Review of the SBIR and STTR Programs at NASA

Meeting of the Committee (February 15-16, 2024)

Biographies of Guest Speakers

February 15 Open Session:

JASON KESSLER

Jason Kessler is currently the NASA SBIR/STTR Program Executive where he provides executive leadership and management oversight for NASA SBIR/STTR programs. He previously served as a Senior Advisor to the Global Knowledge Initiative (GKI) where he combined strategy, design, facilitation, and coaching to create systems-focused learning experiences targeted at increasing the use of science and technology to enable better outcomes in environmental and climate change programming for clients in the developing world. Prior to his current position at NASA, Kessler served as a Program Executive in the Office of the Chief Technologist from 2013 to 2016, and as Deputy Project Director for SERVIR, a unique partnership between NASA and the United States Agency for International Development (USAID) from 2010 to 2013. As an entrepreneur and consultant serving outside of government, he has also started several businesses and still maintains a small contingent of select Executive Coaching clients. Kessler holds a BS in Chemistry from Vanderbilt University and an MBA from the University of Arizona.

February 16 Open Session:

DIMI APOSTOLOPOULOS

Dr. Dimi Apostolopoulos founded ProtoInnovations in 2005. From his position as the CEO and Chief Technologist of the company he has led 40 NASA-funded SBIR and STTR projects in advanced robotic rovers, mechanisms, specialized tools, and software architectures and controls for mobility and environmental interactions with primary emphasis on planetary surface applications. Notable innovations of his work include modular and reconfigurable rovers, intelligent locomotion elements, robotic anchoring systems, software architectures and controls for rover-based terrain manipulation, and methods and algorithms for real-time slip estimation, embedding detection, and autonomous selection of adaptable mobility controls. Apostolopoulos has guided ProtoInnovations through all phases of technology innovation. Most recently he led the infusion of safeguarding mobility controls to NASA's Volatiles Investigating Polar Exploration Rover (VIPER) for its mission to the South Pole of the Moon in late 2024. Apostolopoulos is also a Principal Systems Scientist at the Robotics Institute of Carnegie Mellon University and Program Director at the National Robotics Engineering Center (NREC). At Carnegie Mellon he focuses on robotics and autonomous systems for defense, mining, and agricultural applications.

BRADLEY CHEETHAM

Bradley Cheetham is a lifelong space advocate, highly experienced engineer, a three-time entrepreneur, and seasoned graduate-level instructor. He is best known as the co-founder and CEO of Advanced Space where he leads company in its efforts to enable the sustainable exploration, development, and settlement of space by delivering solutions in flight dynamics, technology development, and rapid turn-key missions to clients across the space industry. Advanced Space is the owner and operator of the CAPSTONE spacecraft, which successfully arrived at the

Moon in 2022 as a pathfinder for NASA's Artemis program. Cheetham serves as the PI for this mission which represents the first-ever commercial spacecraft to operate at the Moon.

Cheetham earned a degree in Aerospace Engineering and Mechanical Engineering from the State University of New York at Buffalo and received his Masters in Aerospace Engineering Sciences from the University of Colorado at Boulder, where he also conducted significant research on spacecraft navigation at the Moon in support of a Doctorate of Philosophy.

As an advocate for the space industry, he was a co-founder and currently serves as the Chair of the Board of Directors for the Future Space Leaders Foundation, is a member of the Entrepreneurship and Investment Committee of the International Astronautical Federation, and serves on the Board of Advisors and the Board of Trustees of Students for the Exploration and Development of Space (SEDS).

JACK GOODWIN

Jack Goodwin currently serves as the Director of Business Development for Lunar Surface Systems at Astrobotic. Astrobotic specializes in making space missions to the moon and other planets more affordable and accessible for science, exploration, and commerce. Goodwin is responsible for leading the strategy and sales execution of Astrobotic's lunar surface power-, thermal- and mobility-as-a-service portfolio.

Previously, Goodwin has worked as a technical program manager for Apple's emergency iOS satellite connectivity group, and as a systems engineer and program manager on DARPA and US Space Force Programs at Airbus US, SAIC and Lockheed Martin.

Goodwin received his MBA from Harvard Business School where he specialized on emerging markets within the New Space and cis-lunar economies, co-authoring a case on the role of vertical integration in commercial space companies. Previously, he was funded by the US Air Force to study phenomena of plasma meta-materials, photonic crystals and ion propulsion technologies as a PhD student in Stanford University's Plasma Physics Lab. An Outstanding Senior Award finalist, California Space Grant recipient, and AIAA Reuben H Fleet Scholar, Goodwin received a BS in Aerospace Engineering from the University of California, San Diego.