



## SESSION TOPICS

- ▶ Architecture
- ▶ Agile
- ▶ DoD Standards and HSI
- ▶ DT&E
- ▶ Engineered Resilient Systems
- ▶ E&T
- ▶ ESOH
- ▶ HSI
- ▶ Joint Architecture & Systems Engineering Effectiveness
- ▶ Joint DT&E, M&S, & NCO/Interoperability
- ▶ Joint Systems Engineering Effectiveness & M&S - Building the System Model
- ▶ Modeling & Simulation
- ▶ Net-Centric Operations/Interoperability
- ▶ SoS - Engineering Approaches for SoS
- ▶ SoS - Applications of SoS SE
- ▶ SoS - Tools and Approaches to SoS Engineering and Analysis
- ▶ Systems Engineering Effectiveness
- ▶ Systems Security Engineering (SSE)

# 17<sup>th</sup> ANNUAL SYSTEMS ENGINEERING CONFERENCE



OCTOBER 28-30, 2014

[WWW.NDIA.ORG/MEETINGS/5870](http://WWW.NDIA.ORG/MEETINGS/5870)

WATERFORD ▶ SPRINGFIELD, VA

EVENT #5870

**LIEUTENANT GENERAL  
THOMAS R. FERGUSON, JR.  
SYSTEMS ENGINEERING EXCELLENCE  
INDIVIDUAL & GROUP AWARD**

*17<sup>th</sup> Annual Systems Engineering  
Conference Awards Presentations*

*Systems Engineering Excellence  
Individual Award  
presented to*

*Mr. David Castellano,  
U.S. Army Armament Research,  
Development, and Engineering Center*

*Systems Engineering Excellence  
Group Award  
presented to*

*JPALS Systems Engineering Team,  
Raytheon Company*

## SCHEDULE AT A GLANCE

### MONDAY, OCTOBER 27, 2014

1:00 PM - 5:00 PM      Display Setup/Registration

### TUESDAY, OCTOBER 28, 2014

7:00 AM - 6:30 PM      Registration  
7:00 AM - 8:00 AM      Networking Breakfast  
8:00 AM - 9:30 AM      Executive Plenary Session  
9:30 AM - 10:00 AM     Networking Break  
10:00 AM - 12:00 PM    Executive Plenary Session Continued  
12:00 PM - 12:15PM    Presentation of The Ferguson Awards  
12:15 PM - 1:30 PM    Networking Luncheon  
1:30 PM - 3:15 PM      Executive Plenary Session Continued  
3:15 PM - 3:30 PM      Networking Break  
3:30 PM - 5:15 PM      Executive Plenary Session Continued  
5:15 PM - 6:30 PM      Networking Reception

### WEDNESDAY, OCTOBER 29, 2014

7:00 AM - 5:50 PM      Registration  
7:00 AM - 8:00 AM      Networking Breakfast  
8:00 AM - 9:45 AM      Concurrent Breakout Sessions A  
9:45 AM - 10:15 AM     Networking Break  
10:15 AM - 12:00 PM    Concurrent Breakout Sessions B  
12:00 PM - 1:30 PM    Luncheon with Keynote Speaker  
1:30 PM - 3:15 PM      Concurrent Breakout Sessions C  
3:15 PM - 3:30 PM      Networking Break  
3:30 PM - 5:50 PM      Concurrent Breakout Sessions D

### THURSDAY, OCTOBER 30, 2014

7:00 AM - 5:50 PM      Registration  
7:00 AM - 8:00 AM      Networking Breakfast  
8:00 AM - 9:45 AM      Concurrent Breakout Sessions A  
9:45 AM - 10:15 AM     Networking Break  
10:15 AM - 12:00 PM    Concurrent Breakout Sessions B  
12:00 PM - 1:30 PM    Networking Luncheon  
1:30 PM - 3:15 PM      Concurrent Breakout Sessions C  
3:15 PM - 3:30 PM      Networking Break  
3:30 PM - 5:50 PM      Concurrent Breakout Sessions D

## TRACK OBJECTIVES:

### AFFORDABILITY

Affordability is a key theme in the DoD's Better Buying Power Initiative. This year's papers address the development of frameworks for affordability analyses including SE tools.

### AGILE AND SYSTEMS ENGINEERING

The Agile and Systems Engineering track brings together practitioners with experience applying agile methods in a variety of disciplines and domains, with the goal of collaboration to expand their effective use in systems engineering and on defense programs.

### ARCHITECTURE

This track addresses architecture frameworks, strategies, and applications to improve system design, test, operations, and support.

### DEVELOPMENTAL TEST & EVALUATION (DT&E)

The Developmental Test and Evaluation track addresses the entire continuum of test and evaluation from early planning to operational testing.

### JOINT DEVELOPMENTAL TEST & EVALUATION (DT&E), MODELING AND SIMULATION (M&S) & INTEROPERABILITY

The Joint Developmental Test and Evaluation, Modeling & Simulation and Interoperability track is one of the collaboration efforts in the NDIA Systems Engineering Division. The focus is to investigate best practices that can be applied to T&E using Modeling & Simulation for large systems and interoperability testing.

### DEVELOPMENTAL TEST & EVALUATION (DT&E) / SYSTEMS OF SYSTEMS (SOS)

The joint Developmental Test and Evaluation for Systems of Systems track is one of the collaboration efforts in the NDIA Systems Engineering Division.

The focus is to investigate best practices that can be applied to testing our SoS capabilities.

### ENGINEERED RESILIENT SYSTEMS (ERS)

Engineered Resilient Systems (ERS) is a Department of Defense priority initiative that seeks to transform engineering environments so that warfighting systems are more resilient and affordable across the acquisition lifecycle. The track will present new results across the ERS initiative including anchor technologies and computational representation

### EDUCATION & TRAINING

The Education and Training track is an excellent collection of seven presentations from government, industry, and academia. The presentations describe workforce development activities across a wide range from STEM mentoring, industry certifications, the essence of a systems engineer, and accelerating development of senior technical leaders.

### ENVIRONMENT, SAFETY, AND OCCUPATIONAL HEALTH (ESOH)

The ESOH track includes a mix of safety, health, and environmental presentations on the evolving DoD Acquisition ESOH policy and practice. The presentations address software system safety, hazardous materials management, occupational health and safety management systems, DoD noise control, and the integration of ESOH considerations into the acquisition systems engineering processes for system development and sustainment.

### HUMAN SYSTEMS INTEGRATION (HSI)

The HSI sessions include DoD policy maturation and implementation, and technical papers including the application of the Agile Process to operator interface design and HSI implications in designing for complex systems.

