other events like the Consortium for Verification Technology annual workshop, the Carnegie International Nuclear Policy Conference, and the International Conference on Radiological Security in Vienna.
- **Leadership & Professional Development.** NGFP hosted a series of program-wide professional development and networking events. Events included a briefing with the House Armed Services Committee and alumni reception with former fellows spanning the program's years of operations. Additionally, fellows completed diverse trainings aligned to their individual assignments and development plans.
- **Lasting Commitment.** Approximately 22% of the class accepted federal offers with NNSA and an additional 70% accepted positions with ties to national security, including with NNSA subcontractors, DOE, DOS, and national laboratories. The Alumni Spotlight at the end of this report also highlights notable alumni who have gone on to serve the NNSA, national security, and STEM (science, technology, engineering, mathematics) community in meaningful ways.

### Class of 2018-2019 Post-Fellowship Employment



Majority of the Class of 2018–2019 accepted positions within national security.

# Background: Securing the Next Government Leadership Generation

NGFP cultivates future technical leaders in national security. Through NGFP, outstanding students with graduate degrees and career interests in nuclear security technology and policy are appointed to program, functional, and field offices across NNSA.

## Mission

NGFP identifies and develops the next generation of exceptional national security leaders to achieve the NNSA mission: Strengthening our nation through nuclear security.

## Vision

NGFP aims to be the U.S. Government's model program for developing and retaining top-level national security leadership talent.

## Impact

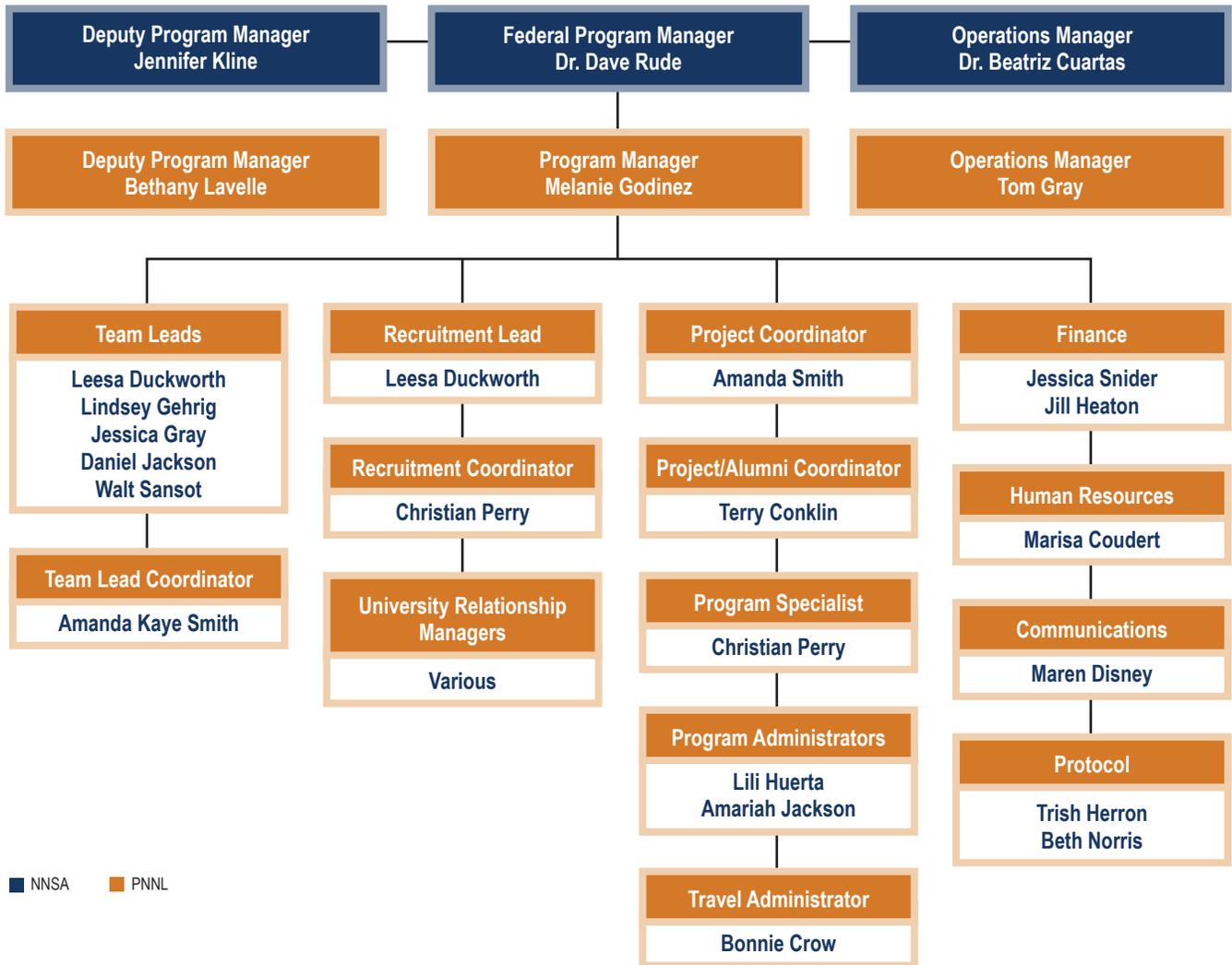
During their one-year assignments, fellows gain unmatched experience through:

- Real-world immersion in nuclear security, technology, and policy;
- Relationships with leading national security experts;
- Hands-on experience in NNSA; and
- Partnering around the globe.



## Organization

NGFP is managed by NNSA’s Office of Management and Budget (blue boxes) and administered by PNNL (orange boxes), with roles shown in the organizational chart.



## Lifecycle

NGFP’s annual lifecycle involves simultaneous planning, administering, and implementing three different fellowship classes: onboarding and administering the **current** class of fellows, recruiting and hiring the **next** class, and recruitment planning for the **future** class.

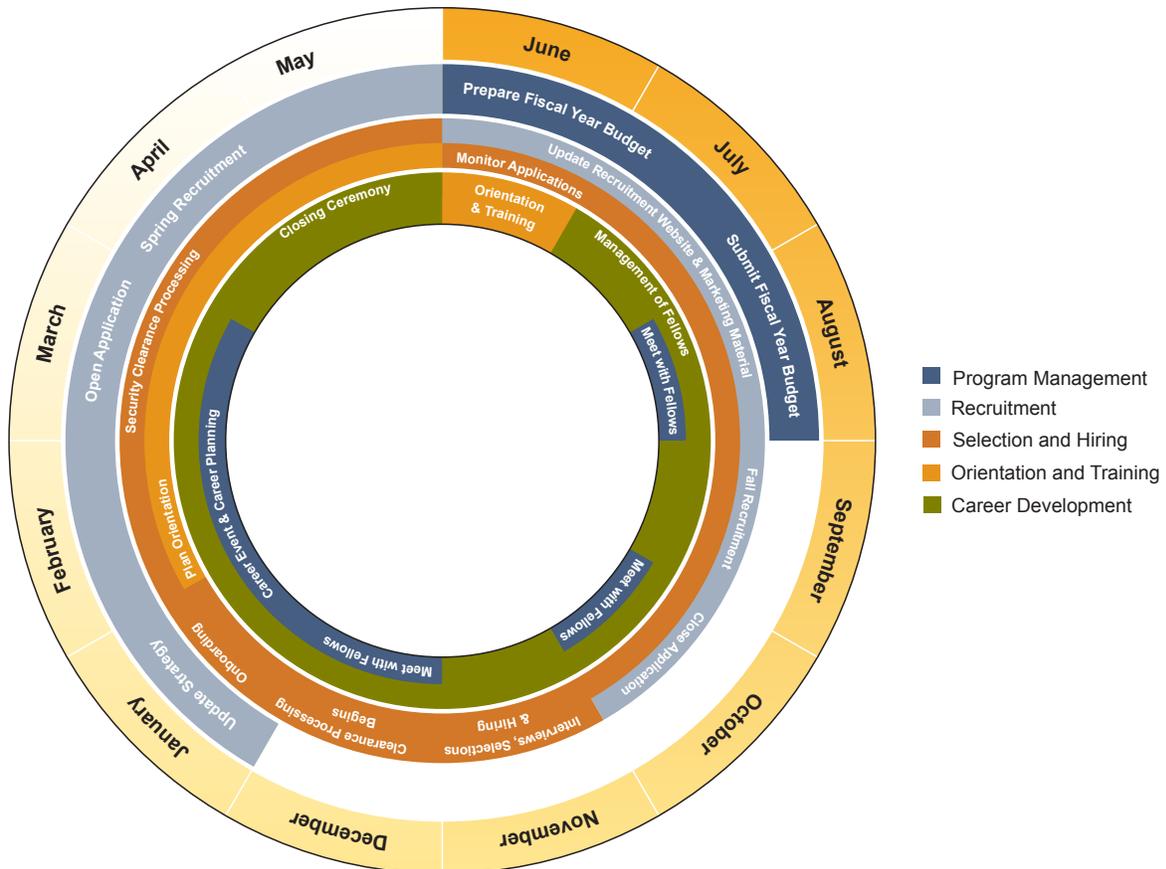


## Responsibilities

The NNSA NGFP Federal Program Manager and PNNL NGFP Program Manager share a unified, best-in-class approach based on a common vision and framework organized into five program elements, as shown below.

### Program Responsibilities

<b>Program Management</b>	Overseeing all aspects of the program, including the budget, strategy, stakeholder engagement, implementation, evaluation, issue resolution, improvements, and reporting.
<b>Recruitment</b>	Developing and implementing an outreach strategy to meet program objectives. This includes conducting an annual NNSA fellow needs assessment, partnering with universities and professional associations for outreach, working closely with prospective candidates to facilitate the application process, and maintaining the online application system.
<b>Selection and Hiring</b>	Preparing applications, coordinating interviews, onboarding fellows, and beginning fellows' security clearance applications.
<b>Orientation and Training</b>	Conducting an extensive orientation to prepare fellows for their assignments and roles in the federal environment.
<b>Career Development</b>	Introducing fellows to career growth opportunities through interactive sessions with professionals in the nuclear security field.



# Methodology: Retaining the Best & Brightest

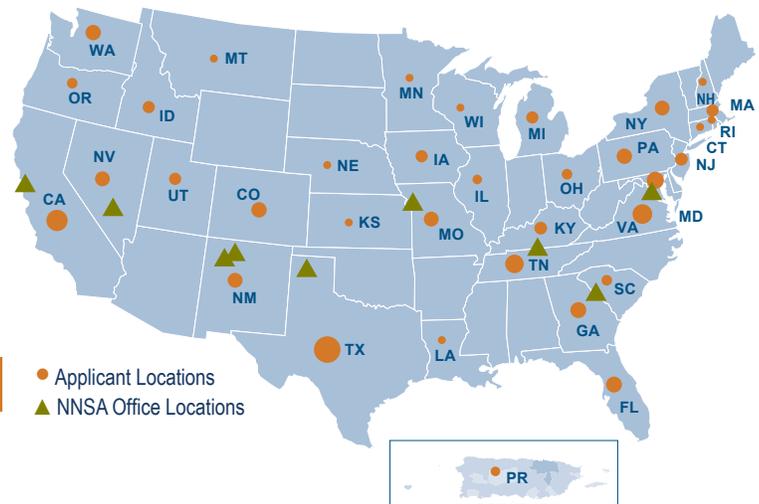
## Recruitment

For the Class of 2018-2019, NGFP sought to recruit a quality pool of candidates for a targeted class size of 50 fellows. Outreach included on-campus recruitment events at 54 partner universities and virtual outreach to over 350 schools. NGFP added to its partner list four new minority-serving institutions (MSIs) as on-campus recruitment partners and collaborated with the PNNL team supporting the NNSA Research on the Science and Engineering of Signatures Consortium and the MSIPP.

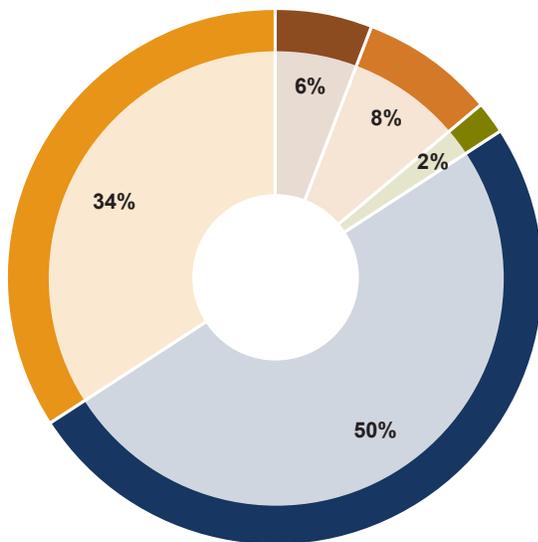
Throughout the spring and fall quarters, the NGFP recruitment team deployed to universities nationwide to participate in information sessions, faculty meetings, diversity-focused student meetings, and collaborations with student organizations. The recruitment and relationship building resulted in 237 completed applications, of which 77% were recruited from on-campus university partners.

## Applicants

Applicants were sourced from across the country and from locations near NNSA offices. In the applicant map at right, the yellow dots indicate application location; the size of the dot reflects the proportion of total applications completed per geographical area. Triangles indicate NNSA office locations.



**Applicant Map**



■ Technical 
 ■ Business 
 ■ Hybrid 
 ■ Other 
 ■ Policy

**Applicant Backgrounds**

Applicants with technical (STEM) degrees comprised 34% of the applicant pool, an increase of 4% over the previous year. Policy-focused applicants (political science, public/international policy, and related degrees) comprised 50% of the pool. Hybrid applicants, those with a master’s degree in a technical field and an undergraduate policy or business degree, totaled 8% of the applicant pool. The Other category included degree types of which NGFP accepts applications but does not target, such as Juris Doctor. Also within the applicant pool, 25% of applicants had or were completing a doctoral degree, 75% had or were completing a master’s degree, and 2.5% of applicants were from MSIs.

## Selection & Hiring

From the applicant pool, NNSA and DOS selected 144 candidates to interview. NGFP partnered with staff from 45 individual offices to conduct 370 interviews over a two-week period in late 2017. Offers were extended to candidates in December for positions that began in June 2018.

