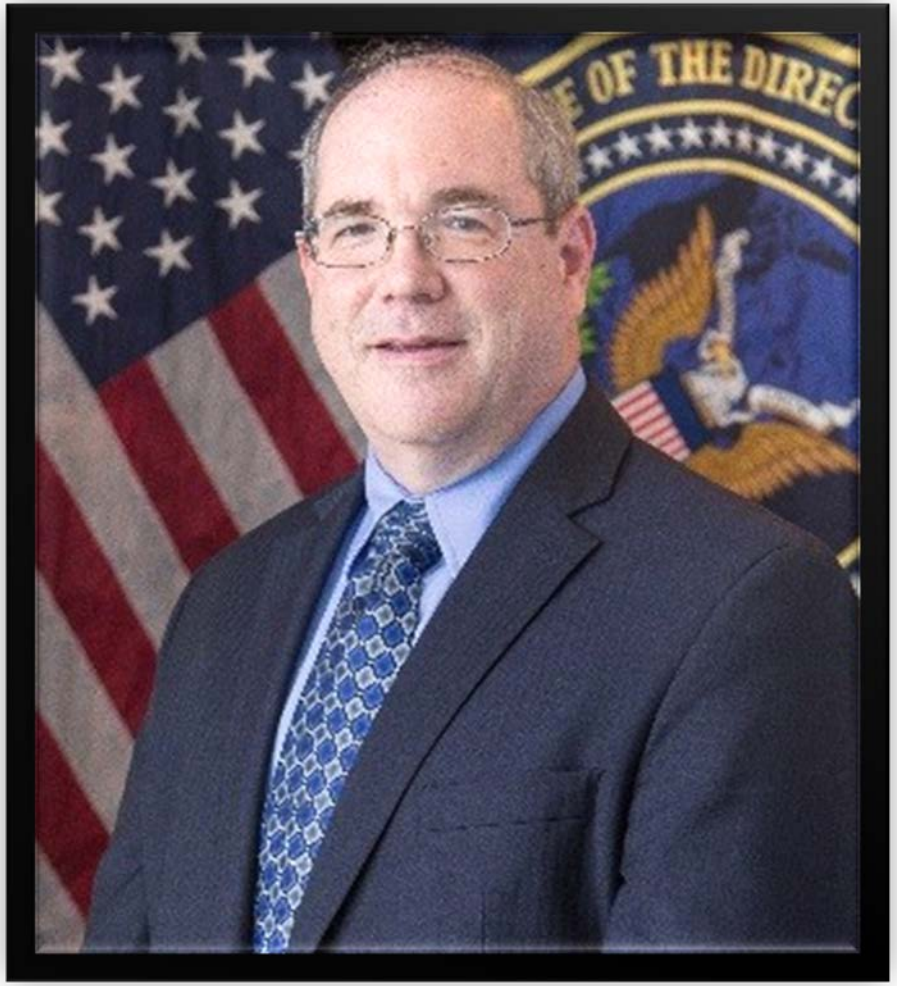
The National Academies of
SCIENCES • ENGINEERING • MEDICINE

The Future of Data Science

AGENDA

11:00 - 11:05	Introduction and administrative announcements, Dr. Joseph Czika, NASEM
11:05 - 11:15	Welcome from the Office of the Director of National Intelligence, Mr. Dan Flynn, ODNI
11:15 - 11:30	Welcome from the National Academies of Sciences, Engineering, and Medicine, Dr. Tina Bahadori, NASEM
11:30 - 12:00	**Challenges in Data Science for National Security**, Dr. Jason Matheny, Georgetown University
12:00 - 12:45	**Looking Ten Years Ahead: Key Converging Technologies in Computing, Data, and Analysis and the Implications for Governance, Standards, and Norms in Knowledge and Privacy**, Ms. Pam Dixon, WPF
12:45 - 1:15	BREAK
1:15 - 2:00	**Data Science in 2030?**, Dr. Tom Mitchell, Carnegie Mellon University
2:00 - 2:45	**Cross-Border Data Flows – US, EU, and China**, Dr. Debrae Kennedy-Mayo, Georgia Institute of Technology
2:45 - 3:00	BREAK
3:00 - 3:45	**The Future of Data Science: Getting to Causality, and a Curious Blend of AI and Determinism**, Mr. Matt Mickelson, The MITRE Corporation
3:30 - 4:00	BREAK
4:00 - 5:00	Panel session moderated by Ms. Pam Dixon
5:00	Adjourn

