PROGRAM
(Eastern Time)

8:00 - 8:15am
OVERVIEW
Michael Vinarcik, Emcee

8:15 - 9:00am
KEYNOTE ADDRESS
Answering the Call for Technical Leaders
(Michael Pennotti)

9:00 - 10:00am
PANEL DISCUSSION
Collaborating for Agile Project Success

10:30 - 12:00pm
SESSION 1
Back to Basics

Apollo and the 1960's

1:00 - 2:30pm
SESSION 2
Growing Systems Engineers through Gamification

Top Ten Ways Engineers Undermine Their Success

3:00 - 4:30pm
SESSION 3
MBSE Complete Eco-System Explained

Systems Honor Society Sigma Theta Mu Lecture

4:30 - 5:00pm
CLOSING PLENARY
Michael Vinarcik, Emcee

4th Annual INCOSE GLRC
Systems Engineering Professional Development Day (SE-PDD)

FEATURED SPEAKERS

Michael Pennotti
Professor, Stevens Institute of Technology
INCOSE Fellow

Dr. Azad M. Madni
Professor of Astronautical Engineering
University of Southern California

THURSDAY OCTOBER 24, 2019
LiveStreamed from the Cleveland I-X Center

INCOSE

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→ **www.incose.org/GLRC13/Attendees** ←

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TOPICS & SPEAKER PROFILES

Michael Pennotti
Answering the Call for Technical Leaders

Dr. Pennotti is a Distinguished Service Professor and the former Director of Systems and Software Programs in the School of Systems and Enterprises at Stevens Institute of Technology. His research interests include technical leadership, the intersection of software and systems engineering, and the implications of complexity theory for systems engineering and architecting. He is a Fellow of the International Council on Systems Engineering, a senior member of both the IEEE and the American Society for Quality, and a former trustee of Caldwell University. Dr. Pennotti's industry experience includes systems engineering leadership at Bell Laboratories and executive positions at AT&T, Lucent Technologies and Avaya. He holds Ph.D. and M.S. degrees in electrical engineering from the Polytechnic Institute of New York and a B.E.E. from Manhattan College, and is a graduate of the AEA/Stanford Executive Institute for Technology Executives.

Dave Walden
Back to Basics: Systems Engineers Must Think About the End before the Beginning

David D. Walden, ESEP, is co-owner and principal consultant for Sysnovation, LLC, a Systems Engineering consulting and training firm he formed in 2006. Previously, Mr. Walden was with General Dynamics Advanced Information Systems for 13 years and McDonnell Aircraft Company for 10 years. Mr. Walden was the lead editor of the INCOSE SE Handbook Fourth Edition. He is an INCOSE liaison to ISO/IEC JTC1/SC7 Working Groups 10 and 22. Mr. Walden was Program Manager of the INCOSE Certification Program from 2007-2013. He has an M.S. in Management of Technology (MOT) from the University of Minnesota, an M.S. in Electrical Engineering and in Computer Science from Washington University in St. Louis, and a B.S. in Electrical Engineering from Valparaiso University in Indiana. Mr. Walden was one of the first to earn the INCOSE Certified Systems Engineering Professional (CSEP) credential in 2004 and was awarded the INCOSE Expert Systems Engineering Professional (ESEP) credential in 2011.

Michael Vinarcik
Apollo and the 1960's: One Giant Leap for Systems Engineering

Michael J. Vinarcik is a Chief Solutions Architect at SAIC and an adjunct professor at the University of Detroit Mercy. He has over twenty years of automotive and defense engineering experience and regularly presents at regional and national conferences. He received a BS (Metallurgical Engineering) from the Ohio State University, an MBA from the University of Michigan, and an MS (Product Development) from the University of Detroit Mercy. He is a licensed Professional Engineer (Michigan) and holds INCOSE ESEP-Acq, OCSMP: Model Builder – Advanced, Booz Allen Hamilton Systems Engineering Expert Belt, ASQ Certified Quality Engineer, and ASQ Certified Reliability Engineer certifications. He is a Fellow of the Engineering Society of Detroit and the President and Founder of Sigma Theta Mu, the systems honor society.

