Thursday, March 31, 2016

7:00 AM - 5:30 PM Registration in Westfields Marriott Conference Center Foyer

7:00 AM - 8:00 AM Continental Breakfast in Conference Center Hallway with Sponsors

8:00 AM - 8:15 AM SEDC Conference Call to Order and Announcements (Conference Chair)

**8:15 AM - 9:15 AM Opening Keynote Presentation (Ambassador R. James Woolsey, Former Director of the CIA) Plenary Session – Grand Dominion Ballroom III-VI***Sponsored by Bechtel.*

9:15 AM – 9:45 AM Networking Break in Conference Center Hallway with Sponsors

*Thursday, March 31, 2016 (late morning)*

|  | *Presentations* |
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|  | **Track 1: CIPR****(Grand Dominion III-VI)*****Track Chair:TBD*** | **Track 2: MBSE****(Jeffersonian I&II)*****Track Chair:TBD*** | **Track 3: Program Management****(Jeffersonian III&IV)*****Track Chair:Karl Geist*** | **Track 4: SoSE****(Jeffersonian V&VI)*****Track Chair:TBD*** | **Eastern Tour Presentations****(Grand Dominion I-II)*****Track Chair:Don Gelosh*** |
| 9:45-10:15 | C-1. A Model-Based Approach to Resilient Architectures*Warren K. Vaneman**Naval Postgraduate School* | M-1. A New Energy Systems Modeling Framework*Nima Shahriari, et. al., ODU* | PM-1. Systems Engineering: a Project Success Enabler*Randy Simpson, Vitech Corporation* | S-1. Adaptable Systems of Systems*Bonnie Johnson, Naval Postgraduate School* | 9:45-10:30: Complex Systems: How to Recognize Them and Engineer Them*Brian White*10:35-11:20: A Systems Thinking Approach to Developing Learning Outcomes for Systems Security Engineering*Don Gelosh, WPI*11:25-12:00: Making “Agile” Work in Large Government Agencies and Offices*Rick Campbell, Strategy Bridge International, Inc* |
| 10:20-10:50 | C-2. ANTS in your systems - A swarming ecosystem defense for executive cybersecurity risk appetite representation *Earl Crane, Emergent Network Defense, Inc.* | M-2. Model-based design of Human-Machine Interaction*Lance Sherry, Houda Kourdali, GMU* | PM-2. Meeting-Free Software Development, in Distributed Teams*Yegor Bugayenko, Teamed.io* | S-2. Emergence in Complex Adaptive SystemsGloria Pumpuni-Lenss, GWU |
| 10:55-11:25 | C-3. Evaluating System of Systems Architectures for Effectiveness and Resiliency*Dr David P Brown, Innovative Decisions Inc.* | M-3. Multilevel Analysis of System Safety: Framework Specification and Database Development *Mark S. Avnet, Texas A&M, Tonya L. Smith-Jackson, NC A&T State University* | PM-3. Systems Engineering Management Approach for Functional Analysis for an Integrated Capability of Arrival/Departure/ Surface Management with Tactical Runway Configuration Management *Rosana R. Stoica, et. al., GMU* | S-3. Visualizing Critical Infrastructure as a System of Systems*Mark A. Wilson, Strategy Bridge International, Inc.* |
| 11:30-12:00 | C-4. Applying the First Stage of MBSE to Critical Infrastructure Protection & Recovery (CIPR) Infrastructures Domains*Loren Mark Walker, BCT-LLC* | M-4. Employing MBSE for the Design and Construction of a Power Plant - A Case Study*Edward Huang, Abbas K. Zaidi, GMU* | PM-4. The Generalized Reuse Framework – Strategies and the Decision Process for Planned Reuse*Gan Wang, BAE Systems* | S-4. Evaluation of Systems Performance of Linked IT Capabilities of Increasingly Shapna Pal, et. al., GWU |

