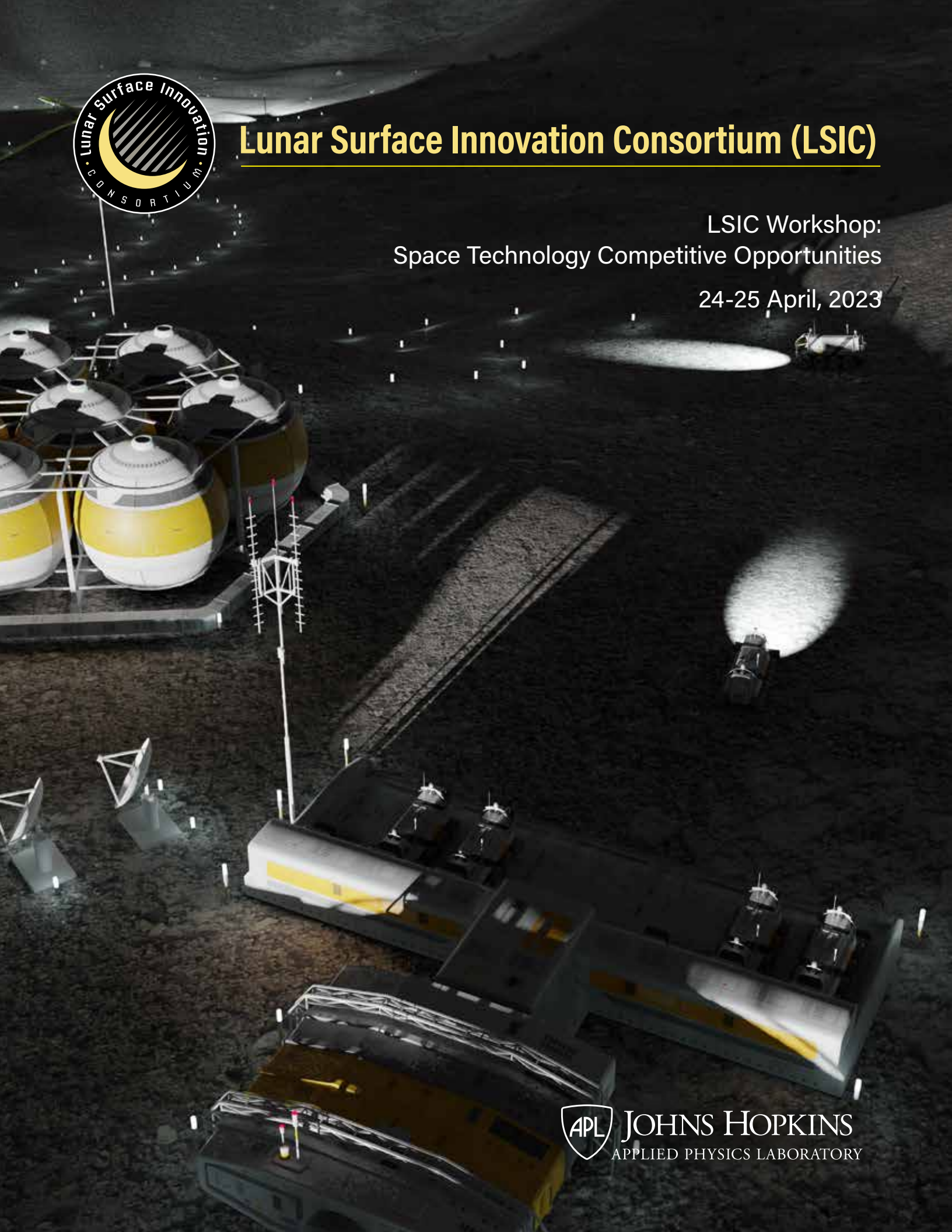




Lunar Surface Innovation Consortium (LSIC)

LSIC Workshop:
Space Technology Competitive Opportunities

24-25 April, 2023



Speakers



Dennis Andrucyk

**Senior Reviewer and Strategic Advisory Committee Member,
Johns Hopkins APL**

Dennis J. Andrucyk currently serves as a senior reviewer for the Space Enterprise Sector (SES) at the Johns Hopkins Applied Physics Laboratory. He is also a member of the Civil Space Mission Area (CSMA) Strategic Advisory Committee, and works to formulate and develop new programs. Andrucyk collaborates with the SES Chief Technologist to further technology development both for the CSMA and for the National Security Space Mission Area (NSSMA). He is also actively engaged in the mentoring of APL SES personnel.

