

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



Albert Einstein Memorial Statue © 1978 by Robert Berks

Nancy Adams (Winter 2005, NAE/CASEE) was scheduled to receive a Ph.D. in geology from the University of Hawaii in May 2005. Her dissertation work concentrated on the exsolution of volatiles during the catastrophic eruption responsible for the Valley of Ten Thousand Smokes in Alaska. She holds a master's degree in geology from Indiana State University and a B.S. in geosciences from Trinity University. While working on her master's degree, she studied large-scale volcanic eruptions in Peru. Nancy previously worked as a project geologist for Environmental Resources Management where her work included monitoring bioremediation sites, assisting with well installations, and sampling groundwater.

Leonidas Bleris (Winter 2005, DEPS/BMSA/DEP) is an Assistant Professor with the Bioengineering and Electrical Engineering Departments of the University of Texas at Dallas. Before joining UTD, Bleris was a Postdoctoral Fellow at the FAS Center for Systems Biology at Harvard University. Bleris earned a Ph.D. in Electrical Engineering from Lehigh University in 2006, and a Diploma in Electrical and Computer Engineering in 2000 from Aristotle University of Thessaloniki, Greece. In 2005 Bleris was awarded the Christine Mirzayan Science and Technology Policy Graduate Fellowship, and served with the Board of Mathematical Sciences and their Applications. During 2009-2010, Bleris was a Visiting Scientist at the FAS Center for Systems Biology at Harvard University, and he currently holds an Independent Expert appointment with the European Commission under the "Science, Economy and Society" directorate. (Updated 02/2011)

Karen Boyd Karen Boyd (Winter 2005, PGA/CSTL) a Regulatory Project Manager in the Office of New Drugs, Division of Hematology and Oncology Products, at the FDA. Prior to joining the FDA in July 2012, Karen worked at Strategic Analysis, Inc., a defense contracting firm based in Arlington, Va., as a technical advisor to the Defense Advanced Research Projects Agency (DARPA). She provided technical and programmatic support to DARPA program managers and the deputy director in the areas of tissue engineering, regenerative medicine, advanced regulatory science, stem cell biology, bioreactor design, and nanotechnology. Prior to working at Strategic Analysis, Karen was a Mirzayan Fellow with the Committee on Science, Technology and Law. Karen holds a master's degree

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in biomedical engineering from the Mayo Clinic College of Medicine and bachelor's degrees in biology and health and society from the University of Rochester. (Updated 10/2012)

John Chase (Winter 2005, NAE/NAEPO) is pursuing a master's degree in international science and technology policy at George Washington University. In May 2002, he received a BS in computer science and Japanese language & literature from the University of Michigan, which included one year of study at the University of Tokyo in Japan. In between graduation from the University of Michigan and enrollment as a graduate student at GW, John was an assistant language teacher with the Japanese Exchange and Teaching (JET) Program. There he taught English and helped develop English-language curriculum at the elementary and middle school levels in Kanasago-machi, Ibaraki-ken, Japan. During his two years in Japan, he participated in various youth-orientated community programs and coordinated international exchange activities. After completing his education in science and technology policy, John hopes to pursue a career in the public sector advocating policies based on sound science. John enjoys reading, sailing, and hiking and he was an active volunteer with the Boy Scouts of America.

Eugene J. Choi (Winter 2005, DEPS/NMMB) is an Advisory Scientist at Strategic Analysis, Inc., with research experience in biomaterials, polymers, surface chemistry/physics, and instrumentation development. Dr. Choi provides technical and program management consulting for the Defense Advanced Research Projects Agency (DARPA), where his efforts focus on various projects involving nanomaterials, devices, synthetic biology, pharmaceuticals synthesis, armor, and chemical-biological defense, as well as having provided technical consult for the design and operations of the DARPA Urban Challenge event. Dr. Choi serves as Team Lead for the physical sciences group at Strategic Analysis, where he manages a team of scientists and engineers supporting DARPA's Defense Sciences Office (DSO). He has also served as a technical reviewer for the Defense Threat Reduction Agency Joint Science and Technology Office for Chemical and Biological Defense and the Army Research Office. Prior to joining SA, Dr. Choi was a Program Officer at the Naval Studies Board at the National Academies, where he directed and managed studies for the Department of Navy and the Chief of Naval Operations providing independent, long-range, scientific and technical advice for the Navy and Marine Corps. As a Mirzayan Fellow with the National Materials Advisory Board, he worked on the review of the National Nanotechnology Initiative, a billion dollar multi-agency effort devoted to nanotechnology research and development. Dr. Choi completed his postdoctoral research at the National Institutes of Health in biomedical engineering and nanotechnology. (Updated 2/2011)