David Long
Growing Systems Engineers through Gamification

Dr David S. Long earned his PhD from MIT in 2012 in Engineering Systems. He is currently teaching Systems Engineering at the Air Force Institute of Technology. To get to this point in his career, he spent 25 years in the Air Force in a variety of positions including aircraft integration, system development, flight test, aircraft maintenance, a Pentagon tour, and in the Air Force Research Laboratory. He retired as a colonel in 2013 and has held defense contractor positions since his "first retirement".

Dr Long is currently focusing on how to apply gamification to knowledge work to advance personal capabilities. (CSEP) credential in 2004 and was awarded the INCOSE Expert Systems Engineering Professional (ESEP) credential in 2011.

Sean McCoy
Top Ten Ways Engineers Undermine Their Success: The Importance of Soft Skills

Sean McCoy is the Chief Architect for controls at Trane. He received his CSEP in 2016, has 13 patents, is a 6-Sigma black belt, and has over 35 years of experience designing and building software systems. 23 of those years have been at Trane developing Building Automation Systems and helping develop Trane's Systems Engineering discipline. Sean has been an active member of INCOSE since 2011 and is the acting President of the North Star Chapter for 2019. In addition, he has been on the GLRC conference planning committee for the past 3 years. His most recent work assignment was leading the development effort for the Requirements Management, Process Automation, and Test Management tools in PTC Integrity. In his spare time, Sean likes to play guitar and is often seen at Rock Camp Experience events in the Twin Cities.

James Hummell
MBSE Complete Eco-System Explained

James Hummell is an expert trainer for SysML, UML, and UPDM/UAF, currently working as chief consultant for MBSE Solutions. He is an expert in software and systems engineering, specializing in modeling and simulation analysis using UML and SysML. James has extensive experience in embedded systems for safety-critical systems (Do178b Level A), configuration management (CM), the software development life cycle (SDLC), and process engineering development. He has been developing software and systems in model-based design engineering (UML and SysML) for over 20 years. He is a member of the RTCA SC-205 subgroup developing Do-178C model-based development and verification supplement and has worked with the Object Management Group (OMG) and the International Council on Systems Engineering (INCOSE) on many specifications and working groups.

Dr. Azad M. Madni
From Models to Interactive Stories in Virtual Worlds: Model Based Systems Engineering in the 21st Century

Systems Honor Society Sigma Theta Mu Lecture

Azad Madni is a researcher, entrepreneur, educator and author. He is the founder and CEO of Intelligent Systems Technology, Inc. a high tech company specializing in modeling and simulation technology for complex systems engineering, education and training. He's the Executive Director of University of Southern California's Systems Architecting and Engineering (SAE) Program and Professor of Astronautical Engineering in USC's Viterbi School of Engineering. His previous positions include Executive Vice President and Chief Technology Officer of Perceptronics, and Simulation Research Leader at Rockwell International on NASA's Space Shuttle Program.

Dr. Madni pioneered the meta-discipline of transdisciplinary systems engineering to exploit the convergence of systems engineering with other disciplines. He is the creator of model-driven storytelling, a transdiscplinary approach that integrates model-based engineering with interactive storytelling in virtual worlds to enhance stakeholder participation in upfront engineering. His areas of expertise include model-based methods for architecting and design of resilient systems and enterprizes and intelligent systems for planning, decision making, training and tutoring. His research in these areas has been sponsored by the federal government, aerospace and automotive companies, several DOD agencies, Air Force, Army, Navy and Marine Corps. His research sponsors in the government include DARPA, OSD, DHS, S&T, MDA, DOE, NIST and NASA. His research sponsors in the aerospace and automotive industries include Boeing, General Motors, NGC, Raytheon, Hughes, Omnicon and SAIC. He has served as a consultant to Institute for Defense Analysis, RAND Corporation, UCLA, Oakridge National Laboratory, and Omnicon.

Azad Madni's current research focuses on formal and probabilistic methods for complex systems engineering, model-based engineering frameworks and testbeds for defining, analyzing, integrating and testing of adaptive cyber-physical-human-systems, and system-of-systems and enterprize architecting. He is the co-founder and current chair of IEEE Systems, Man and Cybernetics, Model-Based Systems Engineering Technical Committee, and serves on the steering committees of multiple centers at USC. He received his B.S., M.S., and Ph.D. from the University of California, Los Angeles.