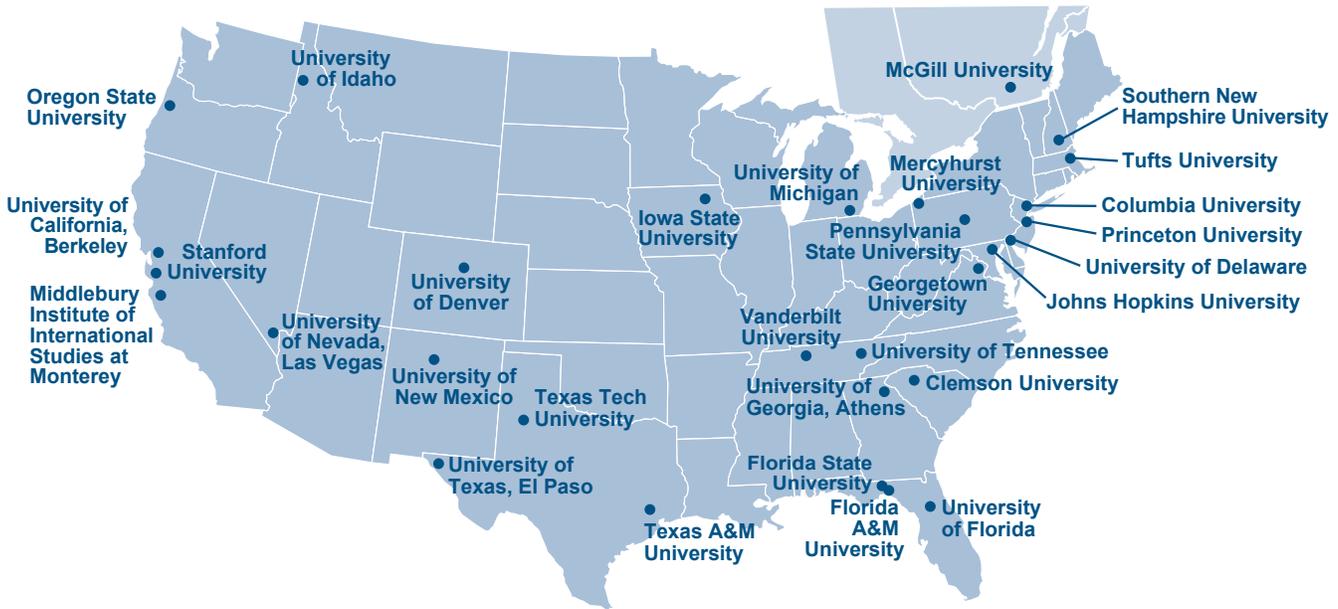
# Results: Delivering Highest Quality Mission Support

Highlights from the fellows selected for the Class of 2018-2019 included the following:

- Graduate degrees completed or in pursuit at 31 universities nationwide, including Puerto Rico, with advance degrees spanning the technology and policy spectrum, including 12 doctoral candidates;
- Assignments spanning 11 different program, functional, and field offices across the NNSA, DOE, and DOS;
- Language skills in Arabic, Bulgarian, English, French, German, Spanish, Russian; and
- Previous experience with the IAEA; U.S. Departments of Agriculture, Defense, State, and Strategic Command; U.S. House of Representatives; and the Brookhaven, Idaho, Los Alamos, Lawrence Berkeley, Lawrence Livermore, Oak Ridge National, and Pacific Northwest National Laboratories.

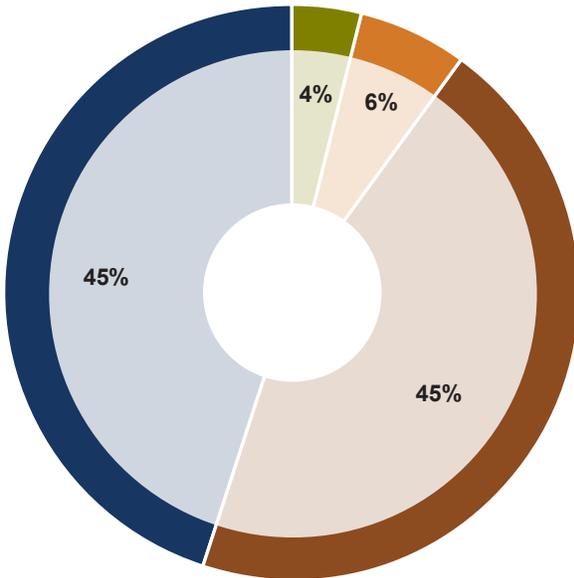
The Class of 2018-2019 fellows hailed universities across the nation.

- Clemson University
- Columbia University
- Florida A&M University
- Florida State University
- Georgetown University
- Iowa State University
- Johns Hopkins
- McGill University
- Mercyhurst University
- Middlebury Institute of International Studies
- Oregon State University
- Pennsylvania State University
- Polytechnic University of Puerto Rico
- Princeton University
- Southern New Hampshire University
- Stanford University
- Texas A&M University
- Texas Tech University
- Tufts University
- University of California, Berkeley
- University of Delaware
- University of Denver
- University of Florida
- University of Georgia, Athens
- University of Idaho
- University of Michigan
- University of Nevada, Las Vegas
- University of New Mexico
- University of Tennessee
- University of Texas, El Paso
- Vanderbilt University



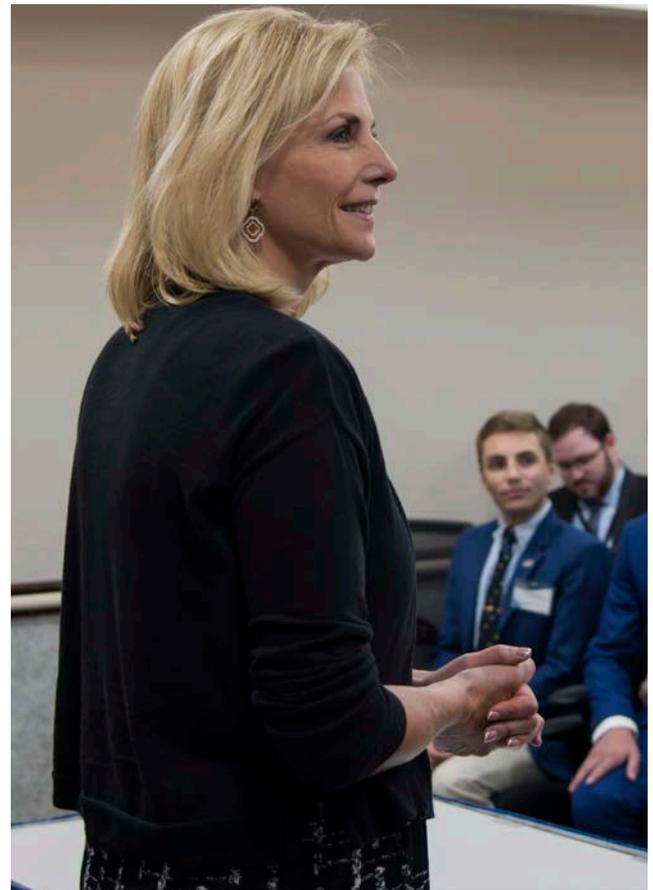
Fellow University Map

Technical fellows (and their hybrid counterparts) held almost 50% of the fellowship positions for the Class of 2018–2019. The remaining fellows held policy/business or other backgrounds.



■ Technical ■ Hybrid ■ Other ■ Policy

### Fellow Backgrounds



## Leadership & Professional Development

Throughout the year, fellows participated in an in-depth orientation, seminars, career development, and networking events across the country. Additionally, fellows partnered with their offices to participate in learning opportunities aligned with their offices' and their individual development needs.

### Orientation

During orientation in June, the fellows spent a week at the PNNL campus participating in briefings with nuclear security leaders and subject matter experts, attending historical and technical tours at the Hanford Site, completing hands-on radiological and nuclear training at the HAMMER training facility, and tackling realistic nuclear security policy challenges in a mock congressional hearing. The cohort also spent two days at NNSA Headquarters in Washington DC, where they heard from leaders from across the NNSA. Featured guest speakers included Randall Hendrickson, former NNSA Associate Administrator for Management and Budget; Frank Lowery, NNSA Associate Administrator for Management and Budget; Dr. Dave Rude, NNSA Chief Learning Officer and NGFP Federal Program Manager; Keith Freier, PNNL Operational Systems and Technology Division Director; and representatives from across the NNSA program, functional, and field offices.

### Trainings, Workshops & Conferences

Fellows used their allotted training funds to build leadership skills and technical expertise through specialized training opportunities and attendance at conferences and workshops across the nation, including the following:



**The career fair was very helpful for giving myself and others exposure to sites/hiring managers.**

**—Maeghan Brundrett**

- Nuclear Nonproliferation Industrial and Commercial Reactors course at Argonne National Laboratory;
- Workshop on Applied Nuclear Data Activities focused on the nuclear data needs and potential solutions for nuclear energy, nonproliferation, isotope production, and stewardship science;
- Public Policy and Nuclear Threats Boot Camp at the University of California San Diego;
- International Meeting on Reduced Enrichment for Research and Test Reactors in Edinburgh, Scotland;
- Consortium for Verification Technology annual workshop in Michigan;
- Carnegie International Nuclear Policy Conference;
- Digitization of Weapons of Mass Destruction Workshop, which explored the impact of digital components of emerging technologies and the effect on WMD use and security;
- Nuclear Incident Response Expo hosted by the Nuclear Counterterrorism and Counter Proliferation Office at Los Alamos National Laboratory; and



Fellows at the historic Hanford B Reactor.



Fellows during a mock congressional hearing.

- Radiation Detection System Maintenance Management Best Practices Workshop in Lima, Peru.

Fellows also helped their offices and senior leaders prepare for and participate in events around the world, including the following:

- Participating in a workshop for Indian Customs officials at the National Academy of Customs, Indirect Taxes & Narcotics in Faridabad, India;
- Attending key stakeholder meetings in Jordan at the European Research Reactor Conference, a key event for the research reactor community;

- Preparing for and attending the IAEA Conference on Security of Radiological Material in Vienna, Austria;
- Traveling to Timor-Leste as a member of the DOE/ NNSA delegation for an International Nuclear Safeguards Outreach Workshop;
- Participating as a U.S. delegation member to the London Plenary meeting of the International Partnership for Disarmament Verification; and
- Joining the International Nuclear Safeguards Engagement Program team at the annual meeting in Ispra, Italy.



**I enjoyed many of the tours that helped me understand other aspects of the Nuclear Security Enterprise and NNSA’s offices. I also really enjoyed the foreign language training, the tuition assistance, and travel opportunities for which I was able to use very well!**

**—Dale Karas**



Fellows at the HAMMER training facility in Richland, WA.



## Leadership Briefings

On October 9 and 10, the fellows attended a two-day professional development event that included tours of the White House, Remote Sensing Laboratory at Andrews Air Force Base, and the Defense Threat Reduction Agency; a luncheon with NNSA Deputy Administrator of Defense Nuclear Nonproliferation Dr. Brent Park; a Congress 101 overview with PNNL government affairs professionals Ryan Eddy and Josh Shiode; and a briefing with House Armed Services Committee professional staff member Leonor Tomero. This was the first of several career events to be hosted by PNNL during the year to help fellows network with the broader nuclear security community.

## Career Skills Workshop

At the Career Skills Workshop January 29–30 in Washington DC, fellows met with PNNL staffing consultants regarding tips for résumé writing and interviews and interviewed with employers regarding potential post-fellowship opportunities. Presenters included representatives from NNSA, PNNL, Argonne National Laboratory, Sandia National Laboratories, Los



**As someone with a technical background, meeting with other labs and managers was helpful. I learned more about what the different labs did, outside of my office's area.**

—Allan Martin

Alamos National Laboratory, Idaho National Laboratory, Kansas City National Security Campus, Lawrence Livermore National Laboratory, the Center for Naval Analysis, Brookhaven National Laboratory, Oak Ridge National Laboratory, the Defense Threat Reduction Agency, Y-12 National Security Complex, and Culmen International.

Fellows also attended the first-ever NNSA-wide job fair in Arlington, VA. This energizing one-day hiring event featured representatives from each of NNSA's mission spaces and every one of its laboratories, plants, and sites—all looking to fill both federal and contractor positions in a variety of career fields across the country. Fellows had the opportunity to visit information booths, meet with NNSA representatives, and explore additional post-fellowship career options within the NNSA.



Fellows at the Career Skills Workshop.



Fellows at a briefing with the House Armed Services Committee.



## Closing Ceremony & Alumni Reception

The class celebrated the completion of its assignments at the closing ceremony and alumni reception in Washington DC on May 31. Guest speakers included keynote speaker The Honorable Lisa E. Gordon-Hagerty, DOE Under Secretary for Nuclear Security and NNSA Administrator; Frank Lowery, NNSA Associate Administrator for Management and Budget; and Dr. Daniel L. Stephens, Jr., PNNL Director of NNSA Programs. Following the ceremony, fellows had an opportunity to showcase accomplishments from their fellowship in an open networking and poster session that welcomed NGFP alumni and leaders from across the Nuclear Security Enterprise.



Fellows celebrate the completion of their fellowship.



Lisa E. Gordon-Hagerty, DOE Under Secretary for Nuclear Security and NNSA Administrator, speaks with fellow Mary Soule at the NGFP alumni reception.



The career event organized by PNNL in which fellows were exposed to other labs and various contractors was very helpful in learning about different opportunities I had not previously considered.

—Lora Dushanova

## Featured Fellows

Throughout the year, the NNSA Fellow Features series highlighted fellows' experiences. Visit the NNSA news website at <http://nnsa.energy.gov> to hear more from fellows Mark Walker, Dr. Bella King, Matthew Tweardy, Josh Cunningham, Margaret Williams, Sarah Pevey, Karen Ventura, Juliette Bronchtein, Zoe Chicketti, Lauryn Williams, Merritt Earle, Ramon Rodriguez, Candace Harris, and Thais A. Ramo. Additionally, several fellows shared how their teachers and STEM education impacted their career trajectory and passion in the article "Teachers of now -NNSA fellows inspire passion, gratitude, and perseverance" (<https://buff.ly/2W7wRbi>).

# NGFP Class of 2018–2019 By the Numbers

**45**

FELLOW  
GRADUATES

**31**

UNIVERSITIES  
REPRESENTED

**45%**

FELLOWS WITH  
A TECHNICAL  
BACKGROUND

**45%**

FELLOWS WITH A POLICY/  
BUSINESS BACKGROUND

**4%**

FELLOWS WITH A HYBRID  
TECHNICAL-POLICY  
BACKGROUND

**~230**

APPLICANTS

**~370**

INTERVIEWS

**140+**

CANDIDATES

**500+**

ALUMNI TO DATE

**22%**

FELLOWS ACCEPTED  
FEDERAL POSITIONS  
WITH NNSA

**70%**

FELLOWS ACCEPTED  
POSITIONS TIED TO  
NATIONAL SECURITY  
(I.E., DOE, DOS  
& NATIONAL  
LABORATORIES)

**11**

DIFFERENT PROGRAM,  
FUNCTIONAL & FIELD  
OFFICES SUPPORTED  
BY FELLOWS (PLUS DOS)

## Mission Impact

The following are highlights from fellows' assignments.

**Tedros Abraham, NA-211 Office of International Nuclear Security**, supported the office's mission through both the program management and the support of the strategic review of the office structure and mission.

**Savannah Blalock, NA-24 Office of Nonproliferation and Arms Control**, served on the delegation for a nuclear safeguards engagement workshop in Timor-Leste and contributed to NA-24's Treaty on the Nonproliferation of Nuclear Weapons and Nuclear Suppliers Group work by reviewing technical and policy studies.



Savannah Blalock (second from the right) with the U.S. delegation and Timorese participants with the U.S. Ambassador at the International Nuclear Safeguards Outreach Workshop for Timor-Leste.

**Juliette Bronchtein, NA-20 Office of Defense Nuclear Nonproliferation Front Office**, served as the point of contact for Defense Nuclear Nonproliferation with other DOE/NNSA offices, Embassies, foreign partners, and laboratories, plants, and sites.



The Global Security Exchange conference provided an opportunity to speak with members of the security enterprise and expand my knowledge.

—Zoe Chicketti

**Maeghan Brundrett, NA-SF Sandia Field Office**, provided program management of multiple functions including planning, directing, and evaluating technical program activities, and developing program goals and operation plans for program execution of numerous projects involving Sandia National Laboratories.



Maeghan Brundrett (second from front right) with members of the Programs group from the Sandia Field Office.

**Hannah Buffenbarger, NA-213 Office of Nuclear Smuggling Detection and Deterrence**, supported the continued development of NSDD's Green Border Security Initiative, a new project for a specific smuggling vector that builds the radiation detection capabilities of green border patrols of international partners.



Hannah Buffenbarger at a border crossing point in Eastern Ukraine.

**Zoe Chicketti, NA-40 Office of the Associate Administrator for Emergency Operations**, worked with the NA-84 fellow on consequence management improvement plan and emergency response prescribed agreement assignments between Federal Emergency Management Agency (FEMA) and DOE.

