

Christine Mirzayan Science and Technology Policy Graduate Fellows
2005 Fall Biographical Sketches



Tammy Bosler (Fall 2005, NAE/CASEE) was awarded a PhD in physics from the University of California, Irvine in October 2004, where she also earned a MS. She received a BA in physics from Temple University. Her research specialty is observational astrophysics in the context of galaxy formation in the Local Group. Along with her PhD research, she acted as an outreach coordinator to develop an astronomy and astrophysics outreach program at UCI where she created basic astronomy curricula and demonstrations for students from third grade to high school. She also taught physics and astronomy classes at UCI where she won a departmental teaching award and recently taught thermodynamics at the University of Regensburg in Germany. She also developed a two day astronomy workshop designed for the general public entitled "Astronomy: Understanding Our Place in the Universe." (Updated 4/2009)

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Saharah Moon Chapotin (Fall 2005, PGA/DSC and CSCANS) is Acting Division Chief for Agricultural Research at the U.S. Agency for International Development. She joined the Agency in 2006 as a Biotechnology and Biosafety Advisor. She was a Fall 2005 National Academies Fellow, working on international scientific cooperation and communication and on biosecurity. After her NAS Fellowship, she completed a post-doc at the Biosafety Institute for Genetically Modified Agricultural Products, working on issues surrounding the regulation of bioengineered crops and biosafety policy, followed by a AAAS Science and Technology Policy Fellowship with a placement at USAID. Saharah Moon was awarded a PhD in plant physiology from Harvard University and received a BS in biology from Stanford University. Her thesis research focused on the water relations and biomechanics of baobab trees in Madagascar. (Updated 8/2011)



Matthew Druckenmiller (Fall 2005, DELS/PRB and BASC) is currently a CIRES visiting fellow with National Snow and Ice Data Center at the University of Colorado at Boulder and a PACE (Postdocs Applying Climate Expertise) fellow with the University Corporation for Atmospheric Research. During his fellowship with the National Academies' Polar Research Board, he worked on the report that outlined the requirements of an Arctic observing network. After his time at the NAS and before starting his PhD, Matthew served as a project manager at the Arctic Research Consortium of the U.S. In summer 2011, Matthew finished his PhD in geophysics at the University of Alaska-Fairbanks, where he researched coastal sea-ice along Alaska's Arctic coast. His research integrated geophysical methods of monitoring and studying shorefast ice with the experiential and traditional knowledge of Inupiat hunting communities. Matthew also has a BS in environmental systems engineering and a MS in geo-environmental engineering from Penn

State University, where he investigated geologic carbon sequestration as a means to potentially mitigate industrial releases of carbon dioxide. (Updated 10/2011)



Joanna D. Friesner (Fall 2005, PGA/GUIRR) was awarded a PhD in genetics from the University of California, Davis in December 2004. She received a BA in molecular and cellular biology from the University of California, Berkeley. Her dissertation work involved defining DNA repair mechanisms in higher plants and their use as a model for human DNA repair. Following four years as the Coordinator for the Multinational Arabidopsis Steering Committee (MASC) Joanna currently has two positions: (1) Coordinator for the North American Arabidopsis Steering Committee (NAASC), a non-profit plant research organization and (2) Coordinator of the Inter-institutional Network for Food, Agriculture and Sustainability (INFAS) at University of California, Davis. Among the goals of NAASC are fostering communication and free exchange of data, materials and ideas among worldwide plant researchers studying the model flowering plant, *Arabidopsis thaliana*. A recent spinoff in this position is to assist with the development of a new International

Arabidopsis Information Consortium (IAIC) which strives to develop systems to allow community members to manage the increasing amounts and types of data and allow the leveraging of global resources, knowledge, and collaborations. In her second position at the Agricultural Sustainability Institute (UC Davis), Joanna is the new coordinator of INFAS, a national network of scholars committed to the development and support of food and agricultural systems that sustain the health of people, society, and the natural environment. (Updated 2/2012)

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James W. Gregory (Fall 2005, DEPS/ASEB) was awarded a PhD in aeronautics and astronautics at Purdue University in August 2005, where he also earned his master's degree. Jim earned his bachelor's degree in aerospace engineering from Georgia Tech in 1999, graduating with highest honors. During the summer of 2004, he interned at the Tohoku University-Department of Aeronautics in Japan, where he developed a real-time imaging system for unsteady aerodynamic measurements with pressure-sensitive paint. His work experience also includes tenures at NASA Glenn Research Center and Delta Air Lines. Jim is currently an assistant professor in Aerospace Engineering at The Ohio State University. His research focuses on the study and control of unsteady, separated flows, as well as development of advanced measurement techniques for aerodynamics. His educational interests focus on international collaborative design projects for engineering students. (Updated 3/2010)



