

Christine Mirzayan Science and Technology Policy Graduate Fellows
2014 Biographical Sketches



Aaron Adams (2014; NAE/NAE EO) received his Ph.D. and M.S. in mechanical engineering and his M.S. in Marketing from the University of Alabama, Tuscaloosa. A major part of Dr. Adams' doctorate research was carried out at Brookhaven National Laboratory, and it focused on the thermal annealing of Cadmium Zinc Telluride crystals for nuclear radiation detectors. While matriculating at the University of Alabama, Aaron participated in the Engineering Without Borders project that focused on providing clean water and solar lighting to rural villages in Iquitos, Peru. Prior to attend the University of Alabama, he was employed at Ford Motor Company as a product design engineer focusing on environmental policies. For the last three years, Aaron has been an assistant professor at Alabama Agricultural & Mechanical University in the mechanical engineering technology and mechanical engineering departments respectively. In his spare time Aaron enjoys watching and playing sports, he is a die-hard Detroit Lions fan, and is a passionate Nissan Z Car enthusiast.

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Andrew Carpenter (2014; PGA/CISAC) received his Master of Public and International Affairs from the University of Pittsburgh's Graduate School of Public and International Affairs. For his thesis, he researched the relationship between tacit knowledge and the proliferation of nuclear weapons. He also interned at the Center for Arms Control and Nonproliferation, where he researched and published articles on the effect of sanctions on the Iranian nuclear program. Andrew received a B.A. in History and International Politics from the Pennsylvania State University with a Minor in Middle Eastern Studies. While pursuing his undergraduate degree, he was named Vice President of the Penn State chapter of the Phi Alpha Theta International History Honors Society. Andrew hopes to gain further experience in the policy arena, while exploring opportunities in public service and addressing the diverse challenges in the creation and application of effective science policy. His goal is to begin a career that combines both his background in public policy and international relations

with his interest in the sciences.



Christine Clarke (2014; IOM/BGH) is currently a Ph.D. candidate in the Department of Microbiology at Howard University College of Medicine. Her graduate studies focus on immunological mechanisms underlying the pathogenesis of diseases, and her Ph.D. thesis on delineating the modulatory role of a select immune protein in the resolution of tumors. As a graduate student, Christine participated in the Howard-Johns Hopkins Health Disparities Scholars Research Training Opportunity, which helped to cement her passion to eliminate health disparities and promote health among vulnerable and disenfranchised populations. She also served as science mentor with the Walter Reed Army Institute of Research Science Education & Outreach Program, and Howard University Amgen Scholars Summer Research Program. She has observed environmental health policy formulation during her tenure at the U.S. Environmental Protection Agency and, more recently, regulatory health policy in her capacity as D.C. Board of Medicine Health Policy Fellow.



Renske Erion (2014; IOM/HSP) is currently completing a Ph.D. in cell and molecular biology at the Perelman School of Medicine at the University of Pennsylvania. Her Ph.D. thesis investigates the molecular and cellular basis of metabolic regulation by sleep and circadian systems using the fruit fly *Drosophila melanogaster* as a model. Prior to graduate school, Renske earned a B.S. in chemical biology from the University of California, Berkeley. As a Mirzayan Fellow, Renske is looking forward to combining her background in science with her interest in policy.

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Nirupa Goel (2014; IOM/BPH) received her Ph.D. in neuroscience from the University of Pennsylvania and is currently a postdoctoral fellow at the University of British Columbia. Her research investigates sex differences in the neuroanatomy and neuroendocrine responses related to stress. Throughout her research career, Nirupa has actively participated in science outreach through the Brain Bee competition and the annual Brain Awareness week. She has also taught interactive workshops on stress, suicide, and mental health in Vancouver high schools, which fueled her growing interests in public health outcomes and health literacy. Additionally, she represents her university in the Canadian Association of Postdoctoral Scholars and has worked towards improving the career training, status, benefits, and professional development of postdocs at the national and local levels.