**Tyler Cousins, NA-122.3 Office of the Nuclear Weapon Stockpile, Air-Delivered Weapons Division**, served as a contributing staff member to nuclear weapon program and surveillance activities within the Air-Delivered Weapons Division, including developing a comprehensive risk matrix, producing the Integrated Weapon Evaluation Team Report, conceptualizing positive measures, and assisting in development of headquarters surveillance baseline documents for nuclear weapon stockpile systems.



(Left to right) Kristin Townsend, Benito Herrera, and Tyler Cousins at a testing range in Nevada.

**Joshua Cunningham, NA-APM-1.3 UPF Project Management Office**, in support to the Business Management and Federal Project Director Support Division of the Uranium Processing Facility Project Office, served on a variety of projects that helped to explain and promote the office, including updating the Uranium Processing Facility webpage, presentations, and guidance documents.

**Cameron Douglas, NA-11 Office of Research, Development, Test, and Evaluation**, supported the NA-11 front office through support to the chief of staff, several business process improvements, and leading NA-11's Capital Acquisition process; he also supported congressional affairs and public affairs in NA-EA.

**Lora Dushanova, NA-213 Office of Nuclear Smuggling Detection and Deterrence**, assisted workshop and exercise development, including formulating a new

initiative to support partner countries' local law enforcement and supporting NSDD in working more efficiently with other partners such as the IAEA, European Union, and Canada through the Border Monitoring Working Group.

**J. Seth Dustin, NA-APM-1.5 Chemistry and Metallurgy Research Replacement Project Management Office**, as a member of the NNSA Integrated Project Team for the Radioactive Liquid Waste Treatment Facility Upgrade Project, assisted in the commissioning of the \$87.9M Low-Level Liquid Waste Project and with review of the multi-million-dollar Transuranic Liquid Waste Project design.

**Merritt Earle, NA-83 Office of Nuclear Forensics**, aided in development of program and analysis requirements and reviewed operations plans for the National Nuclear Materials Archive.

**Nikolas Economy, NA-191.1 B61-12 Life Extension Program Federal Program Office**, contributed to many facets of the B61-12 program, from collaborating with NA-121.2 Weapon Security and Control to learning from Sandia National Laboratories subject matter experts about technical issues and their approach to solve them.

**Daniel Edward T. Enriquez, NA-APM-10 Office of Acquisition Management**, worked contracts supporting NNSA's Office of Secure Transportation, including securing the lease of a tactical training facility.



(Left to right) Daniel Edward T. Enriquez, Ramon Reyes Rodriguez, and Jessica Hartman at the Sedan Crater at the Nevada National Security Site.



The fellowship’s first two weeks of training at PNNL and in DC was very helpful in providing a broad overview of the career opportunities within NNSA.

—Joshua Cunningham

**Sarah Fenn, NA-MB Office of Management and Budget**, helped coordinate the MSIPP technical meeting at the University of El Paso, Texas, bringing together the principal investigators at the grant recipient consortia to discuss progress and share best practices.



Sarah Fenn (second from the right) with the student hosts for the 2019 MSIPP technical meeting, Associate Administrator for the Office of Management and Budget Frank Lowery, and NA-MB-40 staff.

**John Fenton, NA-18 Office of Systems Engineering and Integration**, founded the Risk Management Working Group, a Nuclear Security Enterprise-wide organization working toward improving and standardizing risk management practices across the enterprise.

**Jonathan Gill, NA-84 Office of Nuclear Incident Response**, managed a portfolio of interagency partnerships between NA-84, the Department of Homeland Security and FEMA, including the interagency Nuclear Incident Response Team’s projects with FEMA and the Environmental Protection Agency.

**Jared Godby, NA-10 Office of Defense Programs**, provided direct support to the newly confirmed Deputy Administrator of Defense Programs by tracking tasks assigned to staff and ensuring the Deputy Administrator was provided the necessary information and materials to perform the duties of his office.

**Candace Harris, NA-LF Livermore Field Office**, assisted the High Energy and Density group at Lawrence Livermore National Laboratory in performing DANTE measurements.

**Jessica Hartman, NA-LA Los Alamos Field Office**, served as a facility representative in-training and supported oversight activities at Los Alamos National Laboratory.

**Dale Karas, NA-143 Office of Cost Policy and Analysis**, characterized multivariate statistical models and authored events-based simulations that supported programmatic recapitalization and reliability analysis for NNSA life extension programs.



Dale Karas serving as survey commander for the Defense Threat Reduction Agency Defense Nuclear Weapons School Nuclear Emergency Team Operations training.



The Defense Nuclear Weapons School at the Defense Threat Reduction Agency was the most useful. It provided me with a solid base of knowledge.

—Daniel Enriquez

**Gabriella King, NA-123 Office of Technology Maturation**, led an organizational team for an agency-wide workshop focused on additive manufacturing to facilitate the communication among the relevant stakeholders and unite the vision for additive manufacturing within the enterprise.



Gabrielle King (third from left, middle) and other NA-123 office members.

**Catherine Kuhnheim, NA-122.1 Office of Nuclear Weapon Stockpile, Stockpile Services Division**, helped her office to determine how the software GRANTA is useful for organizing and accessing energetic material data, holding multiple meetings with sites using the software to learn its capabilities.

**Matthew Marsh, NA-233 Office of Material Disposition**, played a supporting role in the NNSA's transition to a dilute-and-dispose approach for plutonium surplus disposition, including reviewing engineering reports, schedules, calculations, and other documentation related to the project's expedited implementation.



Matthew Marsh at the Pu-238 National Historic Chemical Landmark dedication ceremony in Aiken, SC.

**Allan Martin, NA-191.2 W88 ALT 370 Program**, focused on overseeing Sandia External Productions' strategic microelectronics and shepherding 10 components to their first production units, with many more of the components on track for the following year.

**Eric Matthews, NA-LF Livermore Field Office**, attended the Workshop on Applied Nuclear Data Activities, where he supported sessions focused on nuclear energy and nuclear safeguards and compiled a report that will be used to guide the DOE's nuclear data activities.

**Colton Oldham, NA-233 Office of Material Disposition**, supported the Surplus Plutonium Disposition Project and the Fast Critical Assembly Disposition Project, including assisting with the design process and essential document reviews.

**Adria Peterkin, NA-191.3 W80-4 Life Extension Program Office**, supported the planning, research, and execution of the weapons program, including developing the NNSA Program Plan and Nuclear Explosive Operational Procedure.



Adria Peterkin at the House Armed Services Committee meeting.



Attending training and participating in project reviews gave me the ability to truly understand the inner workings of the complex.

—Sarah Pevey

**Sarah Pevey, NA-532 Office of Nuclear Material Integration**, focused on a series of projects that examined ways to integrate robotic technology in managing nuclear material.

**Kyle Pilutti, NA-241 Office of International Nuclear Safeguards**, coordinated the North Africa and Western Europe portfolios, overseeing the varying stages of preparation for engagements with different international partners on international nuclear safeguards topics.



Kyle Pilutti (fifth from the left) at a workshop with the Libyan Atomic Energy Establishment on Fundamentals of Information Management for Safeguards Implementation.

**Thais A. Ramo, NA-21 Office of Global Material Security**, participated in the Radiation Detection System Maintenance Management Workshop in Lima, Peru, which welcomed participants from Peru, Dominican Republic, Panama, Argentina, Mexico, Jamaica, Colombia, and Honduras to discuss best practices and lessons learned.



Thais A. Ramo (front left) with participants of the Radiation Detection System Maintenance Management Best Practices Workshop in Lima, Peru.

**Ramon Reyes Rodriguez, NA-LA Los Alamos Field Office**, led a Quality Assurance Management Assessment for the Los Alamos Field Office where over 100 policies and procedures were reviewed.



Ramon Reyes Rodriguez at Los Alamos.

**Victoria Sanchez, DOS-AVC Department of State Office of Arms Control, Verification, and Compliance**, participated as a U.S. delegation member to the London Plenary meeting of the International Partnership for Disarmament Verification, which aims to identify critical gaps and technical challenges in verifying nuclear disarmament.



Victoria Sanchez (second from the front right) and other members of the International Partnership for Nuclear Disarmament Verification at a hardened aircraft shelter, RAF Honington UK.

**Sarah Sarnoski, NA-241 Office of International Nuclear Safeguards**, managed various safeguards technology projects across the DOE complex and coordinated with principal investigators at national laboratories to develop project work plans, meet deliverables, and stay within project scope.



Sarah Sarnoski (second from the front right) with Safeguards Technology and IAEA representatives at the Unattended Cylinder Verification Station project in Richland, WA.

**Michael Sharp, NA-212 Office of Radiological Security**, conducted assurance visits to confirm physical protection upgrades were functioning properly, supported domestic and international programs focusing on securing radioactive materials, and conducted vulnerability and threat assessments.



Michael Sharp (left) on an assurance visit to the Center for Disease Control in Atlanta, GA.



Fellows at the HAMMER training facility.

**Mary Soule, NA-231 Office of Conversion**, supported her office in completing important nuclear nonproliferation work around the world, including Kazakhstan, Scotland, Italy, France, South Korea, Japan, and Jordan.



Mary Soule (left) visiting the Kyoto University Critical Assembly.

**Karen Ventura, NA-22 Office of Research and Development**, helped organize the Open Science by Design Workshop where several laboratories and stakeholders discussed ideas for an Open Science community and the Science Council held at the Nevada Field Office.



Karen Ventura (middle right) at the Nevada National Security Site facility during the Science Council.

**Kristin Townsend, NA-122.1 Office of Nuclear Weapon Stockpile, Stockpile Services Division**, validated the federal requirements for the Lawrence Livermore Independent Diagnostic Scoring System for future deployments.

**Matthew Tweardy, NA-192.2 Domestic Uranium Enrichment Program Office**, was integral to implementation of the Strategic Materials Strategic Collaboration between the U.S. and the UK, planning the initial meeting between U.S. and UK officials to discuss current and future goals for the group.

**Jon Vreede, NA-14 Office of Decision Support**, created a tool for tracking hundreds of milestones across multiple SSMPs; the updated milestones generated by the tool form the basis for milestones discussed in the next SSMP as well as other documents.

**Mark Walker, NA-NV Nevada Field Office**, helped manage federal oversight activities at the Nevada National Security Site in several functional areas, including stockpile stewardship, safeguards and security, and infrastructure.



I took advantage of language training funds and studied Hindi. These classes ended up being really helpful during official travel to India.

—Lauryn Williams



Mark Walker (fourth from the right) with the NA-20 Science Council at the Sedan Crater at the Nevada National Security Site.

**Isabelle Weisman, NA-LF Livermore Field Office,** applied technical skills to a nuclear forensics project and collaborated with safeguards analysts on several related nonproliferation projects.



Isabelle Weisman receiving a certificate of participation for the 2018 Public Policy and Nuclear Threats Bootcamp by former NNSA Administrator, Ambassador Linton Brooks.

**Bobby Wetherington, NA-242 Office of Nuclear Export Controls,** coordinated responses to DOE Policy 485.1 “Foreign Engagements with DOE National Laboratories” for the NA-24 Office of Nonproliferation and Arms Control and helped stand up the Export Compliance Assistance Program.



Bobby Wetherington representing DOE at the Subgroup on Nuclear Export Controls meeting at DOS.

**Lauryn Williams, NA-242.2 Office of Nonproliferation Export Control,** participated in a workshop for Indian Customs officials at the National Academy of Customs, Indirect Taxes and Narcotics in Faridabad, India, where participants learned techniques for delivering Commodity Identification Trainings to their own colleagues.



Lauryn Williams at a March 2019 workshop for Customs officials in Faridabad, India.

**Margaret Williams, NA-10 Office of Defense Programs,** helped manage the communications flow regarding strategic materials and life extension programs with internal and external stakeholders and executed initiatives designed to improve organizational health and performance.

## Conclusion: Retaining Next-Generation Quality Talent

NGFP remains the premier program for bringing passionate and talented graduate-level students into the NNSA and the national security enterprise.



## Where They Are Now

After completing their assignments, the majority of the Class of 2018-2019 accepted positions where they continue to support the global security mission within government, industry, private sector, or academia. The list below indicates the fellows' latest status as of the summer of 2019.

- Tedros Abraham, DOE International Nuclear Energy Policy
- Savannah Blalock, MELE Associates Inc., Contractor to NA-24 Office of Nonproliferation and Arms Control
- Juliette Bronchtein, NNSA NA-23 Office of Material Disposition
- Maeghan Brundrett, Pantex
- Hannah Buffenbarger, McConnor Meade Risk Management LLC
- Zoe Chicketti, Oak Ridge National Laboratory
- Tyler Cousins, Defense Threat Reduction Agency
- Joshua Cunningham, Longenecker and Associates
- Cameron Douglas, ASNER
- Lora Dushanova, Amazon
- J. Seth Dustin, NNSA NA-APM-1.5 Chemistry and Metallurgy Research Replacement Project Management Office
- Merritt Earle, Pacific Northwest National Laboratory
- Nikolas Economy, Los Alamos National Laboratory
- Daniel Edward T. Enriquez, Sandia National Laboratories
- Sarah Fenn, Systems Planning and Analysis
- John Fenton, Nebraska National Strategic Research Center
- Jonathan Gill, MELE Associates Inc., Contractor to NA-84 Office of Nuclear Incident Response
- Jared Godby, NNSA NA-141 Office of Strategic Planning and Programming
- Candace Harris, fellowship to be completed in January
- Jessica Hartman, NNSA NA-LA Los Alamos Field Office
- Dale Karas, NNSA NA-122.3 Office of the Nuclear Weapon Stockpile, Air-Delivered Weapons Division
- Gabriella King, Lawrence Livermore National Laboratory
- Catherine Kuhnheim, Oak Ridge National Laboratory
- Matthew Marsh, NNSA Y-12 site
- Allan Martin, Los Alamos National Laboratory
- Eric Matthews, fellowship to be completed in January
- Colton Oldham, NNSA NA-SV Savannah River Field Office
- Adria Peterkin, General Electric Hitachi Nuclear Energy
- Sarah Pevey, Air Force Civilian Services - Pentagon
- Kyle Pilutti, MELE Associates Inc., Contractor to NA-24 Office of Nonproliferation and Arms Control
- Thais A. Ramo, NNSA NA-21 Office of Global Material Security
- Ramon Reyes Rodriguez, NNSA NA-LA Los Alamos Field Office
- Victoria Sanchez, Department of State
- Sarah Sarnoski, Los Alamos National Laboratory
- Michael Sharp, Oak Ridge National Laboratory
- Mary Soule, NNSA NA-231 Office of Conversion
- Kristin Townsend, Air Force Nuclear Weapons Center
- Matthew Tweardy, NNSA NA-192.2 Domestic Uranium Enrichment Program
- Karen Ventura, Pantex
- Jon Vreede, Culmen International, Contractor to NA-213 Office of Nuclear Smuggling Detection and Deterrence
- Mark Walker, Los Alamos National Laboratory
- Isabelle Weisman, Lawrence Livermore National Laboratory
- Bobby Wetherington, MELE Associates Inc., Contractor to NA-24 Office of Nonproliferation and Arms Control
- Lauryn Williams, MELE Associates Inc., Contractor to NA-24 Office of Nonproliferation and Arms Control
- Margaret Williams, Govini

## Alumni Spotlight

### Sustaining the public service mission



NGFP alumni and early-career employees Jessica Lillo and Kyle Fowler were awarded with the 2019 Linton F. Brooks Medal for Dedication to Public Service in a ceremony at DOE Headquarters.

