The National Academies of
SCIENCES • ENGINEERING • MEDICINE

POLICY AND GLOBAL AFFAIRS DIVISION
Board on Higher Education and Workforce

SPEAKER BIOS (in alphabetical order by last name)

Building Research Partnerships between the Department of Defense University Affiliated Research Centers and HBCUs/MIs

Webcast Live Here: https://www.nationalacademies.org/event/03-23-2022/building-research-partnerships-between-the-department-of-defense-university-affiliated-research-centers-and-hbcus-mis

March 23, 2022 | 1:00PM - 3:30PM EST

Margo Edwards, Ph.D., *Director, Applied Research Laboratory (ARL), University of Hawai'i (UH); Senior Research Scientist, Hawai'i Institute of Geophysics and Planetology at UH Mānoa*

Margo Edwards is the Director of the Applied Research Laboratory (ARL) at the University of Hawai'i (UH) and a Senior Research Scientist in the Hawai'i Institute of Geophysics and Planetology at UH Mānoa. She received her doctoral degree in marine geology and geophysics from Lamont-Doherty Earth Observatory of Columbia University in 1992. Edwards specializes in remote sensing of the seafloor using optical and acoustic systems. Her research focuses on processes involved in creating and modifying the seafloor and oceanic crust. In 1999, Edwards served as Chief Scientist of the Science ICe EXercise (SCICEX) program, becoming the first woman to sail on a U.S. Navy nuclear submarine during an Arctic operation. She served as the Chair of the UNOLS Arctic Icebreaker Coordinating Committee from 2004-2007 and received a Distinguished Public Service Award from the Commandant of the U.S. Coast Guard, ADM Thad Allen, for those efforts. From 2007 until the present Edwards used high-resolution photographic and acoustic data to assess military munitions that were disposed at sea south of O'ahu, Hawai'i. She currently leads the ARL at UH in its mission to imagine and develop agile, innovative and cost-effective solutions to problems impacting our stakeholders, community, and planet.

Erin Fitzgerald, Ph.D., *Director, INSURE Consortium, Applied Research Laboratory for Intelligence and Security, University of Maryland*

Dr. Erin Fitzgerald serves on the leadership team for the Applied Research Laboratory for Intelligence and Security (ARLIS) at the University of Maryland, where she leads the ARLIS-led INtelligence and Security University Research Enterprise (INSURE), building a robust consortium of universities to further ARLIS's mission and impact as the Department of Defense designated University-Affiliated Research Center (UARC) for securing the human domain. Inspired by Joy's Law ("No matter who you are, most of the smartest people work for someone else"), the INSURE network helps ARLIS respond with agility and a deep bench of expertise to address problems the security and intelligence communities bring its way. Dr. Fitzgerald has also served as ARLIS Director for Operations and Chief of Staff, providing daily leadership for all operational, strategic planning, business development, and personnel activities related to the operation and management of ARLIS. Previously, she supported the UMD Vice President for Research as the Director of National Research Initiatives, working to identify and cultivate high visibility research opportunities and relationships between UMD researchers and various external funding sources and partners. Before joining the University of Maryland in December 2016, Dr. Fitzgerald spent several years in the Office of the Secretary of Defense (OSD) where she

served dual roles as a Strategist for OSD Policy and Senior Science Advisor to the Basic Research Office of the Assistant Secretary of Defense for Research and Engineering. From 2010-2016, Dr. Fitzgerald directed OSD's Minerva Research Initiative, a $30M defense social science research program with a portfolio ranging from the mechanisms of radicalization to the role of energy and the environment in shaping societal resilience and geopolitical power projection in a multipolar world. As science advisor, she also developed strategic plans for future basic research investments across the defense enterprise. Dr. Fitzgerald received her B.S. in electrical and computer engineering from Carnegie Mellon University and her master's and Ph.D. degrees in electrical and computer engineering from The Johns Hopkins University. Her research in speech and language processing combined electrical engineering, computer science, and cognitive science approaches for data-driven efforts in automatic speech recognition and language translation.