## TRACK OBJECTIVES CONTINUED:

### MODELING AND SIMULATION (M&S)

The M&S Track highlights the use of models and simulations in the systems engineering process. It includes sessions on Model-Based Systems Engineering (MBSE), integrated environments, tools & technologies, and M&S applications in several SE process phases, including a joint session with DT&E on M&S in T&E. A joint session with SEE on Building the System Model is also featured.

### NET-CENTRIC OPS / INTEROPERABILITY

Interoperability is the ability to operate in synergy in the execution of assigned tasks both within the DoD and its external mission partners. Net Centric Operations supports interoperability by providing the POPIM solution sets that allows the DoD and its mission partners to share information/data/knowledge when needed, where needed, and in a form they can understand and act on with confidence, while protecting it from those who should not have it. Net Centric Operations/ Interoperability includes technologies such as Service Oriented Architecture, Data Center, Cloud Computing, Information Transport [e.g. internet, web, radios, data links], as well as both hardware and software [aka Information and Communicative Technology] together with people, operating alone or in organizations, as part of the System of Systems Systems Engineering.

### SYSTEMS ENGINEERING EFFECTIVENESS (SEE)

The Systems Engineering Effectiveness (SEE) Track highlights the latest policy and guidance, new approaches, and practical experiences to assist the DoD and defense industry SE community in achieving a quantifiable and persistent improvement in program outcomes through appropriate application of systems engineering principles and best practices.

### SYSTEMS OF SYSTEMS (SOS)

The System of Systems track will feature papers highlighting development SoS engineering approaches, particular SoS SE application areas, and SoS tools and modeling.

### SYSTEM SECURITY ENGINEERING (SSE)

The SSE track will focus on system security engineering and a holistic approach to program protection.

## A SPECIAL THANK YOU TO OUR PLANNING COMMITTEE:

- ▶ Mr. Frank Serna, Conference Chair
- ▶ Mr. Bob Rassa, Conference Vice Chair
- ▶ Dr. Thomas Christian, Technical Chair
- ▶ Mr. Steve Henry, Division Chair

## A SPECIAL THANK YOU TO ALL OUR TRACK AND SESSION CHAIRS:

- ▶ Mr. Jeff Bergenthal
- ▶ Mr. Al Brown
- ▶ Mr. Jim Coolahan
- ▶ Ms. Holly Coulter
- ▶ Dr. Judith Dahmann
- ▶ Mr. Steve Dam
- ▶ Mr. Geoff Draper
- ▶ Mr. Joe Elm
- ▶ Mr. Sherman Forbes
- ▶ Dr. Don Gelosh
- ▶ Ms. Lois Hollan
- ▶ Dr. Jeffery Holland
- ▶ Ms. Dona Lee
- ▶ Ms. Noren McQuinn
- ▶ Dr. Ken Nidiffer
- ▶ Mr. John Palmer
- ▶ Mr. Curtis Potterveld
- ▶ Mr. Matthew Risser
- ▶ Mr. David Schulte
- ▶ Mr. Steve Scukanec
- ▶ Mr. Frank Serna
- ▶ Dr. John Snoderly
- ▶ Mr. Jeff Walker
- ▶ Dr. Beth Wilson
- ▶ Mr. Jack Zavin

# TUESDAY, OCTOBER 28, 2014

7:00 AM - 6:30 PM REGISTRATION  
7:00 AM - 8:00 AM NETWORKING BREAKFAST  
8:00 AM - 8:30 AM WELCOME AND INTRODUCTION  
8:30 AM - 9:30 AM SESSION A

**KEYNOTE SPEAKER:** The Honorable William LaPlante, *Assistant Secretary of the Air Force (Acquisition) and Air Force Service Acquisition Executive*

9:30 AM - 10:00 AM NETWORKING BREAK  
10:00 AM - 12:00 PM SESSION B

## CHIEF SYSTEMS ENGINEERS PANEL

**Moderator:** Mr. Stephen Welby, *Deputy Assistant Secretary of Defense (Systems Engineering), Office of the Assistant Secretary of Defense (Research and Engineering)*

### Panelists:

- ▶ Mr. Kevin Fahey, *Executive Director, System of Systems Engineering and Integration (SoSE&I), Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology)*
- ▶ Mr. Stu Young, *Director, Systems Engineering, Naval Air Systems Command*
- ▶ Dr. Thomas Christian, *Associate Deputy Assistant Secretary of the Air Force for Science, Technology & Engineering*
- ▶ Mr. James Tuttle, *Chief Systems Engineer, Under Secretary of Science and Technology, Department of Homeland Security*
- ▶ Ms. Michele Merkle, *Director, National Airspace System Systems Engineering Office, Federal Aviation Administration*
- ▶ Mr. Albert Spencer, *Director, Systems Engineering Center, National Oceanic and Atmospheric Administration*

12:00 PM - 12:15 PM PRESENTATION OF THE FERGUSON AWARDS

**MASTER OF CEREMONIES:** Ms. Kristen Baldwin, *Principal Deputy, Office of the Deputy Assistant Secretary of Defense (Systems Engineering), Assistant Secretary of Defense (Research and Engineering)*

12:15 PM - 1:30 PM NETWORKING LUNCHEON  
1:30 PM - 3:15 PM SESSION C

## PROGRAM MANAGERS' PANEL:

### THE PROGRAM MANAGEMENT-SYSTEMS ENGINEERING REALITY: WHAT HAVE YOU DONE FOR ME LATELY?

**Moderator:** Mr. James Thompson, *Director, Major Program Support, ODASD Systems Engineering*

### Panelists:

- ▶ Mr. Michael Sprang, *Joint Light Tactical Vehicle (JLTV) Program*
- ▶ Mr. Barry Lake, *Key Management Infrastructure (KMI) Program*
- ▶ Col Robert Strasser, *USAF, B-2 Program*
- ▶ CAPT John Bailey, *USN, Airborne Electronic Attack Systems & EA-6B Programs*

3:15 PM - 3:30 PM NETWORKING BREAK  
3:30 PM - 5:15 PM SESSION D

## INDUSTRY SYSTEMS ENGINEERING PANEL:

### "SYSTEMS ENGINEERING AS THE INTEGRATING DISCIPLINE TO HELP IMPROVE PROGRAM PERFORMANCE"

**Moderator:** Mr. Bob Rassa, *Director, Engineering Programs, Space & Airborne Systems, Raytheon Company*

### Panelists:

- ▶ Mr. Pat Seamon, *Vice President, Engineering & Operations, Harris Corporation*
- ▶ Dr. John Zolper, *Vice President, Research and Innovation, Raytheon Company*
- ▶ Mr. Mark Anderson, *Director, National Security Programs, The Boeing Company*
- ▶ Mr. Keoki Jackson, *Corporate Vice President for Program Excellence, Lockheed Martin Corporation*