Rachel Courtland (Winter 2005, PGA/COSEPUP) is an editor at *IEEE Spectrum*. While at the National Academies, she worked as a researcher and writer for *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future*, a report on U.S. competitiveness. She went on to take a AAAS Mass Media Fellowship with *U.S. News and World Report*. She holds a BA in physics from the University of Pennsylvania, an MS in physics from Emory University, and a degree in science communication from the University of California, Santa Cruz. (Updated 10/2011)

Eileen Gentleman (Winter 2005, NAE/NAEPO) is a Wellcome Trust Research Career Development Fellow in the division of Craniofacial Development & Stem Cell Biology at King's College London. She joined Imperial College London in 2005 after completing her PhD in biomedical engineering at Tulane University. In 2011, she moved to King's College, where her research focuses on utilizing biomaterials to direct stem cell differentiation for tissue engineering. She is particularly interested in the osteochondral interface, the transitional tissue that connects cartilage to bone, and the role it plays in normal joint function. Her multi-disciplinary research interests also include fundamental mechanisms of biomineralization and the role of mechanosensing in tissue development. She has also worked extensively with bioactive glasses, and is interested in the biological effects of surface energy and ion release on stem cell differentiation. Her work has been published in prestigious journals including *Nature Materials*, *Proceedings of the National Academy of Sciences*, and *Biomaterials*. Dr. Gentleman has received funding awards from the Wellcome Trust, the Rosetrees Trust, the Royal Society and Orthopaedic Research UK. The Orthopaedic Research Society named her as a finalist for their New Investigator Recognition Award (2010) and in 2013 her work in regenerative medicine was recognized with a prestigious Philip Leverhulme Prize. (Updated 2/2016)

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Mara Jeffress (Winter 2005, STEP & PGA/STL) was awarded her PhD in molecular and cellular biology from the University of Washington in August 2004. She received two BAs in biology and philosophy from the University of California, Santa Cruz. As a researcher, she has studied malarial, HIV and cancer cell drug resistance. During graduate school, she discovered new malaria drug resistance genes, which may help future researchers design more effective anti-malaria drugs. Mara has lived in many different places including California, Hawaii, Australia, Mexico, and Nepal and traveled extensively. As a lecturer, Mara designed and taught an undergraduate course in bioethics at UC-Santa Cruz and has been interested in the subject ever since. Her Mirzayan Fellowship with STEP and CSTL strongly matched her interests in law, ethics, and policy and was a welcome break from the bench after graduate school. During the summer following her Fellowship (2005), she solo-hiked 1000 miles from Canada to California to raise money for charity. Currently, Mara is a consultant at Kantar Health, providing insight, competitive intelligence, and strategic advice to pharmaceutical companies worldwide. (Updated 10/2011)

Kelly Kroeger (Winter 2005, PGA/COSEPUP) earned her PhD in pharmacology and molecular sciences from Johns Hopkins University in December 2004. Her dissertation research examined the effects of oxidized abasic DNA lesions generated in the cell by chemotherapeutic treatments, and has resulted in seven publications. Additionally, as a graduate student, she taught undergraduate cell biology laboratory courses. Kelly received her bachelor's degree with honors in molecular genetics from Ohio State University and was a member of the OSU varsity crew team. She has been involved in a number of volunteer activities including renovating a shelter for battered women and children, helping to feed the homeless, community clean-up projects, and tutoring. Her career aspirations lie in academia, where she plans a research focus in immunology. Kelly would like to serve as an advisor to committees responsible for making critical decisions affecting the funding and direction of medical research.

Deborah A. Kuzmanovic (Winter 2005, DEPS/BAST) earned her PhD in genetics from the University of Washington in December 2000. Her dissertation research involved the characterization of a motor protein involved in cell division, using a genetic approach to study the role of that motor protein in cell division. She received her bachelor's degree in molecular biology from Carnegie Mellon University. She was a postdoctoral fellow at National Institute of Standards and Technology where her research focused on the development of methods to overcome the scientific hurdles associated with the development of a skin cancer diagnostic kit. Currently, Deborah is a senior scientist at Geo-Centers, Inc, under contract to the U.S. Army, Edgewood Chemical and Biological Center. As head of the microbiology lab, she supports research efforts in the detection and identification of biological agents. She volunteers at the Little Blue House Family Development Center, a residential and safe home for children who have experiences neglect or abuse. Deborah has traveled extensively and is fluent in German. She believed that a Mirzayan Fellowship at The National Academies would be a way to gain a formal mentorship in navigating between industry, government and academia.