Johanna Gusman (2014; PGA/CHR) received her J.D. from the University of Washington, graduating as a William H. Gates Public Service Law Scholar with a concentration in international law. She also holds a graduate degree in biophysics and physiology from Georgetown University and an undergraduate degree in microbiology from Virginia Tech. Following her Mirzayan Fellowship, she was awarded a [Fulbright-Clinton Fellowship](#) to work at the National Human Rights Institute in Apia, Samoa where she assisted with the country's first ever State of Human Rights Report. She has since worked as a UNV Technical Officer with the World Health Organization's Regional Office for the Eastern Mediterranean in Cairo, Egypt. Currently, she is working as a legal officer with the World Health Organization's Convention Secretariat in Geneva, Switzerland. (Updated 4/2016)



William Hall (2014; IOM/FNB) is a Ph.D. student in Global & Sociocultural Studies at Florida International University. Using a combination of ethnographic and GIS methods, his dissertation research focuses on issues of race, gender, and economic security within the restaurant industry. As a research assistant, William worked with an interdisciplinary team of scientists investigating social and environmental dimensions of climate change in Miami-Dade County. He also recently participated in a community-based research (CBPR) study focusing on experiences and perceptions of racism among African Americans. Beyond his research pursuits, William has served for three years with the Miami-Dade Food Policy Council working to address issues of inequity in the food system. He hopes to pursue a career working in applied science.

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Lara Henry (2014; DELS/PRB) earned a Ph.D. in biological oceanography at the University of South Florida College of Marine Science. She holds a B.S. in neurobiology, physiology, and behavior from the University of California at Davis. Her doctorate focused on the effects of temperature, depth, and algal symbionts on the metabolism of corals from off the coasts of Florida and the Antarctic Peninsula. She has also worked as a coral physiologist for a private firm. Lara is looking forward to her experience as a Mirzayan Fellow with the Polar Research Board. She believes that it is vital for decision-makers to have an understanding of how our actions as stakeholders impact ocean ecosystems and their resources. In her spare time, Lara volunteers with Surfrider Foundation.



Rebecca Jones (2014; IOM/BCYF) is an assistant professor in the psychiatry department at Weill Cornell Medical College. She completed her B.A. at Princeton University, an M.Phil. at the University of Cambridge in the UK and received her Ph.D. in neuroscience from Weill Cornell Graduate School of Medical Sciences. She studies the development of the social brain and how and why this differs in those with autism spectrum disorders and typically developing individuals. She uses a variety of technologies in her research including functional MRI, wearable devices and eye tracking in order to examine the neural systems in the brain that drive social behavior and how they change across age. Her work also includes developing behavioral tasks to determine their predictive quality in treatment response.



Kenneth Kort (2014; DEPS/NMMB) is currently completing his Ph.D. in Chemistry at the University at Buffalo under the advisement of Prof. Sarbajit Banerjee. Kenneth's doctoral research has focused on the synthesis, characterization, and spectroscopic studies of two dimensional rare-earth oxychloride and InGaAs thin films. In 2011, Kenneth was selected as a National Science Foundation East Asia Pacific Summer Institute (EAPSI) Fellow. This allowed him to spend a summer in Pusan, South Korea, learning nano-indentation and studying the mechanical properties of highly oriented nanocrystal thin films. In his spare time, Kenneth enjoys spending time outside cycling, golfing, playing basketball, and traveling.

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Mollie Minear (2014; IOM/NCPF) received her Ph.D. in genetics and genomics from Duke University, studying the genetic basis of a late-onset disease of the eye, Fuchs endothelial corneal dystrophy. Following her Ph.D., Mollie stayed at Duke as a postdoc to re-train in the ethical, legal, and social issues (ELSI) raised by genomics. Her postdoctoral research examined the use of non-invasive prenatal genetic testing (NIPT) in the U.S. and in the developing world. During her postdoc, Mollie was a 2014 Mirzayan Fellow in the IOM's National Cancer Policy Forum, where she examined policy issues surrounding the use of cancer biomarker tests. After finishing her postdoc, Mollie was selected as a 2015-16 AAAS Science & Technology Policy fellow at the National Institutes of Health. There, she works at the National Heart, Lung, and Blood Institute (NHLBI) helping inform policies regarding the return of genetic data to research participants. (Updated 4/2016)