5:15 PM - 6:30 PM NETWORKING RECEPTION

## WEDNESDAY, OCTOBER 29, 2014

7:00 AM - 5:50 PM **REGISTRATION**

7:00 AM - 8:00 AM **NETWORKING BREAKFAST**

8:00 AM - 9:45 AM **SESSION A**

TRACK	8:00 AM - 8:35 AM	8:35 AM - 9:10 AM	9:10 AM - 9:45 AM
<b>TRACK 1 SSE</b>  <b>KORMAN ROOM</b>	<b>17009:</b> Systems Security Engineering Committee Results and Plans -Ms. Holly Dunlap, <i>Raytheon Company</i>	<b>16875:</b> Building a Software Assurance Road-map and Using It Effectively -Mr. Robert Martin, <i>The MITRE Corporation</i>	<b>16888:</b> Do You have the Right Practices in Your Cyber Supply Chain Tool Box? -Ms. Michele Moss, <i>Booz Allen Hamilton</i>
<b>TRACK 2 ENGINEERED RESILIENT SYSTEMS: DOD PERSPECTIVES</b>  <b>SELLIER ROOM</b>	<b>16903:</b> Engineered Resilient Systems (ERS) Overview -Dr. Jeffery Holland, <i>U.S. Army Engineer Research and Development Center</i>	<b>16915:</b> ERS Support to DoD Prototyping Objectives -Mr. Earl Wyatt, <i>DASD (EC&amp;P) ASD (R&amp;E)</i>	<b>16943:</b> Modular Open Systems Architecture in DoD Acquisition -Mr. Stephen Welby, <i>DASD (SE)/ASD (R&amp;E)</i>
<b>TRACK 3 SYSTEMS ENGINEERING EFFECTIVENESS</b>  <b>GIBSON ROOM</b>	<b>16951:</b> Department of Defense Systems Engineering Policy and Guidance -Ms. Aileen Sedmak, <i>ODASD Systems Engineering</i>	<b>16961:</b> The Integrated Systems Engineering Framework (isef) -Dr. Edward Umpfenbach, <i>U.S. Army TARDEC</i>	<b>16936:</b> U.S. Air Force Engineering Enterprise Update Responding to SecAF Challenge -Ms. Susan Thornton, <i>Headquarters Air Force Materiel Command</i>
<b>TRACK 4 M&amp;S TRANSITIONING TO MBSE</b>  <b>SINGLETON BALLROOM</b>	<b>16846:</b> Transforming Systems Engineering through a Holistic Approach to Model Based Systems Engineering -Dr. Mark Blackburn, <i>Stevens Institute of Technology</i>	<b>17048:</b> From Theory to Reality: Taking the Fear Out of Model-Based Systems Engineering -Mr. Christopher Finlay, <i>Raytheon Company</i>	
<b>TRACK 5 AGILE</b>  <b>MILLER BALLROOM</b>	<b>16853:</b> Systems Engineering on Large-scale Agile Software Development Programs -Mr. William Menner, <i>The Johns Hopkins University Applied Physics Lab</i>	<b>17038:</b> The Impacts of Agile Development on the System Engineering Process -Mr. Robert McCaig, <i>ASSETT, Inc.</i>	
<b>TRACK 6 NET OPS/ INTEROPERABILITY</b>  <b>VON STERNBERG BALLROOM</b>	<b>16918 Panel:</b> The New Policy & Process for Interoperability of Information Technology to Include National Security Systems and Defense Business Systems <b>Moderator:</b> Mr. Jack Zavin, <i>OUSD(AT&amp;L)/DASD(C3CB)</i>  <b>Panelists:</b> -Mr. Kristopher Strance, <i>DoD CIO</i> -Mr. James Gaetjen, <i>Joint Staff/J6</i> -Mr. Christopher Watson, <i>Joint Interoperability Test Command (JITC)</i>		

9:45 AM - 10:15 AM **NETWORKING BREAK**

## WEDNESDAY, OCTOBER 29, 2014 CONTINUED

### 10:15 AM - 12:00 PM SESSION B

TRACK	10:15 AM - 10:50 AM	10:50 AM - 11:25 AM	11:25 AM - 12:00 PM
<b>TRACK 1 SSE</b>  <b>KORMAN ROOM</b>	<b>16944:</b> DoD Software Assurance (SwA) Overview -Mr. Thomas Hurt, <i>ODASD Systems Engineering</i>	<b>16950:</b> Department of Defense (DoD) Joint Federated Assurance Center (JFAC) Initiative -Ms. Kristen Baldwin, <i>ODASD Systems Engineering</i>	<b>16994:</b> System Security Engineering and Program Protection Integration into SE -Ms. Melinda Reed, <i>ODASD Systems Engineering</i>
<b>TRACK 2 ERS ANCHOR TECHNOLOGIES AND CAPABILITIES</b>  <b>SELLIER ROOM</b>	<b>16934:</b> Engineered Resilient Systems Architecture -Dr. Cary Butler, <i>U.S. Army Engineer Research and Development Center</i>	<b>17033:</b> Collaboration Infrastructure for Agile Model-Based Design -Dr. Steven Bankes, <i>BAE Systems</i>	<b>16896:</b> Engineered Resilient Systems: Tradespace Enabled Decision Making -Dr. Tommer Ender, <i>Georgia Tech Research Institute</i>
<b>TRACK 3 SYSTEMS ENGINEERING EFFECTIVENESS</b>  <b>GIBSON ROOM</b>	<b>16838</b> Panel: Systems Engineering Streamlining - Budget-Constrained Strategies for Systems Engineering Excellence in DoD Acquisition <b>Moderator:</b> Ms. Gretchen Lizza, <i>U.S. Navy</i>  <b>Panelists:</b> -Dr. Judith Dahmann, <i>The MITRE Corporation</i> -Mr. Tom Hannon, <i>Lockheed Martin Corporation Aeronautics</i> -Mr. Mark Anderson, <i>The Boeing Company</i>		
<b>TRACK 4 M&amp;S - TRANSITIONING TO MBSE</b>  <b>SINGLETON BALLROOM</b>	<b>16810:</b> Practical Implementation of Model-Based Systems Development -Mr. Thomas Landers, <i>Lockheed Martin Corporation</i>	<b>16889:</b> Developing a Cube Sat Model-Based System Engineering (MBSE) Reference Model -Mr. David Kaslow	<b>17023:</b> Use of Model-Based Design Methods for Enhancing Reliability of Self Adaptive Systems -Ms. Lenora Knox, <i>The George Washington University</i>
<b>TRACK 5 AGILE</b>  <b>MILLER BALLROOM</b>	<b>17015:</b> Domain Independent Agile Systems Engineering and a Life Cycle Model Development Project -Mr. Rick Dove, <i>Paradigm Shift International</i>	<b>16931:</b> Does Use of Agile Practices Support Affordability? -Dr. Shawn Rahmani, <i>The Boeing Company</i>	<b>16958:</b> Bringing Focus to an R&D Project Through the Application of Agile Techniques -Mr. Timothy Sliski, <i>Raytheon Company</i>
<b>TRACK 6 NET OPS/ INTEROPERABILITY</b>  <b>VON STERNBERG BALLROOM</b>	<b>16917:</b> Kickoff/Context for NCO Interoperability -Mr. Jack Zavin, <i>OUSD (AT&amp;L)/DASD (C3CB)</i>	<b>16841:</b> An Approach to Achieving Digital Interoperability for the DoD: A Discussion of the Joint Staff J6 Coordinated Implementation Methodology -Ms. Marsha Mullins, <i>Joint Staff Hampton Roads</i>	<b>16835:</b> Defense Intelligence Information Enterprise (DI2E) -Dr. Naz Azizian, <i>Office of the Under Secretary of Defense, Intel</i>