Joe Larsen (Winter 2005, DELS/BLS) is currently serving as Branch Chief for the Broad Spectrum Antimicrobial program at the Biomedical Advanced Research Development Authority (BARDA) within the Department of Health and Human Services. Previously, Dr. Larsen served as a Senior Science and Technology Manager at the Joint Science and Technology Office for Chemical and Biological Defense (JSTO-CBDP) within the Defense Threat Reduction Agency (DTRA). There, he managed a ~\$50M applied research program aimed at the development of medical therapeutics against viral, bacterial, and toxin threat agents. From 2005-2006, Dr. Larsen was an American Association for the Advancement of Science (AAAS) Fellow at the Department of Homeland Security. There, he managed university-based research programs aimed at the development enhanced food safety detection systems and medical countermeasures for agricultural threat agents. Joe was a Winter 2005 National Academy of Science Christine Mirzayan Fellow with the Board of Life Sciences. Dr. Larsen received his PhD in microbiology from the Uniformed Services University of the Health Sciences and his BA from the University of Kansas. (Updated 10/2011)

Robert A. Lipinski (Winter 2005, DBASSE/CSBD) holds a PhD and master's degrees in psychology from Lehigh University. He studied politics as an undergrad at Fairfield University in Connecticut. Many of Rob's research activities have been issues that have potential significance for everyday life. His master's thesis examined the effectiveness of list and matrix instructions in promoting memory and comprehension for multiple medication regimens. His dissertation examined the effects of attentional demands and contextual detail on adult age-

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differences in memory for actions. He has taught lab courses for Introduction to Psychology at Lafayette College, where he has been a visiting assistant professor. His ultimate goal is to be employed in a research environment where he would have the opportunity to either develop applications of research and theory or conduct research on topics with implications for problems of everyday life—ideally in the areas of memory, cognitive psychology, and cognitive aging. Rob believes that his fellowship experience will familiarize him with the ways in which research comes to influence public policy and also expand his knowledge of professional environments to realize his work goals.

Claudia Mengelt (Winter 2005, DELS/PRB) is a senior program officer with the Ocean Studies Board. After completing her BS in aquatic biology at the University of California, Santa Barbara, she received her MS in biological oceanography from the College of Oceanic and Atmospheric Sciences at Oregon State. Her master's degree research focused on marine biogeochemical cycling. She obtained her PhD in marine sciences from the University of California, Santa Barbara, where she conducted research on the photophysiology of harmful algal bloom species. She joined the full-time staff of the National Academies in the fall of 2005 following a fellowship with the Polar Research Board in the winter of 2005. At the National Academies she has worked on studies addressing the design of Arctic observing systems, evaluating lessons learned from global change assessments, and providing strategic advice to NSF's atmospheric science's division. Currently, she is working on a study to review the nation's tsunami warning and preparedness efforts as well as a panel that makes recommendations on how to adapt to the impacts of climate change. In her free time, she enjoys any form of outdoor recreation she can fit in and is looking forward to the day she can introduce her 3-year old to snowboarding and surfing. (Updated 3/2010)

Siddhartha "Sid" Misra (Winter 2005, PGA/GUIRR) holds a master's degree in business administration with a concentration in finance from Rensselaer Polytechnic Institute. His core studies included organizational behavior, management sciences, accounting and corporate finance. He also consulted for small businesses in the Albany area and was editor of the school paper. Sid received his master's degree in economics from the University of Delhi School of Economics. He currently works as a manager at the Reserve Bank of India in New Delhi. His work at the bank involves supporting the regional director in designing and executing organizational level strategies in the areas of customer services, knowledge management systems, and human resources development. His short term career goal includes joining a multilateral banking or economic development institution where his focus would be creating viable and profitable business opportunities in the meeting ground of economic development and cutting edge technologies. Ultimately, he intends to go back to school to research, consult and teach in the field of international business strategy. Sid is excited about interacting and collaborating with professionals and students from several disciplines during his fellowship. He would like to focus on studying and understanding how different socioeconomic forces dynamically interact to shape the outcomes of different nations and the world.