Joan Fuller, Ph.D., Director, Federal Funded Research Centers (FFRDC) and University Affiliated Research Centers (UARC), Office of the Undersecretary of Defense Research and Engineering, U.S. Department of Defense

Joan Fuller is the Director for Federal Funded Research Centers (FFRDC) and University Affiliated Research Centers (UARC) in the Office of the Undersecretary of Defense Research and Engineering. In her current role she is responsible for policy and statutory oversight of the DoD's FFRDC and UARC's. The FFRDCs and UARCs are operated by non-profit organizations and are deliberately chosen to serve as long-term, independent, strategic partners to the DoD. Leveraging these strategic partnerships is a critical component of the DoD's technology modernization goals. Prior to assuming her current duties, she was the Deputy Executive Director in the Division of Physical and Engineering Sciences (DEPS) at the National Academy of Sciences, Engineering and Medicine (NASEM) where she was responsible for elevating the role of the national security efforts within the Academies and communicating the value to the DoD of independent, science based policy to enable future military capabilities. Throughout her career, she has been an advocate for efforts to promote collaboration between academia and the national security science and technology communities. She holds a PhD in Inorganic Chemistry from the University of Alabama.

Dr. David A. Honey, *Deputy Under Secretary of Defense for Research and Engineering*

Dr. David A. Honey is the Deputy Under Secretary of Defense for Research and Engineering (DUSD(R&E). In this role, he assists the Under Secretary and Chief Technology Officer in managing research, development, and prototyping activities across the Department of Defense (DoD) enterprise. He also helps oversee the activities of the Defense Advanced Research Projects Agency (DARPA), the Missile Defense Agency (MDA), the Defense Innovation Unit (DIU), the Space Development Agency (SDA), the DoD Laboratory and Engineering Center enterprise, and the Under Secretariat staff focused on developing advanced technology and capability for the U.S. military.
Dr. Honey previously served a Special Assistant to the Director, Defense Advanced Research Projects Agency (DARPA). He has served in several other capacities at DARPA; as the Acting Deputy Director, the Director of the Strategic Technology Office (STO), Director of the Advanced Technology Office (ATO) and the Deputy Director of and program manager in the Microsystems Technology Office (MTO).
In 2019, he served as Acting Director of the Strategic Capabilities Office. From 2011-2017, he served as the Director, Science and Technology, and as the Assistant Deputy Director of National Intelligence for Science and Technology in the Office of the Director of National Intelligence. From 2009 to 2011, Dr. Honey served as the Deputy Assistant Secretary of Defense for Research in the Office of the Assistant Secretary of Defense for Research and Engineering. He was responsible for oversight of Department of Defense science and technology programs from basic research through advanced technology development. From 2007 to 2009, Dr. Honey was the Defense Sector General Manager and a Senior Vice

President in a small business and during this time he also served on the US Air Force Scientific Advisory Board. Dr. Honey is a retired US Air Force Lieutenant Colonel who began his military career as a pilot in the B-52D and H model bombers and the FB-111 fighter-bomber, and later transitioned into managing a wide variety of R&D programs. Dr. Honey holds a Doctorate of Philosophy in solid state science from Syracuse University, a Master of Science in optical science from the University of Arizona, a Master of Science in engineering physics from the Air Force Institute of Technology (AFIT), and a Bachelor of Science in photographic science from Rochester Institute of Technology.

James J. Hudgens Ph.D., *Director, Georgia Tech Research Institute (GTRI) and Senior Vice President, the Georgia Institute of Technology (Georgia Tech)*

