



## Verification and Validation Summit 2014 September 17-18, 2014

### Speaker Biographies

**Nicholas D. Bartlow Ph.D.** is a Senior Principal Engineer and Lead of the Center of Digital Excellence (CoDE) at Noblis, a nonprofit science, technology, and strategy organization serving public sector clients in the areas of national security, intelligence, transportation, healthcare, sustainability, and enterprise engineering. In his role as Lead of the Center of Digital Excellence, Nick heads a collaborative effort across Noblis to deliver solutions in the areas of Agile Software Development, Software Data Visualization, User Experience Design, Mobile & Connective Applications, and Software Modeling & Simulation.

Beyond his role in CoDE, Nick has spent the last four years supporting the FBI in the development of biometric workstation software. During this time he has served in roles ranging from Lead Developer to Agile Product Owner / Project Manager. A large portion of his efforts on the project have focused on building and maintaining the project's Continuous Integration (CI) pipeline with activities ranging from orchestrating the execution and automated recording of user interface (UI) tests, implementing Continuous Deployment (CD) to test environments, partially automating the generation of product documentation, and developing jobs for creation of release artifacts.

Prior to supporting the FBI, Nick helped DHS develop a 10-year plan to guide Multi-biometric fusion activities with the Science and Technology Directorate. Nick earned B.S., M.S., and Ph.D. degrees in Computer Science from West Virginia University. During his time at WVU he focused on basic and applied research in the areas of biometrics, digital watermarking, and hardware fingerprinting.

**Edward L. Bolton Jr.** is the Assistant Administrator for NextGen at the Federal Aviation Administration. The Office of NextGen (ANG) is responsible for leading the modernization of the National Airspace System. Bolton leads a workforce of nearly 1,000 employees, and oversees the \$1 billion annual budget of the Next Generation Air Transportation System.

Bolton joined the FAA in September 2013 after a career with the U.S. Air Force, most recently with the rank of Major General and the position of Deputy Assistant Secretary for Budget. He was a three-time commander of operational space units.

Mr. Bolton is a level three program manager and has had extensive experience managing multibillion-dollar Air Force space programs.

He also served as Director for Defense Policy at the White House National Security Council, and was chief of systems engineering and integration at the National Reconnaissance Office.



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Bolton has a Bachelor of Science degree in Electrical Engineering from the University of New Mexico, a Master of Science in Systems Management from the University of Southern California, and a Master of Science in national security strategy from the National War College.

**James Daum** is the Safety & Information Security Division Manager and Information Systems Security Manager (ISSM) for the NextGen Operations Organization. He joined the FAA in 2003 as a Safety Engineer assisting in development of the ATO's Safety Management System (SMS). He has participated in the implementation and management of SMS in the NextGen Organization as both a service unit and now as a Staff Office. Recently he was chosen to lead the integrated Safety and Information System Security Division to spearhead the synthesis of information security and safety in NextGen Initiatives. Prior to his FAA career, he spent 7 years with the Boeing Company as a Crew Systems/Human Factors Engineer developing helicopter and tilt-wing aircraft cockpits. Mr. Daum has held positions as an Aircraft Accident Investigator, Senior Safety Engineer, Safety Manager, Design Engineer, and Manufacturing Engineer. He is currently a Maintenance Test Pilot and officer in the U.S. Army National Guard, and he served as a Helicopter Pilot in Operation Iraqi Freedom. He holds Commercial Multi-Engine Airplane and Helicopter Pilot Certificates. Mr. Daum holds a Bachelor of Science Degree in Mechanical Engineering Technology from the University of Dayton.

**Dennis L. Filler** is the Director of the FAA William J. Hughes Technical Center. As director, Mr. Filler leads the nation's premier aviation and air traffic management Federal Laboratory. The Technical Center's world-class laboratories and top-notch engineering expertise place it at the forefront of the FAA's efforts to modernize the U.S air transportation system and advance NextGen.

Prior to becoming Director, Mr. Filler had a private consulting firm since March 2009. Prior to that Mr. Filler served as Chief Information Officer and Director of Information Technology for the FAA Air Traffic Organization (ATO). In that position, Mr. Filler provided IT administrative services to support the safe and efficient operation of the National Airspace System for 35,000 federal employees and 15,000 contractors at 840 FAA facilities.

