

Christine Mirzayan Science and Technology Policy Graduate Fellows 2003 Summer Biographical Sketches



Liz Alter (Summer 2003, PGA/Intl Programs) completed a master's degree in environmental science, policy and management at the University of California, Berkeley, and will begin a PhD program in biological sciences at Stanford University this fall. Her doctoral research will focus on the conservation genetics and molecular evolution of marine organisms. Liz is interested in the policy implications of environmental problems that require cooperation across international borders, particularly issues related to marine conservation and climate change. Throughout her academic and professional career, Liz has worked to encourage greater public understanding of the science that shapes our society. As an undergraduate at Yale University, she taught for and eventually directed an environmental education program for low-income New Haven elementary schools. After graduating from Yale, Liz taught high school biology in Cairo,

Egypt, and worked at the Smithsonian Museum of Natural History on a biodiversity database project. Her professional goal is a career in academic research with a focus on producing science that will aid the conservation of natural resources. During the course of the fellowship, Liz hopes to gain a deeper understanding of the ways in which scientific research is translated into public policy.



Angela Armendariz (Summer 2003, IOM/FNB) earned a PhD in molecular and biochemical nutrition at the University of California, Berkeley in 2004. She earned a BS in human nutrition and food science with a minor in biochemistry from New Mexico State University. She is currently the Living Systems Facility Manager at the Exploratorium, a science museum in San Francisco. The Mirzayan Fellowship at the National Academies allowed Angela the unique opportunity to gain insight into the ways in which science influences governmental policies and vice-versa. Angela was a fellow in the Food and Nutrition Board within the Institutes of Medicine, and contributed to a FNB study on the safety of genetically modified foods. (Updated 10/2011)

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Kristen Averyt (Summer 2003, DELS/PRB) finished her PhD in Geological and Environmental Science at Stanford University in 2004. She earned an MS in chemistry from the University of Otago in Dunedin, New Zealand while on a Fulbright Fellowship, and received her BS in chemistry and marine science from the University of Miami. Subsequent to completing her PhD, she was a NOAA Knauss Legislative Fellow in the Office of US Senator Ron Wyden (D-OR). She then became a staff scientist for Working Group I of the Intergovernmental Panel on Climate Change, and one of the many US scientists who received the 2007 Nobel Peace Prize. Currently, she is Deputy Director of the Western Water Assessment, one of ten NOAA Regional Integrated Sciences and Assessment Programs. Her current work involves incorporating climate science into adaptation and mitigation planning on regional scales. (Updated 9/2010)



Amy Brown (Summer 2003, IOM/BCYF) earned a master's degree public health, concentrating in health policy and administration at Yale University, and a bachelor's degree in biology from Smith College. As a Christine Mirzayan Science & Technology Policy Graduate Fellow during the summer of 2003, Amy contributed to a study to help build the research base to improve adolescent health and development outcomes, particularly among those at increased risk. Amy currently works as a senior policy associate at Altarum Institute in Washington, D.C. She has coordinated data collection, analytic, and writing support for over 30 projects involving federal and state public health programs. She is currently managing evaluations of the Early Childhood Comprehensive Care (ECCS) Grant Program and the Oral Health Workforce Activities Grant Program. She is also managing an assessment of strategies to promote the sustainability of Federal health and human services programs. In addition, Amy has continued to pursue her personal and professional passion of engaging in research to reduce health disparities among vulnerable populations and has recently presented a poster at the Third National Leadership Summit on Eliminating Racial and Ethnic Disparities in Health. Amy is also currently pursuing a certificate in epidemiology at the George Washington University School of Public Health and Health Services. (Updated 3/2010)

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Amy Love



Collins (Summer 2003, DBASSE/BBCSS) obtained her PhD in developmental psychology from Boston College, where she was involved in research examining older adults' psychological resilience against life challenges associated with normal aging. She continued her research on health and well-being in older adults as a postdoctoral fellow at Princeton University. Prior to Boston College and Princeton, she earned an MA in psychology from The

