2020 VIRTUAL SYSTEMS & MISSION ENGINEERING CONFERENCE

November 10, 12 – 13, 2020 | NDIA.org/VirtualSME
AGENDA

TUESDAY, NOVEMBER 10

9:00 am – 9:15 am   OPENING REMARKS
Joe Elm
Chair, Systems Engineering Division, National Defense Industrial Association (NDIA)

Bob Rassa
Director, Engineering Programs, Raytheon Intelligence and Space
Conference Chair, Systems Engineering Division, NDIA

9:15 – 10:15 am   KEYNOTE ADDRESS
Dr. Sandra H. Magnus, PhD
Deputy Director for Engineering, Office of the Under Secretary of Defense for Research and Engineering (OUSD(R&E))

10:15 – 10:20 am   SPEAKER TRANSITION

10:20 am – 12:05 pm   EXECUTIVE PLENARY PANEL: SERVICE AND AGENCY SYSTEMS ENGINEERING LEADS
Dr. Sandra H. Magnus, PhD
Deputy Director for Engineering, Office of the Under Secretary of Defense for Research and Engineering (OUSD(R&E))

Moderator

Jeannette Evans-Morgis, Army
Chief Systems Engineer, Assistant Secretary of the Army for Acquisition, Logistics, and Technology (ASA(ALT))

John Fiore, Navy
Chief Engineer (Acting), Assistant Secretary of the Navy for Research, Development, and Acquisition (ASN(RDA))

Kristen J. Baldwin, Air Force
Deputy Assistant Secretary of the Air Force (Science, Technology, and Engineering)

Dennis Mays, MDA
Director for Engineering (A), Missile Defense Agency

12:05 – 12:30 pm   AWARDS PRESENTATION
C O N C U R R E N T  B R E A K O U T  S E S S I O N S

|---------------------------|-----------------------------------|----------------------------------|--------------------------|

S P E A K E R  S W I T C H / B R E A K

1:00 – 1:30 pm

| 23427 DARPA CRANE Program Philosophy Dr. Alexander “Xander” Walan DARPA Tactical Technology Office (TTO) Program Manager | 23064 INCOSE Model-Based Enterprise Capabilities Matrix – For Organizational Assessments Al Hoheb Senior Systems Engineer, The Aerospace Corporation |

S P E A K E R  S W I T C H / B R E A K

1:35 – 2:05 pm


S P E A K E R  S W I T C H / B R E A K

1:35 – 2:05 pm

| 23401 Data Architecture and Strategy to Support Engineering Design David Stuart Associate Technical Director, Engineered Resilient Systems |
| 22989 DevSecOps – Software Development in the Next Generation DoD Joseph McKairnes Sr. Federal Solutions Architect, GitLab |
| 23337 Modeling System of Systems through OSLC Fran McCafferty |

S P E A K E R  S W I T C H / B R E A K

2:10 – 2:40 pm

| 23319 Digital Engineering Strategy to Enable Enterprise Systems Engineering Ryan Noguchi Director, Space Architecture Department |
| 23390 Industry/Government Simulation Collaboration Framework Dr. George Ball Principle DT Fellow |
| 23097 A Holistic DevSecOps Perspective for Big System Builders Dr. Harry Koehnemann SAFE Fellow and Principle Consultant, Scaled Agile |

S P E A K E R  S W I T C H / B R E A K

2:45 – 3:15 pm

| 23097 A Holistic DevSecOps Perspective for Big System Builders Dr. Harry Koehnemann SAFE Fellow and Principle Consultant, Scaled Agile |