The International Council on Systems Engineering (INCOSE) is a not-for-profit membership organization founded to develop and disseminate the interdisciplinary principles and practices that enable the realization of successful systems. INCOSE is designed to connect SE professionals with educational, networking, and career-advancement opportunities in the interest of developing the global community of systems engineers and systems approaches to problems. We are also focused on producing state-of-the-art work products that support and enhance this discipline's visibility in the world. Globally, INCOSE has over 17000 members, more than 70 chapters, 45 working groups, and 3500 certified systems engineers. Visit www.incose.org to learn more.

PANELIST PERSPECTIVES AND PROFILES
Collaborating for Agile Project Success:
Integrating Project/Program Management (PM) and
Systems Engineering (SE) Approaches

Michael Pafford
Influence of Agile on Systems Engineering and Project/Program Management

Michael E. (Mike) Pafford has over 45 years of military, government, industry, and research center experience in the concept, analysis, architecting, design, development, testing, operations, and management of complex socio-technical and cyber-physical system solutions. He holds a BS from the University of Maryland University College (UMUC) and an MS from the Naval Postgraduate School. Mike has been a member of INCOSE since 1998 and is a Past President of the Chesapeake Chapter. From 2008-2018 he taught the course "Software Systems Engineering" for the Johns Hopkins University (JHU) MS in Systems Engineering program. For the past three years Mike has facilitated workshops for Systems and Software Systems Engineers, as well as Project and Program Managers, in using Lean Startup Method (LSM) and Agile for Initial Project Planning.

Shadrak Rajkumar
Demonstration of Mistake-Proof Scaled Agile SE Framework for Complex Systems Development Applied to Aerospace Domain – A Real-Life Example

Shadrak Rajkumar is a Systems Engineer at Collins Aerospace. He has been practicing System Engineering since 2004. He started his career as Software Engineer at Honeywell and took a Systems Engineering position at Collins in the year 2011. He received BE in Electrical Engineering from Madras University, India, an ME (Avionics) from Anna University, India, and MBA from Mount Mercy University, USA, in Quality Management. Shadrak received his CSEP certification in 2010. He has experience in Requirement Analysis, Design, Development, and Verification & Validation of Avionics applications. Currently, he is exercising mistake-proof systems engineering to reduce human mistakes and increase product quality.

Nichole Tubiolo
PMI-ACP – What is it? I already know "agile" so what's in it for me? Common Myths

Nichole is the owner of NT Consulting LLC, an Agile specific Training and Coaching Consultantcy with a focus on increasing the number of high quality Agile leaders and Agilests in the area to meet the current need for Agile Practitioners. Nichole is an Agile Practitioner for Willis Towers Watson in Buffalo NY, and coaches multiple Product Scrum Teams. She has lead enterprise level projects for over nine years that span from back end upgrades to customer facing applications and co-authored The Agile Almanac Book 2 in 2017.

Nichole previously held the Director of Community Outreach position within the chapter. As Director of Community Outreach Nichole was responsible for running a Project Management for Nonprofits Program a program of training, mentoring and an e-toolbox of forms and templates designed to bring project management best practices to Western New York charitable organizations. Nichole is a member of the Buffalo Junior League, a philanthropic organization committed to volunteerism, developing the potential of women, and improving the community through effective action and leadership.

Nichole is a certified by PMI as a Project Management Professional (PMP) and Agile Certified Practitioner (PMI-ACP). She also holds Certified Scrum Master (CSM) designation from the Scrum Alliance. Ms. Tubiolo graduated from Empire State College with a BA in Business Administration and Economics.

Sean McCoy
Soft Skills and the Agile Manifesto

See Sean McCoy's bio on previous page.

PM-SE Integration, the PMI-INCOSE Strategic Alliance, and the Project/Program Management (PM) Agile Perspective

In 2011 the Project Management Institute (PMI) and the International Council on Systems Engineering (INCOSE) formed a Strategic Alliance as a means of significantly improving engineering project/program performance, particularly in the development of complex systems. The Massachusetts Institute of Technology (MIT) Center for Engineering Program Excellence (CEPE) was enlisted by the Alliance to oversee research and analysis studies and document results. A significant result of the Strategic Alliance is the Wiley book "Integrating Program Management and Systems Engineering: Methods, Tools, and Organizational Systems for Improving Performance." Understanding and integrating SE-centric and PM-centric approaches to Agile can be an important success factor.