12:00 PM - 1:00 PM **Lunch. Sponsored by Stevens Institute of Technology**

*Thursday, March 31, 2016 (early afternoon)*

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|  | *Presentations* |
|  | **Track 1: CIPR****(Grand Dominion III-VI)*****Track Chair:Mike deLamare*** | **Track 2: MBSE****(Jeffersonian I&II)*****Track Chair:TBD*** | **Track 3: Program Management****(Jeffersonian III&IV)*****Track Chair:Karl Geist*** | **Track 4: SoSE****(Jeffersonian V&VI)*****Track Chair:TBD*** | **Eastern Tour Presentations****(Grand Dominion I-II) *Track Chair:Don Gelosh*** |
| 1:00-1:30 | C-5. Integrating NIST Cybersecurity Framework with Systems Engineering ProcessesMuhammad F Islam, et. al., GWU | M-5. Systems Engineering Your MBSE Deployment*David Long, Vitech Corporation* | PM-5. "To Matrix of Not to Matrix": An Assessment of an Enterprise Matrix Organization through a Systems Engineering Lens*Rosana R. Stoica, et. al., GMU*  | S-5. Considering Critical Infrastructure Services in Systems and Security engineering *William Scheible, MITRE* | 1:00-1:55: Beyond MBSE: Looking towards the Next Evolution in Systems Engineering*David Long, Vitech Corporation*2:00-2:40: Agile Development Practices: Implications for Systems Engineers*Mark A. Wilson, Strategy Bridge International* |
| 1:35-2:05 | C-6. System Maturity Assessments Using System Readiness Level and Advanced System Network Structures*Brent Thal, et. al., GWU* | M-6. Probabilistic Ontologies in Domain Engineering*, Shou Matsumoto, Kathryn B. Laskey, Paulo C.G. Costa, GMU* | PM-6. Factor Space Allocation: A Programmatic Decision Tool*Douglas Brown, et. al., BAH* | S-6. Discerning System Design-Complexity from Subsystem Interdependency, whose Mathematical Underpinnings Derive from a New Set of Canonical Pattern Simplexes*Michael D. Nueslein* |
| 2:10-2:40 | C-7. Design of a Transoceanic Cable Protection System*Isaac Geisler, et. al., GMU* | M-7. Calibrating your Stakeholder GPS: Navigating and Managing the Stakeholders involved in your SystemAshley Flick, BAH | PM-7. "Thinking Outside the Triangle": Enabling Agility and Managing Value within Emerging Systems Developmenty Paridigms *Rosana R. Stoica, et. al., GMU* | S-7. Introducing and Applying the SoS-VEE Model to Critical Infrastructure Protection and RecoveryOliver Hoehne, WSP | Parsons Brinckerhoff |
| **2:40 PM - 3:30 PM. Networking Break in Conference Center Hallway with Sponsors** |

*Thursday, March 31, 2016 (late afternoon and evening)*

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|  | *Presentations* |
|  | **Track 1: CIPR****(Grand Dominion III-VI)*****Track Chair:Mike deLamare*** | **Track 2: MBSE****(Jeffersonian I&II)*****Track Chair:TBD*** | **Track 3: Decision Support****(Jeffersonian III&IV)*****Track Chair:TBD*** | **Track 4: Architecture****(Jeffersonian V&VI)*****Track Chair:TBD*** | **Eastern Tour Presentations****(Grand Dominion I-II) *Track Chair:Don Gelosh*** |
| 3:30-4:00 | C-8. Issues of National Importance – Can INCOSE Answer the Call?*Michael deLamare, Bechtel* | M-8. Executives Will Want to use MBSE*Loyd Baker, 3SL Inc* | D-1. Making Architecture Design Decisions with Decision Analysis*Dennis Buede, Innovative Decisions, Inc.* | A-1. Data-Centric vs Product-Centric Modeling Paradigms in Systems Architecture *Matthew Amissah & Holly A.H. Handley,**Old Dominion University* | Challenges for Systems Engineering in the Age of Connectivity*Tour Panel – David Long, Brian White, Rick Campbell, Mark Wilson (Moderator – Don Gelosh)* |
| 4:05-4:35 | C-9. Overview of Intelligent Transportation System Architecture - Critical Infrastructure Security*Jeffrey Brummond, Iteris, Inc.*  | M-9. Requirements Engineering for Retrofit Application*Jason Baker, et. al., Transocean* | D-2. Design Patterns Decision Framework*Rosana R. Stoica, et. al. GMU* | A-2. Evaluating Resilient Architectures*Warren K. Vaneman, Naval Postgraduate School*  |
| 4:40-5:10 | C-10. Models of Collaboration, Cooperation, and Automation for CIPR in the Internet of Things Age *Lawrence D. Pohlmann, Strategics* | M-10. A MBSE Model Representing the Deployment of an IT Solution in a Cloud Environment*Gareth Digby, Vitech Corporation* | D-3. Expert Data Transformation: Adding Flexibility to Traditional Analytic Hierarchy ProcessRay McCollum, et. al., BAH | A-3. METS: Scoping Framework for Mission-Centric Systems Engineering*Ken Harmon, Virginia Tech* |