### 12:00 PM - 1:30 PM NETWORKING LUNCHEON WITH KEYNOTE SPEAKER:

**KEYNOTE SPEAKER:** Mr. Stephen Welby, *Deputy Assistant Secretary of Defense (Systems Engineering), Office of the Assistant Secretary of Defense (Research and Engineering)*

## WEDNESDAY, OCTOBER 29, 2014 CONTINUED

### 1:30 PM - 3:15 PM SESSION C

TRACK	1:30 PM - 2:05 PM	2:05 PM - 2:40 PM	2:40 PM - 3:15 PM
<b>TRACK 1 SSE</b>  <b>KORMAN ROOM</b>	<b>16990:</b> Department of Defense (DoD) Trusted Microelectronics -Mr. Raymond Shanahan, <i>ODASD Systems Engineering</i>	<b>16997:</b> Vulnerability Analysis Techniques to Support Trusted Systems and Networks (TSN) Analysis -Ms. Melinda Reed, <i>ODASD Systems Engineering</i>	<b>16867:</b> An Implementation of System Security Engineering: The Secure Engineering Assurance Model/SEAM -Ms. Dawn Beyer, <i>Lockheed Martin Corporation</i>
<b>TRACK 2 COMPUTATIONAL REPRESENTATION: CORE ERS COMPONENT</b>  <b>SELLIER ROOM</b>	<b>16975:</b> Engineered Resilient Systems for Ship Design and Acquisition -Mr. Adrian Mackenna, <i>Engineered Resilient Systems for Ship Design and Acquisition</i>	<b>17032:</b> Environmental Simulation in Support of Engineered Resilient -Mr. David Richards, <i>U.S. Army Engineer Research and Development Center</i>	<b>17039:</b> Computational Research and Engineering Acquisition Tools and Environments (CREATE) Program -Dr. Douglass Post, <i>ERDC High Performance Computing Modernization Program</i>
<b>TRACK 3 SYSTEMS ENGINEERING EFFECTIVENESS</b>  <b>GIBSON ROOM</b>	<b>16885:</b> Employing a Repeatable Systems Approach for Developing Performance-based Requirements for Policy Implementation, Acquisition for Services, and Product Development -Mr. Philip Lindeman, <i>Intuitive Research and Technology Corporation</i>	<b>16978:</b> The Business Case for Systems Engineering: Comparison of Defense-Domain and Non-Defense Projects -Mr. Joseph Elm, <i>Software Engineering Institute</i>	
<b>TRACK 4 M&amp;S IN CONCEPT MATURATION</b>  <b>SINGLETON BALLROOM</b>	<b>17044:</b> Integrated Model Framework for Concept Development -Mr. Christopher Hoffman, <i>Northrop Grumman Corporation</i>	<b>16937:</b> A Virtual Simulation Platform for Conceptual Design, Testing, and Verification of Unmanned Aerial Vehicles -Dr. Simon Briceno, <i>Georgia Institute of Technology</i>	<b>16963:</b> On the Use of Analytic Availability Models in the Acquisition Process -Dr. John MacCarthy, <i>Institute for Defense Analyses</i>
<b>TRACK 5 DT&amp;E</b>  <b>MILLER BALLROOM</b>	<b>17005:</b> Developmental Test and Evaluation Committee Results and Plans -Mr. Joe Manas, <i>Raytheon Company</i>	<b>16848:</b> The Chief Developmental Tester and Industry Test Lead – Partnering for Success -Mr. Joe Manas, <i>Raytheon Company</i>	<b>17021:</b> Shifting Digital Constructs and Testing to the Left -Mr. Anthony Devino, <i>ASN RDA T&amp;E</i>
<b>TRACK 6 NET OPS/ INTEROPERABILITY</b>  <b>VON STERNBERG BALLROOM</b>	<b>17029:</b> Engineering Networks with Predictable Performance Using a Virtual Emulation Environment -COL Charles Burdick, USA (Ret), <i>Innovative Decisions, Inc.</i>		