S P E A K E R  S W I T C H / B R E A K

3:15 – 3:35 pm

C O N C U R R E N T  B R E A K O U T  S E S S I O N S
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker Name</th>
<th>Title</th>
<th>Organization/Role</th>
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<tbody>
<tr>
<td>3:35 – 4:05 pm</td>
<td>201 – Digital Engineering</td>
<td>23367</td>
<td>Promoting a Distributed Model Based Market/Exchange</td>
<td>Troy Peterson, Vice President, SSI</td>
</tr>
<tr>
<td>3:35 – 4:05 pm</td>
<td>202 – Systems Engineering Effectiveness</td>
<td>23258</td>
<td>Repeatable, Measurable, and Quantifiable Methodology for Reviewing Required System Engineering Technical Reviews</td>
<td>James Miller, Software Engineer, Software Engineering Institute</td>
</tr>
<tr>
<td>3:35 – 4:05 pm</td>
<td>203 – Agile Systems Engineering &amp; Assurance</td>
<td>23091</td>
<td>Provisioning Pipelines: A Managed DevSecOps Approach to Software Pipeline Creation</td>
<td>Shane Ficorlli, Software Engineer, Software Engineering Institute</td>
</tr>
<tr>
<td>3:35 – 4:05 pm</td>
<td>204 – System Security Engineering &amp; Assurance</td>
<td>23458</td>
<td>Welcome and System Security Engineering Council Highlights</td>
<td>Cory Ocker, Secure Systems Manager, Raytheon Intelligence &amp; Space</td>
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**SPEAKER SWITCH/BREAK**

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<tr>
<td>4:10 – 4:40 pm</td>
<td>201 – Digital Engineering</td>
<td>23119</td>
<td>Leveraging the Digital Engineering transition to Revolutionize the IP Marketplace</td>
<td>Curtis Sisson, Boeing Defense, Space and Security (BDS) MBSE Manager</td>
</tr>
<tr>
<td>4:10 – 4:40 pm</td>
<td>202 – Systems Engineering Effectiveness</td>
<td>23369</td>
<td>Leveraging Model-Based Systems Engineering to Enhance Mission Engineering and Owning the Technical Baseline for the USAF</td>
<td>Derek Boddy, Manager, Systems Engineering and Quality Assurance, BAE Systems</td>
</tr>
<tr>
<td>4:10 – 4:40 pm</td>
<td>203 – Agile Systems Engineering &amp; Assurance</td>
<td>23203</td>
<td>OUSD(R&amp;E) Resilient Systems Overview</td>
<td>Melinda Reed, Director, Resilient Systems, Office of the Under Secretary of Defense for Research and Engineering, OUSD(R&amp;E)</td>
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**SPEAKER SWITCH/BREAK**

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<tr>
<td>4:45 – 5:15 pm</td>
<td>201 – Digital Engineering</td>
<td>23218</td>
<td>Extending a Digital Engineering Framework through Operations</td>
<td>Christopher Ritter, Director, Digital Innovation Center of Excellence</td>
</tr>
<tr>
<td>4:45 – 5:15 pm</td>
<td>203 – Agile Systems Engineering &amp; Assurance</td>
<td>23222</td>
<td>The Systems Engineer as an Agile Product Owner</td>
<td>Paul Zajac, Software Factory Principle SME, Lockheed Martin</td>
</tr>
<tr>
<td>4:45 – 5:15 pm</td>
<td>204 – System Security Engineering &amp; Assurance</td>
<td>23171</td>
<td>Agile Authorizations for Cyber Resiliency</td>
<td>Daniel Holtzman, AF Cyber Technical Director, USAF</td>
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**SPEAKER SWITCH/BREAK**

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<tr>
<td>5:20 – 5:55 pm</td>
<td>202 – Systems Engineering Effectiveness</td>
<td>23282</td>
<td>Answering the Challenges of AI with Systems Engineering</td>
<td>Dr. Barclay Brown, Engineering Fellow, Raytheon Technologies</td>
</tr>
<tr>
<td>5:20 – 5:55 pm</td>
<td>203 – Agile Systems Engineering &amp; Assurance</td>
<td>23333</td>
<td>The GAP Model for Agility and Excellence</td>
<td>Noah Carpenter, Agile Systems Engineering</td>
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**THURSDAY, NOVEMBER 12**

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<th>Session</th>
<th>Speaker Name</th>
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<tbody>
<tr>
<td>9:00 – 9:30 am</td>
<td>3A2 – Systems Engineering Effectiveness</td>
<td>23102</td>
<td>Model-Centri Systems Engineering (MCSE) in an Agile Environment</td>
<td>Nataliya Shevchenko, Member of the Technical Staff, Software Engineering Institute at CMU</td>
</tr>
<tr>
<td>9:00 – 9:30 am</td>
<td>3A3 – Agile Model-Based Engineering</td>
<td>23224</td>
<td>Protecting the DevSecOps Application through Software Assurance</td>
<td>Bradley Lanford, Software Assurance Lead, Contractor Support</td>
</tr>
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9:35 – 10:05 am

- **INCOSE and the Future of Systems Engineering**
  - Troy Peterson
  - Vice President, SSI

