

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

Roundtable on Aligning Incentives for Open Science

Open Scholarship Priorities and Next Steps: Public Workshop

December 7, 2021 (Tuesday)

Speaker Biographical Information

THOMAS KALIL (Roundtable Co-Chair) is Chief Innovation Officer at Schmidt Futures. In this role, Mr. Kalil leads initiatives to harness technology for societal challenges, improve science policy, and identify and pursue 21st-century moonshots. Prior to Schmidt Futures, Mr. Kalil served in the White House for two Presidents (Obama and Clinton), helping to design and launch national science and technology initiatives in areas such as nanotechnology, the BRAIN initiative, data science, materials by design, robotics, commercial space, high-speed networks, access to capital for startups, high-skill immigration, STEM education, learning technology, startup ecosystems, and the federal use of incentive prizes. From 2001 to 2008, Mr. Kalil was Special Assistant to the Chancellor for Science and Technology at University of California, Berkeley. Mr. Kalil received a B.A. in political science and international economics from the University of Wisconsin at Madison and completed graduate work at the Fletcher School of Law and Diplomacy.

KEITH R. YAMAMOTO (Roundtable Co-Chair) (NAS/NAM) is University of California, San Francisco (UCSF) vice chancellor for science policy and strategy, director of precision medicine for UCSF, and professor of cellular and molecular pharmacology at UCSF. He is a leading researcher investigating transcriptional regulation by nuclear receptors, which mediate the actions of essential hormones and cellular signals; he uses mechanistic and systems approaches to pursue these problems in pure molecules, cells and whole organisms. He has led or served on numerous national committees focused on public and scientific policy, public understanding and support of biological research, and science education; he chairs the Coalition for the Life Sciences, and sits on the National Academy of Medicine Council and the National Academy of Sciences (NAS) Division of Earth and Life Studies Advisory Committee. As Chair of the NAS Board on Life Sciences, he created the study committee that produced “Toward Precision Medicine: Building a Knowledge Network for Biomedical Research and a New Taxonomy of Disease,” the report that enunciated the precision medicine concept, and he has helped to lead efforts in the White House, in Congress, in Sacramento and at UCSF to implement it. He has chaired or served on many committees that oversee training and the biomedical workforce, research funding, and the process of peer review and the policies that govern it at the National Institutes of Health. He is a member of the advisory board for Lawrence Berkeley National Laboratory and the board of directors of Research!America. He was elected to the National Academy of Sciences, the National Academy of Medicine, the American Academy of Arts and Sciences, and the American Academy of Microbiology, and is a fellow of the American Association for the Advancement of Science.

RANDOLPH HALL is director of CREATE, the nation's first homeland security university center of excellence and professor in the Daniel J. Epstein Department of Industrial and Systems Engineering at University of Southern California (USC). He served for nearly 15 years as VP of research at USC, for which he was led research initiatives across the university and oversaw research advancement, administration, and ethics. His office supported USC's faculty in every discipline and worked to build strong relationships with federal government agencies and foundations, in areas ranging from the biological and medical sciences, physical sciences, and engineering to the humanities and social sciences. Dr. Hall's experience includes serving as the founder/principal investigator for two national research centers, the Center for Risk and Economic Analysis of Threats and Emergencies (CREATE), and the National Center for Metropolitan Transportation Research (METTRANS). He also served as senior associate dean for research in the Viterbi School of Engineering for four years. Dr. Hall has been funded by the National Science Foundation, U.S. Departments of Homeland Security and Transportation, California Department of Transportation, Los Angeles County Department of Health Services, and LA Care. He has numerous publications in the areas of transportation, logistics, system engineering, and queueing. Dr. Hall received his Ph.D. (1982) and M.S. (1980) in civil engineering from University of California, Berkeley.

RONALD DANIELS is the 14th president of Johns Hopkins University and a professor in the Department of Political Science. Since taking office in 2009, Mr. Daniels has focused his leadership on three overarching themes—enhanced interdisciplinary collaboration, individual excellence, and community engagement. These themes are the backbone of the Ten by Twenty, the university's strategic vision through 2020, and underscore the priorities of Rising to the Challenge, Johns Hopkins' largest-ever fundraising campaign, a \$5 billion effort. Under Mr. Daniels' leadership, the university has launched a series of transformative, multidisciplinary initiatives that seek to advance the understanding of some of society's most vexing issues, from realizing the promise of individualized health to addressing the challenges facing urban environments. A law and economics scholar, Mr. Daniels' research focuses on the intersections of law, economics, development, and public policy in areas such as corporate and securities law, social and economic regulation, and the role of law and legal institutions in promoting third-world development. His recent writing has focused on advocating for young investigators in American life-science research and on the role of the research university in promoting community development. He is the author or co-author of seven books and dozens of scholarly articles, as well as a fellow of the American Academy of Arts & Sciences. Before coming to Johns Hopkins, he was provost and professor of law at the University of Pennsylvania and dean and James M. Tory Professor of Law at the University of Toronto. Mr. Daniels earned an LLM from Yale University in 1988 and a J.D. in 1986 from the University of Toronto, where he served as co-editor-in-chief of the law review. He received a B.A. from the University of Toronto in 1982, graduating with high distinction. He has been visiting professor and Coca-Cola World Fellow at Yale Law School and John M. Olin Visiting Fellow at Cornell Law School.