Samantha I. Infeld (Fall 2005, DEPS/AFSB) is a senior systems engineer developing the concurrent engineering facility at NASA Langley. She was awarded a PhD in aeronautics and astronautics in April 2006 from Stanford University. Her Ph.D. dissertation was on space mission trajectory design and optimization. While working towards a M.S. at Stanford, she worked on micro-satellite development and testing in the Space Systems Development Lab and participated in a team research project on rewards and gender at science and engineering organizations. She received her B.S. in aerospace engineering and space science from the University of California, San Diego. Her interest in a wider, system-level view is what led her to the Mirzayan Fellowship at the National Academies of Sciences, Engineering, and Medicine. She specifically tried to learn how national and global politics affect problem solving and how exploration goals are pursued in the aerospace field. After her Fellowship, Samantha worked at NASA JPL for two and a half years on space mission concepts all over the solar system, but especially for Earth climate science and terrestrial energy applications. She was then contracted to NASA Langley for the CLARREO Earth climate observer mission for three years, to a mission at the International Space Station, and to DOE Lawrence Berkeley Lab in energy efficiency policy development analysis. (Updated 4/2016)



Marnina (Reed) Kammersell (Fall 2005, PGA/COSEPUP) is a freelance policy analyst. Previously, she was a research associate at the Board on Health Sciences Policy within the Institute of Medicine. Prior to joining the IOM, she was a health science policy analyst at the Clinical Research Policy Analysis and Coordination (CRpac) program within the Office of Biotechnology Activities at the National Institutes of Health. Her work at the NIH focused on the ethics, policy, and regulation of clinical trials. Marni was a research assistant at The George Washington University's Center for International Science and Technology Policy, and she also served as a legislative intern for the House Science Committee. Marni was a Fall 2005 Christine Mirzayan Fellow for COSEPUP where she worked with Debbie Stine on *Rising Above the Gathering Storm*. She holds a master's in public policy with a focus on health policy from George Washington and a bachelor's in philosophy from the University of Michigan. (Updated 2/2016)

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Amit S. Mistry (Fall 2005, NAE/CASEE) is currently a AAAS Science and Policy Fellow at the U.S. Agency for International Development. He works in the office of the Chief Operating Officer to help coordinate the agency's efforts in food security. Previously, Amit was a MRS/OSA Congressional Fellow in the office of Congressman Edward J. Markey. Amit has also served as a science policy fellow at Research!America, an advocacy organization for health research. Amit holds a bachelor's degree in chemical engineering and a doctorate in bioengineering, both from Rice University. For his doctoral research he studied nanotechnology and regenerative medicine to evaluate a novel material for its potential to heal severe bone injuries. In fall 2005, Amit contributed to an online educational resource for new engineering professors as a Christine Mirzayan Science and Technology Policy Fellow at the National Academy of Engineering. Prior to graduate school, Amit spent two years teaching high school science and math in an underserved community in New Orleans with Teach for America. (Updated 3/2010)



Meredith Murr (Fall 2005, NAS/Koshland) is the Director of Research Development in the Office of Research at the University of California, Santa Barbara. She received her Ph.D. from the department of Molecular, Cellular and Developmental Biology at UCSB in the laboratory of Professor Daniel Morse in 2006. Meredith holds a B.A. in chemistry from Boston University and M.A. in chemistry from University of Texas at Austin, and has several years of industry experience at pharmaceutical and biotechnology companies. After participating in the Mirzayan Fellowship, Meredith worked in the Education Department of the California NanoSystems Institute at UC Santa Barbara, focusing on professional development programs for graduate students and postdoctoral scholars. (Updated 9/2010)

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Lindsay Odell (Fall 2005, PGA/CISAC) was awarded a PhD in biophysics and biophysical chemistry in April 2004 from the Johns Hopkins School of Medicine, where she studied the mechanisms of drug resistance in *M. tuberculosis* and the neurological disorder, Refsum's disease. She received a BA in biological sciences from the University of Chicago. As a postdoctoral scholar, Lindsay used X-ray protein crystallography to study the mechanism of human phytanoyl-CoA hydroxylase, an enzyme involved in Refsum's disease. She then worked for the United States Patent and Trademark Office where she applied legal analysis and technical

knowledge in microbiology, molecular biology, and biophysics to determine whether to grant or deny patents for inventions in biotechnology. Lindsay's career goals include using her expertise in the fields of chemistry, physics and biology, as well as her understanding of the international science community, to help develop policies that protect our nation against the threat of chemical and biological weapons. She hopes to make substantive contributions to the

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Academies' continuing efforts in supporting the Defense Department's missions in combating weapons of mass destruction (CWMD). Lindsay is currently an associate at Booz Allen Hamilton, working in the fields of biosecurity and CWMD. (Updated 4/2009)