Meghan Mott (2014; IOM/HSP) is a neuroscientist with a strong interest in the intersection of science, technology and public policy. Currently, she serves as Chief of Staff in the Office of the Director at the National Institute of Neurological Disorders and Stroke (NINDS) at the National Institutes of Health. In this position, she serves as a representative for the NINDS Director, communicating policy, managing resources, and guiding the Institute's scientific and administrative functions to accomplish its mission. Meghan serves as the NINDS Director's point of contact for a number of high priority projects, by performing analyses, fact finding, and collecting data to inform strategic, policy and programmatic planning as well as providing advice and direction for special projects across the whole range of NIND's programs and activities. In addition, she develops written material; data and policy analysis; coordinates communication, policy development, program planning and implementation, and works on a variety of strategic and outreach activities. Previously, Meghan was a Science & Technology

Policy Fellow for the American Association for the Advancement of Science (AAAS) Health, Education, and Human Services Program, where she was Special Assistant to the NINDS Director. In 2014, Meghan was selected as a Christine Mirzayan Science and Technology Policy Fellow at the Institute of Medicine's Board on Health Sciences Policy at the National Academies. Prior to that position, she completed a postdoctoral fellowship in the Laboratory of Molecular Physiology at the National Institute on Alcohol Abuse and Alcoholism. Meghan received a Ph.D. in anatomical sciences and neurobiology from the University of Louisville School of Medicine and a bachelor's in biology with a specialization in neuroscience from the University of Chicago. (Updated 2/2016)

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Cristina Novoa (2014; IOM/BCYF) is currently completing a Ph.D. in psychology at Georgetown University. She holds a M.P.P. from the Georgetown Public Policy School and a B.A. in psychology from Yale University. Her dissertation uses a mixed-method approach to examine academic and behavioral outcomes among young children from immigrant families. Cristina looks forward to working with experts from the biological, behavioral, health, and social sciences to learn more about the research and policy concerns surrounding critical issues for today's children and families.



Christopher O'Donnell (2014; PGA/DSC) received his Ph.D. in Microbiology and Immunology from the University of Illinois-Chicago. Chris' doctorate focused on better understanding the mechanisms involved in herpes simplex virus (HSV) entry and spread. Chris also holds a BS in biology from Nazareth College in Rochester, NY. Most recently, Chris was a postdoctoral IRTA at the National Institutes of Health/National Institute of Allergy and Infectious Diseases (NIH/NIAID). Here, Chris' research focused on the development of live-attenuated influenza vaccines (LAIV) against influenza viruses with pandemic potential, specifically studying the immune response against the 2009 pandemic H1N1 virus and properties of LAIVs that impact their efficacy. During his time at NIH, Chris rotated in the NIAID Office of Global Research gaining invaluable experience in global health policy issues. Chris is eager to learn how he can use his background to best contribute to science policy and the advancement of public health.



Jocelyn Oshrin (2014; GRP) – the Gulf Research Fellow – received a master's degree in geology from the University of Notre Dame researching the petrogenesis of Apollo 14 lunar basalt samples through textural and compositional analysis. She also holds an MSES/MPA dual degree from Indiana University, where she focused on environmental policy and natural resource management. During her undergraduate studies at the University of North Carolina, she received a B.S. in geology and minored in Spanish. Since completing graduate school, Jocelyn has worked with The Nature Conservancy to restore sensitive habitats on preserves throughout southern Indiana and with Cardno JFNew on wetland, stream and prairie restoration projects. When she has free time, Jocelyn volunteers with the local Humane Society and enjoys exploring new cities with friends and taking in the local food, music and sporting events.