This annual award recognizes NNSA employees with less than five years of federal experience whose actions and deeds exemplify former NNSA Administrator and Ambassador Linton Brooks' spirit of commitment and achievement. Seven NGFP alumni have now received this honorable recognition.

Jessica was a fellow in the Class of 2015 and now works in the Office of Nuclear Material Removal. Kyle was also in the Class of 2015 and now works in the Domestic Uranium Enrichment Program. Read more about their awards in "NNSA honors two early-career employees" on the NNSA news website (<https://t.co/ijKgvOez5D>).

### Building lasting relationships

Want to travel the world and impact national security? NGFP is often that gateway, and these alumni are positive examples of successful fellows doing just that. Bonnie Canion (Class of 2015), Marissa Moore (Class of 2016), and Victoria Sanchez (Class of 2018) followed their



dreams from the NGFP to their exciting new careers in national security working on such efforts as the International Partnership for Nuclear Disarmament Verification (IPNDV, [www.ipndv.org](http://www.ipndv.org)). The IPNDV develops innovative monitoring and verification solutions through a multinational partnership that includes more than 25 countries with and without nuclear weapons.

Today, Bonnie works as a Research Associate in the Nuclear and Chemical Sciences Division at Lawrence Livermore National Laboratory specializing in radiation detection and characterization for nuclear security and nonproliferation applications. Marissa is a Foreign Affairs Specialist with the DOE/NNSA Office of Nuclear Verification, where she supports arms control treaty implementation and the development, evaluation, and exercising of technical capabilities to enable current and potential future nuclear warhead monitoring and verification initiatives. Victoria is a Foreign Affairs Officer working on strategic arms control in the DOS Office of Strategic Stability and Deterrence.

## Looking Forward

While the Class of 2018-2019 has departed on its post-fellowship journey, the Class of 2019-2020 came aboard in June 2019 as the program's largest class to date. The class features 53 fellows spanning 11 program and site offices plus the Defense Threat Reduction Agency—a first for the program. Stay tuned for highlights from their cohort in the 2019-2020 annual report.

## Continuous Improvement

To enhance its program management approach and deliver a productive experience for fellows and the offices they serve, NGFP launched a mid-year survey for participants. Based on the results, NGFP incorporated the NNSA Aspiring Leadership Certification Program (ALCP) into the program's future leadership and professional development curriculum. ALCP is competency-based leadership program that provides formal training and learning opportunities while also encouraging fellows' self-study. The certificate program runs in a 3-week cohort approach over the course of year and features seven developmental tracks.

Additionally, to enhance recruitment, in 2019 NNSA launched Nuclear Security Enterprise Days to recruit at a campuses nationwide. Representatives from NNSA's laboratories, plants, and sites travelled to top universities to share current federal and contractor career opportunities and explain the exciting missions across the enterprise. Stay tuned at [nnsa.energy.gov](http://nnsa.energy.gov) and [@NNSANews](https://twitter.com/NNSANews) to see when NNSA is visiting a university near you!

The program is always open to building new relationships with new universities, student organizations, and industry partners interested in growing the next generation of national security leaders. If you are interested in learning how you can engage with NGFP, contact [ngfp@pnnl.gov](mailto:ngfp@pnnl.gov).



Fellows at the Class of 2018-2019 closing ceremony.

# Appendix: Class of 2018–2019 Biographies





## **Tedros Abraham**

NA-211 Office of Radiological Security – Washington DC

### **Experience**

- Legislative Aide, Office of U.S. Senator Jeff Merkley
- Graduate Student Consultant, U.S. Strategic Command (STRATCOM)
- State Department Intern, Political – Economic Section, U.S. Embassy Yaoundé
- Community Engagement Coordinator, All Hands Raised

### **Accomplishments**

- Managed a legislative portfolio encompassing foreign affairs, defense, veteran affairs, intelligence, and judiciary issues
- Researched, analyzed, and drafted legislative text; managed relationships with constituent and national advocacy organizations; and represented constituent concerns to the executive branch
- Served on a team of graduate student consultants and prepared management recommendations to restructure and invigorate a workforce to better support STRATCOM's nuclear enterprise
- Staffed joint U.S.-Canadian delegation assisting Cameroon in countering terrorist radicalization in prisons
- Managed Ninth Grade Counts, a network of 8th to 9th summer transition programs spanning more than 20 community partners and reaching over 1,000 students at risk of dropping out of school
- Served on the Executive Board of the Columbia University School of International and Public Affairs Students of Color and the Co-Founder and Executive Board of the school's Progressive Security Working Group
- Participated in the Partnership for a Secure America - Congressional Partnership National Security Program

### **Education**

- Master of International Affairs, International Security Policy and Conflict Resolution, Columbia University
- Bachelor of Arts, Sociology, Portland State University

## **Savannah Blalock**

NA-24 Office of International Nuclear Safeguards – Washington DC

### **Experience**

- Intern, Office of Counterproliferation Initiatives, U.S. Department of State
- Brazil Activities Coordinator, WinShape Foundation
- Intern, Office of Weapons of Mass Destruction Terrorism, U.S. Department of State
- Richard B. Russell Security Leadership Scholar, Center for International Trade and Security
- Intern, U.S. House of Representatives, 10th District of Georgia

### **Accomplishments**

- Participated in a CBRN weapons program with the Center for International Trade and Security, receiving both academic training and the opportunity to conduct research in the field under one of the center's research scholars
- Supported the U.S. Department of State Office of Weapons of Mass Destruction Terrorism, supporting the Global Initiative to Combat Nuclear Terrorism by designing tabletop exercises that led to vulnerable countries developing a stronger capability to prevent, detect, and respond to nuclear terrorism
- Hosted several foreign delegations, planned and executed a roundtable discussion, and wrote cables and memos to communicate within the U.S. Department of State and across government agencies
- Completed a semester at the University of Porto funded by the U.S. Department of State's Portuguese Flagship Program
- Served as President of the School of Advanced International Studies Europe Defense and Intelligence Club, University of Georgia Admissions Office Recruiter, and Executive Director of a campus political organization
- Spent two summers working in Brasilia, Brazil with a nonprofit organization; interpreted between English and Portuguese on daily basis while also directing a team of 16 people and over 100 volunteers to implement a leadership program in local communities
- Familiar with multiple languages: Portuguese (Advanced), French (Intermediate Low), Spanish (Reading Only)



# Class of 2018-2019

### Education

- Master of Arts, International Relations and International Economics, Johns Hopkins University School of Advanced International Studies
- Bachelor of Arts, International Affairs and Political Science, University of Georgia



### Juliette Bronchtein

NA-20 Front Office, Office of Defense Nuclear Nonproliferation – Washington DC

### Experience

- Consultant to the Max Bell School of Public Policy at McGill University
- Graduate Research Fellow, Center for International Peace and Security Studies
- Intern, Bureau of International Security and Nonproliferation, Office of the Biological Policy Staff, U.S. Department of State
- Research Intern, United Nations Office at Geneva, Joint Inspection Unit
- Energy Policy Consultant, Siemens Canada Ltd.
- Advocacy Intern, Social Justice Connection
- Teaching Assistant, Department of Political Science, McGill University
- Junior Research Fellow, NATO Association of Canada

### Accomplishments

- Designed the curriculum of the inaugural Master's in Public Policy degree offered by the Max Bell School of Public Policy at McGill University, based on market research
- With the U.S. Department of State, incorporated information from technical and political sources to coordinate U.S. multilateral efforts on the Biological Weapons Convention
- Worked with the Joint Inspection Unit of the United Nations Office at Geneva and researched provided recommendations to UNIDO on improving best practices, strategic planning, and executing core functions
- Collaborated with engineers to build a policy attentive to emergent technologies and to the politics of energy agreements and dual-use research concerns
- Fluent in French and English—translated for ArtWorks Projects Documentary: The Prosecutors, Sirona Biochem, and Social Justice Connection
- Published on the NATO website on topics relating to Emerging Security; "The Evolution of Lone Wolf Terrorism" was republished by the Mackenzie Institute

### Education

- Master of Arts, Political Science, Concentration in International Relations, McGill University
- Bachelor of Arts, Political Science and International Development Studies, McGill University

### Maeghan Brundrett

NA-SFO Sandia Field Office – Albuquerque, NM

### Experience

- Research Assistant, Department of Civil, Environmental and Construction Engineering, Texas Tech University
- NASA Earth and Space Science Fellow, Department of Civil, Environmental and Construction Engineering, Texas Tech University in Conjunction with NASA
- Teaching Assistant/Instructor of Record, Department of Civil, Environmental and Construction Engineering, Texas Tech University
- Research Assistant, College of Education, Texas Tech University

### Accomplishments

- Participated in projects with national, state, and local agencies including the Texas Department of Transportation, NASA, and the Louisiana Oil Spill Coordinators Office
- Collected field samples used in developing a bioremediation tool used to remediate sensitive anaerobic environments contaminated by the Deepwater Horizon oil spill



- Applied environmental geochemical processes to understand complex systems, such as the Martian soils systems and terrestrial environments containing oxy-chlorine compounds
- Volunteered with outreach programs including the Army Research and Engineering Apprenticeship Program and Science, It's a Girl Thing to promote science and engineering especially in underrepresented groups
- Served as the student representative for the Civil, Environmental, and Construction Engineering Departmental Safety Committee and Graduate Student Grievances Council
- Registered Engineer in Training in Texas, No. 58001
- Received the NASA Earth and Space Science Fellowship, Achievement Rewards for College Scientists Scholar, and the Helen DeVitt Jones Excellence in Graduate Teaching Award

### Education

- Doctor of Philosophy, Civil Engineering (Specialization Environmental Engineering), Texas Tech University
- Master of Science, Civil Engineering, Texas Tech University
- Bachelor of Science, Geosciences, Texas Tech University

## Hannah Buffenbarger

NA-213 Office of Nuclear Smuggling Detection and Deterrence – Washington DC

### Experience

- Systems Analysis R&D Graduate Intern, Sandia National Laboratories
- Arabic Language Lab Preceptor, Macalester College

### Accomplishments

- Completed a graduate capstone project at Texas A&M on the use of unmanned aerial systems by non-state actors, concluding with several briefings at Fort Meade
- Drafted and developed a range of projects at Sandia National Laboratories including an internal-use domestic terrorism database, a primer on consumer-grade unmanned aerial systems, and a portfolio reviewing the long-term trajectory of transportation research in the United States
- Researched black market supply chains, port securitization, and transnational criminal networks during undergraduate work at Macalester College
- Attended Middlebury College's Language Immersion Program in Amman, Jordan, a three-month overseas study in Modern Standard and Levantine Arabic
- Served two years as a language laboratory instructor for beginning and intermediate-level Arabic students at Macalester College in St. Paul, Minnesota
- Served as Graduation Committee Chair, acting liaison to the Texas A&M University administration in planning The Bush School of Government and Public Service's graduation events and final ceremonies
- Served on the Association of Former Students Distinguished Achievement Award Selection Committee, nominated to assist in the selection of a faculty recipient for the Texas A&M Association of Former Students' Distinguished Achievement Award, which recognizes excellence in teaching and research

### Education

- Master in International Affairs, Texas A&M University
- Bachelor of Arts, International Studies, Macalester College

## Zoe Chicketti

NA-40 Office of Nuclear Material Integration – Washington DC

### Experience

- Education Intern, Department of Defense (Center for the Study of Weapons of Mass Destruction)
- Response Team Member, American Red Cross Disaster Action Response
- Student Co-Op, United States Postal Service: Mission Support
- Team Lead, Transportation Management Services
- Owner, Little Z Concessions
- Manager, Dayton Area Amusements



# Class of 2018-2019

- Human Resources Assistant, College of Public Health
- Legislative Research Committee Intern, Representative Stan Lee

### Accomplishments

- Completed graduate studies focused on emergency and disaster management through risk assessment, preparedness, mitigation, response, and recovery
- Interned with the National Defense University for the Center for the Study of Weapons of Mass Destruction
- Participated in coordinating the inaugural transportation of President Trump's colleagues
- Worked in the central dispatch office coordinating the response of 650 coach buses to respond to Hurricane Harvey in San Antonio and Houston, to help evacuate citizens
- Coordinated the activation order of 500 buses for Hurricane Irma, for the potential evacuation of South Carolina
- Researched smoking laws in other states to provide information to legislative representations, which resulted in the laws not being passed
- Attended the ASIS International Security Conference, learning about the impact of cybersecurity and national security
- Served as Phi Alpha Delta Pre-Law Fraternity President and Fraternity Treasurer

### Education

- Master of Professional Studies, Emergency and Disaster Management, Georgetown University
- Bachelor of Arts, Business Communication and Political Science, University of Kentucky

## Tyler Cousins

NA-122.3 Air-Delivery Weapons Division – Albuquerque, NM

### Experience

- Graduate Student Research Assistant, Detection of Nuclear Nonproliferation Group, University of Michigan
- Community and Field Organizer, Generation Atomic
- Field Organizer, Armstrong County Republican Committee
- Research Assistant, Republican National Committee Protest, Penn State
- Research Assistant, Center for American Political Responsiveness Project, Penn State
- Senatorial Intern, Health Care Committee, PA Senator Pat Toomey, U.S. Senate, Washington DC
- Congressional Intern, Transportation & Infrastructure, Oversight & Investigations Committee, PA Congressman Bill Shuster, U.S. House, Washington DC

### Accomplishments

- Completed an International Safeguards Inspector Training Course at Oakridge National Laboratory
- Served as the President of the Alpha Nu Sigma Nuclear Engineering Honor Society and organized the society's first-ever Energy Policy Debate, bringing opposing academic communities together to discuss their research and further the energy policy discussion
- Worked for a pro-nuclear energy nonprofit, Generation Atomic, as a Penn State Campus Organizer, effectively running the ground game for nuclear advocacy in the Central Pennsylvania region
- Demonstrated proficiency in engineering coding software (such as Mathematica, UNIX, Simulink, MATLAB, and Monte Carlo N-Particle) and laboratory and research experience with both analog and digital detection systems
- Worked on a PNNL-funded research project aiming to improve verification methods for the Comprehensive Test Ban Treaty
- Helped optimize radionuclide detection devices and conducted comparative testing of the current plastic to stilbene alternatives in organic scintillators
- Delivered introduction to R-Studio and dataset lectures and taught students how to present and interpret data

### Education

- Master of Science, Nuclear Engineering, University of Michigan
- Bachelor of Science, Nuclear Engineering, Pennsylvania State University
- Bachelor of Science, Political Science, Pennsylvania State University





## Joshua Cunningham

NA-APM 1.3 CMRR Project Management Office – Oak Ridge, TN

### Experience

- Adjunct Instructor, Interpersonal, Organizational, and Media Communication, King University - Knoxville
- Science Writing Intern, Oak Ridge National Laboratory
- Graduate Teaching Assistant, Business and Professional Communication, University of Tennessee - Knoxville
- Sustainability Coordinator, Tennessee Clean Water Network

### Accomplishments

- Studied under Belarusian sociologist Oleg Manaev and developed a research focus on the crossroads of Russian government, mass media, and industry
- Invited to present at the Congress on International Economic and Administrative Perspectives in Azerbaijan
- Wrote feature-length articles concerning scientific discovery occurring through the Oak Ridge Leadership Computing Facility, home of America's most powerful supercomputer
- Presented "Peculiarities in Putin's Russia: Gazprom Oil Concern's Role as a Media Giant" at the Thomas C. Dowden International Conference
- Served as the Social Media Officer for the Political Social Media Research Group of University of Tennessee - Knoxville
- National service alum having served in the National Civilian Community Corps as a Wildland Firefighter and with AmeriCorps State/National Service as a Water Quality Technician for the Town of Farragut, Tennessee
- Former KNOM Radio Mission fellow deployed to remote Alaskan villages to report on local news, political meetings, and culturally important entertainment programs