### 3:15 PM - 3:30 PM NETWORKING BREAK

# WEDNESDAY, OCTOBER 29, 2014 CONTINUED

3:30 PM - 5:50 PM SESSION D

TRACK	3:30 PM - 4:05 PM	4:05 PM - 4:40 PM	4:40 PM - 5:15 PM	5:15 PM - 5:50 PM
<b>TRACK 1 SSE</b>  <b>KORMAN ROOM</b>	<b>17016:</b> Systems Security Engineering Competency Model – A Working Example of the Proposed INCOSE SE Role-Based Competency Framework -Dr. Don Gelosh, <i>Worcester Polytechnic Institute</i>	<b>17022:</b> Tool Support for Tradespace Exploration and Analysis -Dr. Jakub Moskal, <i>VIStology, Inc.</i>	<b>17046:</b> System Security Engineering a Single Integrated Technical Process -Mr. Daniel Holtzman, <i>The MITRE Corporation</i>	<b>17051:</b> Mission Models: Merging Cyber Operations and Traditional Warfare -Ms. Ronda Henning, <i>Harris Corporation</i>
<b>TRACK 2 MATURING ERS CAPABILITIES</b>  <b>SELLIER ROOM</b>	<b>17040:</b> Engineering Data Visualization Efforts for Engineered Resilient Systems -Mr. Robert O’Bara, <i>Kitware, Inc.</i>	<b>16993:</b> Optimizing Systems Architecture and Whole of Life Costs Through Design Profit® -Mr. David Foreman, <i>Munro &amp; Associates, Inc.</i>	<b>16873:</b> Whole System Trades Analysis Transforming the Way We Do Business -Mr. Troy Peterson, <i>Booz Allen Hamilton</i>	<b>17014:</b> Innovation Platforms: the Next Phase in IT for Model-Based Engineering -Dr. Marc Halpern, <i>Gartner</i>
<b>TRACK 3 SYSTEMS ENGINEERING EFFECTIVENESS</b>  <b>GIBSON ROOM</b>	<b>16863:</b> Techniques for Conducting Effective Concept Design and Design-to-Cost Trade Studies -Mr. David Di Pietro, <i>NASA / Goddard Space Flight Center</i>	<b>16925:</b> Resolving the Conflict Between Acquisition Affordability, Total Ownership Cost and Maximum Military Performance -Dr. Craig Ardnt, <i>Defense Acquisition University</i>	<b>16830:</b> Implementing Structured Requirements to Improve Requirements Quality -Dr. Ronald Carson, <i>The Boeing Company</i>	<b>16826:</b> Integrated Systems Engineering Tool Suite -Mr. Alan Banks, <i>L-3 Communications, Maritime Systems</i>
<b>TRACK 4 M&amp;S - INTEGRATED SE ENVIRONMENTS</b>  <b>SINGLETON BALLROOM</b>	<b>16876:</b> Increasing Legacy System Utilization via an Integrated Training Environment -Dr. Federica Robinson-Bryant, <i>PEO for Simulation, Training and Instrumentation</i>			
<b>TRACK 5 DT&amp;E</b>  <b>MILLER BALLROOM</b>	<b>16953:</b> The DT&E Strategy Story: Developmental Evaluation Framework to STAT-based Test Design -Dr. Suzanne Beers, <i>The MITRE Corporation</i>	<b>16911:</b> Use of Automated Testing to Facilitate Affordable Design of Military Systems -CAPT Paul Van Benthem, USN, <i>DASN (RDT&amp;E)</i>		
<b>TRACK 6 AFFORDABILITY</b>  <b>VON STERNBERG BALLROOM</b>	<b>16850:</b> MORS Affordability Analysis Concepts and Applications -Dr. Lisa Oakley-Bogdewic, <i>The MITRE Corporation</i>	<b>16847:</b> Divestment Methods for Strategic Choices -Dr. Lisa Oakley-Bogdewic, <i>The MITRE Corporation</i>	<b>16928:</b> Instituting a Value Engineering (VE) Program to Improve the Efficiencies of Both Products and Services at the Defense Information Systems Agency (DISA) -Dr. William McDaniel, <i>The Johns Hopkins University Applied Physics Lab</i>	

## THURSDAY, OCTOBER 30, 2014

7:00 AM - 5:50 PM REGISTRATION

7:00 AM - 8:00 AM NETWORKING BREAKFAST

8:00 AM - 9:45 AM SESSION A

TRACK	8:00 AM - 8:35 AM	8:35 AM - 9:10 AM	9:10 AM - 9:45 AM
<b>TRACK 1</b> <b>ESOH</b>  <b>KORMAN ROOM</b>	<b>16977:</b> ODUSD (I&E) Environment, Safety, and Occupational Health (ESOH) in Acquisition Initiatives in 2014 -Mr. David Asiello, <i>ODUSD (I&amp;E)/S&amp;T</i>	<b>16980:</b> Smarter Hazardous Materials Management for DoD Systems Acquisition -Mr. Timothy Sheehan, <i>Raytheon Company</i>	<b>16940:</b> Role of Noise Control in Systems Engineering, Process Control and Human Risk Reduction -Mr. Kurt Yankaskas, <i>Office of Naval Research</i>
<b>TRACK 2</b> <b>ERS SELECTED TOPICS</b>  <b>SELLIER ROOM</b>	<b>16881:</b> Designing Resiliency into Critical Infrastructure Systems -Dr. Warren Vaneman, <i>Naval Postgraduate School</i>	<b>16948:</b> Making Cost Effective Decisions in Early Program Phases Despite Lack of Data – An Analytical Approach -Mr. Robert Hell, <i>Systecon</i>	<b>17050:</b> Application of Epoch-Era Analysis to the Design of Engineered Resilient Systems -Mr. Michael Curry, <i>Massachusetts Institute of Technology</i>
<b>TRACK 3</b> <b>DOD STANDARDS AND HSI</b>  <b>GIBSON ROOM</b>	<b>17103:</b> DoD Systems Engineering Standardization Initiative -Mr. David Davis, <i>USAF Space and Missile Systems Center</i>	<b>17019:</b> Cluster Analysis: A Method for Analyzing the HSI Backlog in Agile Development -Ms. Ariana Kiken, <i>Pacific Science and Engineering Group</i>	<b>17027:</b> The Human Systems Integration Framework (HSIF): Defining a New Role to Enhance Cross Domain Collaboration -Dr. Matthew Risser, <i>Pacific Science &amp; Engineering Group</i>
<b>TRACK 4</b> <b>JOINT SYSTEMS ENGINEERING EFFECTIVENESS &amp; M&amp;S BUILDING THE SYSTEM MODEL</b>  <b>SINGLETON BALLROOM</b>	<b>16969:</b> Digital System Model and Technical Data -Ms. Philomena Zimmerman, <i>ODASD Systems Engineering</i>	<b>16968:</b> Determining the Contents of the Digital System Model -Dr. Thomas Christian, <i>USAF SAF/AQR</i>	<b>16967:</b> Adopting Digital Representations for Use in Systems Engineering -Mr. Kris Romig, <i>NASA, Goddard Space Flight Center</i>
<b>TRACK 5</b> <b>DT&amp;E</b>  <b>MILLER BALLROOM</b>	<b>16879:</b> The Air Force Test Center Value to the Acquisition Process and Our Customers -Dr. Elisabetta Jerome, <i>Air Force Test Center</i>	<b>16884:</b> System Test Management Using MBSE Methods -Mr. Ronald Kratzke, <i>Vitech Corporation</i>	<b>16858:</b> Test Planning - Advancing the Science -Mr. Stephen Scukanec, <i>Northrop Grumman Corporation</i>
<b>TRACK 6</b> <b>ARCHITECTURE &amp; STRATEGY</b>  <b>VON STERNBERG BALLROOM</b>	<b>16909:</b> Capability Based Technical Reference Frameworks for Open System Architecture Implementations -Mr. Nickolas Guertin, <i>DASN RDT&amp;E</i>	<b>17036:</b> SAVI Support of DoD Architecture Centric Virtual Integration -Dr. David Redman, <i>AVSI</i>	