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Argenta Price (2014; DBASSE/BOSE) is currently finishing her Ph.D. in biochemistry at the University of California, San Francisco. She received her B.A. in biology from Yale. Her Ph.D. research focuses on how the spliceosome, a dynamic RNA-protein machine required for gene expression, assembles at the correct places on pre-mRNAs. During graduate school, Argenta has volunteered extensively with UCSF's Science & Health Education Partnership, teaching science lessons in elementary and high school classrooms and mentoring a high school student in the lab. She is also a member of the science policy student group, and is working with a team of other graduate students to create videos that show why basic science research is important for society. Before graduate school, she spent a year as a Fulbright Scholar in Argentina, studying how *Giardia* evades the immune system.



Kavitha Ramane (2014; PGA/STEP) is currently completing her Ph.D. in electrical and computer engineering from Purdue University. Her doctoral research is based on economic analysis of the utilization of wireless spectrum used by different service providers. She started to work as a design engineer immediately after she received her bachelor's degree in electronics and communications engineering, and has ten years of experience working on different industrial products at Robert Bosch, Honeywell and TVS in India and the US. She has performed various leadership roles in different business units within the organization. She also holds a master's degree in engineering education from Purdue University. Kavitha hopes to gain the necessary skills and understand national policy decision making. She enjoys travelling, exploring different cultures. This interest led her to work with her advisor, Brent Jesiek on global competent engineers and their Cultural Intelligence. She is also passionate about car racing.



Youngbok Ryu (2014; NAE/NAEPO) is a Ph.D. candidate at the Pardee RAND Graduate School. He has an M.S. in technology management from the Georgia Institute of Technology and an M.S. in science, technology, and environmental policy from the University of Minnesota. He completed his undergraduate study in civil and environmental engineering at the Korea University in Seoul. His Ph.D. dissertation examines the impact of innovative transportation technology on the environment (specifically, biodiversity and ecosystem service) under the condition of deep uncertainty. He has been involved in several RAND projects on the emerging technology and the Earth System Modeling. Prior to coming to the United States, he worked as a researcher at both national and regional think tanks in Korea, focusing on technology forecasting and patent data analysis. He also served as a military officer in Korea's Engineering Corps.

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John P. Sadowski (2014; DELS/BCST) completed his Ph.D. in chemistry at Harvard University. His research is in DNA nanotechnology, an interdisciplinary field that combines aspects of molecular biology, chemistry, materials science, and computer science. His graduate work focused on developing dynamic nucleic acid systems with the ability to respond to and control their chemical and physical environment in intricate ways, as well as developing the computational methods by which these systems can be designed. He is also a longtime contributor to Wikipedia, having contributed to articles on topics such as nanotechnology, biomolecular structure, history of science, and budgetary policy, and has given in-person lectures and mentored students on how to effectively edit Wikipedia. Sadowski received his B.S. from the California Institute of Technology in chemistry with a minor in the history and philosophy of science.



Asha Sharma (2014; PGA/PGAEO) – the Rosenblith Fellow – is currently completing her Ph.D. in Biological and Environmental Engineering at Cornell University. She holds an MS in the same field from Cornell, a Post Graduate Diploma in Intellectual Property Rights Law from the National Law School of India University and a BTech in Industrial Biotechnology from Anna University, India. Asha's graduate research is in hydrology at a wide range of scales and using a variety of techniques. Her current research involves developing methods to identify long-term hydrological trends in data-scarce situations, such as evapotranspiration in the Mississippi River Basin and the seasonality of rainfall in India. Her other research interests include using DNA based tracers to study hydrological flowpaths. Asha is particularly interested in the intersection of climate change, water, food and energy. She has been part of interdisciplinary groups focused on these issues in Ethiopia and India, including the Food Systems and Poverty Reduction IGERT program at Cornell.