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Catholic University of America and a BA in English literature from the Honors College at the University of South Florida. (Updated 10/2011)



Stephanie (Cupp) Weeks (Summer 2003, NAE/CASEE) is a technology executive focused on the strategic growth of educational technology, advocating for and creating change that benefits customers and end users, with a focus on learners in particular. Stephanie leverages a design-thinking approach to problem solving and loves seeing a business change in order to better meet the needs of real people. Prior roles included providing product direction for International regions, and creating and growing a large-scale software design organization that focused on product design, UI development, accessibility standards, and content development. Stephanie received her M.S. in computer science from The George Washington University, while studying the impacts of technology on collaborative learning, and her B.S. in computer science from Kennesaw State University. (Updated 2/2016).



Collette Eccleston (Summer 2003, DBASSE/CFE) has been working towards a doctorate in social psychology at the University of California, Santa Barbara. She earned a bachelor's degree in psychology from Columbia University. Her research attempts to gain a greater understanding of the psychological experience of individuals who belong to stigmatized groups. Specifically, she is interested in how structural and psychological factors contribute to differences between members of relatively disadvantaged groups and relatively privileged groups in important life outcomes, such as educational achievement and health. Her career goal is to conduct scientific research that has potency outside the realm of academia. Collette had hoped that her Mirzayan Fellowship would provide her with an opportunity to learn about the process through which scientific research influences public policy. In her free time, Collette

enjoys running and hiking.



Mary Feeney (Summer 2003, PGA/COSEPUP) is associate professor and the Lincoln Professor of Ethics in Public Affairs at Arizona State University and associate director at the Center for Science, Technology, and Environmental Policy Studies at ASU. Her research focuses on public and nonprofit management and science and technology policy. She is currently working on an NSF-funded project investigating materials sharing among academic scientists and a project investigating technology use in municipal governments. She holds a Ph.D. in public administration and policy from the University of Georgia. (Updated 2/2016)

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Lee Finewood (Summer 2003, DELS/NRSB) has worked for more than 12 years in the engineering, science policy, energy and security fields. While his work has taken him to Philadelphia, Denver, Boston and NYC, he has called DC home for more than 5 years. His work during graduate school with the Office of the Attorney General of the State of New York began his career in science and technology policy while he also tutored disadvantaged youth in a federal education program. At the National Academies, Lee worked with the Board on Radioactive Waste Management (now the Nuclear and Radiation Studies Board) exploring the important policy issues of safety and security of the nation's nuclear facilities and associated waste disposition. He finished his MS with his thesis on kinematics and dispersal of particle bearing jets and gravity flows at the State University of New York and has been working on the important union between science and public policy ever since. Lee has worked with Booz Allen Hamilton as a consultant for the US Department of Energy on safeguards, security and emergency management for special nuclear materials as well as the Department of Homeland Security's Office of Science and Technology helping to bring advances in science to bear on the practical needs of safety and security. Presently he is a Federal government employee at the Department of Energy. Lee is an avid outdoorsman and sports enthusiast who enjoys adventure racing, kayaking, climbing and cycling in the D.C. area and playing on various softball and other sports teams.

(Updated 03/2010)



Monique (Hite) Head (Summer 2003, DELS/NRD and DEPS/BICE) is an associate professor in the Department of Civil Engineering at Morgan State University in Baltimore, Md. Prior to joining the faculty at Morgan State in 2011, she was a tenure-track assistant professor at Texas A&M University. She earned her bachelor and master of civil engineering degrees from the University of Delaware in 2000 and 2002, respectively, and her doctorate in structural engineering from the Georgia Institute of Technology in May 2007. Her research and teaching interests include experimental testing, detailed analytical modeling using state-of-the-art software to study the responses of bridges, structural dynamics, bridge engineering, performance-based bridge design using AFRP composite materials, reinforced concrete design, seismic retrofitting of bridges, and engineering education. Dr. Head is a member of several national professional organizations, and enjoys facilitating engineering outreach activities for K-12 students to stimulate an excitement for science, technology, engineering and mathematics.