LeighAnne M. Olsen (Fall 2005, IOM/IOM EO) is a program officer with the Board on Global Health's Forum on Microbial Threats at the Institute of Medicine (IOM). In 2010, LeighAnne joined the Forum to pursue her long-standing interests in microbial diversity and evolution; factors influencing the emergence and spread of infectious diseases; and the use of science-based policy to improve global security and health. As a member of the Forum's staff she has contributed to work on neglected tropical diseases, antimicrobial resistance, emerging fungal diseases, food safety, and One Health. As a Mirzayan Fellow and Program Officer, LeighAnne has also contributed to the work of the IOM's Roundtable on Value & Science-Driven Health Care; developing several of the Roundtable's projects on accelerating the translation of biomedical research into effective medical practice. LeighAnne earned a PhD from Princeton University for research on mechanisms of viral infection and spread in the nervous system and a BA from the University of California, Berkeley for studies in molecular biology and anthropology. (Updated 10/2011)



Rachael E. Scholz (Fall 2005, PGA/COSEPUP) is an associate at Booz Allen Hamilton for the Defense Life Science Team. She provides technical programmatic support for research programs across the defense and intelligence communities in biological, chemical, biotechnology, biomedical, nanotechnology and materials science areas. Rachael received her PhD in neuroscience from George Washington University in December 2005. She received a bachelor's in biology from Bates College. As a Mirzayan Fellow in the fall of 2005, she worked with the Committee on Science, Engineering, and Public Policy on a new study that examines the most effective policies and practices for recruiting, hiring, and retaining women faculty. Rachael is also an active member of the Society for Neuroscience. Previously, she has worked for the Genetics and IVF Institute and Brigham and Women's Hospital as a clinical specialist in cytogenetics, where she analyzed karyotypes of blood and prenatal samples for chromosome abnormalities. In her spare time, Rachael races on a D.C./Booz Allen dragon boat team and D.C. outrigger canoe team and plays in various ultimate Frisbee leagues, as well as competes in local sprint triathlons. (Updated 03/2010)



Brian T. Schwartz (Fall 2005, PGA/COSEPUP) earned a PhD in electrical and computer engineering in 2005 from the University of Colorado and a BA in physics from Swarthmore College. He lives with his wife and children in Boulder, Colo. He works as a technology specialist at a law firm, where he assists in patent prosecution, litigation, patentability determinations, and infringement analysis in technologies including optics, photonics, silicon photonics, imaging, lens design, image sensors, and image processing. He has been a research associate for the Independence Institute, a free-market think tank and a writer and member of the Editorial Advisory Board for the *Boulder Daily Camera*. His op-eds have also been published in the *Denver Post* and other Colorado newspapers, as well as on-line at PJ Media and *The Huffington Post*. (Updated 4/2016)

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Kevin Whittlesey (Fall 2005, PGA/CSTL) is currently a Science Officer at the California Institute for Regenerative Medicine (CIRM) working to translate stem cell research efforts into clinical applications and new therapeutic treatments. Kevin earned his PhD in biological sciences from Northwestern University in 2005 for which he developed a novel biomaterials-based tissue engineering strategy to treat spinal cord injury. Kevin received his B.A. in biochemistry from Occidental College in Los Angeles, CA. Before entering graduate school, he spent three years at the National Institute of Allergy and Infectious Diseases studying allergic inflammation. After completing his doctorate, Kevin's experience as a fellow at the National Academies with CSTL solidified his interest in pursuing science policy. After leaving the National Academies, Kevin was an NIH SBIR-funded postdoctoral fellow at Aastrom Biosciences characterizing bioreactor-expanded adult human bone marrow-derived stem cells which are currently in clinical trials to

facilitate tissue repair. He returned to the Washington area when he was selected as the 2006-2007 MRS/OSA Congressional Fellow with the AAAS Science and Technology Policy Fellowship Program. He was placed in the office of Rep. Doris Matsui (D-CA) working on science education and research issues, during which time he developed legislation to improve science communications training that was signed into law with America COMPETES (P.L. 110-69). Kevin then served as Legislative Assistant to Rep. Anna G. Eshoo (D-CA), handling energy and environmental issues. Most recently before moving to San Francisco, Kevin spent two years as a member of the inaugural class of the FDA Commissioner's Fellowship Program. He was placed in the Office of the Chief Scientist examining the agency's regulatory process and communication efforts pertaining to regulation of cell therapy and regenerative medicine products. Kevin's long term interests are in the area of technology transfer and improving the communication of science to facilitate the transition of basic research into new products and treatments. (Updated 2/2011)



Ling Zhu (Fall 2005, PGA/STEP) is currently serving as an Assistant Professor at the College of Management of Long Island University C.W. Post Campus in New York. He has taught more than 350 MBA and undergraduate students IT management courses. He focuses his research on global IT policy. Ling Zhu was a Mirzayan S&T Policy Fellow in Fall 2005, working at STEP of PGA. In 2006, he was one of the NSF (National Science Foundation) Young Scholars selected by the National Center for Technology & Law and attended the U.S.-China Forum on Science & Technology Policy in Beijing. Ling Zhu received his Ph.D. degree in Management Information Systems (MIS) from the University of Arizona Eller College of Management. He also earned a Master of Laws (LL.M.) in International Trade Law from UofA's James E. Rogers College of Law and Bachelor of Law (LL.B.) from Shanghai Jiao Tong University in China. (Updated 9/2010)