This symposium seeks to create an interactive forum for the advancement of the practice of systems engineering across the multiple disciplines and specialty areas associated with the engineering of complex systems. The symposium will provide a venue for systems engineering practitioners, managers, researchers, and educators to exchange innovative concepts, ideas, applications and lessons learned addressing:

- Applications-oriented topics on large-scale systems and systems-of-systems in topics noted below.
- Systems engineering, education, standards, processes and methodologies for the system-of-systems environment.
- Research opportunities and results relating to systems-of-systems.

**TOPICS**

- System Architecture and Architectural Frameworks
- Engineering Systems-of-Systems
- Risk Management of Complex Systems Environment
- Systems Reliability
- Engineering Processes for Complex Systems – Includes Process Management
- Improvement and Quality Management
- (CM), Requirements management, Data Management Strategy
- (CMS) and Integrated Logistics Support
- Service Oriented Architectures
- Cyber Security Issues and Approaches for Complex Systems
- Enterprise Systems Engineering
- Modeling and Simulation
- Agile Development Methods of System-of-Systems
- Model-Based Systems Engineering
- Systems Verification and Validation
- Systems Engineering Competency, Education and Training
- Program/Project Management for Complex Systems
- “Systems thinking” Benefits
- Technology Transfer Between Academia and Industry
- Societal and Political Impacts of Systems and Systems Design
- Diagnostics, Prognostics, and Enterprise Health Management
- Research in Systems Engineering
- Software Systems Engineering
- System-level design
- HW/SW co-design
- Virtual prototyping

**SYSTEMS CONSIDERATIONS ABOUT**

- Autonomous Systems
- Energy Management and Sustainability, including Renewable Energy
- Space and Communications Systems
- Medical Systems
- Transportation Systems
- Gaming and Entertainment Systems
- Sensors Integration and Application for a Net-centric Environment
- Disaster response
- Global Earth Observation
- Large-Scale Systems Integration (in any application area)