Andrucyk was the director of NASA's Goddard Space Flight Center, guiding the direction and management of one of NASA's major field installations. Goddard's sites include the primary campus in Maryland, Wallops Flight Facility in Virginia, the Katherine Johnson Independent Verification & Validation Facility in West Virginia, the Goddard Institute for Space Studies in New York, the White Sands Complex in New Mexico, and the Columbia Scientific Balloon Facility in Texas. Goddard is responsible for the oversight and execution of a \$3.2 billion portfolio comprising 80 missions – 29 in development and 51 in operation – and is home to the nation's largest concentration of scientists, engineers and technologists dedicated to Earth and space science. Its workforce consists of more than 10,000 employees, both civil servants and contractors.

Andrucyk was deeply committed to promoting diversity and inclusion in the workplace and championed efforts to develop a more diverse and inclusive workforce that encouraged collaboration and partnership across the center and agency.

Andrucyk served in numerous senior leadership roles at NASA. He previously served as the deputy associate administrator for NASA's Science Mission Directorate, helping oversee the planning, direction and effective management of NASA programs focused on the scientific exploration of Earth, the Moon, Mars and beyond. This included charting the best route of discovery and harnessing advancements in Earth and space exploration for the benefit of society. He managed and sponsored research and flight missions, advanced developments in technology, and supported related activities required to expand our understanding of Earth and the Sun.

Prior to joining the Science Mission Directorate, Andrucyk served as NASA's acting chief technologist and deputy associate administrator for its Space Technology Mission Directorate. He previously held many positions at Goddard, including director of its Applied Engineering and Technology Directorate, director of engineering, deputy director of engineering, chief of the Software Engineering Division, and chief of the Mission Engineering and Systems Analysis Division. He also served as Goddard's chief technologist and as associate chief of the Electrical Engineering Division. He was selected as a Goddard senior fellow in 2000.

Before joining NASA in 1988, Andrucyk served at the Department of Defense as both a contractor and civil servant. He has worked for the National Security Agency, Naval Research Laboratory, Westinghouse Electric, General Electric and Northrop Grumman Corporation.

He has earned the NASA Medal for Outstanding Leadership, NASA Exceptional Service Medal, Goddard Outstanding Leadership Honor Award, and Goddard Exceptional Achievement Award in Diversity and Equal Employment Opportunity. He is also a two-time recipient of the Senior Executive Service Meritorious Presidential Rank Award.

Andrucyk holds a bachelor's in electrical engineering from the University of Maryland, College Park. He served as Goddard's center director from January 2020 through December 2022.

Speakers



Christopher Baker

Program Executive, NASA STMD

Flight Opportunities and Small Spacecraft Technology programs

Christopher Baker currently serves as the program executive for NASA's Space Technology Mission Directorate Flight Opportunities and Small Spacecraft Technology programs, which seek to increase the pace of space exploration, discovery, and the expansion of space commerce through the rapid identification, development, and testing of capabilities that exploit agile spacecraft platforms and responsive launch capabilities from industry providers. Baker previously held various positions in atmospheric and suborbital flight testing at the Armstrong Flight Research Center, and managed an agency wide early stage research and development program from NASA Headquarters.



Lauren Briese

Space Technology Analyst, NASA STMD

Lauren Briese is a Space Technology Analyst with NASA's Space Technology Mission Directorate and serves as the lead analyst for the NASA TechPort website. Lauren focuses on data collection, quality, and user support to ensure information about NASA technology development is available to the widest possible audience in order to inform the public, facilitate opportunities for collaboration, and enable analyses of how NASA is meeting its mission needs.



Dr. Angela Dapremont

Policy, Strategy, and Recruitment Lead, LSIC

Associate Staff, JHU Applied Physics Laboratory

Dr. Angela Dapremont is a Post Doctoral Fellow at the Johns Hopkins University Applied Physics Laboratory. As a member of the Lab's Planetary Exploration Group, Dr. Dapremont provides policy, strategy, and recruitment support to the Lunar Surface Innovation Consortium. Dr. Dapremont's scientific research is focused on understanding the composition of terrestrial bodies in the solar system. Her research publications have incorporated datasets from numerous orbital remote sensing missions including the Compact Reconnaissance Imaging Spectrometer for Mars (CRISM), the Context Camera (CTX), and the High Resolution Imaging Science Experiment (HiRISE) camera currently orbiting Mars. Dr. Dapremont also uses Moon Mineralogy Mapper (M3) data to investigate lunar surface composition and is an Affiliate of the Lunar Trailblazer mission.

Speakers



Elizabeth DiVito

Program Integrator, NASA Flight Opportunities Program

Elizabeth DiVito is the program integrator for NASA's Flight Opportunities program. In this role, Elizabeth provides strategic support for the program's various initiatives and also streamlines collaboration with other parts of the agency as well as the program's researcher and flight provider communities. She leads the Flight Opportunities outreach and communications team in comprehensively communicating the program's opportunities and impact.



