

Review of the Small Business Innovation Research and Small Business Technology Transfer Programs at the Department of Energy

Committee

Maryann P. Feldman

Co-Chair

Dr. Maryann P. Feldman is the Heninger Distinguished Professor in the Department of Public Policy and Professor of Finance at the Kenan Flagler Business School at the University of North Carolina. Her research and teaching interests focus on the areas of innovation, the commercialization of academic research and the factors that promote technological change and economic growth. From 2014 to 2017, Dr. Feldman held a joint appointment at the National Science Foundation as the Science of Science and Innovation Policy (SciSIP) Program Director. Dr. Feldman's early work revealed that universities were necessary, but not sufficient, for technology-based economic development. These findings launched a new area of investigation into university technology transfer. She has written extensively on processes and mechanisms to commercialize academic research, areas germane to the SBIR/STTR programs. Since 2016, Dr. Feldman has been a member of the National Academies' Innovation Policy Forum, and was an ex officio member prior to that. Dr. Feldman also served on the National Academies' Workshop Steering Committee on Prioritizing and Implementing Improvements to Innovation Indicators (2015-2016). She earned her Ph.D. in economics and management from Carnegie Mellon University. Dr. Feldman is proposed as co-chair because she would provide leadership and expertise to the committee from her extensive research experience in the areas of innovation, commercialization of research, and economic development and her leadership as director of the NSF SciSIP program.

Scott Stern

Co-Chair

Dr. Scott Stern is the David Sarnoff Professor of Management at the MIT Sloan School of Management. He explores how innovation and entrepreneurship differ from more traditional economic activities, and the consequences of these differences for strategy and policy. His research in the economics of innovation and entrepreneurship focuses on entrepreneurial strategy, innovation-driven entrepreneurial ecosystems, and innovation policy and management. Recent studies by Dr. Stern include the impact of clusters on entrepreneurship, the role of institutions in shaping the accumulation of scientific and technical knowledge, and the drivers and consequences of entrepreneurial strategy, areas relevant to the committee's task. Dr. Stern's National Academies activity includes serving on the committee on the Study on the Evaluation of ARPA-e Mission and Goals (2015-2017), chairing the workshop steering committee on Prioritizing and Implementing Improvements to Innovation Indicators (2015-2016), serving on the committee on the Impact of Copyright Policy on Innovation in the Digital Era (2010-2013), and serving on the committee to study the Future of Supercomputing (2003-2005). He currently serves as co-chair of the National Bureau of Economic Research's Innovation Policy Working Group. Dr. Stern earned his Ph.D. in economics from Stanford University. Dr. Stern is proposed as co-chair because he would provide leadership and expertise to the committee from his highly acclaimed research on the economics of innovation and entrepreneurship, and innovation policy and management.

Daniel Armanios

Member

Dr. Daniel Armanios is assistant professor in the Department of Engineering and Public Policy at Carnegie Mellon University. Dr. Armanios' research lies at the intersection between entrepreneurship, institutions, and public policy. Specifically, he focuses on the public institutions and infrastructure necessary to support high-tech innovation and sustainable development, examining how institutional intermediaries like the SBIR/STTR programs help entrepreneurs acquire public resources. Dr. Armanios' work has been published in a wide range of leading journals in technology policy, strategic management, economics, and in chemistry and hydrology. He received his doctorate in management science and engineering (with a specialty in entrepreneurship and public policy) from Stanford University and his M.Sc. degrees in management research and water science, policy, and management from Oxford University as a Rhodes Scholar. Dr. Armanios would support the committee by providing his methodological expertise in empirical micro-economic and sociological data.

Aaron Chatterji

Member

Dr. Aaron Chatterji is an associate professor at Duke University's Fuqua School of Business and Sanford School of Public Policy. He previously served as a senior economist at the White House Council of Economic Advisers (CEA) where he worked on a wide range of policies relating to entrepreneurship, innovation, infrastructure and economic growth. Dr. Chatterji has also been a visiting associate professor at Harvard Business School. Dr. Chatterji's research and teaching investigates entrepreneurship, innovation, and the expanding social mission of business. He was awarded the 2017 Kauffman Prize Medal for Distinguished Research in entrepreneurship, among other awards for his work in understanding the intersection of business and public policy, and in strategy. Dr. Chatterji received his Ph.D. in business administration from the Haas School of Business at the University of California-Berkeley. He would contribute from his public service experience and his expertise in entrepreneurship, public policy, and the social impact of business and innovation to the work of the committee.