### Education

- Master of Science, Communication and Information, University of Tennessee - Knoxville
- Bachelor of Applied Science, Management, Johnson & Wales University



## Cameron Douglas

NA-11 Office of Research, Development, Test Capabilities, and Evaluation – Washington DC

### Experience

- Legislative Aide, Colorado House of Representatives
- Intern, Foresight, Strategy, and Risks Initiative, Atlantic Council
- Student Research Trainee, National War College
- Intern, U.S. Representative Bob Goodlatte

### Accomplishments

- Studied international security and European security, becoming knowledgeable in the technology issues shaping policy and strategy and working within government structures
- Researched European issues such as NATO expansion and the populist movements that will affect the United States' future relationships with partners
- Developed substantial research paper on the Three Seas Initiative and the impact of Central and East European intergovernmental cooperation on transatlantic cooperation
- Supported the Atlantic Council with research on the grand strategy, emerging technology, and future trends in the United States and abroad
- Participated in the University of Denver's Crisis Engagement and Negotiation Exercise, serving as lead communications officer for one of several country teams tasked to deal with a crisis scenario on the Korean peninsula
- Certified in German Language from the Goethe-Institut Berlin
- Spent five summers as a professional whitewater rafting guide

### Education

- Master of Arts, International Studies, University of Denver Josef Korbel School of International Studies
- Bachelor of Arts, History and Political Science, Principia College

# Class of 2018-2019



## **Lora Dushanova**

NA-213 Defense Nuclear Nonproliferation Office of Research and Development – Washington DC

### **Experience**

- Senior Financial Analyst, Ubisoft
- Senior Financial Analyst, Zynga Inc.
- Senior Audit Staff, Deloitte and Touche
- Equity Capital Markets Analyst, Wachovia Securities
- Asset-Backed Securities Analyst (Intern), Lehman Brothers

### **Accomplishments**

- Conducted graduate research focused on security studies, unconventional weapons, and nonproliferation
- Developed financial models, forecasts, and other analyses for product lines generating \$300+ million
- Conducted investigative and forensic audits for some of Deloitte's most critical projects, including initial public offering for Yelp and Trulia and quarterly/annual reviews for Union Bank—requiring the utmost diplomacy
- Handled S-1 filings in preparation for Yelp internal public offering (at valuation of \$1.47 billion) on an aggressive six-month timeline
- Received University of Southern California tuition scholarship and Association of International Certified Professional Accountants John L. Carey Scholarship
- Experienced as a seasoned data analyst and advanced Excel user with intermediate Python programming skills
- Lived and worked in Bulgaria, Hong Kong, New York, Indiana, North Carolina, and San Francisco; fluent in Bulgarian and intermediate knowledge of Russian

### **Education**

- Master of Arts, Security Studies, Georgetown University (in progress)
- Master of Science, Accounting, University of Southern California
- Bachelor of Arts, Economics, Davidson College



## **J. Seth Dustin**

NA-APM-1.5 CMRR Project Management Office – Los Alamos, NM

### **Experience**

- Graduate Research Assistant, University of Idaho
- Intern, Idaho National Laboratory
- Teaching and Research Assistant, University of Idaho

### **Accomplishments**

- Designed and fabricated a plasma generation system for sealing polymeric microfluidic devices, with publication
- Developed and implemented work-control procedures for a molten-salt, electrochemical research project at the Center for Advanced Energy Studies, coordinated between the University of Idaho, Idaho State University, and the Idaho National Laboratory
- Chief Safety Officer and fabrication/test lead for first-place winning team in the “Open Category” at the 2016 Waste Management Research Consortium design contest
- Coordinated an \$850K Nuclear Energy University Program grant proposal between University of Idaho, Idaho National Laboratory, and University of Michigan, which was subsequently awarded
- Presented computational modeling work at the Nuclear and Emerging Technologies for Space 2018 Conference in Las Vegas, Nevada
- Awarded \$25K University of Idaho grant as co-principal investigator for work enhancing secondary education through the funding, support, and mentorship of high school senior projects in rural areas
- Conducted process design review of multi-million dollar transuranic waste facility design, with findings validated by independent third-party review team
- Provided chemical and nuclear quality guidance, with review of deliverables for commissioning the \$87.9M Low-Level Liquid Waste Project, contributing to Critical Decision 4 approval

### Education

- Master of Science, Nuclear Engineering, University of Idaho
- Bachelor of Science, Psychology, University of Idaho
- Bachelor of Science, Chemical Engineering, University of Idaho



### Merritt Earle

NA-83 Office of Nuclear Forensics – Washington DC

### Experience

- Graduate Research Assistant, Clemson University
- Radiation Safety Assistant, Clemson University
- Academic Cooperation Participant, Lawrence Livermore National Laboratory
- Undergraduate Research Assistant, Clemson University
- Chief Technical Officer, Geographic Integration Management Solutions LLC

### Accomplishments

- Researched characterization of iodine interactions with silver-nitrate functionalized filter material for reprocessing facilities
- Used gas chromatography and a paired mass spectrometer to identify compounds after performing a derivatization reaction in varying environments
- Certified in land surveying and advanced geographic information systems analysis
- Named Nuclear Regulatory Commission Nuclear Engineering and Radiological Sciences undergraduate scholar three times and was chosen for the South Carolina Universities Research Education Foundation/Department of Homeland Security Domestic Nuclear Detection Office nuclear forensics undergraduate scholarship
- Presented at the Nuclear Forensics Undergraduate Scholarship Program Culmination Seminar at Los Alamos National Laboratory, the Hydrogeology Symposium, and the Nuclear Engineering and Environmental Science Professional Advisory Board meeting
- Received the Thomas F. Logan Jr. Geology Merit Award and Jean G. Stillwell Award
- Member of the Geological Society of American and the Mineralogical Society of America

### Education

- Master of Science, Environmental Health Physics, Clemson University
- Bachelor of Science, Hydrogeology; Minor, Nuclear Engineering; Clemson University

### Nikolas Economy

NA-191.1 B61-12 Life Extension Program Federal Program Office – Albuquerque, NM

### Experience

- Nuclear Engineering Research Assistant, Oregon State University
- High School Level Chemistry Instructor, Princeton Learning Cooperative
- Leber Lab Intern, Franklin & Marshall College, Chemistry Department

### Accomplishments

- Researched the kinetics of organic thermal decomposition, computed tomography modeling of spent fuel, and non-proliferation methods for nuclear materials storage
- Provided data analysis of Monte Carlo N-Particle and SCALE models of spent fuel storage casks in collaboration with University of Utah's civil and environmental engineering department to assess risk in the event of a seismic event
- Conducted primary research as a project lead to discover mechanistic properties of complex hydrocarbon thermal decomposition that reconciled previously inconclusive research
- Served as OSU Institute for Nuclear Materials Management student chapter president
- Completed the "Applied Detection and Nuclear Security Science" hands-on intensive course concerning border security technology and logistics at the HAMMER facility
- Organized a contingent of OSU students to attend the PNNL Lab Day



# Class of 2018-2019

- Received the Presidential Merit Scholarship, Kenneth J. Schultz Sr. Scholarship, the Dana Scholarship, and the Institute of Nuclear Power Operations Scholarship
- Member of the Junto Honor Society, Alpha Nu Sigma Honor Society, and a Nuclear Regulatory Commission Fellow

### Education

- Master of Science, Nuclear Engineering, Oregon State University
- Bachelor of Science, Chemistry, Franklin & Marshall College



## Daniel Edward T. Enriquez

NA-APM-10 Office of Project Analysis, Oversight and Review – Albuquerque, NM

### Experience

- Clinical Law Student, University of New Mexico School of Law Clinical Law Programs Business and Tax Clinic
- Paid Student Internship Program, U.S. Department of Defense, Defense Security Service-Center for Development of Security Excellence
- Student Researcher, Mohamedou Ould Slahi Periodic Review Board Hearing for Detainees held at Guantanamo Bay
- Independent Contractor, Adelante Development Center
- Deputy Campaign Manager, Lisa Torraco for District Attorney
- Office Manager, Republican Party of Bernalillo County

### Accomplishments

- Drafted Articles of Incorporation and Organizational Bylaws for nonprofit corporations and worked on state and federal tax problems for clients
- Attended the Madrid Summer Law Institute at the Universidad Rey Juan Carlos in Madrid, Spain, studying European Union Law and International Business Transactions
- Coordinated with Homeland Security Investigations during the representation of a client in a wage theft and human trafficking case
- Updated the Center for Development of Security Excellence operating instructions to comply with Defense Security Service regulations
- Accepted as a scholar in the National Security Studies Program at the University of New Mexico, a Defense Intelligence Agency-sponsored program
- Completed a certificate in national security and strategic analysis
- Received the Judge J.V. Gallegos Memorial Scholarship

### Education

- Juris Doctor, University of New Mexico School of Law
- Bachelor of Arts, Political Science, University of New Mexico



## Sarah Fenn

NA-MB Office of Management and Budget – Washington DC

### Experience

- Investigator, Western Union
- Performance Analyst, Colorado Department of Transportation
- Intelligence Analyst, Ball Corporation
- Intelligence Research Analyst, TAM-C Solutions

### Accomplishments

- Completed international studies coursework focused on non-state actors, data analytics, and intelligence
- Developed a strong background in applying data-based decision making to project management and analysis
- Gained a unique perspective on counterterrorism and counterproliferation through studies in Middle East studies and psychology, including a focus on the psychology of terrorism and group dynamics

- Served as a performance analyst for the Colorado Department of Transportation, working with engineers, project managers, and executive management to monitor, analyze, and visualize data trends
- Interned as an analyst for a security consulting company, partnering with a team of analysts to identify actionable, open-source intelligence
- Conducted complex analysis concerning patterns and trends associated with suspicious transaction activity
- Collected data to aggregate and report on performance measures (including processing incoming data and division needs) delivered monthly to the entire department, the public, and the governor
- Researched and analyzed open-source and geospatial data in a fast-paced and dynamic work environment
- Developed over 30 in-depth forecasting intelligence memos for governmental and Fortune 100 clients for weekly production
- Participated in national security-related events and exercises including the Korean Peninsula Nuclear Crisis and Negotiation Exercise, the Michigan Homeland Security Readiness Assessment, and the Action Avenues Department of Homeland Security Peer- to-Peer Competition

#### **Education**

- Master of Arts, International Security, University of Denver Josef Korbel School of International Studies
- Bachelor of Arts, Psychology and Middle East Studies, Claremont McKenna College

### **John Fenton**

NA-18 Office of Systems Engineering and Integration – Washington DC

#### **Experience**

- Congressional Intern, Regional Office of Congressman Mike Johnson
- Research Team Leader, The Pentagon in association with The Citadel
- Statistical Package for Social Sciences Statistics Analysis Software Training, The Citadel
- Research Analyst, Louisiana Tech Research Institute
- International Competitor, Peer 2 Peer, Challenging Extremism Project
- Secretary Treasurer and Co-founder of the 2017 Defense and Intelligence Club, Johns Hopkins University School of Advanced International Studies
- Academic Officer and Human Affairs Officer, The Citadel
- Chief Justice and Vice Chair of the Citadel Delegation, South Carolina Student Legislature, The Citadel

#### **Accomplishments**

- Completed coursework focused on in-depth case studies in nations where nuclear nonproliferation is a fundamental issue
- Led a three-person team conducting open-sourced research on the Jordanian economy, including economic drivers and hindrances, advised on the state of its economy, and proposed possible solutions to economic setbacks
- Studied the Chinese Second Artillery Corps and the history of nuclear proliferation
- Operated multiple social media platforms to educate the populace on ideological differences between extremism and radicalization
- Maintained mental health and intra company relations, exercising conflict resolution for a group of 100-plus cadets
- In the Peer 2 Peer Program, collaborated with a small team of cadets with the goal of countering ISIS' online presence
- Worked in conjunction with the Pentagon on an open-source research project that was needed to influence policy in the Middle East
- Studied abroad in London, focused on Islam and Western Culture Interactions
- Received the Class of 1939 Citadel Scholar Scholarship-Full Academic Scholarship

#### **Education**

- Master of Arts, Global Risk, Johns Hopkins University, School of Advanced International Studies (in progress)
- Bachelor of Arts, Political Science, The Citadel, The Military College of South Carolina



# Class of 2018-2019



## Jonathan Gill

NA-84 Office of Nuclear Incident Response – Washington DC

### Experience

- Graduate Researcher, Nuclear Operations Group Fellowship, BWX Technologies Inc., University of Tennessee, Knoxville
- Graduate Researcher, Radiochemistry Center of Excellence, University of Tennessee, Knoxville
- Construction Battalion Plans Officer, U.S. Army
- Assistant Engineer Brigade Operations Officer and Senior Watch Officer, U.S. Army
- Senior Border Police Advisor and Training Team Operations Officer, U.S. Army
- Combat Engineer Company Commander, U.S. Army
- Intelligence and Physical Security Officer, U.S. Army
- Security Platoon Leader, U.S. Army
- Construction Platoon Leader and Civil Construction Project Manager, U.S. Army

### Accomplishments

- Completed dissertation on novel fission track methods using lithium fluoride fluorescent nuclear track detection
- Led combat operations at the 30- and 100-personnel level in both Iraq and Afghanistan, eventually leading to positions managing regional U.S. military security projects and audited national-level programs
- Led 150 U.S. military personnel through four major training exercises culminating in maneuver live fire, live fire breach, and a 25-day major field training exercise integrated with 19 sister units
- Planned and assisted in managing a 500-person unit's reorganization and transition to another forward-deployed base in Germany and back to the United States
- While in Germany, planned and supervised over 30 projects with multinational forces forming partnerships with new allies and cultivating partnerships with existing ones

### Education

- Doctor of Philosophy, Nuclear Engineering, University of Tennessee, Knoxville
- Master of Science, Nuclear Engineering, University of Tennessee, Knoxville
- Master of Science, Engineering Management, Missouri Institute of Science and Technology
- Bachelor of Science, Nuclear Engineering, U.S. Military Academy
- Graduate Certificates in Nuclear Security and Military Construction Management

## Jared Godby

NA-10 Office of Defense Programs, Front Office – Washington DC

### Experience

- National Security Fellow, U.S. House of Representatives
- Campaign Manager and Strategist, Congressional Exploratory Campaign
- Graduate Teaching Assistant, Iowa State University
- Legislative Correspondent, U.S. Senate
- Cavalry Scout, Army National Guard

### Accomplishments

- Performed bill analysis and consolidated input from subject matter experts and stakeholders to inform policy and legislative priorities on Afghanistan stability operations while a national security fellow in the House of Representatives
- Established and managed the organization of a congressional campaign that included experienced senior staff, research staff, and over 100 volunteers for field, event, fundraising, and communications support
- Completed a graduate certificate in public management and policy
- Analyzed and recommended changes to Department of Defense policies and innovation while a legislative correspondent in the U. S. Senate
- Recognized and awarded for timely and appropriate actions during a village clearing operation while serving as a cavalry scout in the Army National Guard



### Education

- Master of Arts, Political Science, Iowa State University (in progress)
- Bachelor of Arts, Political Science, Iowa State University

## Candace Harris

NA-LFO Livermore Field Office – Livermore, CA

### Experience

- Graduate Research Fellow, Minority-Serving Institution Partnership Program, NNSA at Y-12 National Security Complex
- Graduate Teaching Assistant, Florida Agriculture & Mechanical University
- Intern, Lawrence Livermore National Laboratory
- Graduate Researcher, University of Massachusetts Amherst
- High School Physics Teacher, Springfield Public School Systems