Mr. Filler has held several key positions at the Technical Center, including acting deputy center director, chief scientist for technology, program director of the NAS System Engineering and Analysis Division and FAA Human Factors Laboratory Team lead.

Mr. Filler holds a Bachelor of Science degree in electrical engineering from the U.S. Military Academy at West Point. He is also a graduate of the Telecommunications Operations Officer Course at the Air Force Institute of Technology at Wright Patterson Air Force Base. He completed



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all graduate course work in aviation science, aviation management and human factors at Embry Riddle Aeronautical University, and is a graduate of the Federal Executive Institute.

Mr. Filler has been active in the scientific research and test and evaluation communities. He served as both treasurer and vice president of the International Test and Evaluation Association, South Jersey Chapter. He is a member of the Air Traffic Control Association, the South Jersey Human Factors and Ergonomics Society Chapter. He is trained as an electronic warfare officer and has conducted many extensive flight and field trials of both airborne and ground based sensor, jammer and countermeasure systems. He is also pursuing his private pilot's license.

Mr. Filler lives in Brigantine, New Jersey and Parsons, West Virginia with his wife Joann, a retired special education school teacher. They have four children.

**John Frederick** is a graduate from Drexel University (Philadelphia) with a BS in Computer Systems Management. Mr. Frederick has over 26 years of T&E experience with Federal Aviation Administration (FAA) systems. In the early part of his career, as both a support contractor and FAA employee, Mr. Frederick has worked as a National Airspace System (NAS) programmer, test engineer, simulations developer, and Operational Test and Evaluation (OT&E) lead on Air Traffic Control automation systems. Mr. Frederick has supported or led T&E efforts on over 12 major FAA automations programs in the past 26 years. A large portion of his career in the FAA was dedicated to working as an FAA Test Director and Test Program Manager on major FAA acquisitions of En Route Air Traffic Control (ATC) automation systems. As Chief Test Engineer and Subject Matter Expert (SME), Mr. Frederick has consulted with the Department of Defense (DOD) and international agencies on Test and Evaluation (T&E), and provided T&E guidance and consultation to many other FAA T&E programs. In the past 7 years, he has served as the Test Standards Board Chairman to establish test standards and provide quality T&E oversight for the FAA. Mr. Frederick is the Manager for the Verification and Validation Strategies and Practices Branch at the FAA Technical Center. He is also the International Test and Evaluation Association (ITEA) South Jersey Chapter President and serves as the T&E representative for the FAA Technical Center on the FAA Acquisition System Advisory Group.

**Sharon S. Graves** is the Deputy Project Manager for the Vehicle Systems Safety Technologies Project within the Aeronautics Research Directorate at the National Aeronautics and Space Administration (NASA). She joined NASA Langley Research Center in 1990 working as a Systems Engineer in the field of Intelligent Measurements Systems. Since then, she has managed teams of engineers with a focus on expert systems, human-machine collaboration, machine intelligence, decision-making, and autonomous systems.



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Sharon has a wide variety of experience covering complex aerospace systems, advanced measurement technologies, vehicle health assurance, effective crew-system interactions, decision-making and response, as well as technologies for the assurance of safe and effective aircraft control under hazardous conditions. She is currently focused on Safe Autonomous Systems Operations for aircraft, airspace traffic management and airport future applications operating within the National Airspace.

Sharon holds a Master's of Science from the Joint Institute for the Advancement of Flight Science at George Washington University.

**William (Bill) T. Keegan** is the Vice President and Director of the Test, Evaluation & Analysis Directorate in American Systems Corporation. For the previous five years, he was Vice President of Operations and Manager of the Test, Training & Analysis Division of Science Applications International Corporation (SAIC). He also served as Vice President and Deputy Operations Manager for the Test, Evaluation & Analysis Operation, and Vice President and Division Manager for the System Engineering, Test & Analysis Division. Prior to joining SAIC in 2007, he managed T&E programs for WBB, Inc., including Joint Single Integrated Air Picture T&E IPT, and T&E for the Deputy Secretary of Defense TACAIR Study.

