

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

Committee

Timothy B. Folta

Co-Chair

Timothy B. Folta is Professor and the Thomas John and Bette Wolff Family Chair of Strategic Entrepreneurship at University of Connecticut. His research is currently examining the role of the corporate headquarters in multi-business firms in reallocating strategic resources across businesses, and the effectiveness of government grant programs in supporting technical entrepreneurship. His research has garnered a number of awards, including several best paper awards at the Academy of Management; the 2009 Fulbright Special Senior Scholar Award for the 60th anniversary of the Fulbright program in Italy; and a 2006 Office of Advocacy, U.S. Small Business Administration award. He is a member of the Academy of Management and Strategic Management Society; and served as Division Chair (2020-21) for the Strategic Management Division of the Academy of Management. He holds a PhD in strategic management from Purdue University.

David Popp

Co-Chair

David Popp is the Caroline Rapking Faculty Scholar in Public Administration and Policy in the Department of Public Administration and International Affairs at the Maxwell School of Syracuse University. He is an environmental economist whose research focuses on the links between environmental policy and innovation, with a particular interest in how environmental and energy policies shape the development of new technologies needed to combat climate change. His work has been published in a variety of economics and policy journals, including American Economic Review, the Journal of Environmental Economics and Management, Nature Energy, and Research Policy. Popp is also a Research Associate of the National Bureau of Economic Research and a Research Network Member in the Energy & Climate Economics Research Group of CESifo. He received a BA in political economy from Williams College in 1992, and a PhD in economics from Yale University in 1997.

Margaret E. Blume-Kohout

Member

Margaret Blume-Kohout is an Associate Professor of Economics at Gettysburg College. In addition to academic appointments at liberal arts colleges and research universities, Blume-Kohout also held a doctoral fellowship at the RAND Corporation and a graduate research assistantship in basic and applied simulation science at Los Alamos National Laboratory, and was founder and CEO of MBK Analytics, LLC, a federal contract research organization. As an applied microeconomist, policy analyst, and quantitative methodologist, Blume-Kohout focuses on analyzing the effects of government policies on innovation, entrepreneurship, and STEM education and workforce-related outcomes. She earned her PhD in policy analysis from the Pardee RAND Graduate School, her MS in environmental health sciences from the University of California at Berkeley, and her BA in economics from Williams College.

Raphael Calel

Member

Raphael Calel is an Associate Professor in the McCourt School of Public Policy at Georgetown University. He has researched the effects of public policy on innovation in low-carbon technologies. His work has been recognized with a CESifo Distinguished Affiliate Award and the Lloyd's Science of Risk Prize. After receiving his PhD in environmental economics from the London School of Economics in 2013, Professor Calel was also awarded a Ciriacy-Wantrup Postdoctoral Fellowship at UC Berkeley. He also holds a BA from the University of Cambridge and an MSc from University College London.

Brett A. Gilbert

Member

Brett Anitra Gilbert is the inaugural Arlene R. and Robert P. Kogod Regional Innovation Chair, and Associate Professor of Management at American University, Kogod School of Business. Prior to receiving her PhD in entrepreneurship from Indiana University-Bloomington, and before the full emergence of the Internet, she spent five years in sales, marketing, human resources, and technical training capacities. Her then fascination with the corporate adoption of the internet, piqued her interest in studying emerging technologies and entrepreneurship. This interest evolved into her current focus on regional innovation, entrepreneurial ecosystems in emerging economies, and emerging clean technologies. Through these interests, she has served in a variety of leadership capacities for the entrepreneurship division of the Academy of Management, the entrepreneurship and small business track for the Africa Academy of Management, as an advisory committee member for the Texas Emerging Technology Fund. She is a current associate editor for the Strategic Entrepreneurship Journal, and prior associate editor for the Small Business Economics Journal. She also currently serves on the editorial review board for the Academy of Management, Journal of Business Venturing, and Small Business Economics Journal. Her research is published in leading entrepreneurship, management and innovation journals.

Kenneth Gillingham

Member

Kenneth Gillingham is a Professor of Economics and Senior Associate Dean for Academic Affairs at the Yale School of the Environment, with secondary appointments in the Yale Department of Economics, School of Management, and Jackson School of Global Affairs. He is a Research Associate at the National Bureau of Economic Research and has served as the Senior Economist for Energy and the Environment at the White House Council of Economic Advisers. He is an energy economist with a focus on the adoption of new energy technologies and the evaluation of policies and regulations, and has published in top journals in economics, science, management, and engineering. He is a member of the Board of Environmental Change and Society of the National Academies. His graduate study is from Stanford University and he received a PhD in management science & engineering (minor in economics), a MS in statistics, and an MS in management science & engineering. He also holds an AB in economics and environmental studies from Dartmouth College.

Anna Goldstein

Member

Anna Goldstein is the Director of Impact at Prime Coalition, a nonprofit on a mission to unlock catalytic capital and change the future of climate finance. She leads impact measurement and management for all of Prime's programs, including catalytic capital for climate solutions. Goldstein was previously the founding Executive Director of the Energy Transition Institute at the University of Massachusetts Amherst, where she led interdisciplinary research efforts to integrate technological innovation and social equity in the energy transition. She was a Postdoctoral Research Fellow at the Harvard Kennedy School's Belfer Center for Science and International Affairs from 2015 to 2017, during which time she served as a consultant for a National Academies committee that evaluated ARPA-E. She holds a PhD in chemistry from UC Berkeley.