- **A Framework for Agile MBSE Development**
  - Dave Wood
  - Scientist, Systems Engineer, CSEP, OCSMP

- **Accelerating Modernization of Software Acquisition to Better Serve the Warfighter with a Special Emphasis on Software Assurance and Near-Term Technology Drivers**
  - Dr. Kenneth Nidiffer
  - President & CEO, Ken's Software Company

10:10 – 10:35 am

- **Capability Based Acquisition: The Fusion of Systems Engineering, Mission Engineering and Test and Evaluation to Deliver Operational Mission Success**
  - CAPT Benjamin Harris
  - Jeffrey Bobrow
  - Kenneth Senechal

- **Agile for All – Integrating Agile Practices Across Functions**
  - Robin Yeman
  - Senior Fellow, Lockheed Martin (LM) Space System

- **Threat and Attack Modeling: System Centric vs Attack Centric**
  - Randall Brooks
  - Engineering Fellow, Raytheon Technologies

10:40 – 11:00 am

**BREAK – VIRTUAL EXHIBIT HALL**

11:00 – 11:30 am

- **Accelerating the Change – MBE Deployment Mechanisms**
  - Karla Beas
  - Systems Engineer, Raytheon

- **Leading Model-Based Systems Engineering Adoption – Top 6 Things Leaders can do to Drive MBSE**
  - Al Hoheb
  - Senior Systems Engineer, The Aerospace Corporation

- **DOs and DON'Ts in Capacity-Based Agile Procurements – A Case Study**
  - Dr. Mahdieh Gholampoor
  - Director of Service Delivery, Abaco Strategy LLC

- **The Expansive Use of NIST SP 800-53r4 as a Common Requirements Lexicon**
  - David Olmstead
  - Cyber Systems Security Engineer/Senior Staff, Lockheed Martin

11:35 am – 12:05 pm

- **Digital Engineering: From Toolchain to Platform**
  - Dr. Aleksandra Markina-Khusid
  - MITRE

- **Workflows in Multi-Repository Model Management**
  - Veejay Gorospe
  - Solutions Consultant, Dassault Systems CATIA No Magic

- **Evaluating, Selecting, and Succeeding with Agile Suppliers**
  - Jeff Dalton
  - Chief Evangelist and CISO, AgileCxO.org

- **Continuous, Agile, Cyber Assured?**
  - Ronda Henning
  - Senior Fellow, L3Harris Technologies
SPEAKER SWITCH/BREAK

12:10 – 12:35 pm
23299
Cloud Infrastructure for Digital Engineering Tools
Nancy Gomez Dominguez
Lead Cloud Infrastructure and Software Engineer, Idaho National Laboratory

23284
The Lifecycle Modeling Framework: Organizing and Simplifying the Application of Model-Based Systems Engineering
Dr. Jerry Sellers
President, Teaching Science and Technology, Inc.

23050
Doing Agile in Hard Places: 10 Things the DoD Does Poorly when Implementing Agile (And 5 It Does Really Well)
Scott Grimes
Agile Coach/Co-Organizer, Agile for Defense

23326
Incorporating Cybersecurity into SAFe®
Flavius Galiber
Digital Engineering Coach, Northrop Grumman

12:40 – 1:10 pm
BREAK – VIRTUAL EXHIBIT HALL

3C1 – Digital Engineering
23191
DE Metrics: Categorizing the Benefits and Value of Digital Engineering
Tom McDermott
Deputy Director and Chief Technology Officer, Stevens Institute of Technology

3C2 – Model-Based Systems Engineering
23340
Digital Tread – Integrating MBSE and Product Lifecycle Management
David Segal
Sr. Director of Business Development, PTC

3C3 – Agile Program Management
23096
PSM Continuous Iterative Development (CID) Measurement Framework
Cheryl Jones
System Engineer, US Army CCDC-AC

3C4 – System Security Engineering & Assurance
23204
Design Principles for Weapon Systems Engineering
Michael McEvilley
Principal Scientist, The MITRE Corporation

SPEAKER SWITCH/BREAK

1:10 – 1:45 pm
23199
Digital Engineering Measures Correlated to Digital Engineering Lessons Learn from Systems Engineering Transformation Pilot
Dr. Mark Blackburn
Senior Research Scientist, Stevens Institute of Technology