Prior to joining industry in 2005, Mr. Keegan retired from the Army at the rank of colonel with over 24 years of service in multiple combat arms, command and staff positions worldwide. His assignments included: Current Operations Chief, Supreme HQ Allied Powers Europe; G-3 XVIII Airborne Corps Artillery; Battalion Commander in the 82d Airborne Division; Operations Officer in the 101st Airborne Division; multiple commands in the 25th Infantry Division; Chief of Congressional Strategy, US Army Legislative Liaison; Military Assistant for Fire Support Programs, and Senior Military Assistant to the Director, Operational Test & Evaluation (DOT&E), Office of the Secretary of Defense.

Mr. Keegan has served on the Board of Directors of the International Test & Evaluation Association and is a member of the National Defense Industrial Association's Industrial Committee on Test & Evaluation.

He holds a BA from Siena College, an MS from CMU, and an MS in National Security Strategy from the National War College. He is a graduate of the Army Command and General Staff College, the Armed Forces Staff College, the NATO Staff College, and attended the Centres des Hautes Etudes Militaires exchange program in Paris, France.



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**Natesh Manikoth** is the FAA's Chief Scientist and Technical Advisor for NAS Software within the NextGen organization. As NAS systems become ever more software-centric, it is the responsibility of the Chief Scientist for NAS Software to provide expert technical guidance, advice, and leadership in all software related areas of the FAA system acquisition and development process. As such, his primary focus areas are the sustainable acquisition practices for software intensive systems with an emphasis on improving the time and effort related to software validation and verification.

Prior to joining the FAA in 2012, Natesh was the Chief Technology Officer for the Transportation, Central and Local Government Sector for Xerox services. He has over 25 years of experience with the development and deployment of large scale systems.

Natesh holds a Bachelor's degree in Electrical Engineering and a Master's Degree in Industrial Engineering from the Indian Institute of Technology Kharagpur as well as a MBA from the Robert H. Smith School of Business at the University of Maryland.

**Rose Karolenko Mooney** received her BA degree in Information System Management from the College of Notre Dame, Maryland after completing studies in computer science and electrical engineering at University of Baltimore County. Rose's interest in aviation began as a young child living in Queens NY in the approach path of LaGuardia airport. She spent her nights watching the aircraft and being intrigued by flight. Rose's career started with developing manufacturing robots for Westinghouse, development of medical devices and now has moved to Unmanned Aircraft System (UAS). She has always had a fascination with robotics. Rose is currently the Executive Director of the Mid Atlantic Aviation Partnership (MAAP) which is the FAA awarded UAS Test site in Virginia, New Jersey and Maryland. As Vice President of Archangel Aero LLC she leads an engineering consulting company that serves the new technology and aviation arenas. Prior to Archangel, she spent the last 7 years as the Director of Engineering and then Director of UAS Airspace Integration for AAI / Textron Systems. Rose spent 14 years, prior to AAI / Textron Systems, as the President/CEO of Archangel Systems Inc., a provider of systems and network engineering services and manufacturer of specialty hardware and software systems. Rose served as the President of the UAS National Industry Team (UNITE), is Co-Chair of the RTCA SC-203 Unmanned Aircraft Systems Committee, AIA UAS subcommittee and sits on the NASA Advisory Council UAS subcommittee. Rose is involved in national and international education, advocacy and safe integration of UAS in non-segregated airspace. Rose is pursuing a M.B.A – Leadership from Liberty University and is also a student pilot. Rose is active in the arts, community and her church. She has 4 incredible children (3 girls and a boy) and a wonderful husband who shares her love of aviation.



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**Eric Neiderman Ph.D.** is the Manager of the Aviation Research Division. The division includes the Fire Safety Branch, the Human Factors Branch, the Airport Technology R&D Branch, the Software and Systems Branch, and the Structures and Propulsion Branch. He has more than 19 years of government experience, beginning with the Federal Aviation as an engineering research psychologist working in aviation security. Eric headed the Aviation Security Human Factors Program, and transitioned to the Transportation Security Administration and then the Department of Homeland Security in the wake of the 9/11 attacks. At DHS Science & Technology he served as the Division Manager for Detection and Deterrence Systems. He is also an adjunct professor at the Fels Center of Government at the University of Pennsylvania.