James S. Harris

Member

James Harris (NAE) is the James and Ellenor Chesebrough Professor, Emeritus of Electrical Engineering, Applied Physics and Materials Science at Stanford University. After finishing his PhD in electrical engineering at Stanford University, he joined the Rockwell International Science Center where he moved from Member of Staff to Group Leader to Chief Scientist to Director of Photonics. He successfully initiated and led a number of new device projects based upon novel materials, including a SERI funded 40kW high concentration GaAs solar array that was tested at SNL-Albuquerque. At Stanford, his research focused on novel materials and the physics and application of ultra-small structures to new photonic devices. He provided the key materials and device technologies for interdisciplinary teams to develop an implantable retinal prosthesis, record efficiency ultra-high-efficiency multi-junction solar cells and still world record solar to hydrogen generation through water splitting. He has supervised 140 PhD students and received a number of awards, including election to NAE, an IEEE Third Millennium Medal and Jun-Ichi Nishizawa Medal.

Harris has served on a number of National Academies study committees and oversight boards.

Varun Rai

Member

Varun Rai is the Walt and Elspeth Rostow Professor in the LBJ School of Public Affairs at the University of Texas at Austin, with a joint appointment in Mechanical Engineering. Through his interdisciplinary research at the interface of energy systems, complex systems, decision science, and public policy, he develops effective policy approaches to help accelerate the transition of the global energy system into a more sustainable and resilient one. He was a Global Economic Fellow in 2009. From 2013 to 2015 he was a Commissioner for the vertically-integrated electric utility Austin Energy and from 2019 to 2021 he served as director of the UT Austin Energy Institute. In 2016 the Association for Public Policy Analysis & Management (APPAM) awarded him the David N. Kershaw Award and Prize. He received his PhD and MS in mechanical engineering from Stanford University and a bachelor's degree in mechanical engineering from the Indian Institute of Technology (IIT) Kharagpur.

Rai previously served on the National Academies' committee on the role of net metering in the evolving electricity system.

Gamal Refai-Ahmed

Member

Gamal Refai-Ahmed (NAE) currently serves as an AMD Senior Fellow, highlighting a prestigious career with significant contributions to the fields of high-performance computing (HPC), artificial intelligence (AI), and electronic packaging. Holding a PhD from the University of Waterloo, Refai-Ahmed has over 120 publications and more than 110 patents, marking him as a global technical leader. As a Senior Fellow Engineer at AMD, he leads innovations in thermos-mechanical system-level integration and technology strategies, significantly impacting GPU, CPU, and FPGA technologies across various sectors. His work has earned him numerous honors, including the IEEE Canada R.H. Tanner Industry Leadership Award and The American Society of Mechanical Engineers (ASME) Service Award, recognizing his leadership and innovation. Notably, Refai-Ahmed is a Life Fellow of ASME, a Fellow of IEEE, the Canadian Academy of Engineering, and the Engineering Institute of Canada, and was recently inducted into the National Academy of Engineering in 2024, in recognition of his outstanding contributions to engineering practice and education.

Subhash C. Singhal

Member

Subhash Singhal (NAE) became an independent consultant in the field of clean energy and advanced materials after retiring from the Pacific Northwest National Laboratory (PNNL). At PNNL, he was a Battelle Fellow and Director-Fuel Cells, and provided senior technical, managerial, and commercialization leadership to the laboratory's extensive fuel cell and clean energy programs. Before joining PNNL, he worked for over 29 years, initially as a scientist and later as Manager-Fuel Cell Technology, at the Westinghouse Electric Corporation. At Westinghouse, he conducted and/or managed major research, development, and demonstration programs on advanced materials and energy systems. He has authored over 135 scientific publications, edited 21 books, received 13 patents, and given over 345 plenary, keynote and invited presentations worldwide. Singhal is a member of the National Academy of Engineering, a founding member and Past-President of the Washington State Academy of Sciences, and a Fellow of several professional societies. He has received many national and international awards and medals including the Grove Medal for pioneering advances in fuel cell technology. Singhal received his PhD in materials science and engineering from the University of Pennsylvania and an MBA from the University of Pittsburgh. He served on the National Academies' Board on Higher Education and Workforce (2013-2018), and on over 20 Academies' study committees and panels.

Kjersten B. Whittington

Member

Kjersten Bunker Whittington is Professor of Sociology at Reed College. A quantitative and network methodologist, her research activities center on the intersection of gender and work, scientific careers and science-based organizations, networks of collaboration, and the knowledge economy. Her primary line of research focuses on gender disparities in scientific and technical careers, with a particular focus on men's and women's engagement in knowledge networks and academic dissemination, and commercialization activities. A second research focus investigates regional dynamics and the science economy, and the influence of inter-organizational network structure on firm-level outputs. Recently, Whittington served a year away from Reed as Special Assistant to the Director of the Office of Research on Women's Health (ORWH) at the National Institutes of Health (NIH). Whittington received a BS in physics from North Carolina State University, and an MA and PhD in sociology from Stanford University.

Jeffery G. York

Member

Jeffrey G. York is Associate Dean for Strategic Initiatives, Professor of Strategy and Entrepreneurship, Research Director for the Deming Center for Entrepreneurship, and a Renewable and Sustainable Energy Institute Fellow at the University of Colorado Boulder's Leeds School of Business. Previously Dr. York served as Chair of the Social Responsibility and Sustainability division, Chair of the Organizational Leadership and Information Analytics Division, and Associate Editor for the Journal of Business Venturing. Professor York's teaching and research are focused on environmental entrepreneurship, which is the simultaneous creation of ecological and economic goods. He is interested in how and why entrepreneurs create new products, services, and industries that reduce environmental degradation. Dr. York received his PhD from the Darden School of Business at the University of Virginia.

Gail Cohen

Staff Officer