23229
6 Vs and 3 Ts of Systems Engineering
David Long
Founder and President, Vitech

23086
Managing an Agile Project in an EVM World
Colt Stout
Deputy Project Manager, Sandia National Laboratories

23202
Cyber Resilient Weapon Systems (CRWS) Workforce Competency
Melinda Reed
Director, Resilient Systems, Office of the Under Secretary of Defense for Research and Engineering, OUSD(R&E)

SPEAKER SWITCH/BREAK

1:45 – 2:15 pm
23179
A Digital Engineering Demonstration for a Small Unmanned Underwater Vehicle
Dr. Ronald Giachetti
Chair and Professor, Department of Systems Engineering, Naval Postgraduate School

23231
Schema and Metamodels and Ontologies, Oh My!
David Long
Founder and President, Vitech

23109
Performance measurement in an Agile Contract – Do’s and Don’ts from a Success Story
Kishore Nakka

23332
Trusted Traceability in Semiconductor and Electronics Supply Chains
Brett Attaway
Lessons Learned in the Creation a Digital Thread
Kayla Corey
Systems Engineer, SPEC Innovations

Model-Based Requirements: Writing Requirements without Writing
Dr. Alejandro Salado
Assistant Professor, Virginia Tech

DevOps Successes and Lessons Learned from the Field - The Office of Naval Intelligence
Nicholas Guertin
Senior Software Systems Engineer, Carnegie Mellon University, SEI

On-demand integrity measurement at the circuit-board level
Random Gwinn
Cybersecurity Researcher and Engineer, Johns Hopkins University Applied Physics Laboratory

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Break – Virtual Exhibit Hall

3D1 – Mission Engineering & Assurance
R&E Mission Engineering State of Practice
Elmer L. Roman
Director, Mission Integration

3D2 – Model-Based Systems Engineering
Transitioning Legacy Systems to Model-Based Systems Engineering
Paul White
ICBM GBSD Digital Engineering Branch Lead, BAE Systems

3D3 – Agile Program Management
Mission Based Alternative to WSJF
Keith Korzec
Senior Member of the Technical Staff, Software Engineering Institute

3D4 – System Security Engineering & Assurance
Concepts for an Approach to Weapon Systems Engineering
Michael McEvilley
Principal Scientist, The MITRE Corporation

Approach to Digital Engineering for Large Systems of Systems Mission
Dr. Judith Dahmann
Technical Fellow, MITRE

Format Independence for SysML Models
Robin Mikola
Product Owner, SodiusWillert

Measuring Product Value
Bill Golaz
Project Engineering Principle and Lockheed Martin Fellow Emeritus, Lockheed Martin Aeronautics

Can We Assure Resilience of Cyber-Physical Systems Using Model-Based Systems Engineering?
Tom McDermott
Deputy Director and Chief Technology Officer, Stevens Institute of Technology

Application of Probabilistic Graph Models to Kill Chain and Multi-Domain Kill Web Analysis Problems
Dr. Valerie Sitterle
Principal Research Engineer and Chief Scientist, Systems Engineering Research Division, Georgia Tech Research Institute

Pathfinder for Transitioning a Dinosaur Program to a Model-Based (MBSE) Approach
Jonathan Moon
Model Based Engineering Implementation Lead, Lockheed Martin

Building Quality by Engineering People and Values: Improve the person, and you improve everything!
Dr. Barclay Brown
Engineering Fellow, Raytheon Technologies

Model-Based Cyber Threat Analysis Approach
Leqi Zhang
Cyber Solution Architect, L3Harris
**SPEAKER SWITCH/BREAK**

5:30 – 6:00 pm

- **23247**
  - Implementing Digital Engineering Environment for Mission Engineering
  - Dr. Judith Dahmann
  - Technical Fellow, MITRE

- **23371**
  - MBSE: From Abstraction to Implementation
  - Javier Villafane
  - Principle Systems Engineer, Raytheon Missile & Defense

- **23104**
  - Integrating DevOps into Navy Combat Systems Development
  - LT Andrew Miller
  - Engineering Duty Officer, Naval Postgraduate School