Jeannette Colyvas

Member

Dr. Jeannette Colyvas is associate professor at Northwestern University's School of Education and Social Policy, the Institute for Complex Systems (NICO), and (by courtesy) the Kellogg School of Management, the Sociology Department, and the Institute for Policy Research. Dr. Colyvas's research interests include innovation in science policy and practice; comparing public, private, and nonprofit organizational forms; performance metrics, and institutional change. Dr. Colyvas' publications appear in diverse journals such as Management Science, Research Policy, Organization Science, Sociological Theory, and American Journal of Education. At Northwestern, Dr. Colyvas serves in advisory roles for the Innovations and New Ventures Research Office, NICO, the program in science and human culture, the Undergraduate Business Institutions Program, and the Undergraduate Learning and Organizational Change program. Dr. Colyvas has served on the editorial boards of Sociological Theory, Journal of Technology Transfer, and Research in the Sociology of Organizations, and participates in panel and ad hoc reviews for the National Science Foundation. She earned a Ph.D. in organizational and policy analysis from Stanford University. Dr. Colyvas would contribute her expertise in program evaluation and performance metrics, organizational science, and technology transfer to the work of the committee.

Lisa D. Cook

Member

Dr. Lisa D. Cook is associate professor of economics and international relations at Michigan State University, where she performs research in macroeconomics, development economics, and the economics of innovation. She served as a senior economist for the White House Council of Economic Advisers from 2011-2012, a national fellow and research fellow at the Hoover Institution of Stanford University from 2002-2005, and a post-doctoral fellow and visiting assistant professor at the Kennedy School of Government, and deputy director for Africa research at the Center for International Development at Harvard University from 1999 to 2002. A major focus of her research is on patents, scientific networks, and understanding the mechanisms behind patenting and commercialization differences among women and African Americans. Dr. Cook's work also explores the links between knowledge creation, intellectual property, and development, and the effect of greater intellectual property protection on the economic growth of developing countries. She received her Ph.D. in economics from the University of California, Berkeley. Dr. Cook would support the committee's investigation of the commercialization of newly created knowledge, and the economics of bias, race, and gender.

David Hsu

Member

Dr. David Hsu is the Richard A. Sapp Professor of Management at the Wharton School, University of Pennsylvania. Hsu's research interests are in entrepreneurial innovation and management. Within that domain, he has investigated topics such as intellectual property management, start-up innovation, technology commercialization strategy, and venture capital. His research has appeared in leading journals such as Management Science, Journal of Finance, Strategic Management Journal, and Research Policy. He is past department and associate editor of Management Science. In 2008, Dr. Hsu was awarded an Alfred P. Sloan Foundation Industry Studies Fellowship. He teaches MBA courses on entrepreneurship and technology Strategy and serves as associate faculty director of the Weiss Tech House, which encourages and supports students in the creation, development, and commercialization of innovative technologies. Dr. Hsu earned his Ph.D. in management from the Massachusetts Institute of Technology's Sloan School of Management. He would contribute his expertise on entrepreneurial innovation, management, and technology commercialization to the committee.

Kaye G. Husbands

Member

Dr. Kaye Husbands Fealing is chair of the School of Public Policy at the Georgia Institute of Technology. She specializes in the science of science and innovation policy, the public value of research expenditures related to food safety, and the underrepresentation of women and minorities in STEM fields and the workforce. Dr. Husbands Fealing developed and was the inaugural program director for the National Science Foundation's (NSF) Science of Science and Innovation Policy (SciSIP) program and co-chaired the Science of Science Policy Interagency Task Group, chartered by the Social, Behavioral and Economic Sciences Subcommittee of the National Science and Technology Policy Council. At NSF she also served as an economics program director. Dr. Husbands Fealing was previously a staff officer with the National Academies, directing the Panel to Review the National Science Foundation's Science and Technology Indicators (2011-2014) and the Steering Committee on Science of Science and Innovation Policy Principal Investigator's Workshop (2012-2013). She is active as a member of the Committee on Developing Indicators for Undergraduate STEM Education (2015-2018) and the Panel on Reengineering the Census Bureau's Annual Economic Surveys (2015-2018). She received her Ph.D. in economics from Harvard University. Dr. Husbands Fealing would support the committee's consideration of the economics of bias, race, and gender.

Amol Joshi

Member

Dr. Amol Joshi is an assistant professor of strategy and entrepreneurship at Oregon State University's College of Business. Dr. Joshi's work focuses on technology entrepreneurship, and has included an investigation of the impact of workforce diversity at agencies awarding SBIR and STTR grants and the likelihood of minority and women technology entrepreneurs receiving awards. Dr. Joshi's work also examines how inventors create and commercialize new products and technologies, and the problems associated with managing innovation across organizational boundaries. Dr. Joshi has extensive experience in the private sector as a research engineer, a business manager, inventor, and entrepreneur, and has invented several commercialized products and worked at venture-backed startup firms and high-growth public companies across many industries throughout the United States and the world. Dr. Joshi has also trained teams of scientific researchers across the world on the best practices for spinning-off and launching new ventures from university and government research labs. He received his Ph.D. in business administration from the Kenan-Flagler Business School at the University of North Carolina at Chapel Hill, his M.S. in engineering sciences from the Thayer School of Engineering at Dartmouth College, and his B.S. of electrical engineering from the Georgia Institute of Technology. Dr. Joshi would contribute to the committee's expertise in innovation and entrepreneurship economics and practice.