*all times in ET



Dan Flynn

ODNI

Dan Flynn was selected to be the first director of the Office of the Director of National Intelligence's IC Net Assessments Division. In this position, Mr. Flynn is responsible for developing forecasts and comparative assessments to identify emerging challenges and opportunities for U.S. intelligence capabilities. Prior to his current assignment, Mr. Flynn was the director of the Global Security Program for the National Intelligence Council's (NIC's) Strategic Futures Group. In this position, he led national-level assessments of long-term and crosscutting military-security issues for senior U.S. policymakers and defense officials. Prior to joining the NIC, Mr. Flynn served in multiple positions at CIA as an analyst and manager responsible for assessments of foreign weapons, technologies, and military innovations. He was a member of CIA's Senior Analytic Service (SAS) and former Chairman of the SAS Council.

From 2004 to 2005, Mr. Flynn served as a senior staff member for The President's Commission on the Intelligence Capabilities of the United States Regarding Weapons of Mass Destruction. His duties included leading the Commission's research on the capabilities of the IC to support future U.S. military operations, perform strategic assessments, and conduct scientific and technical analysis.

Mr. Flynn is a "Distinguished Graduate" of the National War College where he earned a M.S. in national security strategy. He also earned a B.S. in aerospace engineering from Boston University. Mr. Flynn is an ODNI "Plank Holder."

Tina Bahadori

The National Academies

Tina Bahadori is executive director for the National Academies' Division on Engineering and Physical Sciences. Bahadori came to the Academies from the U.S. Environmental Protection Agency's Office of Research and Development, where for eight years she designed and led several transdisciplinary research and risk assessment programs. Her positions at EPA included serving as national program director for human health risk assessment, as center director of the National Center for Environmental Assessment, and as national program director for chemical safety for sustainability. During her time at EPA, Bahadori built extensive collaborations across the landscape of community, national, and international partners from multiple sectors, and was committed to developing innovative approaches that weave together systems-based research and policy solutions. Before joining EPA, her career was founded on nearly two decades of research and science enterprises in the private sector, where she worked on converging and diverging issues related to energy, environment, technology, and chemical management.

Bahadori holds a doctorate in environmental science and engineering from the Harvard School of Public Health. From MIT, she holds a Master of Science in Chemical Engineering and Technology and Policy, as well as Bachelor of Science degrees in chemical engineering and in humanities. She served as the president of the International Society of Exposure Science and is an associate editor of the Journal of Exposure Science and Environmental Epidemiology.

Jason Matheny

Georgetown University

Jason Matheny is founding director of the Center on Security and Emerging Technology (CSET) at Georgetown University. Previously he was Assistant Director of National Intelligence, and Director of IARPA, responsible for developing breakthrough technologies for the U.S. intelligence community. Before IARPA, he worked at Oxford University, the World Bank, the Applied Physics Laboratory, the Center for Biosecurity, and Princeton University, and was the co-founder of two biotechnology companies. He is a member of the National Security Commission on Artificial Intelligence, the National Academies' Intelligence Community Studies Board, and the AAAS Committee on Science, Engineering and Public Policy. He serves on the boards of Noblis and the Nuclear Threat Initiative, and serves on technical working groups for the U.S. Department of Energy, the Center for a New American Security, and the Carnegie Endowment for International Peace.

Matheny has served on various White House committees related to artificial intelligence, biosecurity, high-performance computing, and quantum information science. He co-led the National AI R&D Strategic Plan released by the White House in 2016 and was a member of the White House Select Committee on AI, created in 2018.

