

Christine Mirzayan Science and Technology Policy Graduate Fellows 2007 Fall Biographical Sketches



Albert Einstein Memorial Statue © 1978 by Robert Berks



Robin Ackerman (Fall 2007, PGA/CSTL) is an attorney for the U.S. Department of Labor, in the Division of Occupational Safety and Health. She previously worked as a health scientist for the Occupational Safety and Health Administration. Robin holds a JD from Northeastern University School of Law, a master's degree in nursing from Simmons College, and a master's degree in environmental health from the Harvard School of Public Health. (Updated 9/2009)



Boonchai Boonyaratanakornkit (Fall 2007, DELS/BCST) graduated from the University of California, Berkeley with a PhD in chemical engineering in June 2006. Boonchai hails from a Thai-Chinese background hence the long last name. His doctoral research focused on the cultivation of extremophiles from deep-sea hydrothermal vents and the elucidation of genes that allow for survival in such extreme environments. Boonchai received his BS in biochemical/chemical engineering at the University of California, Davis where he got to enjoy the rural life, biking around campus, and research in air quality and viticulture. He recently worked as a post-doctoral fellow at Lawrence Berkeley National Lab and explored enzymatic and electrochemical means to convert carbon dioxide into dense, carbon-neutral liquid fuels. He is excited to be living on the East Coast and learning about the interrelationship between policy and research instead of doing bench science. During his time at BCST, he hopes to apply and expand his speaking and writing skills in order to pursue possible careers in scientific writing and patent law. In his free time, he enjoys

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working out, reading, learning new languages, writing chorales, and playing tennis, basketball, and softball. (Updated 3/2010)



Sarah Case (Fall 2007, BEES & DEPS/DEPS EO) is currently the 2011 American Institute of Physics (AIP) State Department Fellow, and is serving as the Nonproliferation Officer in the Office of Chinese and Mongolian Affairs at the U.S. Department of State. Sarah's professional interests focus primarily on international nuclear safety, security, and non-proliferation concerns. Prior to accepting the AIP fellowship, Sarah was a senior program officer with the Nuclear and Radiation Studies Board (NRSB) of the National Academies. During her time at the Academies, she worked both for the NRSB and for the Board on Energy and Environmental Systems (BEES), primarily on projects related to nuclear security, non-proliferation and the nuclear fuel cycle, and nuclear energy. Her graduate research focused on the characterization of topological transitions in fluids. She received her PhD in physics from the University of Chicago, and her AB from Columbia University. (Updated 10/2011)



Mark Fleury (Fall 2007, NAE/CASEE) currently works as the Associate Director for Science Policy at the American Association for Cancer Research (AACR). Prior to this position he was an American Chemical Society (ACS) / American Association for the Advancement of Science (AAAS) Congressional Fellow. As an ACS/AAAS Fellow, and later as a staff member, Mark worked for Senator Claire McCaskill as her health care advisor during the recent passage of major reform legislation. Mark completed his PhD in biomedical engineering at the Ecole Polytechnique Federale de Lausanne (EPFL) in Switzerland where he studied the role of small convective flows in the promotion of cancer metastases and new blood vessel formation. He also held a post-doctoral research position at MIT studying immune cell signaling. He received an MS from Northwestern University in chemical engineering as well as a BS in the same field from Kansas State University. Mark is a licensed professional engineer, and prior to graduate school he worked in the food industry and served as a project engineer overseeing several wastewater projects. (Updated 10/2011)



Jennifer Flexman (Fall 2007, PGA/GUIRR) completed a PhD in bioengineering and the program on technology commercialization at the University of Washington and a BEng in electrical engineering at McGill university. Before returning to graduate school, she worked in the semiconductor industry at Teradyne, Inc., in Boston, Mass. During her graduate training, she was a co-director of the Forum on Science Ethics and Policy (FOSEP), a group devoted to promoting dialogue among scholars, policy experts, and the public about the role of science in society. Jennifer was also the international student representative to the IEEE Engineering in Medicine and Biology Society. After completing her graduate studies, Jennifer was a Mirzayan Fellow for the Government-University-Industry Research Roundtable (GUIRR) and the University-Industry Demonstration Project (UIDP) at The National Academies. After working as a Michael Smith Postdoctoral Trainee at the British Columbia Cancer Research Centre, she is now a technology transfer officer at the University-Industry Liaison Office at the University of British Columbia in Vancouver, B.C. (Updated 9/2009)

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Shikha Gupta (Fall 2007, DEPS/NMMB) is currently a Commissioner's Fellow at the Food and Drug Administration. She is working in the Center for Devices and Radiological Health, in the Office of Science and Engineering Laboratories, and the Division of Solid and Fluid Mechanics. Her current research efforts are focused on understanding the fatigue properties of the nickel-titanium alloys used in medical devices. Shikha is also interesting in learning more about spinal devices. In addition to her scientific endeavors, Shikha engages herself in a variety of artistic and athletic pursuits, including hiking, tennis, and salsa dancing. (Updated 10/2011)