Anjali Shastri (2014; PGA/CSTL) received her Ph.D. in Immunology from Stanford University, where she studied how the zoonotic parasite *Toxoplasma gondii*, a Class B bioterrorism agent, manipulates the immune system. At Stanford, she sought teaching and mentoring opportunities and worked with diverse stakeholders to improve student training and promote professional and career development, including founding an annual career exploration trip to Washington D.C. Through courses at the Stanford Law School and Public Policy Program, she explored her interest in science policy, specifically in improving STEM education and public health, domestically and abroad. Anjali received her bachelor's degree from the University of California, Berkeley in molecular and cell biology. Upon completing her Mirzayan Fellowship, Anjali began a AAAS Fellowship at the U.S. Department of State. In her current role, she serves as a Global Health Policy Advisor in the Office of the U.S. Global AIDS Coordinator and Health Diplomacy, where she utilizes her technical training to elevate the role of public health in U.S. foreign policy. Working to bridge interagency technical experts and policy makers, she designs and develops educational tools to prepare U.S. diplomats to engage in health diplomacy and serves as liaison between the Office of Global Health Diplomacy and the Department's Bureau for South and Central Asian Affairs. Anjali enjoys doing yoga, travelling, and baking. (Updated 2/2016)

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Reid Sherman (2014; PGA/COSEPUP) works in the NASA Earth Science Division as a data systems policy expert. His work focuses on implementing White House and interagency initiatives around climate information and citizen science. He joined NASA as a AAAS Science Policy Fellow in 2014. Prior to that, his policy experience was around education and STEM workforce issues. He received his Ph.D. in astrophysics from the University of Chicago in 2011, where his research focus was on multi-wavelength observational studies of star-forming regions and the interstellar medium. He grew up in the Bronx and currently lives in Alexandria, Va. with his wife. (Updated 2/2016)



Padmashri Suresh (2014; DEPS/SSB) is currently finishing her Ph.D. in electrical engineering at Utah State University. She is a NASA Earth and Space Science Fellow working on understanding the effects of space weather. Her dissertation focuses on studying the effects of solar storms on the Earth's upper atmosphere. Her other research interests include instrumentation for CubeSats and sounding rocket missions. She is also a member of the student government working as the graduate research director and serving as the graduate student liaison across various research and student welfare committees. Originally from Bangalore, India, Padmashri obtained her B.S. in Electrical Engineering from Visveswaraiah Technological University. Following which, she worked with IBM as a systems engineer and architect for 2 years and then moved to Utah to pursue a Master's with a focus on space systems. While not working in the lab, she loves to hike the national parks. She is also an amateur astronomer and an avid photographer.



John Thompson (2014; NAS/Koshland) is a Science and Technology Policy Fellow with the California Council on Science and Technology, where he was placed in the State Assembly as a legislative staffer. He completed his Ph.D. in materials science and engineering at Northwestern University and received his B.S. in physics with a minor in music from New York University. His Ph.D. thesis focuses on bridging the gap between theory and experiments on coarsening in solid liquid systems, with an emphasis on 3D visualization and characterization of experimental systems. Throughout his academic career, John has been involved in improving the quality of life for students through his work on the boards of the department student associations at both Northwestern, where he focused on improvements in stipend benefits and treatment of teaching assistants, and NYU, where he worked with faculty on the academic curriculum for undergraduates. In his spare time, John enjoys playing tennis, spending time with his family and playing board games. (Updated 4/2016)

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Nickolas Weiler (2014; NAS/Koshland) recently received his Ph.D. in neuroscience from Stanford University, where he developed computational microscopy techniques to study the molecular basis of experience-dependent plasticity in distinct cortical synapse populations. During his doctorate, Nick taught science to students ranging from the elementary to graduate level, led a science-writing group dedicated to improving communication between scientists and society, and performed in a student Shakespeare troupe.