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**FRIDAY, NOVEMBER 13**

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<th>Time</th>
<th>Session</th>
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<tr>
<td>9:00 – 9:30 am</td>
<td><strong>4A1 – Mission Engineering &amp; Assurance</strong></td>
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<td>23254</td>
<td>Leveraging Set-Based Practices for Ongoing Optimization of Your Mission Engineering Designs, Even as the Mission Unfolds</td>
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<tr>
<td></td>
<td>Brian Kennedy</td>
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<td>Co-Founder Chief Technical Officer, Targeted Convergence Corporation</td>
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| 9:35 – 10:05 am | **4A2 – Modeling & Simulation**                                         |
| 23213          | Relationship between Traditional Modeling & Simulation and Digital Engineering |
|                | Brian Miller                                                           |
|                | CNV U.S. ARMY Futures Command (USA), OUSD (R&E)                        |

| 10:10 – 10:40 am | **4A4 – Environment Safety & Occupational Health**                      |
| 23394          | Industrial DevOps: from Value Streams to Agile Teams                    |
|                | Dr. Suzette Johnson                                                   |
|                | Enterprise Lean-Agile Strategic Lead, Northrop Grumman                |

| 23197 | Environment, Safety, and Occupational Health (ESOH) in the Adaptive Acquisition Framework |
|       | David Asiello                                                          |
|       | Program Manager, ODASD(ENV)                                            |

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**9:35 – 10:05 am**

- **23348**
  - Every Mission-Level or System-Level Trade Study Should Have an Associated Trade Space Map to Facilitate Multi-Discipline Review
  - Brian Kennedy
  - Co-Founder and Chief Technical Officer, Targeted Convergence Corporation

- **23257**
  - Improved Delivered Capability: Isolating and Predicting New Technologies, Technology Uses and Emerging Threat Sources
  - Dr. Carlo Lipizzi
  - Associate Professor at the Stevens Institute of Technology and Principle Investigator at the System Engineering Research Center

- **23082**
  - CyberAgility Deliver Security Faster: Agile Case Studies in Cybersecurity
  - Tim LaPorta
  - Director of Agile Coaching and Staffing, Lithespeed LLC

- **23093**
  - Agile: Beyond IT and System Development
  - Dr. Martha Hennen
  - Personnel Psychologist, Office of Equal Employment Opportunity (OEEO), US Securities and Exchange Commission

- **23351**
  - F-35 Joint Program Office and Support Team – Environmental Excellence in Weapons System Acquisition
  - John Casana
  - Senior Lead Engineer, Booz Allen Hamilton