SAYEED CHOUDHURY is the Associate Dean for Research Data Management at the Sheridan Libraries of Johns Hopkins University. He is also Senior Presidential Fellow at the Council on Library and Information Resources (CLIR), and Hodson Director at the Digital Research and Curation Center at Johns Hopkins University. From 2008 to 2010, he lectured in the Department of Computer Science at Johns Hopkins, and from 2007 to 2009 he was a Research Fellow at the Graduate School of Library and Information

Science at the University of Illinois at Urbana-Champaign. Dr. Choudhury has served as principal investigator for projects funded through the National Science Foundation (NSF), Institute of Museum and Library Services (IMLS), and the Andrew W. Mellon Foundation. He is the principal investigator for the Data Conservancy, part NSF's DataNet program. He is a member of the ICPSR Council and DuraSpace Board. He is also the Director of Operations for the Institute of Data Intensive Engineering and Science (IDIES), based at Johns Hopkins. Dr. Choudhury has published articles in journals such as International Journal of Digital Curation, D-Lib, the Journal of Digital Information, First Monday, and Library Trends. He has served on committees for the Digital Curation Conference, Open Repositories, the Joint Conference on Digital Libraries, and WebWise. He has presented at various conferences including Educause, CNI, DLF, ALA, ACRL, and international venues including IFLA, the Kanazawa Information Technology Roundtable, and eResearch Australasia. Dr. Choudhury contends that emerging developments in data-intensive scholarship across a range of disciplines might represent the “inflection point” in terms of transformation.

BELINDA ORLAND is a Senior Manager of Research Operations at the American Heart Association (AHA). In this capacity, she has played a key coordinating role in the development and implementation of the AHA's Open Science Policy, which encompasses not only public access to papers arising from AHA funding, but also an open data policy and a commitment to make all original research articles in the twelve subscription model AHA journals freely available on that AHA journal website after six months. The AHA strives to build on current open policies and increase open activities.

ERIN MCKIERNAN is the Community Manager for the Open Funders Research Group (ORFG). In this role she works with existing and prospective ORFG members to better understand the tools and resources needed to develop, launch, and oversee open policies. Dr. McKiernan is a neuroscientist who has been a professor in the Department of Physics, Biomedical Physics Program at the National Autonomous University of Mexico in Mexico City since 2015. Dr. McKiernan founded the Why Open Research? project, an educational site for researchers to learn how to share their work, funded in part by the Shuttleworth Foundation and has been active in SPARC's OpenCon. She only publishes her research in open access journals and encourages other scientists to adopt open practices. Dr. McKiernan earned her Ph.D. in physiological sciences from the University of Arizona.

GREG TANANBAUM is the Director for the Open Research Funders Group (ORFG), a partnership of leading philanthropic organizations committed to the open sharing of research outputs. Collectively, the ORFG members hold assets in excess of \$250 billion, with total annual giving in the \$11 billion range. Members' interests span the entirety of the disciplinary spectrum, including life sciences, physical sciences, social sciences, and the humanities. He holds a Master's Degree from the London School of Economics and a B.A. from Yale University.

ARTHUR LUPIA is Assistant Director of the National Science Foundation and serves as head of the National Science Foundation (NSF) Directorate for Social, Behavioral, and Economic Sciences (SBE). He is the Gerald R Ford University Professor at the University of Michigan and co-chair of the National Science and Technology Council's Subcommittee on Open Science. Dr. Lupia's research and related public work examines processes, principles, and factors that guide decision-making and learning. His efforts clarify

how people make decisions, and choose what to believe, when they face adverse circumstances. Dr. Lupia has been a John Simon Guggenheim Fellow, an Andrew Carnegie Fellow, and is a recipient of the National Academy of Sciences Award for Initiatives in Research. He earned a bachelor's degree in economics from the University of Rochester and a social science Ph.D. at the California Institute of Technology.

STEVE CRAWFORD is the Senior Program Executive for Scientific Data and Computing at the National Aeronautics and Space Administration (NASA). Before this position, Dr. Crawford served as the Scientific Editor for the American Astronomical Society with a focus in software, instrumentation, and machine learning. He was the Manager of the Science Calibration Software Branch of the Space Telescope Science Institute, the group responsible for the calibration software for the Hubble Space Telescope and the James Webb Space Telescope. He also was the SALT Science Data Manager for the South African Astronomical Observatory and a Lecturer for the National Astrophysics and Space Science Program at the University of Cape Town. He earned his Ph.D. in Astronomy from the University of Wisconsin-Madison.

LUKE DRURY is a mathematician and astrophysicist at the Dublin Institute for Advanced Studies (DIAS) with research interests in plasma physics, particle acceleration, gas dynamics, shock waves, and cosmic rays. He was President of the Royal Irish Academy from 2011 to 2014. Dr. Drury retired in 2018 but continues to work on issues of policy for science. In particular, he advocates for open access and open science as a board member of the federation of All European Academies (ALLEA). In 2021 he was made an honorary fellow of Trinity College Dublin. He earned his Ph.D. in astrophysics from the University of Cambridge.