Walt Engelund

Deputy Associate Administrator for Programs, NASA Space Technology Mission Directorate

Mr. Walt Engelund serves as the Deputy Associate Administrator for Programs in the Space Technology Mission Directorate (STMD) at NASA Headquarters, and provides executive leadership and execution for a portfolio of 10 space technology programs with an annual investment value of over \$1Billion. STMD invests in technologies for NASA and commercial space needs that span the full range of technology readiness levels (TRLs), from fundamental laboratory experiments to full scale space flight demonstrations.

Prior to his appointment with STMD in 2019, Mr. Engelund spent 30 years at NASA's Langley Research Center in Hampton, VA, most recently as the Director of the Space Technology and Exploration Directorate, where he led an organization that was responsible for developing technologies for human spaceflight and robotic exploration. He also previously served as the Chief Engineer at NASA Langley, and was responsible for technical oversight for Langley's diverse research and development portfolio, spanning aeronautics, human and robotic space technologies, and Earth science and remote sensing systems.

He is a recognized expert, reviewer, and consultant for hypersonic flight and planetary entry systems for NASA and other government agencies. He is a Fellow in the American Institute of Aeronautics and Astronautics, and the recipient of numerous NASA Achievement Awards including NASA's Exceptional Engineering Achievement and the Exceptional Achievement Medals, and the Meritorious Presidential Executive Award.



Dillon Gresham

Senior Software Engineer, ARES Corporation

Dillon Gresham is a Senior Software Engineer at ARES Corporation and the Deputy Project Manager of the TechPort project. Dillon has been a part of the TechPort team for the past 8 years with a primary focus on software development. Over the years the Dillon has helped the project continue to showcase NASA's portfolio of active and completed technology projects. Dillon has also helped create several other NASA online systems, including the Critical Knowledge Gateway.

Speakers



Jenn Gustetic

Director of Early Stage Innovations and Partnerships, NASA STMD

Ms. Gustetic is a senior executive who architects innovation systems for impact.

Currently she is the Director of Early Stage Innovations and Partnerships for NASA's Space Technology Mission Directorate. In this role she leads a portfolio of technology programs that engages diverse sources, creativity and innovation across the country, awarding more than \$300M in funding annually through prize competitions, SBIR/STTR, research grants, internal innovation team projects, advanced concepts studies, and technology transfer. She is also a founding co-chair of the Partnership for Public Service's Innovation Council (2018-today).

Previously she has served in various program executive roles at NASA HQ, as the Assistant Director for Open Innovation at the White House Office of Science and Technology Policy, and throughout her career has led numerous communities focused on incentive prizes, citizen science, design thinking and the maker movement.

Outside of her government duties, she also serves on the board of trustees of the Van Alen Institute and on the board of advisors of the National Science Policy Network.

Ms. Gustetic holds a bachelors degree in aerospace engineering from the University of Florida and a master's degree in technology policy from the Massachusetts Institute of Technology. She was a future of work research fellow at the Harvard Kennedy School from 2017-2019 and she has also received an executive education certificate from Stanford University in Venture Capital investing. She has published numerous writings on innovation including in the MIT Press, Space Policy Journal, New Space Journal, and Issues in Science and Technology.



Dr. Rachel Klima

Director, LSIC

Principal Staff Scientist, JHU Applied Physics Laboratory

Dr. Rachel Klima is the Director of the Lunar Surface Innovation Consortium and a principal staff scientist in the Planetary Exploration Group at the Johns Hopkins Applied Physics Laboratory. Dr. Klima's research focuses on integrating laboratory analysis of lunar, meteoritic, synthetic, and terrestrial rocks and minerals with near through mid-infrared spectral measurements of solid bodies in the solar system to understand such topics as the thermal/magmatic evolution of the Moon, distribution of minerals, water, and hydroxyl on the lunar surface, and the composition of Mercury's crust. Dr. Klima has been involved with numerous missions to bodies throughout the solar system, including the Dawn Mission, the Moon Mineralogy Mapper, a hyperspectral imaging spectrometer flown on Chandrayaan-1, MESSENGER, and Europa Clipper. She previously served as the Deputy PI of the Volatiles, Regolith and Thermal Investigations

Consortium for Exploration and Science (VORTICES) team for the NASA Solar System Exploration Research Virtual Institute (SSERVI). She currently serves as the Deputy PI of the Lunar Trailblazer Mission and is a participating scientist on the Korea Pathfinder Lunar Orbiter.

Speakers



LK Kubendran

Lead for Commercial Acquisitions, NASA STMD

As the Lead for Commercial Acquisitions within the Space Technology Mission Directorate (STMD) at NASA Headquarters, Dr. Kubendran leads Tipping Point and Announcement of Collaboration Opportunity. His previous STMD roles include Portfolio Executive for Commercial Partnerships Portfolio, Program Executive for SBIR/STTR, and Program Executive for Flight Opportunities. Dr. Kubendran received his Bachelor of Technology in Aeronautical Engineering from IIT-Madras, MS and PhD in Aerospace Engineering from Georgia Tech, and an Executive MBA from UCLA. He is an Associate Fellow of the American Institute of Aeronautics and Astronautics.