Jocelyn Widmer (2014; IOM/BCYF) works as a MPH Assistant Professor of urban affairs and planning at the School of Public and International Affairs at Virginia Tech. Through international work in Micronesia, Southeast Asia and more recently Haiti, Jocelyn has diverse experiences in bringing together organizations, foundations, institutions, businesses and governments to address global development issues that most often play out in the very intimate setting of one community on the ground. Nearly all of her international development experience has been focused on adapting and implementing strategies to reflect local factors, development goals, and stakeholder expectations in contexts that support varying capacities for infrastructure, society and culture. Jocelyn teaches courses live and online in community engagement, international development, and urbanization and development. Current and future interests lie at the intersections of urban planning and public health, with a particular focus on community- and technology-based approaches to development. Jocelyn holds a Ph.D. in urban

and regional planning with a concentration in international development from the University of Florida, where she subsequently earned a Master of Public Health. Jocelyn also holds a Master's degree in Landscape Architecture from Texas A&M.

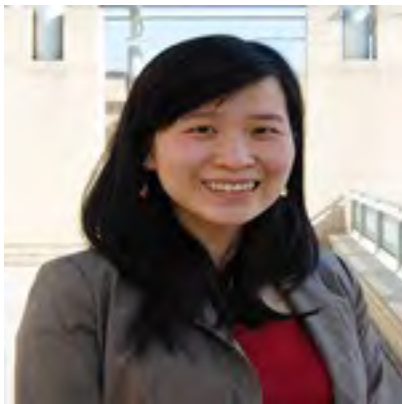


Sarah Wynn (2014; DBASSE/CLAJ) received her J.D. from the University of Oklahoma College of law. Sarah is licensed to practice in Wisconsin and before the United States Patent and Trademark Office. She published two papers in law school, one on the disproportionate effects of possession of controlled substances on women in the criminal justice system and the other on the intellectual property and anti-trust implications of genetically modified seeds. She has worked for the Wisconsin State Public Defender's Office as a private bar attorney. Prior to law school, Sarah received a bachelor's degree in molecular biology and history of science with comprehensive honors and a minor in European studies from the University of Wisconsin-Madison.

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Laurence Yeung (2014; DELS/BLS) received his B.A. in chemistry from Oberlin College and Ph.D. in physical chemistry from the California Institute of Technology. He completed postdoctoral training at the University of Southern California in oceanography and later was a National Science Foundation Earth Sciences Postdoctoral Fellow at UCLA. His research revolves around the use of stable isotopes to understand how molecules are transformed in the atmosphere and oceans, e.g., how global air pollution has varied since the preindustrial era and how atmospheric carbon is taken up by the Amazon River's offshore plume. In addition, Laurence was a founding producer for PHD TV (phdcomics.com/tv/), an online-based science outreach venture led by Jorge Cham (creator of PHD Comics). There, he created educational and journalistic pieces into complex topics such as how six Italian seismologists could be convicted of manslaughter after the 2009 L'Aquila earthquake. His short, "Gold Dust," about NASA's Genesis mission, was picked up by New Hampshire Public Radio.



Wa Yuan (2014; PGA/BISO) received her Ph.D. in materials science and engineering at Northwestern University. She earned her undergraduate degree in materials science from Zhejiang University, China. Her Ph.D. thesis focuses on structure-property relationships of self-assembled charged molecules in colloidal systems and at liquid interfaces. After graduation from Northwestern, Wa founded Scitivate, a company that builds automatic referral systems to facilitate networking among attendees of professional conferences and associations.



Elizabeth Zeitler (2014; DEPS/BEES) received a Ph.D. in chemistry from Princeton University directed towards electrochemistry for energy storage. Beth focused her research on formation of energy-dense liquid fuels from carbon dioxide using molecular catalysts, a problem which presents vexing questions in chemistry and in policy. Engagement in the wide-ranging policy issues related to her work led to collaborations with researchers in energy science and policy at Princeton and Rutgers and nationally and internationally through her DOE and NSF IGERT Fellowships. Beth is particularly interested in the ways energy problems manifest themselves in the transportation and agriculture sectors. Prior to attending graduate school, Beth volunteered full time for a year through Americorps and subsequently worked in fundraising for Catholic Charities of Baltimore. Outside of her academic and professional pursuits, Beth enjoys cooking, biking, and service in the community.