### Accomplishments

- Conducted research in nuclear processes including data analysis in Monte Carlo Simulations, target material studies used in PRIMEX at the Thomas Jefferson National Laboratory, and construction of organic scintillation studies
- Conducted research in nuclear and particle detection; projects included data analysis through coding simulations for sub-atomic particle detector output and analyzing nuclear targets used in beam accelerator experiments at Thomas Jefferson National Laboratory
- Interned at Lawrence Livermore National Laboratory, becoming familiar with viable approaches toward nuclear forensics
- Published research on characterizing laser-induced plasmas associated with micro-particles on substrates and calibration model maintenance for other products of fissile materials such as boron and zirconium
- Selected as a U.S. Delegation Committee Member of the 2017 International Conference for Women in Physics, a meeting in the International Union for Pure and Applied Physics Conference to be held at the University of Birmingham, UK
- Received the EMSLIBS 2017 Journal of Analytical Atomic Spectroscopy Poster Award

### Education

- Doctor of Philosophy, Physics, Florida Agriculture and Mechanical University
- Master of Science, Physics, University of Massachusetts Amherst
- Bachelor of Science, Physics, Spelman College

## Jessica Hartman

NA-LA Los Alamos Field Office – Los Alamos, NM

### Experience

- Graduate Research Assistant, Mechanical Engineering Department, University of Nevada Las Vegas (UNLV)
- Nuclear Regulatory Commission Fellowship, UNLV

### Accomplishments

- Developed a detection program implementing drones for location and identification of nuclear material for a grant assisting the Savannah River clean-up operation
- Worked as part of a multi-disciplinary team of nuclear and electrical/computer engineers to devise an imaging technique to detect radioactive material outside of regulatory control
- Completed certificate programs in both nuclear criticality safety and nuclear security and safeguards, with courses focusing on radiation monitoring safeguards, neutron detection and production, and nuclear criticality safety engineering
- Co-authored multiple publications and presented at local forums such as UNLV's Graduate and Professional Student Research Forum and the Engineering College's annual Graduate Celebration
- Presented at student and professional conferences with national and international attendees from the nuclear industry, national laboratories, and government agencies
- Facilitated, managed, and edited teaching materials for organizing and planning the UNLV Nuclear Scout Workshop
- Received the National Securities Technologies Scholarship, Helen & Roy Kelsall Engineering Scholarship, and American Nuclear Society Nevada Chapter Scholarship
- Placed second in the UNLV Engineering Department Best Thesis Competition



# Class of 2018-2019

### Education

- Doctor of Philosophy, Mechanical Engineering, UNLV
- Master of Science, Materials and Nuclear Engineering, UNLV
- Bachelor of Science, Mechanical Engineering, UNLV

### Dale Karas

NA-143 Office of Cost Estimation – Washington DC

### Experience

- Graduate Student Researcher, Energy and Environmental Materials Laboratory, University of Nevada, Las Vegas Center for Energy Research
- Graduate Assistant, Center for Excellence in Security Science and Engineering and Los Alamos National Laboratory Neutron Science Center
- Graduate Student Researcher, Large Optics Fabrication and Testing Group, Steward Observatory Mirror Laboratory
- Graduate Research Intern/Member of Technical Staff, Integrated Sensor Design and Analysis Department, The Aerospace Corporation
- Graduate Student Researcher, Advanced Sensing Laboratory, University of Arizona College of Optical Sciences
- Student Researcher, Integrated Photonics Laboratory, University of California
- Undergraduate Student Researcher, Nanophotonic Materials Group, CREOL: College of Optics and Photonics, University of Central Florida

### Accomplishments

- Conducted research in simulation strategies of energy propagation in nanomaterials
- Leveraged familiarity with Department of Energy- and Justice-sponsored programs to support diverse projects requiring proficiency from science and engineering disciplines
- Supported computer-aided design and operational readiness for neutron beam radiation- hardness testing of gallium nitride semiconductor media
- First-authored and co-authored peer-reviewed publications in computational materials science, chemistry, and optical engineering
- Synthesized novel inorganic nanomaterials for solar-thermal energy conversion efficiency and waste heat recovery
- Developed processing and analysis routines for computing aspheric optical fields, diffraction-limited Point Spread Function/Modulation Transfer Function test data, and Fourier domain representation of sequential raytracing/illumination design for telescopic mirror components
- Characterized focal plane arrays, refined computational models for infrared hyperspectral sensor design simulation and analysis, and administered state-of-the-art metrological optical testing for remote-sensing technologies
- Developed illumination scheme, design, and optimization metrics for polarimetric and spectroscopic machine learning/computer vision optical sensing platform

### Education

- Doctor of Philosophy, Mechanical Engineering, University of Nevada Las Vegas
- Bachelor of Science, Optical Sciences & Engineering, University of Arizona
- Bachelor of Music, Music Composition, University of Arizona

### Gabriella (Giampaoli) King

NA-123 Office of Technology Maturation – Washington DC

### Experience

- Chemistry Department Head Teaching Assistant, Oregon State University
- Research Assistant, Subramanian Solid State Chemistry Lab
- Research Associate, Gilead Sciences Inc.
- Chemistry Intern, Formulation Department, Marrone Bio Innovations



## Accomplishments

- Lead organizer for the second annual Additive Manufacturing Workshop
- Worked on Federal Program Management teams to mature technologies
- Attended the Nuclear Nonproliferation Seminar: Reactors and Commercial Nuclear Industry training, International Manufacturing Technology Show, Additive Manufacturing Conference in Germany, Limited Nuclear War panel discussion, Digitization of WMD workshop, Stewardship Science Academic Programs symposium, etc.
- Awarded the Milton Harris Summer Fellowship (2016), Outstanding Laboratory TA Award (2014), Milton Harris Teaching Award (2017), departmental nomination for the University-wide Frolander Teaching Award (2017)
- First author publications include:
  - Bi<sub>2-x</sub>CaxIr<sub>2</sub>O<sub>6+y</sub> Pyrochlore Phases: Structure and Properties with Varied Oxidation State from 3.9+ to 4.3+. (DOI:10.1021/acs.inorgchem.7b00345)
  - Tuning Color through Sulfur and Fluorine Substitutions in the Defect Tin (II, IV) Niobate Pyrochlores. (DOI:10.1016/j.solidstatesciences.2018.05.001)
  - Temperature Independent Low Loss Dielectrics Based on Quaternary Pyrochlore Oxides. (DOI:10.1016/j.progsolidstchem.2018.06.001)
- Presented “Benign by Design: Tin Containing Pyrochlore Oxysulfide and Oxyhalide Pigments” at the North American Solid State Chemistry Conference
- Presented posters at the Northwest Regional Meeting of the American Chemistry Society, Oregon Academy of Science, Gordon Research Conference and Seminar, Pacific Northwest Women in Science Retreat, and Puget Sound Women Chemists Retreat
- Organized the Pacific Northwest Women in Science Retreat, planned OSU SPARK Year of Arts and Science, mentored undergraduates in the sciences, volunteered in Family Science and Engineering Nights, Da Vinci Days, OSU Discovery Days, etc.
- Served as OSU departmental safety advisory committee member
- Served as analytical chemist in the Gilead Research and Development department working on Gilead's groundbreaking hepatitis C drug, Sovaldi

## Education

- Doctor of Philosophy, Solid State Chemistry, Oregon State University
- Bachelor of Science, Chemistry, University of California, Davis

## Catherine Kuhnheim

NA-122.1 Stockpile Services Division, Office of Nuclear Weapon Stockpile – Washington DC

## Experience

- CIRAT Analyst, Mercyhurst Intelligence Department
- Graduate Assistant, Mercyhurst Physics Department
- Global Security Directorate Intern, Oak Ridge National Laboratory
- General Crimes Unit Intern, Naval Criminal Investigative Service
- Biology Unit Intern, Maryland State Police Forensic Science Division

## Accomplishments

- Experienced in the fields of natural science, policy, and intelligence analysis in mission areas such as counterterrorism, global security, and nuclear smuggling detection and deterrence
- Conducted cancer cell research targeting the cell signaling pathways via chemoradiotherapy
- Completed undergraduate thesis focused on blood spatter patterns—leveraged background in criminal justice and forensics to determine how spatter patterns are typically formed and analyzed at crime scenes, and combined that with experience in the sciences to systematically test how the patterns change when exposed to different surface temperatures
- Conducted research on the relationship between a states' nuclear arsenal size and the nuclear proliferation of other states
- Presented nuclear arsenal and nonproliferation research at the 2017 Institute of Nuclear Materials Management National Meeting



# Class of 2018-2019

- Presented chemoradiotherapy cancer cell research at the 2016 American Association of Physics Teachers National Meeting and the 2016 American Chemical Society National Meeting
- Received the Mercyhurst Honors Program Scholarship, Egan Academic Scholarship, and Presidential Scholarship

### Education

- Master of Science, Applied Intelligence, Mercyhurst University
- Bachelor of Science, Biochemistry; Minors, Law Enforcement and Physics; Mercyhurst University

## Matthew Marsh

NA-233 Office of Material Disposition – Aiken, SC

### Experience

- Graduate Student, Florida State University, Electrochemistry on Lower-Valent Transuranic Complexes
- Undergraduate Researcher, University of Tennessee, Knoxville, Fission Product Gas-Phase Separations Involving Synthesis of Volatile Lanthanide Compounds

### Accomplishments

- Accepted as a Fellow for the Nuclear Nonproliferation Education and Research Center 2014 program in Daejeon, South Korea
- Focused on seminars addressing international relations, the Asian geopolitical sphere, the South Korean-U.S. nuclear agreement, and nonproliferation through both a technical and policy standpoint
- Worked on an individual project with a policy emphasis related to recovering uranium from seawater
- Awarded the Best Presentation in Analytical Chemistry at the Southeast Undergraduate Research Conference
- Received the 2014 Coryell Award in Nuclear Chemistry at 249th American Chemical Society meeting in Denver, Colorado
- Awarded patent for Methods for Gas-Phase Thermochromatographic Separations of Fission and Activation Products
- Co-author on at least eight publications, including four reviews and book chapters such as “Complex Inorganic Actinide Materials” in the textbook Experimental and Theoretical Approaches to Actinide Chemistry (2018)

### Education

- Doctor of Philosophy, Inorganic Chemistry, Florida State University
- Bachelor of Science, Biochemistry; Minor, Chemistry; University of Tennessee, Knoxville

## Allan Martin

NA-191.2 Defense Programs W80-4 Life Extension Program Office – Albuquerque, NM

### Experience

- Graduate and Undergraduate Research Assistant, Nuclear Engineering Department, University of Florida
- Mathematics Tutoring Coordinator, University of Florida Teaching Center

### Accomplishments

- Participated in project funded by the U.S. Domestic Nuclear Detection Office’s Advanced Research Initiative (DNDO ARI) and conducted at the University of Florida
- Conducted applied research combining scintillation detectors and computer vision sensors into a deliverable system and algorithm to detect, localize, and track radiation sources for use in public or process spaces
- Authored two abstracts and presented two posters at the yearly DNDO ARI program review
- Worked with many different types of radiation detectors and learned their applications in various detection situations
- Participated in project to take measurements at the Device Assembly Facility in Nevada, gaining real-world data analysis and experiment experience
- Completed registered Engineering Ethics workshop through the University of Florida Department of Materials Science
- Submitted written and oral comments and co-drafted position papers at the Nuclear Regulatory Commission public hearings for nuclear power plant construction in Florida
- Received the American Nuclear Society Kent W. Hamlin Memorial Scholarship and the CSX Corporation National Merit Scholarship



### Education

- Master of Science, Nuclear Engineering, University of Florida
- Bachelor of Science, Nuclear Engineering, University of Florida

## Eric Matthews

NA-LFO Livermore Field Office – Livermore, CA

### Experience

- Research Apprentice and Graduate Fellow, Nuclear Science and Security Consortium
- Researcher, Bay Area Nuclear Data Group, Lawrence Berkeley National Laboratory
- Visiting Affiliate, Lawrence Livermore National Laboratory
- Graduate Student Instructor and Teaching Assistant for Nuclear Reactions and Radiation at University of California Berkeley
- Reader for Radiation Biophysics and Dosimetry, University of California Berkeley

### Accomplishments

- Engaged in research projects that developed applied nuclear physics skills, particularly in nuclear data analysis and evaluation
- Worked on the Fission Induced Electromagnetic Response (FIER) code, developing a background in applying theory and modeling to nuclear forensics applications; completed and validated this code package and developed a Monte Carlo uncertainty quantification method for the model output
- Worked on three medical isotope cross-section measurements and a depleted uranium irradiation at the High-Flux Neutron Generator
- Received a 2018 University of California Berkeley Outstanding Graduate Student Instructor Award for efforts in Nuclear Reactions and Radiation
- Received the 2017 Christopher Wootton Award for superior service and leadership to the University of California Berkeley Department of Nuclear Engineering
- Presented research into the use of FIER for non-destructive assay of the fissionable composition of neutron-irradiated material as well as research with the Nuclear Science and Security Consortium and detailed how improving the formatting of nuclear databases could assist nuclear simulation packages

### Education

- Doctor of Philosophy, Nuclear Engineering, University of California Berkeley (anticipated May 2021)
- Bachelor of Science, Nuclear Engineering, University of California Berkeley
- Baccalaureate Education, Special Seminar on Nuclear Structure, University of Oslo

## Colton Oldham

NA-233 Office of Material Disposition – Aiken, SC

### Experience

- Nuclear Engineering Science Laboratory Synthesis Intern, Nuclear Security Modeling, Oak Ridge National Laboratory
- Graduate Research Assistant, Hall's Research Group, University of Tennessee, Knoxville
- Undergraduate Research Assistant, Hall's Research Group, University of Tennessee, Knoxville
- Summer Undergraduate Fellow, Nonproliferation Education and Research Center, Korea Advanced Institute of Science and Technology

### Accomplishments

- Designed and constructed an isothermal coupling oven to interface a traditional gas chromatograph to inductively coupled plasma-time of flight-mass spectrometer
- Designed an additional instrument that will allow for depositions of these activation products to apply other analysis techniques such as gamma spectroscopy
- Presented at several conferences annually, including NNSA annual reviews, Institute for Nuclear Materials Management, and American Nuclear Society



# Class of 2018-2019

- Contributed to several papers covering topics from synthetic melt glass to advanced gas-phase separation techniques
- Conducted research on nonproliferation culture and developed experimental iodine spray systems in reactor safety environments
- Co-authored “Gas chemical adsorption characterization of lanthanide hexafluoroacetylacetonates” and “Inaugural gas-phase detection of solid-state rare earth fission product complexes for post-detonation nuclear forensic analysis” published in the Journal of Radioanalytical and Nuclear Chemistry

### Education

- Doctor of Philosophy, Nuclear Engineering, University of Tennessee - Knoxville (in progress)
- Bachelor of Science, Nuclear Engineering, University of Tennessee - Knoxville

## Adria Peterkin

NA-191.3 W80-4 Life Extension Program Office – Albuquerque, NM

### Experience

- Student Researcher, Nuclear Innovation Bootcamp, University of California Berkeley
- Physical Science Technician, U.S. Geological Survey
- Student Researcher, Physics, Howard University
- Student Researcher, Global Education and Awareness Research Undergraduate Program, Chulalongkorn University
- Chemistry Student Researcher, Institutional Research Engagement Program, Howard University
- Student Intern, National Radio and Astronomy Observatory
- Student Researcher, Global Education and Awareness Research Undergraduate Program, Universidad Popular Autonoma del Estado de Puebla