Carolyn Mercer

Chief Technologist, NASA SMD

Dr. Carolyn Mercer is the Chief Technologist for NASA's Science Mission Directorate where she champions the development of innovative technologies to enable new capabilities for future science missions. Prior to her current assignment, she was the founding leader of the Planetary Exploration Science Technology Office and the lead Program Executive for the SIMPLEX rideshare program for planetary science. Dr. Mercer has managed a broad portfolio of space-related technology development projects, including technologies to explore icy moons, advanced scientific instruments, flexible solar arrays, energy storage systems, and adaptive engine technologies. She has developed optical techniques to measure fluid properties in aerospace facilities and holds two patents in optical instrumentation. She has received numerous awards including the Rotary National Award for Space Achievement, NASA Glenn Outstanding Leadership Award, and NASA Exceptional Engineering Achievement Medal.



Greg Peters

Technology Manager, NASA Flight Opportunities Program

Greg Peters is a Technology Manager for the NASA Flight Opportunities Program, where he identifies and supports technologies that can benefit from suborbital flight testing. He also manages the NASA TechLeap Prize, a competition that challenges innovators to design and demonstrate precision landing technologies for small spacecraft. Greg has a background in planetary geology and has worked on several NASA missions, including the Mars Science Laboratory (Curiosity), the Phoenix Mars Lander, and the Mars 2020 (Perseverance) rover. He has received several awards for his contributions to NASA's exploration of Mars, such as the Space Act Award for conceiving of RASP sampling technology, which obtained the first water-ice sample on another planet, and a Voyager Individual Award for determining rock properties from MSL drill telemetry. Greg holds a Bachelor of Science degree in Geological and Earth Sciences from Chadron State College.

Speakers



Chuck Taylor

Principal Investigator, NASA Langley Research Center

Chuck has worked at NASA for 15 years after working for the Defense Department for over 25 years. Early in his career he held many engineering, project, and staff positions within the Navy. He then moved to the Office of the Secretary of Defense where he served as Special Assistant to the Deputy Asst. Secretary of Defense for Intelligence, the Deputy Director of the C4ISR Decision Support Center where he was an advisor to both the Joint Chiefs of Staff and the Deputy Secretary of Defense for (AT&L). His last DOD posting was as a DARPA Project Manager. Since coming to NASA he has held positions at NASA HQ in both the Directors Office and as the Principal Technologist for Space Power and Propulsion within STMD. After transitioning to LaRC in 2016 Chuck was assigned as the Project Manager for multiple projects related to Autonomous In-Space Assembly. Chuck has a B.S. in Industrial and Systems Engineering from Georgia Tech and a M.S. in Applied Mathematics (Operations Research) from George Washington University.



Damian Taylor

Deputy Program Executive for Integration,
NASA SBIR/STTR Program

Damian Taylor is employed at NASA Headquarters in Washington, D.C. in the Space Technology Mission Directorate (STMD). He currently serves as the Deputy Program Executive for Integration in the NASA SBIR/STTR program. Damian has held various programmatic positions with increasing responsibility in NASA for the last 10 years.

Prior to NASA, Damian worked for various companies—including Lockheed Martin, Booz Allen, Kodak, ITT Space Systems, and ARES, Inc.—for over 15 years within the Space, Intelligence, and Department of Defense industries as an Engineering Consultant, Systems Engineer, Program Manager, and Business Unit Manager.

Damian holds Bachelor of Science and Master of Science degrees from Western International University and Florida Institute of Technology and is a graduate of the Air Force's Squadron Officer School as well as the Air Command and Staff College in the areas of electronics technology, international business, management, acquisition/contracts, leadership, and national security/policy. After nearly 30 years of total service in the active Army and Air Force Guard, Lieutenant Colonel (Retired) Taylor has led troops and deployed as an Air Force reserve officer in various leadership positions, serving last as an Inspector General.



Maggie Yancey

Entrepreneurship Lead, NASA SMD and STMD

Maggie Yancey is the Entrepreneurship Lead for NASA's Science (SMD) and Space Technology Mission Directorates (STMD), she is currently working to advance commercialization opportunities for current and future NASA entrepreneurs in academia. Before NASA, Maggie was at the U.S. Department of Energy in the Wind Energy Technologies Office and lead the Community Impacts Research and Outreach portfolio working on climate change challenges connecting small businesses, entrepreneurs, and communities to wind energy innovation opportunities on both land and water for the U.S. She started her Federal career as a 2015 Presidential Management Fellow.