Kofi Inkabi (Fall 2007, DEPS/BICE) recently completed his PhD in Civil and Environmental Engineering at the University of California, Berkeley. His doctoral research examined human and organizational influences on risk with respect to engineered energy and water resource infrastructure such as electric power transmission grids, pipelines, and dams. Kofi received his BS in civil engineering from the University of California, Davis in 1999 and his MS in structural engineering from the University of California, Berkeley in 2000. He then worked as a structural designer and assistant project manager for Parsons Brinckerhoff Quade & Douglas before returning to Berkeley, where he participated on the National Science Foundation supported forensic investigation of the New Orleans flood defense failure following Hurricane Katrina. As part of his postdoc, Kofi will help assess the energy and flood protection infrastructure within the Delta region. While a fellow, Kofi's perspective and knowledge of infrastructure risk analysis and the implications it potentially has for national and state policy was greatly enhanced by assisting on the study *Assessment of the Bureau of Reclamation's Security Program*. In his free time, Kofi enjoys eating, cycling, hiking, tennis, sailing, skiing, snowshoeing, swimming, and baking. (Updated 9/2010)



Bridget Kelly (Fall 2007, DBASSE/BCYF) is currently supporting strategic planning and project development for the Creating Health Collaborative, which works to understand and create health beyond the lens of health care, particularly through approaches that are embedded within communities. She just completed eight years at the National Academies of Sciences, Engineering, and Medicine where she worked on a wide range of topics in health and education, using a diverse array of processes for convening, information gathering, and analysis and interpretation. Most recently she was the Interim Director of the Board on Children, Youth, and Families. Previously, in that Board and the Board on Global Health, she led projects on workforce needs for the care and education of children birth through age 8, evaluation design for complex global initiatives, U.S. global HIV/AIDS programs, country-level decision-making for health, global chronic diseases, and strengthening the use of economic evidence to inform interventions for children and families. She has also worked for projects on mental health and child development. She completed an M.D. as well as a Ph.D. in neurobiology through the Medical Scientist Training Program at Duke University. She received her B.A. in biology with a concentration in neuroscience from Williams College, where she was also the recipient of the Hutchinson Fellowship in fine arts. She is a dancer and choreographer with many years of experience in grassroots arts administration and production. (Updated 2/2016)



Julia Kregenow (Fall 2007, PGA/STS) completed her PhD in astrophysics at the University of California, Berkeley in 2007. Her stated mission in life is to bring science and math to the masses. From 2007-2009 she did a combination of education research and physics and astronomy adjunct teaching at Ithaca College and Cornell University. Then in 2009, Julia began a faculty job in the astronomy department at Penn State University. There, she exposes 1,000 students each year to the glories of the universe through teaching them Astronomy 101, and remaining active in education research. Julia is an easygoing gal who likes cheese, bicycle commuting, science phenomena as metaphors for life, and sweaters with pockets. Or buttons. Or both. (Updated 2/2016)

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Divine Kumah (Fall 2007, PGA/BISO) is currently a postdoctoral associate in applied physics at the Yale University. He is investigating the internal structure of novel ferroelectric and semiconductor materials using x-rays. He completed his master's and doctorate degrees in electrical engineering and applied physics at the University of Michigan, and received his bachelor's degree in physics at Southern University. During his Mirzayan Fellowship, he sought a different perspective on how scientific research can be applied in developing policy on a global scale for energy sustainability. He plans to help less-developed countries develop sound policies in the areas of energy, science and technology. Divine loves to travel, read and play soccer and chess. (Updated 10/2011)



Frank Hiroshi Ling (Fall 2007, NAS/Koshland) is currently a visiting researcher at the Climate Policy Project at the Institute for Global Environmental Strategies (IGES) in Hayama, Japan and the manager of the Cleantech.Org website. He has done postdoctoral work at the Energy and Resources Group at the University of California at Berkeley and Lawrence Berkeley National Labs where he studied energy technologies and policies for a lower carbon future. He holds a PhD in Chemistry from UC Berkeley and a B.S. in Chemical Engineering from Caltech. Frank also produces the Berkeley Groks science radio show and podcast from the campus radio station. He was previously a AAAS Science Media Fellow in which he interned at the Voice of America. Frank speaks Japanese and Chinese. (Updated 9/2010)



Beth Masimore (Fall 2007, DEPS/BPA) is a technical SETA with AVIAN Engineering. Beth provides scientific and technical assistance for a research program aiming to develop systems to detect technical emergence from scientific and patent literature. Prior to joining AVIAN, she was an analyst at Discovery Logic, a Thomson Reuters company. Typical projects included designing and implementing data-driven program evaluations and teaming with software developers to design tools to facilitate informed science policy decisions. She earned her PhD in physics in May 2008 from the University of Minnesota. Her thesis research focused on adapting theories and techniques developed for condensed matter physics for use with neurological data. (Updated 2/2011)



John McMurdy (Fall 2007, NAE/CASEE) recently started a AAAS Fellowship at the U.S. Agency for International Development in the EGAT international research and biotechnology team. He completed his PhD in biomedical engineering at Brown University under the support of a NASA Graduate Student Researcher Program Fellowship. The scope of his research while at Brown has been in the clinical testing of spectroscopic techniques and the design of compact and inexpensive optical sensors to non-invasively measure blood components. Concurrent with his graduate work, John co-founded Corum Medical and currently serves as the Chief Scientific Officer responsible for development of a handheld device to monitor total blood hemoglobin from the inner eyelid. John also was a Christine