5:15 PM – 7:00 PM **Reception in Conference Center Hallway sponsored by WPI**

Friday, April 1, 2014

7:00 AM – 12:00 PM Registration in Westfields Marriott Conference Center Foyer

7:00 AM - 8:00 AM Continental Breakfast in Conference Center Hallway with Sponsors

8:00 AM - 8:15 AM Call to Order/Announcements (Conference Chair)

**8:15 AM - 9:15 AM Day 2 Opening Keynote (Bill Murtagh) Plenary Session – Grand Dominion Ballroom III-VI**

9:15 AM – 9:45 AM Networking Break in Conference Center Hallway with Sponsors

*Friday, April 1, 2016 (late morning)*

|  | *Presentations* |
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|  | **Track 1: CIPR I****(Grand Dominion III-VI)*****Track Chair:Karl Geist*** | **Track 2: MBSE****(Jeffersonian I&II)*****Track Chair:TBD*** | **Track 3: M&S****(Jeffersonian III&IV)*****Track Chair:TBD*** | **Track 4: Education****(Jeffersonian V&VI)*****Track Chair:TBD*** | **Track 5: CIPR II****(Grand Dominion I-II)*****Track Chair:TBD*** |
| 9:45-10:15 | C-11. Panel: The Triple Threat to Critical Infrastructure – Threat Scope and Hindrances to Deterrence,*Michael deLamare; Bechtel, Dr George Baker; Bill Harris; Chuck Manto* | M-11. Developing an Effective Optical Satellite Communications Architecture*Frank E. Skirlo, CACI, Adrien Sullivan, NSF, Syed Abbas Zaidi, GMU* | MS-1. A System Dynamics Approach to Demand And Growth Of Portable Audio Ecosystem*Saikumar Annadatha, et. al., GWU* | E-1. Leaving a Positive INCOSE Footprint – Involvement in Security-related Standards Development*Kenneth J Kepchar, EagleViews* | C-14. A Model Based Systems Engineering approach for Critical Infrastructure Threat Analysis and Counter-Capability assessment*John Daly, BAH* |
| 10:20-10:50 | M-12. Systems Engineering Life 3.0 – Getting Lean: Implementing Lean Systems Engineering Principals and Processes at Home to help Streamline your life*Ashley Flick, BAH* | MS-2. Harness your inner (modeling & simulation) Jedi Knight by leveraging the wisdom of community Jedi masters and improve the force through the use of appropriate standards over the acquisition life cycle*Kenneth "Crash" Konwin, BAH* | E-2. Systems Engineering as an Academic Discipline: A Review of Graduate and Undergraduate Programs in the United States*Muhammad F Islam, GWU, and Gina Guillaume-Joseph, MITRE* | C-15. Critical Infrastructure Sector Resiliency Engineering and Analysis Framework*David Flanigan and Steven Taylor, JHU/APL* |
| 10:55-11:25 | C-12. Fueling Innovation and Accelerating Growth through Cybersecurity*, Mansur Hasib, University System of Maryland* | M-13. Enterprise Incident Management *Framework, Rosana R. Stoica, Ph.D., GMU* | MS-3. Quantitative Analysis of Spectrum Allocation and Utilization Using System Dynamics*Rikin Thakker and Michael Dellomo, University of Maryland* | E-3. Is standardized testing the best way to verify elementary education?*Courtney Wright, V1 Decisions Education* | C-16. Cyber Risk Assessment for Energy Critical Infrastructures*Adrian Gheorghe and Unal Tatar, Old Dominion University* |
| 11:30-12:00 | C-13. Defense Critical Infrastructure Protection (DCIP)*Steven H. Dam and John Viar, SPEC Innovations* | M-14. Complexity as a Cognitive Existence*Mustafa Canan, Old Dominion University* | MS-4. Improving Software Project Outcomes through Predictive AnalyticsGina Guillaume-Joseph, MITRE | E-4. Growing Chief Systems Engineers, *Nicole Hutchison, Art Pyster, and Christina Jauregui, Stevens Institute of Technology*  | C-17. The Missing Link - Risk Identification, *Dave Hall, Hall Associates and Laurie Wiggins Sysenex Inc.* |