9:45 AM - 10:15 AM NETWORKING BREAK

## THURSDAY, OCTOBER 30, 2014 CONTINUED

### 10:15 AM - 12:00 PM SESSION B

TRACK	10:15 AM - 10:50 AM	10:50 AM - 11:25 AM	11:25 AM - 12:00 PM
<b>TRACK 1</b> <b>ESOH</b>  <b>KORMAN ROOM</b>	<b>16988:</b> ESOH in Early SE Development Planning – Is It Really Important? -Mr. Jim Rudroff, <i>OASN EIE/ODASN</i>	<b>16979:</b> The Case for a Single DoD NEPA Implementing Regulation -Mr. George Evans, <i>Prospective Technology Incorporated</i>	<b>17001:</b> Proposed ISO 45001 Occupational Health and Safety Management System Standard Development Status Update and Potential Impacts to U.S. DoD MIL-STD-882E -Mr. Kenneth Clayman, <i>Booz Allen Hamilton</i>
<b>TRACK 2</b> <b>SOS - ENGINEERING APPROACHES FOR SOS</b>  <b>SELLIER ROOM</b>	<b>16865:</b> SoS Considerations in the Engineering of Systems -Dr. Judith Dahmann, <i>The MITRE Corporation</i> -Ms. Kristen Baldwin, <i>ODASD Systems Engineering</i>	<b>16890:</b> A Model-Based System Engineering (MBSE) Case Study -Dr. Kenneth Brown, <i>The Johns Hopkins University Applied Physics Lab</i>	
<b>TRACK 3</b> <b>HSI</b>  <b>GIBSON ROOM</b>	<b>16831:</b> Physical Mockups: Redefining the Collaborative Work Environment and Improving Human Systems Integration (HSI) -Ms. Jessica Vomocil, <i>L-3 Communications Maritime Systems</i>	<b>16877:</b> Human Systems Integration Assessment Methodology in Air Force Acquisition -Mr. Jon Coleman, <i>U.S. Air Force Research Lab, 711 Human Performance Wing</i>	<b>16923:</b> Model-Based Soldier Decision Framework -Mr. David Chau, <i>U.S. Army RDECOM ARDEC</i>
<b>TRACK 4</b> <b>M&amp;S - M&amp;S DATA &amp; TOOLS</b>  <b>SINGLETON BALLROOM</b>	<b>16855:</b> Essential Elements of the System Model – Sharing and Evolving Data Across the Acquisition Life Cycle -Mr. Jeff Bergenthal, <i>The Johns Hopkins University Applied Physics Lab</i>	<b>17013:</b> Discovery of Modeling and Simulation Assets to Support Systems Engineering -Mr. Frank Mullen, <i>SimVentions, Inc.</i>	<b>17030:</b> A World Report on the State of Systems Engineering Tools as Learned from the INCOSE 2014 Tool Vendor Challenge -Mr. Frank Salvatore, <i>Engility Corporation</i>
<b>TRACK 5</b> <b>DT&amp;E</b>  <b>MILLER BALLROOM</b>	<b>16868:</b> Implement an Automation Culture: Prevention Over Detection -Ms. Elfriede Dustin, <i>IDT</i>		
<b>TRACK 6</b> <b>JOINT ARCHITECTURE &amp; SYSTEMS ENGINEERING EFFECTIVENESS</b>  <b>VON STERNBERG BALLROOM</b>	<b>16919:</b> Model-Based Product Line Engineering - Variations on a Theme -Mr. Matthew Hause, <i>Atego</i>	<b>16859:</b> A Systems Engineering Approach to Architecture Development -Mr. David Di Pietro, <i>NASA / Goddard Space Flight Center</i>	<b>16801:</b> Differentiating System Architectures -Dr. Ronald Carson, <i>The Boeing Company</i>

### 12:00 PM - 1:30 PM NETWORKING LUNCHEON

## THURSDAY, OCTOBER 30, 2014 CONTINUED

1:30 PM - 3:15 PM      **SESSION C**

TRACK	1:30 PM - 2:05 PM	2:05 PM - 2:40 PM	2:40 PM - 3:15 PM
<b>TRACK 1 ESOH  KORMAN ROOM</b>	<b>16987:</b> Software Safety Assessment - A New Requirement? -Mr. Robert Smith, <i>Booz Allen Hamilton</i>	<b>16989:</b> Noise Control Roadmap for Significant Noise Hazardous Work Operations in DoD -Ms. Joy Erdman, <i>U.S. Navy</i>	<b>16991:</b> Projects of the Deployments and Operations Working Group -Mr. Alfred Rice, <i>Joint Staff</i>
<b>TRACK 2 SOS - APPLICATIONS OF SOS SE  SELLIER ROOM</b>	<b>16902:</b> Contingency Base Infrastructure - Modeling Contingency Base Camps Using System of Systems Systems Engineering and Analysis -Ms. Jennifer Johnson, <i>Product Director Contingency Base Infrastructure</i>	<b>16832:</b> Achieving a Decision Paradigm for Distributed Warfare Resource Management -Ms. Bonnie Young, <i>Naval Postgraduate School</i>	
<b>TRACK 3 SYSTEMS ENGINEERING EFFECTIVENESS  GIBSON ROOM</b>	<b>16945</b> Panel: Transitioning Systems Engineering Research into Programs and Practice <b>Moderator:</b> Mr. Scott Lucero, <i>ODASD Systems Engineering</i>  <b>Panelists:</b> -Dr. Steven Banks, <i>Chief Engineer, BAE Systems</i> -Dr. Barry Horowitz, <i>Munster Professor of Systems and Information Engineering, University of Virginia</i> -Dr. Marc Halpern, <i>Vice President for Design, Engineering and Product Lifecycle Research</i> -Ms. Lisa Graf, <i>Program Manager, Integrated SE Framework, U.S. Army Research, Development and Engineering Command</i>		
<b>TRACK 4 JOINT DT&amp;E, M&amp;S, &amp; NCO/ INTEROPERABILITY  SINGLETON BALLROOM</b>	<b>16854:</b> Live Synthetic Enterprise Architecture for U.S. Army Training and Test & Evaluation -Mr. Jeff Bergenthal, <i>The Johns Hopkins University Applied Physics Lab</i>	<b>16891:</b> Simulation, Analysis, and Visualization for Integrated Fire Control Counter Air Engagement -Ms. Tammy McNeley, <i>Lockheed Martin Corporation</i>	
<b>TRACK 5 E&amp;T  MILLER BALLROOM</b>	<b>16798:</b> Industry Certifications as a Prospective Framework for DoD Contractor Workforce Development -Dr. Bryan Herdick, <i>The Johns Hopkins University Applied Physics Lab</i>	<b>16836:</b> Accelerating the Development of Senior Technical Leaders -Dr. Michael Pennoti, <i>Stevens Institute of Technology</i>	<b>16857:</b> Summary of Findings from the Helix Project (2013-14): An Investigation of the DNA of the Systems Engineering Workforce -Mr. Devanandham Henry, <i>Stevens Institute of Technology</i>
<b>TRACK 6 ARCHITECTURE &amp; REQUIREMENTS  VON STERNBERG BALLROOM</b>	<b>16905:</b> Set-Based Design in Requirements Development -Dr. Norbert Doerry, <i>NAVSEA (SEA 05T)</i>	<b>16807:</b> Requirement Based Engineering Management Process to Minimize the Design Defects -Ms. Dilek Karaca, <i>Turkish Aerospace Industries (TAI)</i>	<b>17026:</b> Analysis of System Synergies and Conflicts -Dr. Barry Boehm, <i>USC</i>