Mirzayan Fellow in the fall of 2007 at the Center for the Advancement of Scholarship on Engineering Education in the National Academy of Engineering. John completed his BSc and MSc in optics from the University of Rochester with help from a Rush Rhees scholarship. (Updated 3/2010)

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Cesar Perez-Gonzalez (Fall 2007, PGA/COSEPUP) is the Science Program Administrator in the Office of the Scientific Director at the National Eye Institute (NEI), part of the National Institutes of Health (NIH). His primary responsibility is to manage and mentor NEI's graduate students, postdoctoral fellows, and other trainees, and provide them with training and career development opportunities. Cesar also serves as the NEI's Summer Intern Program Coordinator as well as provide scientific and policy assistance to the NEI's scientific staff. He holds a Ph.D. in evolutionary biology from the University of Rochester and a B.S. in genetics from Iowa State University. Prior to his Mirzayan fellowship, Cesar was an NIH postdoctoral fellow at the National Institute of Diabetes, Digestive, and Kidney Disorders (NIDDK). He also

served as a volunteer with the NIH Fellows Committee and the National Postdoctoral Association's Diversity Committee. While at COSEPUP, he worked on studies focusing on underrepresented minorities in the STEM (Science, Technology, Engineering, & Mathematics) pipeline and on women and minorities in STEM industries. Cesar and his wife live in northern Montgomery County, Md. with their daughter and two cats. (Updated 1/2013)



Julia Skapik (Fall 2007, IOM/PHPHP) completed her MD and MPH at the Johns Hopkins Schools of Medicine and Public Health, and her residency in Internal Medicine at the University of Pittsburgh Medical Center, joining the faculty as a clinical instructor in July 2011. She started in September 2011 as a AAAS Science and Technology Policy fellow, working at the National Science Foundation in the Directorate for Computer & Information Science & Engineering working on their Smart Health and Wellbeing initiative. Originally from Licking County, Ohio, she attended New College of Florida, graduating with dual BAs in Biology and Psychology in 2001. Subsequently, she spent a year at the FDA in Bethesda performing viral and vaccine neurovirulence research. Since then, she has worked on many research projects

at the Johns Hopkins Medical Institutions, primarily examining medical errors and the junction of mental and medical illness. She is also the author of the chapter "Psychotic Disorders, Severe Mental Illness, and HIV Infection" in the *Comprehensive Textbook of AIDS Psychiatry* and was an editor and author of the sixth edition of the review book *First Aid for Step 2 CK* and the fourth edition of *First Aid for the Wards*. She previously served as Health Policy Action Committee chair for the American Medical Student Association, promoting legislation and education about universal health care, medical quality improvement, smoke-free indoor air, student activism, nutrition policy, and climate change. As a Mirzayan Fellow, she worked primarily with the Roundtable on Environmental Health Sciences, Research, and Medicine as a primary organizer of the workshop, "Environmental health, energy, and transportation: Bringing health to the fuel mixture." She also worked on global water and its environmental impact, Hurricane Katrina, and also collaborated briefly with the Roundtable on Evidence-Based Medicine. (Updated 3/2012)



Albert Swiston (Fall 2007, PGA/COSEPUP) has been currently pursuing a PhD in polymer science and technology at the Massachusetts Institute of Technology. He holds a BS and MSE in materials science and engineering from Johns Hopkins University. Albert's graduate research focuses on the application of ultra-thin polymer films in biological applications, such as immune system engineering. With the generous support of an NSF Fellowship, Albert has had the opportunity to pursue several different projects, including the surface modification of custom-made ocular devices in conjunction with the local non-profit Boston Foundation for Sight. On campus, Albert co-founded the MIT Science Policy Initiative, which seeks to educate graduate students in the US innovation system; as part of the Initiative, students travel

to Washington to participate in the legislative process by speaking with their elected representatives and their staff. During his Mirzayan Fellowship, he hoped to learn more about how science and government interact. Albert is an avid outdoorsman, and always eager to go cycling, backpacking, canoeing, or rock climbing.

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Antwuan Wallace (Fall 2007, NAE/CEE) is a PhD candidate in policy analysis at Milano, The New School where his dissertation investigates variation in how working class families enrolled in Digital Inclusion plans select broadband enabled information communication technologies and how these choices are constrained and expanded by family, neighborhood, institutional and cultural expectations. Most recently, Antwuan was a Research Associate at the Berkman Center for Internet and Society at Harvard University, conducting research in coordination with the FCC on variation in state and municipal broadband deployment. While a Mirzayan Fellow, Antwuan collaborated with the Institute for Peace, Google, Apple, Microsoft and other corporate industry leaders on the role of information communication technologies in global

peace-building initiatives and diplomacy. He is currently completing fieldwork in the Greater San Francisco Bay Area. (Updated 9/2010)