(Updated 4/2016)



Rima Izem (Summer 2003, DEPS/BMSA) has been progressing towards a doctorate in statistics at University of North Carolina. She previously earned a *Maîtrise de Mathématiques Appliquées* in applied mathematics from Université de Montpellier II, in France. Her doctoral research is on quantifying the effect of selection on evolution using functional data from evolutionary biology. Her interest as a statistician is in collaborating with experts to answer questions in their fields by developing new statistical methodologies or improving existing statistical methods. Particularly, she would like to apply statistics to questions in health, biotechnology, agriculture, and the economic and social development of third world countries. Rima also works as a statistic tutor with the disability services of the University of North Carolina and assists a visually impaired student in a statistics course by developing non-visual tools to explain statistical concepts. She believed her Mirzayan Fellowship would complement her academic experience and her personal motivation to work on policy related projects.

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Sarah Kieweg (Summer 2003, NAS/PNAS) is an associate professor with the School of Engineering at the University of Kansas. She conducts research in non-Newtonian fluid mechanics with applications in biomechanics, primarily to improve the drug delivery of anti-HIV microbicides. Her research also has applications in women's health including instrument design, soft tissue mechanics of the female pelvic floor, and the biomechanics of delivery. Dr. Kieweg was a National Institutes of Health (NIH) K12 Building Interdisciplinary Research Careers in Women's Health (BIRCWH) Scholar (2007 – 2011) and is the Principal Investigator of a 5-year NIH phased R21/R33 award, funded through the NIH Microbicide Innovation Program. As co-PI on a major research instrumentation grant from the National Science Foundation, she is conducting high performance computational simulations of thin film flow of non-Newtonian fluids to enable the rational design of microbicide delivery vehicles. Other projects include the development of mathematical models of relevant transport phenomena to design nanomedicines for microbicide drug delivery. Additional funding includes a Kauffman Foundation/Institute for Advancing Medical Innovation proof-of-concept award for a device that will automatically vitrify reproductive cells and tissue to preserve fertility in cancer patients. (Updated 2/2016)



Aaron Levine (Summer 2003, PGA/STEP) is an assistant professor in the School of Public Policy at Georgia Tech. He completed his PhD in public affairs at Princeton University's Woodrow Wilson School. His research interests focus on the intersection between biomedical research, ethical controversy and public policy. His most recent research has focused on stem cell policy and assessed the impact of the atypical policy environment regulating human embryonic stem cell research on the development of this field. Aaron is the author of *Cloning: A Beginner's Guide* (www.cloningBG.com), published in May 2007 by Oneworld Publications. This book offers an accessible introduction to the science of cloning and human embryonic stem cells and discusses the ethical and policy debates this controversial science inspires. Aaron completed his undergraduate studies at the University of North Carolina at Chapel Hill where he studied biology and computer science and completed an award-winning thesis under Dr. Jeff Dangl using DNA microarray analysis to explore disease resistance in *Arabidopsis thaliana*. He also holds a master's degree from Cambridge, where he worked with Dr. Richard Durbin and developed computational tools to help analyze and annotate the human genome. (Updated 10/2011)



Kelly Martinez (Summer 2003, IOM/HPDP) has been working towards a master's degree in exercise science/physiology at University of Kansas while attending medical school at University of Kansas School of Medicine, where she earned her bachelor's degree in biology. While working for the Women, Infant, and Children (WIC) department, she observed that patients' medical needs simply were not being met because the clinic was ill equipped, both in available technology and bilingual staff. Kelly aspires to one day provide a health care service that is culturally and linguistically sensitive to the needs of the Latino community and increase availability of medical technology to underserved areas. Her goal is to help foster a new system that will provide innovative health awareness programs, target specific medical programs for the economically challenged, and establish a bilingual medical program to assist the Latino community in obtaining proper medical care and insurance, with an emphasis on prenatal and child health care. Kelly hopes that her participation in the fellowship program will contribute to her pursuit of creating that health care system—one that is safe and beneficial to all that utilize it. Kelly, also, volunteers for organizations such as the United States Hispanic Leadership Institute and the Kansas City Kansas Youth Soccer Association.