3:15 PM - 3:30 PM      **NETWORKING BREAK**

# THURSDAY, OCTOBER 30, 2014 CONTINUED

3:30 PM - 5:50 PM SESSION D

TRACK	3:30 PM - 4:05 PM	4:05 PM - 4:40 PM	4:40 PM - 5:15 PM	5:15 PM - 5:50 PM
<b>TRACK 1 ESOH</b>  <b>KORMAN ROOM</b>	<b>16938:</b> Application of Process Management Approaches to Reduce Occupational Diseases and Injuries Among Users of Power Hand Tools While Improving Quality and Productivity -Mr. Mark Geiger, <i>Naval Safety Center Liaison Office</i>	<b>16985:</b> ESOH Risk Assessment and Acceptance - The Basics (Part 1) -Mr. Sherman Forbes, <i>SAF/AQRE</i>	<b>16985:</b> ESOH Risk Assessment and Acceptance - The Basics (Part 2) -Mr. Sherman Forbes, <i>SAF/AQRE</i>	
<b>TRACK 2 SOS - TOOLS AND APPROACH TO SOS ENGINEERING AND ANALYSIS</b>  <b>SELLIER ROOM</b>	<b>17020:</b> An Analytic Work Bench Perspective to Evolving System of System Architectures -Dr. Navindran Davendralingam, <i>Purdue University</i>	<b>16906:</b> Towards Technical Reference Frameworks to Support Open System Architecture Initiatives -Dr. Douglas Schmidt, <i>Software Engineering Institute</i>	<b>16919:</b> Model-Based Product Line Engineering-Variations on a Theme -Mr. Matthew Hause, <i>Atego</i>	<b>16957:</b> Systems Engineering Processes for the Integrated Live, Virtual Constructive (LVC) Test & Evaluation (T&E) Environment (ILTE) -Mr. Frank Carr, <i>The MITRE Corporation</i>
<b>TRACK 3 SYSTEMS ENGINEERING EFFECTIVENESS</b>  <b>GIBSON ROOM</b>	<b>16959:</b> DASD(SE) Reliability and Maintainability Engineering Initiatives -Mr. Andrew Monje, <i>ODASD Systems Engineering</i>	<b>16912:</b> Analysis of Factors Influencing ADS-B Program Success -Mr. Mark Lorenz, <i>Exelis</i>	<b>16856:</b> Linking Requirements Change to Project Performance -Ms. Sherrica Holloman, <i>Aerospace Corporation</i>	<b>17028:</b> Agility in Defense SE and Acquisition: Some Critical Success Factors -Dr. Barry Boehm, <i>USC</i>
<b>TRACK 4 M&amp;S - M&amp;S IN DECISION ANALYSIS</b>  <b>SINGLETON BALLROOM</b>	<b>16901:</b> Integration of Decision Analysis with the System Model Shows Value of SE with Reasonable, Defensible Actions -Mr. Richard Swanson, <i>DRC / Engility</i>	<b>16908:</b> A Modeling and Simulation Strategy for Uncertainty Reduction in System-of-Systems Engineering -Mr. Raymond Deiotte, <i>Innovative Support Services &amp; Consulting</i>	<b>16844:</b> Using Game Theory for Optimizing Trade Studies in Systems Engineering -Ms. Jennifer Mills, <i>NAVSEA</i>	
<b>TRACK 5 E&amp;T</b>  <b>MILLER BALLROOM</b>	<b>16952:</b> Developing the U.S. Department of Defense Engineering Workforce -Ms. Aileen Sedmak, <i>ODASD Systems Engineering</i>	<b>16995:</b> Autopsy of a Good Systems Engineer An Endangered Specie -Mr. Jimmy Thai, <i>SAIC</i>	<b>16920:</b> Struggles at the Frontiers of Workforce Development in the Acquisition and Development of Software Intensive Systems -Dr. Kenneth Nidiffer <i>Carnegie Mellon University</i>	<b>17037:</b> Open Systems Architecture and Intellectual Property Rights in ENG 301 -Mr. William Decker, <i>Defense Acquisition University</i>
<b>TRACK 6 ARCHITECTURE APPLICATIONS</b>  <b>VON STERNBERG BALLROOM</b>	<b>16775:</b> Model-Based System Engineering Applied to Program Oversight and Complex System of System Analysis -Dr. Jerry Couretas, <i>Booz Allen Hamilton</i>	<b>17006:</b> Test Perspectives for Architecture -Mr. Joe Manas, <i>Raytheon Company</i>	<b>16939:</b> A Technical Architecture for Arctic Security: How System Architecture Analysis Can Inform Gaps in Policy -Mr. Thomas McDermott, <i>Georgia Tech Research Institute</i>	<b>16845:</b> An Architecture for Agile Systems Engineering of Secure Commercial-off-the-shelf (COTS) Mobile Communications -Mr. Jamieson Gump, <i>The Johns Hopkins University Applied Physics Lab</i>