12:00 PM - 1:00 PM **Lunch. Sponsored by Strategy Bridge**

*Friday, April 1, 2016 (early afternoon)*

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|  | *Presentations* |
|  | **Track 1: CIPR I****(Grand Dominion III-VI)*****Track Chair:Karl Geist*** | **Track 2: MBSE****(Jeffersonian I&II)*****Track Chair:TBD*** | **Track 3: Agile SE****(Jeffersonian III&IV)*****Track Chair:TBD*** | **Track 4: Network Systems****(Jeffersonian V&VI)*****Track Chair:TBD*** | **Track 5: CIPR II****(Grand Dominion I-II)*****Track Chair:TBD*** |
| 1:00-1:30 | C-18. Project Management Processes Applied to Cloud Environment to Increase the Security of IT Critical Infrastructure*Shapna S. Pal, GWU* | M-15. Systems Engineering: From Engineering Phenomena to Value*Ali E. Abbas, University of Southern California* | ASE-1. Adapting Security Practices in Agile Software Development*Muhammad F Islam, et. al., GWU* | N-1. Cloud Computing Integrated Framework*Rosana R. Stoica, GMU* | C-21. Architecture Happens - and Why You Might Care*Stephen E. Zini, Integrity Applications Incorporated (IAI)* |
| 1:35-2:05 | C-19.Improving System Recovery by Prioritizing Component Dependencies*, Subash Kafle, Jason McZara, and Thomas Czernik,* *MITRE* | M-16. Beyond MBSE: Looking towards the Next Evolution in Systems Engineering*David Long, Vitech Corporation* | ASE-2. Agile Acquisition: FAA Incentives to Change their Acquisition Policies*Amanda M. Staley, et. al., MITRE* | N-2. Cloud Computing Integrated Reference Model*Rosana R. Stoica, GMU* | C-22. The Governance of Risk Management (Enterprise Integrated Risk Governance Framework), *Rosana R. Stoica, GMU* |
| 2:10-2:40 | C-20. Critical Infrastructure Protection and Recovery Case Study (Crimea)*Tatiana Chnyrenkova, Bechtel* | M-17. Modeling Emergency Planning and Recovery*Michael Campbell and Steven Dam, SPEC Innovations* | ASE-3. Integrated Mobile Business Model for Integrated Food Ordering & Delivering - "Cafe Crush"*Rosana R. Stoica, et. al., GMU* | N-3. Role of Encryption in Security vs Privacy Debate*Kristine Hejna, Better Biz Solutions, Inc* | C-23. Protection Innovations*Michael Campbell and John Viar, SPEC Innovations* |
| **2:40 PM - 3:30 PM. Networking Break in Conference Center Hallway with Sponsors** |