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Robert McDonald (Summer 2003, DELS/BANR) works for The Nature Conservancy's Analysis Unit, working on issues related to energy, agriculture, and ecosystem services. He conducted a global review of threats to Conservancy projects from agriculture and strategies used by the Conservancy to respond to them, and now leads the Conservancy's global agriculture strategic planning. He also researched the effect of U.S. climate policy on natural habitat impacts from energy development, including biofuels. Prior to joining TNC he was a Smith Conservation Biology Fellow at Harvard University, studying the impact global urban growth will have on biodiversity and conservation. Robert has also taught Landscape Ecology at Harvard's Graduate School of Design, helping architects and planners incorporate ecological principles into their projects. He earned a BS degree in Biology from The University of North Carolina at Chapel Hill, and then defected down the road to earn a PhD in Ecology from Duke University. He currently is based at the Conservancy's World Office.

(Updated 9/2010)



Naila Moreira (Summer 2003, PGA/STS) has been working towards a PhD candidate in geological sciences at the University of Michigan. An aspiring writer, she has interned at *Science News* in Washington, D.C., writing science and research articles. She had planned to complete her dissertation on aqueous geochemistry and carbonate mineral formation after her internship, with the hopes of pursuing a science journalism career. Naila completed her bachelor's degree in geology at Amherst College, and studied European politics both at Amherst and as an exchange student at the Sorbonne and Institut Catholique in Paris. During her spare time, Naila plays an inordinate amount of ultimate Frisbee, and traveled last year to the Ultimate National Championships with traveling team Clutch of Michigan. She also enjoys birdwatching and writing fiction and poetry.

(Updated 06/2005)



Blake Purnell (Summer 2003, PGA/COSEPUP) is a nuclear engineer at the Nuclear Regulatory Commission where he conducts nuclear criticality safety licensing reviews and inspections of fuel cycle facilities. Prior to working at the NRC, Blake worked for six months at the Federation of American Scientists. At the FAS Blake worked on nuclear non-proliferation issues. Blake received a master's degree in physics from the University of California, Santa Barbara. (Updated 3/2010)

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Reena Raman (Summer 2003, DSC/PGA) works as a regulatory counsel in the FDA's Center for Drug Evaluation and Research, Office of Regulatory Policy. Her work involves drafting regulations and guidance documents governing the development, manufacture, and marketing of drug products. Reena earned a law degree from the University of Virginia and a master's degree in neuroscience from New York University. (Updated 3/2010)



Ericka Reid (Summer 2003, NAE/CEE) received her PhD in educational psychology with an emphasis on women and minorities in STEM (science, technology, engineering, and mathematics) disciplines and careers from Georgia State University in Atlanta, Ga. and her med in counseling & development (counselor education) with a concentration in student development in higher education from the University of North Carolina at Greensboro. An educational psychologist, program design/development professional, and a strong advocate for education and career development in the sciences, Ericka has spent 12 years in Atlanta where she has worked for a variety of programs, organizations, and higher education institutions. Prior to leaving Atlanta she served as the manager of professional development for the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE, Inc.), an international membership association where she was responsible for the development, scheduling of, and recruitment for continuing education courses. Currently, Ericka is the Education Outreach Specialist/Director, Office of Science Education & Diversity for the NIH/National Institute of Environmental Health Sciences (NIEHS) in Research Triangle Park, N.C. She is responsible for the coordination of local outreach efforts across the Institute's divisions and serves as the central liaison to other programs and educational institutions nationwide in the development of innovative science education and programs for under-represented populations. (Updated 10/2011)