## Additional Authors

16775	Mr. John Daly		
16807	Mrs. Bengu Yapar		
16810	Ms. Yvonne Bijan	16902	Mr. Mike Sutton
16836	Mr. Steven Jones		Mr. David Bennett
	Dr. Pamela Burke		Mr. Craig Lawton
16838	Dr. Judith Dahmann	16906	Mr. Troy Peterson
	Mr. Tom Hannon		Ms. Christine Brennan
	Mr. Mark Anderson		Dr. Adam Porter
16841	Mr. Danny Allen		Mr. Rick Leathart
16844	Dr. Shahram Sarkani	16908	Mr. Michael O'Hare
	Dr. Thomas Mazzuchi	16909	Dr. Harry Crisp
16845	Dr. Thomas Mazzuchi		Dr. Franklin Grange
	Dr. Shahram Sarkani		Dr. Adam Porter
16846	Dr. Robert Cloutier		Dr. Douglas Schmidt
	Mr. Eirik Hole	16911	Mr. Michael O'Hare
	Dr. Gary Witus	16912	Dr. Harry Crisp
16849	Mr. Ron Sinyard	16918	Mr. Brian Womble
	Mr. Tom Economy		Mr. Glen Dyer
	Mr. Gary Hoehn	16923	Mr. Kristopher Strance
	Ms. Amber Wise		Mr. James Gaetjen
16850	Mr. Kirk Michealson		Ms. Dana Perriello
	Mr. Steve Notarnicola		Ms. Diane Mitchell
	Mr. Richard Null	16928	Dr. Christopher Best
	Mr. Robert Koury		Mr. Andrew Taylor
16857	Ms. Nicole Hutchison	16931	Mr. John Rosbrugh
	Mr. Carlo Lipizzi	16936	Mr. Eric Whittington
	Dr. Art Pyster		Mr. Steve Shyman
16865	Dr. Judith Dahmann		Mr. Darrell Phillipson
16867	Ms. Perri Nejib		Col Fred Baier, USAF
16873	Mr. Troy Peterson	16937	Mr. Nick Awwad
16874	Ms. Christie DaRosa		Dr. Thomas Christian
16877	Mr. Joseph Harrington		Mr. Blaine Laughlin
	Ms. Sarah Orr		Prof. Dimitri Mavris
16881	Dr. Kostas Triantis	16938	Mr. Eric Bolognini
16885	Ms. Lisa Marion	16939	Dr. Brian Chambers
	Ms. Patti Monell		Mr. Donald Wasserman
16889	Ms. Louise Anderson	16940	Dr. Tommer Ender
16890	Ms. Mary Beth Chipkevich	16945	Dr. Andy Register
16891	Mr. Rick Null		Mr. Mark Geiger
16896	Dr. Simon Goerger		Dr. Steven Bankes
	Mr. Christopher Gaughan		Dr. Barry Horowitz
	Mr. Eric Spero	16946	Dr. Marc Halpern
16898	Dr. Nancy Bucher		Mr. Michael O'Neal
	Dr. Ken LeSueur	16948	Dr. Kaushik Datta
		16950	Mr. Vince Castanza
			Mr. Thomas Olinger
			Mr. Thomas Hurt

## Additional Authors

16957	Ms. Laura Hinton Mr. Michael Willoughby	17022	Dr. Mitch Kokar Dr. Paul Work
16961	Mr. Pradeep Mendonza		Dr. Thomas Wood
16965	Mr. Ron O'Guin Ms. Amber Wise Mr. Gary Hoehn Mr. Steve Ford	17023	Dr. Thomas Mazzuchi
16967	Ms. Philomena Zimmerman	17026	Dr. Jo Ann Lane
16968	Ms. Philomena Zimmerman	17027	Mr. Frank Lacson Dr. Kevin Aeling
16973	Mr. Burt Grippin Mr. Brian Healy Ms. Oanh Tran Ms. Anita Zabek	17028	Dr. William Kosnik
16975	Mr. Alexander Gray Mr. Peter McCauley Mr. Jeffery Hough	17029	Dr. Richard Turner
16977	Mr. William Thacker	17033	Dr. Deepinder Sidhu
16978	Mr. Joseph Elm Dr. Dennis Goldenson	17036	Mr. David Cooper Dr. Greg Eakman
16979	Ms. Karen Gill	17032	Dr. Donald Ward Dr. Jeffrey Hensley
16980	Ms. Yvonne Pierce Mr. Jeffery Walker		Dr. Owen Eslinger
16981	Mr. Michael Coughenouir Mr. Jim Brake	17044	Mr. Martin Walsh Mr. Bruce Lewis
16985	Ms. Kritin Thompson	17048	Ms. Tamara Valinoto Mrs. Dawn January
16987	Ms. Karen Gill	17050	Ms. Stacy Dujardin Mr. Michael Curry
16988	Ms. Lucy Rodriguez		Mr. Alex Edsall
16989	Mr. Raymond Fischer Ms. Linda Byrnes	17051	Dr. Jennifer Manuse Dr. Adam Ross
16991	Mr. Jeff Walker		Mr. Wayne Smith
16993	Mr. Daniel McCarthy		
16997	Mr. Paul Popick Mr. JeanPaul LeSaint		
17001	Mr. Jeff Walker		
17002	Ms. Christen Burkeen		
17005	Ms. Beth Wilson Ms. Holly Dunlap		
17006	Ms. Beth Wilson Ms. Holly Dunlap		
17007	Mr. Kenneth Dormer		
17009	Ms. Beth Wilson Mr. Joe Manas		
17019	Dr. Matthew Risser		
17020	Dr. Daniel DeLaurentis Dr. Karen Marais		

### CONFERENCE DISPLAYERS:

- ▶ Dassault Systemes of America Corporation
- ▶ Jama Software
- ▶ Planate Management Group
- ▶ Georgia Tech Research Institute
- ▶ Strategy Bridge International, Inc.
- ▶ The Johns Hopkins University/Whiting School of Engineering
- ▶ Vitech Corporation
- ▶ Worcester Polytechnic Institute
- ▶ WPI: Systems & Cost Optimization
- ▶ Drexel University Online

# THANK YOU TO OUR 2014 CONFERENCE SPONSORS!

## GOLD SPONSOR

---

The Raytheon logo is displayed in a large, bold, red font. The word "Raytheon" is centered and has a slight shadow effect behind it.

Raytheon Company (NYSE: RTN), with 2013 sales of \$24 billion and 63,000 employees worldwide, is a technology and innovation leader specializing in defense, security and civil markets throughout the world. Raytheon is headquartered in Waltham, Mass.

## PATRIOT SPONSOR

---