Dr. Neiderman holds a Bachelor's Degree in Industrial Psychology from La Salle University, and a Master's Degree and Ph.D. in Human Factors from George Mason University. He also holds a Master's Degree in Public Administration from the University of Pennsylvania and is a certified Project Management Professional. His hobbies include distance running, carpentry, movies, and travel.

**Kenneth E. Nidiffer Ph.D.** has over 50 years of government, industry and academic experience in the field of software and system engineering with a specific focus on verification and validation. Ken has successfully executed positions as a Senior Vice-President at Fidelity Investments, Vice President of the Software and Systems Consortium and Director of Technical Operations/Engineering at Northrop Grumman Corporation. He is currently the Director of Strategic Plans for Government Programs at the Software Engineering Institute. Ken received his B.S. degree in Chemical Engineering from Purdue University, Indiana, a M.S. degree in Astronautical Engineering from the Air Force Institute of Technology, Ohio, a MBA degree from Auburn University, Alabama and his D.Sc. in Systems Engineering from George Washington University, in Washington DC.

**Paula Nouragas** is the Manager of the Air Traffic Systems Test and Evaluation Services Division at the Federal Aviation Administration's (FAA) William J. Hughes Technical Center. She leads an organization of technical professionals and test practitioners who provide quality test and evaluation products and services to ensure that current National Airspace System (NAS) and future Air Transportation Systems are efficiently and comprehensively verified and validated, using best practices and quality standards. They conduct testing, analysis, and evaluations of surveillance, terminal automation, en route automation, and traffic flow management systems and capabilities. The Division ensures that these critical systems and capabilities meet specifications, satisfy requirements, and are operationally suitable and effective for use in the NAS. The Division has been certified to the ISO 9001:2008 quality assurance standard since May 2010.



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Paula joined the FAA in 1985 as a student intern for the Technical Center. In her 29 years of Federal service there, she conducted, led, and managed a wide range of aviation research, development, and test activities and projects to evaluate and validate future technologies, concepts, and operational procedures in surveillance, navigation, avionics, weather systems, new aircraft operations, and air traffic management.

Her program management experience is diverse. For the FAA's innovative National Simulation Capability Program, she led a cross-organizational team to establish a distributed simulation network for conducting high fidelity human in-the-loop simulations. Shortly after 9/11, the Federal Air Marshal Service enlisted Paula to design, develop and implement an operational mission deployment system.

Paula holds a Bachelor of Science degree in Information Systems and Sciences from the Richard Stockton College of New Jersey, and a Master of Aeronautical Science degree with a Human Factors and Aviation Systems specialization from Embry-Riddle Aeronautical University. She is a member of the South Jersey Human Factors Society, the South Jersey Chapter of the International Test and Evaluation Organization (ITEA), and the Technical Women's Organization (TWO).

Paula lives in Egg Harbor Township, New Jersey, with her husband and three sons.

**Mike Paglione** is the Branch Manager of the FAA's Concept Analysis Branch at the FAA W. J. Hughes Technical Center, Atlantic City, New Jersey. Before taking the current management position in 2012, he had served as a FAA engineer and project lead for 13 years. He has extensive experience in air traffic control automation algorithms, simulation problems, analysis of decision support software, applied statistics, and general systems engineering. The Concept Analysis Branch (ANG-C41) he manages conducts research to assess the operational and technical feasibility of proposed system changes to National Aviation System (NAS) operations. This work includes validating new aviation concepts' technologies, investigating system capacity issues, and evaluating the performance of emerging and existing systems within the NAS. The research utilizes a variety of engineering and scientific disciplines such as modeling, rapid prototyping, fast-time computer simulation, applied statistical methods, object oriented programming, and real time human-in-the-loop simulation techniques. Mr. Paglione has supported the development, testing, and evaluation of FAA air traffic management software and also served as a NextGen program manager. He was FAA's Rutgers University Fellow from 1994-1996, Accuracy Test Lead for the FAA's User Request Evaluation Tool, Program Manager for the Joint University Program from 1999 to 2004, Lead for the Automation Metrics Test Working Group (a cross organizational team developing and implementing metrics for the En Route Automation Modernization Program, ERAM), and a program manager supporting a NextGen project investigating improvement to the separation



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management functions in the en route automation . He holds B.S. and M.S. degrees in Industrial and Systems Engineering from Rutgers University.