James J. Hudgens, Ph.D., has led national security research for over 23 years. As the current director of the Georgia Tech Research Institute (GTRI) and senior vice president of the Georgia Institute of Technology (Georgia Tech), Hudgens leads over 2,800 employees conducting $782 million in research across a variety of disciplines, including autonomous systems, cybersecurity, electromagnetics, electronic warfare, modeling and simulation, sensors, systems engineering, test and evaluation, and threat systems. GTRI's renowned researchers combine science, engineering, economics, policy and technical expertise to address challenges facing national security, state, and industry. Before joining Georgia Tech, Hudgens directed the $265 million-per-year Threat Intelligence Center (TIC) at Sandia National Laboratories, where he led the Information Operations and Proliferation Assessments programs for the National Security Program Division. Prior to his promotion to director of TIC, Hudgens served in several leadership positions across the organization, including director the Information Systems Analysis Center (ISAC), senior manager of the Airborne Intelligence, Surveillance, and Reconnaissance Systems department where he won the Department of Energy Secretary's Honor Award for Achievement for leading the Copperhead counter-IED program; deputy director of the Surveillance and Reconnaissance program, manager of Photonic Microsystems Technologies, and principal member of Technical Staff. Hudgens earned a Ph.D. in Ceramic Engineering and a B.S. in Ceramic Engineering from Iowa State University, and has authored numerous publications and presentations. Now focused on creating the next wave of advanced technological solutions at one of the nation's leading research institutions, Hudgens continues to be recognized as a high-level thought leader with a focus on transformation, innovation, and growth.

Evelyn W. Kent, *Department of Defense Historically Black Colleges and Universities and Minority-Serving Institutions Program Director, Office of the Under Secretary of Defense for Research and Engineering*

Mrs. Evelyn Kent serves in several capacities within the Office of the Under Secretary of Defense for Research and Engineering where she provides technical support to the Acting, Deputy Director for Research, Technology and Laboratories. She is the Department of Defense (DoD) Program Director for the Historically Black Colleges and Universities and Minority-Serving Institutions (HBCU/MI) Program. In this capacity, she oversees the HBCU/MI Programs, which include Hispanic-Serving Institutions (HSI), Tribal Colleges and Universities (TCU), Asian American and Pacific Islanders (AAPI), and other underrepresented minority communities. These program funds support basic research, equipment and instrumentation upgrades, graduate fellowships, scholarships, research and education centers, and other activities focused on attracting underrepresented minorities to the science, technology, engineering, and mathematics (STEM) disciplines important to the DoD national security mission. Mrs. Kent represents the DoD on the White House Initiatives Executive Orders for HBCUs and MIs. Her career spans over 40 years of government service in the information technology, weapon systems acquisition, international affairs, environmental life sciences, and the command, control and intelligence environment. Mrs. Kent holds a Bachelor of Science degree in Mathematics from Southern University Baton Rouge and a Master of Science degree in Acquisitions Administration from Central

Michigan University. She is also a graduate of the Federal Executive Institute Leadership Program in Charlottesville, VA. Mrs. Kent is the recipient of the Department of Defense Exceptional Civilian Service Award. Mrs. Kent's awards also include the 2012 Women of Color STEM Career Achievement award.

Willie E. May, Ph.D., *Vice President for Research and Economic Development, Morgan State University*
Dr. Willie E. May currently serves as Vice President for Research and Economic Development at Morgan State University where he will be working to aggressively increase the quality and quantity research outputs, facilitate increased tech transfer, and better connect research across Maryland's preeminent urban research university to community needs. Immediately prior to Morgan, Dr. May served as Director of Major Research and Training Initiatives for the College of Computer, Mathematical and the Natural Sciences, University of Maryland College Park where he developed new relationships and expanded existing partnerships with corporations, foundations and government agencies and assisted the college in obtaining additional support for graduate student education, training and mentoring.
Dr. May previously served as Director of the National Institute of Standards and Technology (NIST) and Under Secretary of Commerce for Standards and Technology, a position created in the America COMPETES Reauthorization Act of 2010. As the U/S Dr. May provided high-level oversight and day-to-day leadership for NIST, the agency that promotes U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life. Dr. May began as a bench Chemist and went on to work at every management level within the organization. His personal research activities were focused in the areas of trace organic analytical chemistry and physico-chemical properties of organic compounds, where his work is described in more than 90 peer-reviewed technical publications. He has given more than 250 invited lectures at Conferences and Symposia around the world. Dr. May currently serves on the Board of Directors for Consumer Reports and the Maryland Technology Development Corporation's Innovation Initiative. He also serves on the NASA Advisory Council's Science Committee.
Until recently Dr. May maintained several International leadership responsibilities as well. In March 2019, he stepped down as Vice President of the International Committee on Weights and Measures (CIPM); President of the CIPM's Consultative Committee on Metrology in Chemistry and Biology. He also was a member of the Scientific Advisory Board's for the UK's National Physical Laboratory (NPL) and China's National Institute of Metrology (NIM). Dr. May earned his B.S in Chemistry from Knoxville College and his Ph. D. in Analytical Chemistry from the University of Maryland, College Park. His numerous honors and awards include: Honorary Doctorate's from Wake Forrest University and the University of Alabama Huntsville; the American Chemical Society's Distinguished Service in the Advancement of Analytical Chemistry Award; the American Chemical Society's Public Service Award; the Department of Commerce's Gold, Silver and Bronze Medal Awards; the National Institute of Standards and Technology Equal Employment Opportunity (EEO) Award; and the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers' Percy Julian Award; in 2015, recognized as the Federal Government's "Top Chemist" by Chemical and Engineering News Magazine and in 2016 recognized by the Federal Laboratory Consortium as "Laboratory Director of the Year".