- **23184**
  - ESOH Track – Integrating ESOH Engineering And Product Support Activities
  - Erin Beck
  - Environmental Engineer, Naval Air Warfare Center Aircraft Division, Naval Air Systems Command
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<tr>
<th>Time</th>
<th>Session 1</th>
<th>Session 2</th>
<th>Session 3</th>
<th>Session 4</th>
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<td>10:40 – 11:00 am</td>
<td><strong>BREAK – VIRTUAL EXHIBIT HALL</strong></td>
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| 11:00 – 11:30 am | 23352 Building Safety into Autonomous Robot Software  
  David Hetherington  
  Principle Systems Engineer, System Strategy Inc.  
  **4B1 – CMMI; Software**  
  **4B2 – Model-Based Systems Engineering**  
  **4B3 – Architecture & MOSA**  
  **4B4 – Environment Safety & Occupational Health**  
| 11:00 – 11:30 am | 23355 The Effect of Fatigue and Stress on the Tipping Point of the Emergency Service Systems: A New York City Case Study  
  Maximilian Vierlboeck  
  Stevens Institute of Technology  
| 11:00 – 11:30 am | 23377 Purpose of Architecture  
  Michael Stokes  
  Sr. Principle Systems Engineer/Raytheon Certified Architect, SSI  
| 11:00 – 11:30 am | 23194 Unmanned System (UxS) Safety IPT and Engineering Precepts for Safe Autonomy  
  Michael Demmick  
  Navy WSES RB Secretariat, Executive Secretary, Joint Weapons Safety Working Group & OSD  
  UxS Safety IPT Chair, Naval Ordnance Safety & Security Activity (NOSSA)  
| 11:35 am – 12:05 pm | 23358 A Pattern for Integrating Software Cost Estimation into a SysML System Model  
  Dr. Thomas Ford  
  Principle Systems Engineer, Centauri, LLC  
| 11:35 am – 12:05 pm | 23363 The WWWWW&H of Architecture with the UAF  
  Matthew Hause  
  Principle, SSI  
| 11:35 am – 12:05 pm | 23391 Weapon System-Related Impulse Noise Assessment  
  LTC John “Andy” Merkley  
  Army Hearing Program Manager, Army Public Health Center  
| 12:10 – 12:40 pm | 23251 Using Effective MBSE to Move Up the Data-Information-Knowledge-Understanding-Wisdom Chain and Providing Long Term Strategic Value to the Enterprise  
  Brian Selvy  
  Principle Systems Engineer, Vitech Corporation  
| 12:10 – 12:40 pm | 23327 System Operational Architectures with Agent Modeling for Ground Vehicle Autonomous and Smart Systems  
  David Hetherington  
  Principle Systems Engineer, System Strategy, Inc.  
| 12:10 – 12:40 pm | 23399 Strategizing Solutions for Protecting Warfighter Brain Health  
  Olivia Webster  
  Biomedical Engineer, Health Hazard Assessment Division, U.S. Army Public Health Center  
| 12:40 – 1:10 pm | 23209 Risk Management within Nuclear Weapons Programs: Where We Were, and Where We’re Heading  
  R. Glenn Bell  
  Chief System Engineer for Defense Programs, National Nuclear Security Administration  
| 12:40 – 1:10 pm | 23285 A System Dynamics Model to Measure and Quantitatively Improve Digital Transformation and MBSE Adoption within a Large-Scale Organization or Enterprise  
  Robert Iannuzzi  
  Mission and Systems Engineer, U.S. Navy  
| 12:40 – 1:10 pm | 23374 MOSA Strategy  
  Steve Thelin  
  Engineering Fellow and MOSA Pillar Lead, Raytheon Missiles and Defense, Raytheon Technologies  
| 12:40 – 1:10 pm | 23468 Greatly Improved Safety at Lower Cost  
  Dr. Nancy Leveson  
  Professor of Aeronautics and Astronautics, Massachusetts Institute of Technology  
| 1:10 – 1:40 pm | 23309 Risk Management within Nuclear Weapons Programs: Where We Were, and Where We’re Heading  
  R. Glenn Bell  
  Chief System Engineer for Defense Programs, National Nuclear Security Administration  
| 1:10 – 1:40 pm | 23285 A System Dynamics Model to Measure and Quantitatively Improve Digital Transformation and MBSE Adoption within a Large-Scale Organization or Enterprise  
  Robert Iannuzzi  
  Mission and Systems Engineer, U.S. Navy  
| 1:10 – 1:40 pm | 23374 MOSA Strategy  
  Steve Thelin  
  Engineering Fellow and MOSA Pillar Lead, Raytheon Missiles and Defense, Raytheon Technologies  
| 1:10 – 1:40 pm | 23468 Greatly Improved Safety at Lower Cost  
  Dr. Nancy Leveson  
  Professor of Aeronautics and Astronautics, Massachusetts Institute of Technology  

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<tr>
<td>1:45 – 2:15 pm</td>
<td>23233 Formal Inconsistencies in Risk Assessment Processes</td>
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<td>Dr. Alejandro Salado</td>
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<td>Assistant Professor, Virginia Tech</td>
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<td>23356 Model-Centric Systems Engineering (MCSE) in an Agile Environment</td>
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<td>Nataliya Shevchenko</td>
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<td>Member of the Technical Staff, Carnegie Mellon University</td>
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<td>23457 Integrating MOSA</td>
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<td>Nadine Geier</td>
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<td>Director, Systems Engineering, OUSD (R&amp;E)</td>
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<td>23226 Answering the Ask through Imagination: NEPA Process Streamlining Inventions</td>
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<td>Brian Boose</td>
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<td>Vice President, Technical Practice Director – Impact Assessment and Permitting, AECOM</td>
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<td>2:20 – 2:50 pm</td>
<td>23328 Risk &amp; Opportunity Management Transfer – Systems Engineering &amp; The PMO</td>
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<td></td>
<td>Liz Garypie</td>
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<td>Director, Enterprise Configuration Control, Sikorsky, a Lockheed Martin Company</td>
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<td>23360 MBSE Research Testbed for Rapid and Flexible Modeling and Experimentation</td>
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<td>Dr. Azad Madni</td>
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<td></td>
<td>Professor, Astronautical Engineering, Executive Director, Systems Architecting and Engineering Program, &amp; Chief Executive Officer, Intelligent Systems Technology, Inc. University of Southern California</td>
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<td>23252 Identifying Security Patterns for Modular Open Systems</td>
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<td>Giselle Bonilla-Ortiz</td>
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<td>23365 Graph Exploration of System Models</td>
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<td>Troy Peterson</td>
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<td>Vice President, SSI</td>
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<td>23373 Measuring MOSA</td>
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<td>Steve Thelin</td>
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<td>Engineering Fellow, MOSA Pillar Lead for Raytheon Missiles and Defense, Raytheon Technologies</td>
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<td>23200 Department of the Navy Initiatives to Expedite NEPA Reviews</td>
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<td>Barbie Pine</td>
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<td>Senior Environmental Planner, Chief of Naval Operations, Environment Safety and Occupational Health</td>
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<td>3:25 – 3:40 pm</td>
<td>BREAK – VIRTUAL EXHIBIT HALL</td>
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**4D1 – Program Management**
- 23190 Early Science and Technology Protections Translate to Uncompromised Transition of Advanced Capabilities into Acquisition
  - Kristopher Gardner
  - Director, Science and Technology Protection, OUSD (R&E)