Heather Rosoff (Summer 2003, PGA/COSEPUP) is a post doctoral researcher at the U.S. Homeland Security Center for Risk and Economic Analysis of Terrorism Events (CREATE). Her research focuses on using risk and decision analytic techniques to study the uncertainties surrounding terrorism. More specifically, her risk perception work assesses the public's perceived risk of disaster events (terror and non-terror) and the influence this has on behavioral decision-making. She has developed several surveys to evaluate the perceived risk relationships across disaster characteristics and to predict public behavioral responses to an event, both immediately and in the long term. Her other research at CREATE has been on studying the terrorist threat from the adversary perspective and integrating terrorist challenges and vulnerabilities into policy making. In one project, she and her advisor, Detlof von Winterfeldt, analyzed possible radiological dispersion device attacks on the ports of Los Angeles and Long Beach. In a second project, she assessed how values motivate terrorist leader preferences for alternative attack modes. For the former project, she used a combination of probabilistic risk analysis tools and for the latter refined her knowledge of multi-attribute utility modeling and value-focused thinking. Heather completed her doctoral degree in Public Policy at the University of Southern California's (USC) School of Policy Planning & Development and master's degree in Systems Safety and Security at USC's Viterbi School of Engineering this past summer. (Updated 9/2010)

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Gretchen (Schwarz) Gano (Summer 2003, PGA/COSEPUP) is the Social Sciences Librarian at Frost Library at Amherst College. She completed a 1-year leave from her faculty appointment as Librarian for Public Administration and Government Information and Coordinator of the NYU Data Service Studio at New York University Division of Libraries in July 2010. In fall 2009, Gretchen joined the Human and Social Dimensions of Science and Technology Doctoral program at Arizona State University as a part of the Consortium for Science Policy and Outcomes to research knowledge transfer and utilization across the boundaries dividing expert and lay communities. In 2009-2010 she was the Outreach and Education Coordinator for the Center for Nanotechnology in Society at Arizona State University. She organized activities for CNS-ASU to reach the community and K-12 educators; designed materials and programs based on CNS

research activities for both formal and informal education, and built scholarly communication and archiving capabilities. She holds a Masters in Library Science and a Masters in Public Policy with a concentration in science and technology policy from Rutgers University. Before transitioning to Doctoral study and academic librarianship, Ms. Gano creative directed the immersive theater planetarium show entitled "Search for Life: Are We Alone", produced for the Rose Center for Earth and Space at the American Museum of Natural History in New York City. She also designed and produced information graphics, interactive kiosk, and web content about current earth science, biodiversity, and astrophysics research as the Art Director for "Science Bulletins" at the museum. (Updated 2/2011)



Federico Sciammarella (Summer 2003, DEPS/NMMB) is an assistant professor in the Department of Mechanical Engineering at Northern Illinois University. He received his PhD in metallurgical and material science engineering at Illinois Institute of Technology (2003), where he also earned an MS and BS in the same field. Working in the field of experimental mechanics, he has helped develop cutting edge technology for NDT optical techniques and has contributed to producing Level 1 industry standards. From 1995 to 2002, he worked as a research associate for the Illinois Institute of Technology in the Mechanical Materials and Aerospace Engineering Department. As a research engineer with Alion Science and Technology (2002-2007), he provided technical expertise and operational support to the Department of Defense, civilian government agencies, and commercial customers. His career goal has remained constant—to

become a leader in the scientific community building global coalitions to advance science and technology. Federico has traveled the world and has lived abroad, which he feels gives him a better understanding of the need for developing science and technology worldwide. Updated 4/2009)

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Andrew



Walther (Summer 2003, DEPS/AFSB) is a master's degree candidate at the Goldman School of Public Policy at the University of California, Berkeley. His focus is on science and technology policy. His career vision is closely tied to the purpose of The National Academies, providing high-quality advice to the federal government on science, technology and policy issues. His other policy interests include education/curriculum policy and national security policy. Prior to entering his graduate program, he earned a BS in computer science at Harvey Mudd College and



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spent two years at The Aerospace Corporation as a systems engineer and computer security researcher. In his free time, he enjoys traveling, concocting culinary experiments and searching for bits of wilderness to hike. (Updated 10/2011)