### Accomplishments

- Completed a capstone project at the University of California, Berkeley - Integrating Nuclear and Renewable Energy Sources
- Selected as an intern for National Astronomy Consortium at the National Radio and Astronomy Observatory—used program management and systems engineering methods to construct a NASA Radio Jove Telescope
- Served as Program Management Chair of the Howard University American Institute of Chemical Engineering
- Invited to attend the United Nations Climate Change Conference, Conference of the Parties
- Completed a senior thesis at the U.S. Geological Survey - An Investigation of the High- Mg rocks of Northern Virginia for Potential Carbon Dioxide Storage
- Received the Inter-professional Award from the DC Public Health Case Challenge in Washington, DC

### Education

- Master of Engineering, Nuclear Engineering, University of California - Berkeley
- Bachelor of Science, Chemical Engineering, Howard University

## Sarah Pevey

NA-532 Office of Nuclear Material Integration – Germantown, MD

### Experience

- Worldwide Program Manager, Security, Micro Focus
- Senior Product Marketing Manager, Allytics
- Global Alliance Sales Engagement Specialist, Citrix Systems
- Regional Sales Manager, Avinode
- Information Management Software Sales Manager, Hewlett Packard

### Accomplishments

- Managed research and proposal development, large-scale technical projects, and global strategies
- Experienced in program management, cloud and security technology, and technical solution training
- Managed and executed Micro Focus' worldwide sales programs for the security business unit including application security, security operations, and data security



- Developed sales program strategies focusing on Micro Focus security product portfolio and led the research and data analysis projects to understand the changing technology landscape
- Managed the complex global alliance between Microsoft and Citrix to drive joint sales engagement and developed technical documentation around the integration and functionality of joint products
- Managed the end-to-end rhythm of business, budgets, and program logistics, for major clients including Microsoft, DocuSign, Citrix, and Iron Mountain
- Drove the global go-to-market strategy and sales execution of Citrix technology alliance engagement with NVIDIA
- Fluent and native Spanish speaker

#### Education

- Master of Science, Information and Communications Technology, University of Denver
- Bachelor of Arts, Mass Communication/Journalism and Spanish, University of Arkansas

### Kyle Pilutti

NA-241 Office of International Nuclear Safeguards – Washington DC

#### Experience

- Research Assistant, Ploughshares Fund
- Graduate Research Assistant, James Martin Center for Nonproliferation Studies
- Intern, Office of Public Information and Communication, International Atomic Energy Agency
- Global Security Intern, Safeguards Policy, Lawrence Livermore National Laboratory

#### Accomplishments

- Interned at the International Atomic Energy Agency, assisting the director of the Office of Public Information and Communication on strategic and topical projects, including drafting an office response plan in the event of a radiological emergency, summarizing and analyzing meetings and international conferences, and drafting web stories on agency events
- Completed a two-week program in the Czech Republic with a small group of students selected to pioneer a new program on research reactors in the Czech Republic
- Worked at the Lawrence Livermore National Laboratory in a summer safeguards internship program; focused on the safeguards and safety implications of the new and prospective reactor projects in the Middle East and Northern Africa
- Won second place in the United Nations Security Council Resolution 1540 essay contest organized by the Stimson Center
- Updated the Nuclear Threat Initiative database with recent events in nonproliferation risks and diplomacy while working at the James Martin Center for Nonproliferation Studies
- Co-authored a research paper on the potential utility of online crowd-based participation in nonproliferation treaty monitoring
- Chaired Main Committee I in a simulation class for the Nonproliferation Treaty review process at the Middlebury Institute of International Studies at Monterey
- Participated in the Arabic Flagship program at Michigan State University and graduated after completing a capstone year in Meknes, Morocco

#### Education

- Master of Arts, Nonproliferation and Terrorism Studies, Middlebury Institute of International Studies at Monterey
- Bachelor of Arts, Humanities Pre-Law, Arabic, and Interdisciplinary Humanities, Michigan State University





## Thais A. Ramo

NA-21 Global Material Security – Washington DC

### Experience

- Project Assistant, Governance, National Democratic Institute of International Affairs
- Hispanic Association of Colleges and Universities Intern, Foreign Affairs, Trade and Defense Division, Congressional Research Service, Library of Congress
- Consultant, Puerto Rico Department of Natural and Environmental Resources
- Legal Intern, Office of the Assistant Secretary of Foreign Affairs, Puerto Rico Department of State
- Summer Legal Intern, Disability Rights Center of the U.S. Virgin Islands

### Accomplishments

- As a project assistant at the National Democratic Institute, provided logistic and research support to different international development programs focused on strengthening democratic processes
- At Library of Congress, conducted extensive research in English and Spanish that resulted in the update of two reports for the 114th U.S. Congress
- Conducted research on environmental law that was used in a public hearing at Puerto Rico's Environmental Quality Board (Junta de Calidad Ambiental) regarding a waste-to-energy plant project and its environmental impact
- As a member of the Legal Assistance Clinic at the University of Puerto Rico School of Law, was part of the delegation to the Inter-American Commission on Human Rights at the Organization of American States; the hearing discussed Puerto Rico's Human Rights issues
- As a consultant, spent two years with the Puerto Rico Department of Natural and Environmental Resources supporting the management of federal grants for an urban forestry program funded by the U.S. Forest Service
- Received the William D. and Marjorie P. Love Scholarship while at Middlebury Institute of International Studies at Monterey

### Education

- Master of Arts, Nonproliferation and Terrorism Studies, Middlebury Institute of International Studies at Monterey
- Juris Doctor, University of Puerto Rico School of Law
- Bachelor of Science, Pre-Medical Sciences, and a Certificate in International Relations, University of Puerto Rico Mayaguez Campus



## Ramon A. Reyes Rodriguez

NA-LA Los Alamos Field Office – Los Alamos, NM

### Experience

- Test and Integration Technician, NASA Cygnus Program and SES- 16 / GovSat, Orbital ATK
- Automotive Parts Seller, Autozone, Inc.
- Technical Field Support, Claro PR AMX LTE Evolution Project, MCOMM Solution Inc.
- Technical Engineer, Mastec Project: AT&T LTE 3rd Carrier installations, Eldix Telecom Inc.
- Internship, WIPR-TV Puerto Rico Network

### Accomplishments

- Helped in the implementation of LTE telecommunication technologies projects in Puerto Rico
- Completed electronics licenses from the Federal Communication Commission and certifications from the Electronics Technician Association International
- Certified in aircraft electronics from the National Center for Aerospace & Transportation Technologies
- Leveraged Lean Six Sigma Green Belt certification on a DMAIC project to achieve energy reduction in the customer service sector

### Education

- Master Engineering, Manufacturing Engineering, Polytechnic University of Puerto Rico San Juan
- Bachelor of Science, Electrical Engineering, Polytechnic University of Puerto Rico



## **Victoria Sanchez**

DOS-AVC Arms Control, Verification, and Compliance – Washington DC

### **Experience**

- Nonproliferation Policy Analyst, Toeroek Associates, Army Headquarters
- Nuclear Energy and Nonproliferation Analyst, International Technology and Trade Associates, Inc.
- Graduate Intern, Bureau of Arms Control, Verification, and Compliance, Office of Multilateral Nuclear Affairs, U.S. Department of State
- Instructor and BRIDGE Leader, The English Language Institute
- Instructor, Center for Talent Development, Northwestern University
- Instructor, Talent Identification Program, Duke University
- Course Fellow in Nuclear Nonproliferation, Safeguards, and Security in the 21st Century, Brookhaven National Laboratory
- Directed Study on Nonproliferation at the Center for International Trade and Security.

### **Accomplishments**

- Provided nonproliferation policy support to Army Headquarters at the Pentagon, particularly in strategic nuclear treaties; additionally served as the arms control implementation and compliance liaison from the Army Staff to the Army Secretariat advocating the Department of the Army's WMD position while providing critical analysis and recommendation on arms control treaties
- For doctoral dissertation, developed and coded a dataset, performed quantitative analysis, and process-traced three comparative case studies following the development of the nuclear policy change in Germany, Canada, and Russia prior to and after Fukushima
- Consulted for international clients, including foreign governments and multinational corporations, on civilian nuclear energy with analysis on new reactor licensing, nonproliferation, energy markets, government incentive programs, decommissioning, and regulatory and political risk
- Studied international safeguards of nuclear material and threats to nuclear security in the modern era at a national laboratory and demonstrations on the technical and legal framework needed to assess current nonproliferation policy options
- Assisted in coordinating nuclear policies and provided support to U.S. Delegations at multilateral international organizations at the U.S. Department of State
- Designed an independent study on nuclear nonproliferation policies and export controls with a senior researcher through the Center for International Trade and Security

### **Education**

- Doctor of Philosophy, Political Science and International Relations, University of Delaware
- Master of Arts, Political Science and International Affairs, University of Georgia
- Bachelor of Arts, International Affairs, University of Georgia

## **Sarah Sarnoski**

NA-241 Office of International Nuclear Safeguards – Washington DC

### **Experience**

- Post Masters Research Associate and Safeguards Internship Program Fellow, PNNL
- Nuclear Nonproliferation International Safeguards Fellow, Pennsylvania State University
- Graduate Researcher, Radiation Science and Engineering Center, Pennsylvania State University
- Reactor Research Assistant, University of Florida
- Toshiba Westinghouse Undergraduate Fellow, Pennsylvania State University
- Undergraduate Research Intern, Los Alamos National Laboratory



# Class of 2018-2019

### Accomplishments

- Participated in the Next-Generation Safeguards Initiative Nonproliferation and International Safeguards summer course and safeguards courses at Brookhaven and Oak Ridge National Laboratories, learning fundamental safeguards concepts and applied safeguards skills
- Conducted graduate research on the verification of fresh nuclear fuel for safeguards applications
- Participated in the Nuclear Facilities Experience with the Nuclear Security Science and Policy Institute to tour nuclear facilities in the United Kingdom
- Member of the 2015 Nuclear Engineering Student Delegation to Washington, DC to discuss nuclear energy, policy, education, and research with key policymakers
- Aided in the process of relicensing the University of Florida Training Reactor
- Developed a three-dimensional modeling program to run computer-simulated explosions in an urban setting
- Received the Most Outstanding Undergraduate in Nuclear Engineering Award at the University of Florida

### Education

- Doctor of Philosophy, Nuclear Engineering, Pennsylvania State University
- Master of Science, Nuclear Engineering, Pennsylvania State University
- Bachelor of Science, Nuclear Engineering, University of Florida

## Michael C. Sharp

NA-212 Office of Radiological Security – Washington DC

### Experience

- Acting Chief of Staff, U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service
- Export Manager and Owner, Trade Sharp LLC
- Civil Engineer Supply Manager and Human Resource Generalist, K.S. International (U.S. Department of Defense - Contractor)

### Accomplishments

- Participated in microbiological laboratory inspections and WMD emergency response and preparedness efforts
- Regulated the international trade of live animals to prevent foreign animal disease outbreaks and the proliferation of illicit pathogens, vectors, and bacteria
- Promoted and distributed American agricultural products to importers, retailers, and consumers with the USDA Foreign Agricultural Service - Office of Agricultural Affairs in Vienna, Austria
- Supervised U.S. and third-country nationals on Department of Defense contracts in Bishkek, Kyrgyzstan and Doha, Qatar
- Attended the “Global Biological Threat Reduction” conference in Paris, France
- Attended nuclear security training seminars at the World Institute for Nuclear Security “Evolving Security Threats and Advanced Security Technologies” and “International Event on Incident Planning and Emergency Response” in Vienna, Austria
- Studied abroad at the University of Paris Sorbonne IV, Paris, France and the Diplomatic Academy of Vienna, Vienna, Austria; completed certificates in French and German

### Education

- Masters of Professional Studies, Homeland Security and International Studies, Pennsylvania State University
- Bachelor of Arts, Political Science, Temple University
- Naval Postgraduate School - Center for Homeland Security and Defense, Emergence Program 1702





## Mary Soule

NA-231 Office of Conversion – Washington DC

### Experience

- Public Affairs Intern, U.S. Department of State, U.S. Embassy to the Holy See
- Digital Content Specialist, The Fares Center for Eastern Mediterranean Studies
- Search Engine Optimization Specialist, Auto Europe
- Search Engine Optimization Analyst, Hall Internet Marketing
- High School English Teacher, Princess Chulabhorn's College in Mukdahan, Thailand
- Elementary English Teacher, Little America Institute in Daejeon, South Korea
- Trade Intern, Maine International Trade Center

### Accomplishments

- Completed The Fletcher School's International Security Studies Program—spent a semester assessing Russia's motives and global relevance, largely dependent on their nuclear capabilities
- Attained Presidential Management Fellowship finalist status for 2018
- As an intern with the U.S. Embassy to the Holy See, worked on President Trump and Secretary Tillerson's visit to meet Pope Francis in May of 2017
- Wrote ambassador-level remarks for public events expressing U.S. policy objectives and values
- Composed daily briefings for State Department and U.S. Government officials covering geopolitically significant events to the Vatican and United States
- Co-organized the 2017 Fletcher School's Religion, Law, and Diplomacy Conference with over 300 registrants
- Worked in marketing and advertising as both an analyst and account manager serving a diverse range of client accounts, from government-contracted manufacturers to health and lifestyle brands
- Tailored online marketing campaigns to keep pace with search engine algorithm updates
- Achieved Google Analytics Individual Qualification
- Taught at Princess Chulabhorn's Hub Language Program in Thailand and collaborated with teachers from Vietnam, Kenya, Scotland, India, and the Philippines
- Authored a trade report at the Maine International Trade Center for the Governor's office to demonstrate trade opportunities between France and Maine and utilized government trade websites to properly categorize commodities and identify tariffs for potential exports

### Education

- Master of Arts in Law and Diplomacy, The Fletcher School, Tufts University
- Bachelor of Arts, Anthropology, Colby College

## Kristin Townsend

NA-122.1 Air-Delivery Weapons Division – Albuquerque, NM

### Experience

- ProForce Security, Enterprise Planning & Control/Consolidated Nuclear Security/Y-12 National Security Complex, Compliance Documentation, (Weapon) Production procedures, Engineering, Procedures, Operational Duties
- Custom Protection/Audit Tech/Captain I, G4S Security Services
- Police Personnel, Tennessee Valley Authority

### Accomplishments

- Partnered with NNSA staff to determine approval authority for procedures
- Captured and organized Legacy Imaging Projects in enterprise software for cost savings and auditing
- Organized publicity for events and Y-12 Retirees
- Helped on-site staff capture information about technical procedures, validate the information, find procedure information, and format procedures as required



# Class of 2018-2019

- Had a substantial role in moving nearly 50,000 boxes of archives with a team that also relocated heavy-duty storage units for engineering drawings; some units were 15 feet high and required the use of forklifts, man lifts, and pallet jacks
- Worked a major project for the Enterprise Planning and Controls team that led the move of official papers and information for the Office of Scientific and Technical Information
- Effectively led engineering departments, professionals, and enterprises in a technical environment
- Assisted in creating plans for Tennessee Valley Authority Watts Bar Nuclear Power Plant site security and conducting security audits that included finding alternative plan options
- Served as G4S security captain and functional manager for performance testing and auditing in high-risk areas of East Tennessee
- Managed other security duties to the audit standards and conducted visual walk-downs to include vaults, alarms, and communications at Watts Bar Nuclear Power Plant

#### **Education**

- Master of Business Administration, Engineering Management, Southern New Hampshire University
- Bachelor of Science, Business Administration, Tusculum College