Melinda D. Nickelson (Winter 2005, PGA/DSC) is an analyst at the Department of Justice. She received a master's in applied physics from the University of Michigan. After finishing her undergraduate work at Bryn Mawr, she spent a year participating in the Japan Exchange and Teaching Program (JET), where she taught English in Kitsuki City to Japanese junior high school students. Melinda is particularly interested in international collaborations and international development. She has traveled extensively abroad, including Scotland, Japan, South Korea, Italy, and South Africa. Through funding by a National Science Foundation grant, she helped to design the lesson plans for a physics exploratorium trip to Cape Town, South Africa, for the purpose of helping disadvantaged high school students make connections between their book knowledge and the everyday world. (Updated 10/2011)

Maike C. Rentel (Winter 2005, PGA/COSEPUP) is the vice consul, head of science & innovation at the British Consulate in San Francisco. In this role, Maike promotes access to and sharing of scientific expertise, resources and facilities by connecting U.K. research scientists and science policy makers to those in Northern California and the Northwest U.S. She received her BSc in biochemistry at the University of Edinburgh, earned her DPhil in plant molecular biology at Oxford, and held postdoctoral positions at the University of California, San Francisco and the University of California, Berkeley. Before turning to science, Maike earned a degree in languages and business, living and studying in Germany, France, England and Spain. (Updated 3/2010)

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Eugene "Gene" Russo (Winter 2005, NAS/Koshland) is the editor for the science careers section of the journal *Nature*. Since 1998, he has reported on science and science policy for publications including *The Scientist* and *Research Policy Alert*. He earned his M.A. in history and philosophy of science from the University of Maryland in December 2004, and is currently working towards a master's in environmental policy. He holds a bachelor's degree in English from the University of Pennsylvania. Gene viewed the Mirzayan Fellowship as a means to becoming a more informed science journalist who is better able to explain and report science policy to both educated and lay readers. (Updated 2/2011)

Vanessa J. Schweizer (Winter 2005, DBASSE/CHDGC) earned her Ph.D. in engineering and public policy at Carnegie Mellon University in 2010 and is now an assistant professor at the University of Waterloo in Canada in the Department of Knowledge Integration. Her research focus has been on long-term scenarios used to inform climate policy and energy planning. She received her master's degree in environmental studies from The Evergreen State College in Olympia, Wash., in 2007, and her bachelor's degree in physics, magna cum laude, from the University of Nevada-Reno in 2001. Before coming to the National Academies as a Mirzayan Fellow, Vanessa was an adjunct faculty member at Pierce College-Ft. Steilacoom in the departments of earth sciences and developmental education, teaching courses in environmental science, mathematics, and study skills. Through her Mirzayan Fellowship, Vanessa met inspiring role models and colleagues who aided her professional development and provided real-life perspective on issues where science and policy overlap. (Updated 2/2016)

Elizabeth Sharp (Winter 2005, IOM/BGH) started a AAAS Diplomacy Fellowship at the State Department in September 2010. She finished the Biomedical Sciences PhD program at the University of California, San Francisco in February 2009. The focus of her research was on the human immune response to HIV. She received her BS from the Massachusetts Institute of Technology (MIT) in June 2001. Liz has been an active volunteer in AIDS non-profit programs for years. She has recently come to realize that although science is still a passion, laboratory research is not her lifelong devotion. Liz views this fellowship as an introduction to the world of science policy, which will hopefully prove to be an outlet to stay active in the science world outside of lab work. Some of her favorite activities include indoor climbing, taking dance classes, reading, running, and cooking for friends. (Updated 10/2011)

Eduardo Valle (Winter 2005, PGA/STS) is a Fulbright scholar, with a master's degree in international relations from Syracuse University (May 2005). He received his BA in international relations from the Pontificia Universidade Catolica de Sao Paulo, Brazil. Prior to his fellowship with the National Academies (STS), he was a visiting researcher at VTT Technology Studies in Espoo, Finland, where he conducted research on science, technology and innovation. He was also an intern with the Office of Science and Technology at the Organization of American States in Washington, D.C. Following his Mirzayan Fellowship, Eduardo was selected for the United Nations Fulbright Fellowship in New York City, during which he worked at the Division for Sustainable Development at UN/DESA (Department of Economic and Social Affairs). His career goals include exploring opportunities in science and technology policy in order to foster sustainable development, innovation and international cooperation. Eduardo is an avid reader; he also enjoys biking, exploring local bookstores and traveling. Working from June 2006 to March 2010 as international relations advisor to the Brazilian Agency for Industrial Development (ABDI) in Brasilia, Eduardo is currently corporate affairs manager at the Institute for Technological Research (IPT) in Sao Paulo, Brazil. (Updated 09/2010)