Dr. Victor McCrary, *National Science Board Vice Chair and Vice President for Research and Graduate Programs, University of District of Columbia*

Victor R. McCrary, Vice President for Research and Graduate Programs at the University of the District of Columbia, where his team leads the growth, development, direction and oversight of the University's research enterprise. He has held similar research leadership positions at the Johns Hopkins University Applied Physics Laboratory, Morgan State University, and the University of Tennessee. He is a change agent and serial innovator, responsible for developing comprehensive, sustainable research strategies, fostering trans-disciplinary research and technology commercialization, and expanding research

programs via engagement with federal and state agencies and private entities. His accomplishments include his contributions to Morgan State University in being elevated to R2 high research status in the Carnegie Classification of Institutions of Higher Education, and serving two terms as the national president of the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE). He is a Fellow of the American Chemical Society. Dr. McCrary received his doctoral degree in chemistry from Howard University, a masters degree in engineering from the University of Pennsylvania, and a bachelors degree in chemistry from The Catholic University of America. Dr. McCrary was born and raised in the District of Columbia, growing in the Lamond-Riggs section of DC. He attended DC public schools from K-5, and graduated from DeMatha Catholic High School. He has authored and co-authored more than 60 technical papers and co-edited two books during his career at AT&T Bell Laboratories and the National Institute of Standards and Technology (NIST). He has received numerous honors and awards including: co-recipient of the U.S. Department of Commerce's *Gold Medal in 2000* for the development of the first global electronic book industry standards, and the *2002 Percy Julian Award* by the National Organization of Black Chemists and Chemical Engineers. In 2011, he was honored as *Scientist of the Year* by the Annual Black Engineer of the Year Award (BEYA) STEM Conference. In October 2016, President Barack Obama appointed Dr. McCrary to serve on the National Science Board which oversees the National Science Foundation. He chaired a task force which recently produced the report, *"The Skilled Technical Workforce: Crafting America's Science and Engineering Enterprise",* and in May 2020, was elected as the Vice Chair of the National Science Board.

Byron S. Rose, *Deputy Director, Navy University Affiliated Research Center Office, SEA 00U*

In April 2021, Mr. Rose was named the Deputy Director of the Navy University Affiliated Research Center Office, SEA00U. SEA 00U is part of the Naval Sea Systems Command which is the contracting activity for the five Navy-sponsored University Affiliated Research Centers (UARCs) designated by the Office of the Under Secretary of Defense, Director of Defense Research and Engineering (OUSD(DDR&E)). The five Navy-sponsored UARCs are the Johns Hopkins University Applied Physics Laboratory, the Applied Research Laboratory at the Pennsylvania State University, the Applied Research Laboratories at the University of Texas at Austin, the Applied Physics Laboratory at the University of Washington, and the Applied Research Laboratory at the University of Hawaii.
SEA 00U is responsible for managing the five Naval Sea Systems Command UARC contracts on behalf of the primary sponsor, the Assistant Secretary of the Navy for Research, Development and Engineering (ASN(RD&A)). Mr. Rose is responsible for stewarding the long-term strategic relationship between the Navy-sponsored UARCs and the Department of the Navy, the Department of Defense and other Federal Agencies. This stewardship ensures the continued availability of the essential engineering, research and development capabilities of the Navy-sponsored UARCs. Mr. Rose brings over 34 years of engineering, project planning, program management, financial management, and personnel management experience in the execution of science and technology, research and development, and technology transition efforts for the United States Navy. Mr. Rose's past positions include COLUMBIA Class Research and Development Manager, VIRGINIA Class Deputy Research and Development Manager, VIRGINIA Class Live Fire Test and Evaluation Program Manager, Office of Naval Research Project Officer Advanced Technology Demonstration Project Manager, Office of Naval Research Deputy Submarine Technology Program Manager and Naval Surface Warfare Center Project Engineer.