**4D2 – Model-Based Systems Engineering**
- 23059 Application of Model Based Systems Engineering to Enable Holistic Understanding of Complex Systems
  - Satya Moorthy
  - Senior Research Scientist, Georgia Tech Research Institute (GTRI)

**4D3 – Architecture & MOSA**
- 23449 Assessing MOSA – Refining the Practice
  - Nadine Geier
  - Director of Systems Engineering, OUSD (R&E)

**4D4 – Environment Safety & Occupational Health**
- 23212 Lockheed Martin’s Chemical Stewardship Program: Reducing Risk through the Sustainable Management of Chemical Substances and Materials
  - Margaret Proul
  - Enterprise Risk and Sustainability Program Manager, Lockheed Martin
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## ON-DEMAND SESSIONS

### Education & Training
- **23267**
  - Growing an Organic Systems Engineering/Systems Thinking Culture within a Legacy Program
  - **Patrick McMillan**
    - Systems Integration Manager, Lockheed Martin
- **23370**
  - A Scalable Agile Mechanism for Developing Model Based Engineering Practitioners and Expertise
  - **Dr. Carla Sayan**
    - Raytheon
- **23314**
  - The Future of Defense Training Starts with an Immersive Toolset
  - **Jenna Tuck**
    - Executive Vice President, Global Business Development, Modest Tree

### Engineered Resilient Systems (Ers)
- **23407**
  - Design Engineering Advancements through Lockheed Martin’s EXPEDITE Program
  - **Juan Montoro**
    - Manager, Conceptual Design; ADP Program Manager, Lockheed Martin Aeronautics
- **23403**
  - Python Technologies for Rapid, Agile Development of Novel Simulation & Analysis Workflows
  - **Dr. James A. Bednar**
    - Senior Manager, Technical Services, Anaconda, Inc.

### Human Systems Integration
- **23423**
  - Joint Human Systems Integration Capabilities-Based Assessment Initiative Updates
  - **Dr. Larry Shattuck**
    - Director, Human Systems Integration Program; Chair, Institutional Review Board
- **23349**
  - Resiliency Across Spectrums
  - **Claudia Rose**
    - MAIT, cEA, President BBII Enterprises

### Life Cycle Support
- **23329**
  - NanoFlowX Electronic Waterproofing Solutions
  - **Rick Fung**
    - Founder and Chief Executive Officer, NanoFlowX

### Model-Based Systems Engineering
- **23100**
  - Model of Models Methodology
  - **Aleczander Jackson**
    - Chief Engineer, Digital Engineering
- **23117**
  - The Future of Performance Design with MBSE: Electric Powertrain Example
  - **Dr. Sulius Pavalkis**
    - Industry Business Senior Consultant and MBSE Transformation Leader, Dassault Systems, Catia | No Magic

### Systems Engineering Effectiveness
- **23253**
  - Using Graph Analysis to Support the Digital Thread for Mission Engineering
  - **Dr. Dirk Zwemer**
    - President, Intercax LLC
- **23324**
  - Model Based Automated Design Exploration for Wargaming
  - **Jonathan Kidner**
    - Marine Corps Warfighting Laboratory Liaison, Naval Surface Warfare Center (NSWC) Crane

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12 | #VSME20 | @NDIATODAY