

# Breakout Session 1C: Managing the Volume



- **Moderator: Steve Bradford**, Chief Scientist, FAA NextGen Office
- **Jay Merkle**, Director, Program Control and Integration, FAA Air Traffic Organization
- **John Cavolowsky**, Director, Airspace Operations and Safety Program, NASA Aeronautics Research Mission Directorate
- **Dr. Cathy Cahill**, Director, University of Alaska Center for Unmanned Aircraft Systems Integration and UAS Test Site
- **Mark Blanks**, Director, Mid-Atlantic Aviation Partnership at Institute for Critical Technology and Applied Science, Virginia Tech and UAS Test Site

# Steve Bradford, Chief Scientist, FAA NextGen Office



Steven W. Bradford is the Federal Aviation Administration's (FAA) Chief Scientific and Technical Advisor for Architecture and Next Generation Air Transportation System (NextGen) Development. He is the Chairman of the Technical Review Board, which monitors technical decisions; related investments; and the Enterprise Architecture. Mr. Bradford works with elements of the FAA to develop midterm plans and five-year budget requests to implement NextGen. He has a leading role in NextGen's International engagement activities with SESAR Joint Undertaking, and has led several co-operative international efforts with EUROCONTROL.



Prior to becoming Chief Scientist, Mr. Bradford managed the NAS Concept Development Branch in the Office of System Architecture and Investment Analysis at the FAA. Mr. Bradford served as the FAA Program Manager for Air Traffic Modeling, Model Development Division, Operations Research Service. In that position, he was responsible for the continued development of the FAA's Airport and Airspace Simulation Model and National Airspace System Performance Analysis Capability simulations.

Mr. Bradford holds a Bachelor and Master of Mathematics from Michigan State University with additional graduate work in mathematics at University of Maryland.

#UAS2017



# Jay Merkle, Director, Program Control and Integration, FAA Air Traffic Organization



Jay Merkle became the Federal Aviation Administration's (FAA) Director of System Integration and Requirements Analysis, AJM-1, in the Program Management Organization (PMO) for the Air Traffic Organization (ATO) in April 2015. In this role, he leads the PMO in developing effective, timely, and innovative solutions to evolving business needs. The PMO directorate's focus areas are program control, cross-cutting analysis and integration, and special initiatives.

Prior to his current position, Mr. Merkle was Manager of Systems Integration for Portfolio Management and Technology Development within the NextGen organization. He has more than 25 years of engineering and program management experience in both the defense industry and the FAA.

Early in his career, Mr. Merkle was an engineer working in cockpit and crew station design on several aircraft, including the C-17 large transport aircraft. Since joining the FAA, he has held positions as the Lead Engineer for tower, terminal, and en route automation systems, the Chief System Engineer for en Route and Terminal Domains, and he also served as the Chief Architect for NextGen at the Joint Planning and Development Office

Mr. Merkle holds a master's degree in industrial engineering and operations research from the Virginia Polytechnic Institute and State University.

#UAS2017



# John Cavolowsky, Director, Airspace Operations and Safety Program, NASA Aeronautics Research Mission Directorate



Dr. Cavolowsky is responsible for the overall planning, management and evaluation of the directorate's efforts in foundational air traffic management (ATM) and operational safety research that enables development of revolutionary improvements to, and modernization of, the National Airspace System.

He also supports the Aeronautics Research Mission Directorate Associate Administrator in a broad range of mission directorate activities, including strategic planning and external coordination.

Mr. Cavolowsky began his career at NASA Ames in 1989 as a project manager for aerothermodynamics addressing research and development challenges in hypersonic propulsion and thermal protection systems.

Mr. Cavolowsky received the Gene Zara Award for outstanding contributions as a national team member to the National Aerospace Plane program, as well as a number of agency achievement awards. He has published more than 25 technical papers. He has a bachelor's of science degree in mechanical engineering from the Massachusetts Institute of Technology, and master's and doctoral degrees in mechanical engineering from the University of California at Berkeley.



#UAS2017



# Dr. Cathy Cahill, Director, University of Alaska Center for Unmanned Aircraft Systems Integration and UAS Test Site



Dr. Catherine F. Cahill serves as the Director of the Alaska Center for Unmanned Aircraft Systems Integration – RDT&E (ACUASI) at the University of Alaska Fairbanks (UAF) and the CEO of the Pan-Pacific UAS Test Range Complex. For more than 30 years Dr. Cahill has conducted research on atmospheric aerosols and their impacts on visibility, global climate, and human health including the size and composition of particulate matter entering the Arctic from Asia and the sources and potential health impacts on U.S. forces of atmospheric aerosols in Iraq and Afghanistan.

Since 2006, she has collaborated with the UAF UAS program and worked on developing unmanned aircraft-based sensors for determining the concentration, composition, and spatial distribution of atmospheric aerosols. In August 2015, Dr. Cahill completed a nineteen-month Congressional Fellowship with the U.S. Senate Committee on Energy and Natural Resources and returned to UAF to join ACUASI's leadership team.



#UAS2017



# Mark Blanks, Director, Mid-Atlantic Aviation Partnership at Institute for Critical Technology and Applied Science, Virginia Tech and UAS Test Site



Mark Blanks is the Director of the Mid-Atlantic Aviation Partnership (MAAP) at Virginia Tech.

Mr. Blanks has held a variety of positions in the aviation industry including aircraft maintenance, flight test, and aircraft certification. He accepted the position of UAS Program Manager for Kansas State University in January 2013 where he oversaw the growth and development of the K-State UAS academic and research programs until August 2015 when he transitioned to Virginia Tech to become the Associate Director for MAAP.



Mr. Blanks assumed his current role as Director of MAAP in July 2016 where he is responsible for the oversight of all operations and research at the FAA-designated UAS Test Site. Mr. Blanks is the chairman for the ASTM F38-02 Subcommittee on UAS Flight Operations and serves on the AUVSI Board of Directors. He is a licensed airframe and power plant technician and an instrument rated private pilot.

#UAS2017



# THANK YOU TO AUVSI'S SPONSORSHIP PARTNERS



**AIRMAP**

**QUALCOMM**<sup>®</sup>