Lisa Troyer, Ph.D., *Chief, Physical Sciences Division, DEVCOM-ARL/Army Research Office (ARO)*

Dr. Troyer is currently Chief, Physical Sciences Division at DEVCOM-ARL/Army Research Office (ARO), and also Visiting Research Scientist at Duke University (Department of Sociology). She completed her

undergraduate studies at the University of Washington, receiving a B.A. in Sociology in 1989. She trained at Stanford University, earning her Ph.D. in Sociology in 1995. She came to ARO in 2013 as a Scientific and Engineering Technical Advisor to support development of extramural basic research programming in social and behavioral sciences for the Army and in 2015 was appointed Program Manager for Social and Behavioral Science, Life Sciences Branch, Physical Sciences Division. From 2020-2021, she was Acting Division Chief for the DEVCOM/Army Research Laboratory - Army Research Office's Engineering Sciences Division. She also served as the Acting Director for the Minerva Research Initiative (OUSD(R&E)) from 2018 – 2020. In this capacity she spearheaded the National Academies of Sciences Review of the Minerva Research Initiative. Prior to joining ARO, Dr. Troyer served for 17 years as tenured Professor, Associate Provost, and Chief of Staff to the President at three Carnegie-classified Research I universities and consulted for several Fortune 500 organizations in the domains of workplace innovation, organizational science, and collective decision making. Troyer's award-winning basic research focuses on cross-disciplinary approaches to the study of the interface between technology and social dynamics such as inequality, identity, influence, and change in groups and organizations. Her research is noted for its reliance on theory-driven quantitative modeling, testing, and analysis, as well as for her collaborations with international scholars (including scientists from India, Poland, South Korea, Iceland, South Africa, and Japan). She also led the establishment of university centers in the areas of nanoscience and nanotechnology, informatics, clinical and translational sciences, and virtual technology for the universities she served. In addition, she co-developed one of the first pandemic and emergency response plans for universities while at the University of Iowa. Her original research has been published in a range of peer-reviewed journals and books spanning public health, social psychology, engineering, sociology, management science, and mathematics.

Gloria Washington, Ph.D., *Assistant Professor, Computer Science, Howard University*

Gloria Washington is an Assistant Professor at Howard University in Computer Science. At Howard, she runs the Affective Biometrics Lab and performs research on affective computing, computer science education, and biometrics. Currently, she is leading research that explores the role of affect/emotion and imposter syndrome on performance in computer science courses. Additionally, she is exploring the link between technology, mental health, and Black women's hair texture. Finally, she also works closely with clinicians within the Howard University Hospital to develop technologies for improving the lives of children and teenagers with Sickle Cell Disease through creation of tools for keeping track of their pain and encouraging them in moments of depression. The ABL is currently funded by the National Science Foundation, National Security Agency, Northrop Grumman, Dell, and Microsoft. Before coming to Howard, she was an Intelligence Community Postdoctoral Research Fellow in the Department of Computing Science at Clemson University. She performed research on identifying individuals based solely from pictures of their ears. Dr. Washington has more than fifteen years in Government service and has presented on her research throughout industry. Ms. Washington holds M.S. and Ph.D. in Computer Science from The George Washington University, and a B.S. in Computer Information Systems from Lincoln University of Missouri.