### **Matthew Tweardy**

NA-192.2 Domestic Uranium Enrichment Program Office – Washington DC

#### **Experience**

- Graduate Research Assistant, Department of Nuclear Engineering, University of Tennessee, Knoxville
- Graduate Research Assistant, Nuclear Materials Detection & Characterization Group, Oak Ridge National Laboratory
- NIST-ARRA and NIST-SURF Undergraduate Research Fellow, National Institute of Standards and Technology
- Institutional and Environmental Affairs Intern, FORATOM

#### **Accomplishments**

- Conducted doctoral research in a collaboration with Oak Ridge National Laboratory focused on developing algorithms to estimate enrichment from tagged neutron imaging measurements of uranium metal, a capability that could significantly improve the nuclear security and nuclear nonproliferation missions
- Published two peer-reviewed journal articles and three peer-reviewed conference proceedings as first author
- Completed a graduate certificate in Nuclear Security Science and Analysis, with a focus on both the political and institutional aspects as well as the technologies used to support the nuclear security mission
- Attended the Radiation Detection for Nuclear Security Summer School at PNNL, gaining perspective on both technical and policy needs in the nuclear security field
- Participated in the Japan Nuclear Facilities Experience, a one-week trip through Japan to visit facilities relevant to the nuclear fuel cycle and nuclear nonproliferation
- Attended the Advanced Non-Destructive Assay Workshop at Oak Ridge National Laboratory focused on the hands-on use of non-destructive assay systems
- Studied abroad in Brussels, Belgium in a program focused on the politics of the European Union, particularly the politics of defense
- Interned with FORATOM, a European nuclear energy trade association, analyzed post-Fukushima government response and radiation measurements, and researched the Russian nuclear industry and its effect on the European industry

#### **Education**

- Doctor of Philosophy, Nuclear Engineering, University of Tennessee, Knoxville
- Master of Science, Nuclear Engineering, University of Tennessee, Knoxville
- Bachelor of Arts, International Studies, American University
- Bachelor of Science, Physics, American University





## **Karen Ventura**

NA-22 Defense Nuclear Nonproliferation Research and Development – Washington, DC

### **Experience**

- Quality Control Laboratory Tech, Becton-Dickinson, El Paso
- Research Assistant, University of Texas at El Paso
- Teaching assistant for Physical Chemistry, University of Texas at El Paso
- Peer leader for Periodic Table Class, University of Texas at El Paso
- Undergraduate Researcher, University of Texas at El Paso
- Undergraduate Researcher, Shantou University

### **Accomplishments**

- Conducted graduate research focused on the study of electron transfer fundamentals in multi-electron redox centers and in the development of engineered magnetic nanomaterials for water remediation
- Participated in the National Science Foundation-funded Engineering Research Center called Nanotechnology-Enabled Water Treatment, focused on developing nanomaterials for water treatment applications; served as vice-president of the student leadership council for two years and as member of the innovation research team
- Conducted undergraduate research at the Shantou University in China and spent a summer abroad studying in Vesalius University in Belgium
- Received the University of Texas at El Paso Graduate Scholarship, Thelma E. Morris Endowed Graduate Scholarship, and Academic Excellence Undergraduate Student in Chemistry Award
- Placed second in the Entrepreneurship and Creation of Enterprises Fair at the Instituto Tecnológico de Estudios Superiores Monterrey contest in Cd. Juárez, Mexico
- Authored publications in *Inorganica Chimica Acta*, *Chemical Communications*, *Journal of Chemical Education*, and *ACS Applied Materials & Interfaces*
- Co-authored publications in the *Journal of American Chemical Society* and the *Journal of Environmental Chemical Engineering*
- Fluent in English and Spanish

### **Education**

- Doctor of Philosophy, Chemistry, University of Texas at El Paso
- Master of Science, Chemistry, University of Texas at El Paso
- Bachelor of Science, Chemistry, University of Texas at El Paso



## **Jon Vreede**

NA-14 Office of Cost Policy and Analysis – Washington DC

### **Experience**

- Sie Fellow, Josef Korbel School of International Studies
- Political Risk Specialist, Lynx Global
- Intelligence Research Assistant, Professor Cullen Hendrix, University of Denver
- Intern, Office of Global Targeting, Crime, Narcotics and Western Hemisphere Division, U.S. Department of Treasury Office of Foreign Assets Control
- Project Assistant, National Democratic Institute Elections Team
- Research Assistant, University of Michigan
- Intern, Public Diplomacy, U.S. Embassy in Tbilisi, Georgia
- Intern, U.S. Trade and Development Agency East Asia Region

### **Accomplishments**

- Interned at the American Embassy in Tbilisi, Georgia, gaining first-hand experience in relationship building with U.S. partners
- Supported the U.S. Treasury Department's Office of Foreign Assets Control as a sanctions investigator for the Crime, Narcotics, and Western Hemisphere Division

# Class of 2018-2019

- Led a team during the 2017 University of Denver Crisis Engagement and Negotiation Exercise and served as a board member organizing the 2018 University of Denver Crisis Engagement and Negotiation Exercise
- Expanded understanding of the streetlight effect in international security research by developing a methodology for collecting approximately 8,000 data points
- Researched and wrote original articles highlighting the National Democratic Institute and the Global Network of Domestic Election Monitors' mission for transparent elections
- Researched national oil companies and their efforts at internationalization, including researching eight case studies and maintaining a database of current companies
- Wrote and edited daily briefings using open-source news to keep more than 50 U.S. policymakers in Georgia and the United States abreast of the latest developments
- Researched more than 10 biographies of Chinese officials for the agency briefing book to prepare the U.S. Trade and Development Agency Director for the U.S.-China Strategic and Economic Dialogue

### Education

- Master of Arts, International Security, Josef Korbel School of International Studies, University of Denver
- Bachelor of Arts, Public Policy, University of Michigan

## Mark Walker

NA-NFO Nevada Field Office – Las Vegas, NV



### Experience

- Consortium for Verification Technology Graduate Intern, International Safeguards Group, Oak Ridge National Laboratory
- Intern, Strategic Planning and External Coordination Section, Department of Safeguards, International Atomic Energy Agency (IAEA)
- Intern, U.S. Senate Committee on Foreign Relations
- Undergraduate Research Assistant, Nuclear Materials Detection and Characterization Group, Oak Ridge National Laboratory

### Accomplishments

- Conducted Ph.D. dissertation research at archives in the United States, the United Kingdom, and Germany on the development of international safeguards measures for gas centrifuge enrichment plants
- Managed engagement between the IAEA and 21 Member State Support Programs providing technical development and implementation support to the IAEA Department of Safeguards
- Assisted IAEA staff preparing for meetings with Member State officials and framed reports by IAEA technical staff for presentation to policymakers
- Served as an economics and statistics tutor at Princeton University's Woodrow Wilson School of Public and International Affairs Junior Summer Institute; led the Woodrow Wilson School's intensive calculus refresher course for two incoming graduate student cohorts
- Received a "Best Student Presentation" award at the 2016 and 2017 Consortium for Verification Technology annual workshops
- Received the Barry M. Goldwater Scholarship in March 2011, which is awarded annually to the top ~300 undergraduate STEM students in the United States
- Led and performed R&D projects at Oak Ridge National Laboratory as an undergraduate student, both in the laboratory and using Monte Carlo computer simulations, involving development of a neutron radiography system
- Inaugural member of the University of Tennessee's Haslam Scholars Program, the university's most prestigious undergraduate scholarship

### Education

- Doctor of Philosophy, Woodrow Wilson School of Public and International Affairs, Princeton University
- Bachelor of Science, Nuclear Engineering, Concentration in Radiological Engineering, University of Tennessee, Knoxville



## Isabelle Weisman

NA-LFO Livermore Field Office – Livermore, CA

### Experience

- Geoscience Policy Intern, The American Geosciences Institute
- Teaching and Research Assistant, Vanderbilt University
- Graduate Student Mentor, School for Science and Math, Vanderbilt University Center for Science Outreach
- Research Assistant, United States Antarctic Program
- Research Assistant, College of Marine Science, University of South Florida

### Accomplishments

- Conducted geochemistry laboratory work in the Nuclear and Chemical Sciences Division at Lawrence Livermore National Laboratory
- Invited participant to attend and speak at the 29th International Symposium on Science and World Affairs, hosted by the Union of Concerned Scientists and the International Platform on Science, Technology and Peace at the Technical University in Darmstadt, Germany
- Attended the “Nuclear Nonproliferation Safeguards and Security in the 21st Century” short course at Brookhaven National Laboratory in June 2017
- Completed a Geoscience Policy Internship with the American Geosciences Institute in Washington DC
- Helped prepare congressional testimony and provide decision makers at the federal, state, and local levels and the geoscience community with accurate, unbiased, nonpartisan information about geosciences and policy issues related to the geosciences
- Awarded Graduate Student Fellowship covering full tuition and stipend at Vanderbilt University
- Awarded a specialized Graduate Student Research Grant from the Geological Society of America in 2016 and presented original research at the 2016 Geological Society of America Meeting and the American Geophysical Union Meeting
- Graduate Student Mentor for high school students through the Vanderbilt Center for Science Outreach: School for Science and Math
- Traveled to Antarctic Peninsula on a research vessel to collect sediment samples; analyzed the sediment samples and presented findings at the 2014 Geological Society of America meeting

### Education

- Master of Science, Earth and Environmental Science, Vanderbilt University
- Bachelor of Arts, Geoscience, Hamilton College

## Bobby Wetherington

NA-242 Export Control Review and Compliance/Interdiction – Washington DC

### Experience

- Researcher, Advanced Short-Term Research Opportunity, Oak Ridge National Laboratory
- Scholar, Richard B. Russell Security Leadership Program, The Center for International Trade and Security
- Intern, First Federal Savings and Loans

### Accomplishments

- Spent three months in Marrakech, Morocco studying at the Center for Language and Culture and earned certificates in intermediate Modern Standard Arabic and beginner Moroccan dialect
- Participated in the Center for International Trade and Security Richard B. Russell Security Leadership Program
- Helped host two consecutive Security and Strategic Trade Management Academy sessions and provided logistical and material support including arrangement of transportation and preparation of informational packets for distribution
- Conducted research under the former Center for International Trade and Security Executive Director for her forthcoming textbook provisionally titled “Global Nuclear Order” and contributed to chapters profiling the nuclear weapons arsenals of the United States, Russia, and France



# Class of 2018-2019

- Participated in an Advanced Short-Term Research Opportunity at Oak Ridge National Laboratory and worked in support of NA-242's International Nonproliferation Export Control Program
- Constructed large database based on the Consolidated Screening List of sanctioned entities by coding thousands of lines of country and WMD indicators, the results of which will enable Department of Energy employees to better vet and analyze country- specific sanctions data
- Facilitated a visit of upper- and mid-level managers from the Chinese General Administration of China Customs and worked with International Nonproliferation Export Control Program employees and Customs and Border Protection as they delivered WMD commodity identification training and seaport interdiction training

#### Education

- Master of Arts, International Policy, University of Georgia
- Bachelor of Arts, International Affairs; Minor, Arabic; University of Georgia

### Lauryn Williams

NA-242 International Nonproliferation Export Control – Washington DC

#### Experience

- Countering Weapons of Mass Destruction Policy Intern, U. S. Department of Defense, Office of the Secretary of Defense for Policy
- Students and Alumni of Color Co-Chair, Princeton University
- Center for International Security Studies Graduate Fellow, Princeton University
- Project Manager, Carnegie Endowment for International Peace
- Nuclear Policy Junior Fellow, Carnegie Endowment for International Peace
- Course Assistant to Dr. Condoleezza Rice, Stanford University
- Analyst Intern, Obsidian Analysis, Inc.
- Intern, Office of Weapons of Mass Destruction Terrorism, U.S. Department of State, Bureau of International Security and Nonproliferation

#### Accomplishments

- Co-organized and moderated a panel at the 2019 Carnegie International Nuclear Policy Conference on strategies for promoting diversity and inclusion in the nuclear policy field
- Supported policy advisors, office directors, and the Deputy Assistant Secretary of Defense on global health security initiatives, the Cooperative Threat Reduction program, and pressing government-wide nuclear policy reviews
- Co-organized Princeton University's 22nd annual policy conference on issues affecting policy professionals of color in the United States and abroad
- Served as project manager and Junior Fellow at the Carnegie Endowment for International Peace and researched a range of issues, including dynamics in South Asia, the rise of emerging nuclear powers, and entanglement of nuclear and conventional weapons systems
- Published on the Nuclear Suppliers Group debate regarding membership of non-NPT states in The Bulletin of the Atomic Scientists and The Diplomat, as well as a report-- Perspectives on the Evolving Nuclear Order—with Toby Dalton and Togzhan Kassenova
- Assisted Dr. Condoleezza Rice at Stanford University in coordinating the graduate-level political science seminar, "Challenges and Dilemmas in American Foreign Policy," developed course exercises, and coordinated a 48-hour crisis simulation
- Researched and analyzed products for the Department of Homeland Security and supported a nuclear security exercise involving hundreds of government players
- Assisted the Counter Nuclear Smuggling Team at the U.S. Department of State in writing memos and cables, coordinating interagency meetings, and drafting talking points delivered verbatim by then-Assistant Secretary of State Tom Countryman

#### Education

- Master in Public Affairs, Princeton University
- Bachelor of Arts, Political Science, Stanford University





## Margaret Williams

NA-10 Office of Defense Programs – Washington DC

### Experience

- Research Assistant to Dr. Scott D. Sagan, Center for International Security and Cooperation, Stanford University
- Course Assistant to Ambassador Karl W. Eikenberry and Dr. Herb Lin, Stanford University
- Graduate Fellow, Center on International Conflict and Negotiation, Stanford University
- Project on Nuclear Issues Nuclear Scholar, Center for Strategic and International Studies
- Consultant, Global Nuclear Policy Program, Nuclear Threat Initiative
- Legislative Aide (Defense, Foreign Policy, Veterans' Affairs), Office of Senator Angus S. King, Jr. (I-Maine)
- Policy Analyst/Strategic Communications Assistant, Angus King U.S. Senate Campaign
- English Teaching Assistantship, J. William Fulbright Fellowship, Khabarovsk, Russia

### Accomplishments

- As a member of Senator Angus King's legislative staff, supported the Strategic Forces Subcommittee and the National Defense Authorization Act to include receiving testimony on the U.S. nuclear posture and force structure, regional proliferation threats, and the status of current arms control agreements
- Crafted over 20 pieces of draft legislation to advance the Senator's work on defense, foreign policy, homeland security, veterans' affairs, and intelligence
- As a research assistant to Dr. Scott D. Sagan, supported MacArthur Foundation- sponsored research on public opinion and use of force focusing on nuclear weapons and civilian fatalities in war
- Conducted original research on the impacts of U.S. nuclear modernization on the nonproliferation regime
- As a consultant to the Nuclear Threat Initiative, scoped Track II diplomatic engagements and conducted congressional outreach to better understand the political operating space
- As a 2018 Project on Nuclear Issues Nuclear Scholar with Center for Strategic and International Studies, contributed to research on how emerging technologies improve or degrade strategic situational awareness and the consequences for nuclear strategic stability
- As a Stanford course assistant, advised over 100 students at the graduate and undergraduate level on coursework exploring U.S. national security challenges and the role that technology plays in shaping understanding and response to these challenges

### Education

- Master of Arts, International Policy Studies, Security and Cooperation Concentration, Stanford University
- Bachelor of Arts, International Affairs; Minor, Russian Language; Lewis & Clark College

# Class of 2018-2019



***Building future leaders in nuclear security and nonproliferation***



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