Matheny holds a Ph.D. in applied economics from Johns Hopkins University, an M.P.H. from Johns Hopkins University, an M.B.A. from Duke University and a B.A. from the University of Chicago.

Pam Dixon

World Privacy Forum

Pam Dixon is the founder and executive director of the World Privacy Forum, a public interest research group known and respected for its consumer and data privacy research. An author and a researcher, Dixon has written groundbreaking studies in the area of privacy. She has also written influential reports on Medical Identity Theft as well as the One Way Mirror Society, a report on digital signage networks, and a series of reports on data brokers, among others.

Dixon has conducted substantive biometrics and identity research in India, which formed the basis of a scholarly article about India's Aadhaar, the world's largest biometric ID system. In 2017, A Failure to Do No Harm was published in a special issue of Springer-Nature and co-published in the Harvard-based Journal of Technology Science. Dixon has written 9 books. Her most recent book, *Surveillance in America*, was published in 2016. Dixon has written numerous other influential studies, including studies in the area of health, financial, online, biometric, digital signage, and workplace privacy.

Dixon was formerly a research fellow with the Privacy Foundation at Denver University's Sturm School of Law. There, she researched and wrote about technology-related privacy issues. Dixon co-authored Online Privacy, a reference book, with longtime writing collaborator Robert Gellman. Dixon has testified before Congress and Federal agencies, speaks internationally as a leading privacy expert, and is frequently quoted in the media regarding privacy and security issues.

Tom Mitchell

Carnegie Mellon University

Tom Mitchell is the E. Fredkin University Professor at Carnegie Mellon University, where he founded the world's first Machine Learning Department. Mitchell's research lies in machine learning, artificial intelligence, and cognitive neuroscience. His current research includes developing machine learning approaches to natural language understanding by computers, as well as brain imaging studies of natural language understanding by humans.

Mitchell is a member of the U.S. National Academy of Engineering, the American Association of Arts and Sciences, and is Past President of the Association for the Advancement of Artificial Intelligence.

In 2015 Mitchell was awarded an Honorary Doctor of Laws Degree from Dalhousie University for his contributions to machine learning and cognitive neuroscience, and in 2017 he received the 10-Year Outstanding Research Contributions Award from the Brain Informatics Conference for his research studying language processing in the human brain.

Debrae Kennedy-Mayo

Georgia Institute of Technology

DeBrae Kennedy-Mayo is a research faculty member at the Scheller College of Business at the Georgia Institute of Technology. She works as part of a small team who research, write, and teach on legal and policy issues concerning privacy and cybersecurity. Peter Swire and Kennedy-Mayo are the co-authors of the forthcoming 2020 edition of *U.S. Private Sector Privacy: Law And Practice For Information Privacy Professionals* – the International Association of Privacy Professionals (IAPP) book that is used by professionals who are preparing for the IAPP certification exam on U.S. private-sector privacy and that now serves as the textbook for Georgia Tech's online privacy class entitled Privacy for Professionals.

With her co-authors, Kennedy-Mayo has written on cross-border issues focusing on the U.S., Europe, and India. Prior to her work at Georgia Tech, Kennedy-Mayo was employed as both an Assistant Attorney General for the State of Georgia and an Assistant District Attorney. Prior to that, Kennedy-Mayo clerked for the Honorable William Howard, Sr.

Matt Mickelson

The MITRE Corporation

Matt Mickelson is a principal in MITRE's Naval Program Division. He has spent twenty years integrating emerging technologies, including cyber, AI, and autonomy, to improve some of the world's largest organizations. He has given invited talks in academia and industry. He has been a keynote at the IEEE ICTAI conference, an invited speaker for the National Cyber Security Alliance at the NASDAQ, and invited speaker at multiple Purdue CERIAS colloquium series programs.

Mickelson has always had a passion for identifying and developing disruptive technology. Now, he actively coordinates advanced research programs in cybersecurity at the Office of Naval Research (ONR).