**Nazzareno (Kip) Spurio** is currently the Acting Deputy Vice President of the ATO's Program Management Organization. His entire career has been associated with aviation. In his Air Force career, he was an air traffic controller obtaining facility ratings in control towers, radar approach controls and an en route center; as well as assignments on headquarter staffs including the Pentagon. After his retirement, Mr. Spurio spent the next few years as a contracting engineer supporting both the FAA and the Air Force working for TRW and the MITRE Corporation. In 2000, he returned to federal service as the Director of Resources and Requirements for the Air Force where he was responsible for the sustainment and modernization programs for the Air Force's air traffic management system. In 2003 he joined the FAA. With the FAA, he's been the Chief System Engineer and Manager of Terminal System Engineering, the Chief Architect of the NAS and Senior Technical Advisor in the ATO prior to his current position.

Mr. Spurio earned a Bachelor of Science degree from the United States Air Force Academy, a Master of Science degree from the Naval Postgraduate School, and was a Senior Executive Fellow at the Kennedy School of Government at Harvard University.

**William E. Van Valkenberg** is a founder and the President and Chief Operating Officer of NextGen AeroSciences, LLC ([www.nextaero.com](http://www.nextaero.com)). The company offers complexity science-derived agent-based tools for air transportation demand analyses, airspace modeling of interacting flight trajectories and asset optimization solutions for aerospace industry and government customers. He is also the principal in Practical Legal Advantage, PLLC ([www.practicallegaladvantage.com](http://www.practicallegaladvantage.com)), providing entrepreneurs, executives and their companies with immediate, high-level strategic advice, business planning and assistance solving law-related business problems.

Bill is a senior executive with over 35 years of management and law-related experience advising private and publicly-held corporations in fast-paced, rapidly changing business environments. He has served companies in a variety of roles during his career, including executive officer, director, strategic advisor, early stage investor, founder and outside counsel. He is accomplished in structuring and negotiating business transactions, has strong securities and governance expertise, a background in venture capital financing, reorganizations, mergers, acquisitions and partnering transactions, and hands-on experience with regulatory compliance. He has received recognition from clients and colleagues as a top corporate, securities and M&A lawyer.

Currently serving on the Advisory Council, Pacific Northwest Section, American Institute of Aeronautics and Astronautics (Elected Member 2014 – 2016).



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**Jesse Wijntjes**, Data Communications Program Manager, Federal Aviation Administration, has more than 27 years of experience in Government and industry as a chief systems engineer, engineering manager, and program manager. His government service includes positions at the Naval Air Systems Command, National Oceanic and Atmospheric Administration, and the FAA. He has managed the successful design, development, and deployment of airborne night vision navigation and targeting systems aboard Navy attack, fighter, and rotary platforms; the development and deployment of meteorological weather processing and sensor systems at the National Weather Service; and several acquisitions for the FAA including the Display System Replacement (DSR), User Request Evaluation Tool (URET), and the En Route Information Display System (ERIDS).

In industry, he served as a Senior Systems Engineer and Engineering Manager on Command and Control, Air Defense, and Homeland Security procurements for domestic and international customers, including deployments in the Middle East, North Africa, and Europe. In May 2008, Jesse Wijntjes rejoined the FAA as the NAS Chief Architect in the Systems Engineering and Safety Directorate. He also served as an Investment Portfolio Manager in the NextGen Lifecycle Integration Office and is recently assigned as the Program Manager for the Data Communications Program. He holds a MSE from Catholic University in Washington, D.C. and a BSEE from Union College in Schenectady, N.Y.

**Tanya Yuditsky Ph.D.** is an Engineering Research Psychologist at the William J. Hughes Technical Center. She joined the FAA in 1998 and has focused primarily on supporting acquisition programs. She has applied her expertise in user interface design and usability to systems across Air Traffic Control domains and user populations. Systems include Standard Terminal Automation Replacement System (STARS), En Route Automation Modernization (ERAM), and tools within the Traffic Flow Management System (TFMS). She is currently the Human Factors Lead on several projects for Traffic Flow Management and Aeronautical Information Management.

Prior to joining the FAA, Tanya worked for NYMA, Inc. and supported research projects in Aviation Security. She received an MA in Experimental Psychology and a doctorate in Cognitive Psychology from New York University.