*Friday, April 1, 2016 (late afternoon and evening)*

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|  | *Presentations* |
|  | **Track 1: CIPR I****(Grand Dominion III-VI)*****Track Chair:Karl Geist*** | **Track 2: Student Papers****(Jeffersonian I&II)*****Track Chair:TBD*** | **Track 3: Agile SE****(Jeffersonian III&IV)*****Track Chair:TBD*** | **Track 4: Network Systems****(Jeffersonian V&VI)*****Track Chair:TBD*** | **Track 5: CIPR II****(Grand Dominion I-II)*****Track Chair:TBD*** |
| 3:30-4:00 | C-24. Evaluating CIPR Models in a Table Top Exercise*Steven Dam and Chris Ritter, SPEC Innovations* | SP-1. Automated Greenhouse Sprinkler System - Phased Approach Towards a "Software as a Service" Approach to Agricultural Applications*Said Masoud; et. al., GMU* | ASE-4. More Agile Than Agile*Zane B. Scott, Vitech Corporation* | N-4. Beyond Compliance-Addressing the Political, Cultural and Technical Dimensions of Applying the Risk Management Framework*Jennifer Fabius and RIchard Graubart, MITRE* | C-27. Asset and Configuration Management in Support of System Recovery *Jason McZara ,and Darla Sligh, MITRE* |
| 4:05-4:35 | C-25. Managing Project Risk in the Conceptual Design Phase (in the development of resiliency for critical infrastructure)*Daniel Canales, INCOSE - WMA*  | SP-2. Design of an Anterior Cruciate Ligament Prevention Program for College Athletes.*Maribeth Burns, et. al., GMU* | ASE-5. How can MBSE Support CIPR? *Steve Dam, SPEC Innovations* | N-5. Multi-Formalism Cyber Security Applications*Abbas K. Zaidi, Edward Huang, Ahmed Abu Jbara, GMU* | C-28. Cloud Computing Security Risk Assessment: Benefits, risks and recommendations for information security, *Rosana R. Stoica, GMU* |
| 4:40-5:10 | C-26. Predictive Situation Awareness Model for a Critical Infrastructure Protection System*Cheol Young Park & Kathryn Blackmond Laskey, GMU*  | *TBD* | ASE-6. Application of 3D Model Simulators to a Lunch Decision Process, *Christopher Ritter, et. al., SPEC Innovations* | N-6. Alternative approach to integrating Systems and Security engineering with CIP*William G. Scheible,, MITRE* | C-29. Next Generation Management of Risk*Barry C. Davis, Julia Pounds, Paul Krois and Melissa Wishy, Federal Aviation Administration* |

**5:15-7:00 PM “Avoid the traffic” networking at the Marriott Bar**

Saturday, April 2, 2016

7:00 AM - 8:00 AM Registration in Engineering Building Lobby [Free to all full conference attendees except for the certification exam] (1st floor)

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|  | *Tutorial Presentations* | *Certification Exam* |
|  | **Track A (TBD)** | **Track B (TBD)** | **Track C (TBD)** | **(TBD)** |
| 8:30 AM – 12:00 PM | T-1. Applying the Risk Management Framework (RMF) - An Overview*Jennifer Fabius and Christina Sames, MITRE* | T-3. Systems Engineers Collaborating with Software Engineers in Critical Infrastructure Related Software Intensive Agile Projects*Mike Pafford, INCOSE Object Oriented Systems Engineering Method (OOSEM) Working Group* | T-5. Solving the Systems Engineering Puzzle*Karl C. Geist, ICI Services Corporation/INCOSE Southern Maryland Chapter* | 8:30AM – 11:00 AM Courtney Wright will administer the certification exam during this period. Sign up in advance required. A fee of $80 will be collected prior to the exam. |
| 12:00 – 1:00 PM | Lunch Provided |  |
| 1:00 PM – 4:30 PM | T-2. Modeling CIPR Problems Using MBSE, *Steve Dam, SPEC Innovations* |  T-4. Learn a Simple MBSE Process by Connecting the Dots Using SysML*Loyd Baker, 3SL Inc* | T-6. Understanding and Applying the INCOSE SE Handbook Fourth Edition*David D. Walden, Sysnovation, LLC* |  |

## Backups

C-?. Assessment of Disaster Readiness Tool (ADRT), *John Viar, SPEC Innovations*

D-?. Accountability and Decision-Making Framework, *Rosana R. Stoica, GMU*

PM-?. Quality Management in Engineering Firms: Contrasting Two Scenarios, *Rosana R. Stoica & Elshaday Yilma, GMU*

X-? Brief overview of the concepts and principles encapsulated in the WG's Complexity Primer for Systems Engineers, *Jimmie McEver, Ph.D., M.P.P., JHU Applied Physics Laboratory*