Jennifer Kuan

Member

Dr. Jennifer Kuan is a visiting assistant professor of management at the A. B. Freeman School of Business at Tulane University, and was previously a visiting scholar at the Stanford Institute for Economic Policy Research. Dr. Kuan's research applies economics to questions of strategy within companies, nonprofit organizations and government, and examines differences in strategy and performance among seemingly homogenous organizations. Dr. Kuan's work has uncovered insights for questions of broader concern, including entrepreneurship in developing countries and stock market upheaval in the United States, and the impact of cooperation and collaboration on innovative outcomes. Dr. Kuan also has extensive experience as a manufacturing process engineer and business analyst for private firms. She earned her Ph.D. in business and public policy from the Haas School of Business at the University of California-Berkeley, and her M.S. in industrial engineering from Stanford University. Dr. Kuan would contribute her expertise in applied econometrics, contract theory, and case studies to the committee's work.

Lauren Lanahan

Member

Dr. Lauren Lanahan is an assistant professor of management in the Department of Management at the Lundquist College of Business, University of Oregon. Dr. Lanahan's research primarily focuses on public economics as it relates to innovation and entrepreneurship. She utilizes evidence-based analysis to investigate the role of public institutions in understanding the evolving, multifaceted research and development enterprise. She also investigates processes of self-governance and self-evaluation at academic institutions and of academic research, drawing insights from her experience working in the National Science Foundation's Social, Behavioral & Economics Directorate. Dr. Lanahan's work also seeks to understand what institutions and reward structures are most efficient at producing new scientific knowledge and consequent economic growth. She completed her Ph.D. in public policy at the University of North Carolina at Chapel Hill. Dr. Lanahan would contribute her expertise in utilizing empirical and other evidence-based analysis to understanding the role of public institutions in advancing new scientific knowledge to commercialization outcomes and economic growth.

Robin Rasor

Member

Ms. Robin Rasor is executive director of Duke University's Office of Licensing and Ventures, where she oversees all functions of the technology transfer process at the university. Previously, Ms. Rasor was managing director of licensing at the University of Michigan where she oversaw the licensing process ranging from management and marketing of disclosures to developing and negotiating appropriate licensing terms for license agreements, and finally to maintaining and monitoring existing agreements. Ms. Rasor is a former director of licensing at The Ohio State University and former employee of Battelle Columbus Laboratories, a leading contract research firm in the United States. She also served as the President of the Association of University Technology Managers. Ms. Rasor has a M.S. in genetics from The Ohio State University and a B.S. in bacteriology and zoology from Ohio Wesleyan University. She would contribute her expertise with technology transfer processes, commercialization, and translation processes to the work of the committee.

Stephanie S. Shipp

Member

Dr. Stephanie Shipp is the deputy director and research professor at the Social and Decision Analytics Laboratory (SDAL) at the Biocomplexity Institute of Virginia Tech. Dr. Shipp's work spans topics related to the use of all data to advance policy, the science of data science, and metropolitan analytics. She leads and engages in projects at the local, state, and federal level to assess data quality and use of new and traditional sources of data. Her research focuses on developing statistical methodology and tools for using administrative and other data to model the social condition. She conducts research on communities, innovation, and defense analytics. She previously served at the National Institute of Standards and Technology as the director of the Economic Assessment Office in the Advanced Technology Program. Dr. Shipp also led economic and statistical programs at the Census Bureau and the Bureau of Labor Statistics, and began her career at the Federal Reserve Board. Prior to working at Virginia Tech, Dr. Shipp was a senior research staff member at the Institute for Defense Analyses, Science and Technology Policy, conducting research for the Office of Science and Technology Policy and other federal agencies. Dr. Shipp has extensive volunteer experience with the National Academies, serving on the ARPA-E Evaluation committee (2017), the committee on Assessing the Value of Research in Advancing National Goals (2012-2014), and the Steering Committee for the Workshop on Future Directions for the NSF National Patterns of Research and Development Program (2012). She holds a Ph.D. in economics from The George Washington University. Dr. Shipp would provide her expertise in statistical methodology, data science and modeling, and program and policy analysis to the work of the committee.