

Monday, 10 July

0700-0745

Speakers/Session Chairs' Breakfast

Sponsored by Northrop Grumman - ChampionsGate

0700-0800

Continental Breakfast - Foyer

0700-1700

Symposium Registration - Rotunda

0700-1800

Speaker Ready Room - Wentworth

0700-1900

Cyber Café *sponsored by Boeing - St. Andrew A*

0800-0945

Opening Plenary - National CD - See page 27

Vision for Space Exploration

James W. Kennedy, NASA Kennedy Space Center

0945-1000

Coffee Break - Foyer

0945-1715

Full Day Optional Tutorials (Ticket Required) - See page 29

Tutorial F01

Complete Picture to Model Complex Systems: What, When, How, and Why Model Systems

Jean-Philippe Lerat, SODIUS

Alain Faisandier, MAP système

Location: *Royal Melbourne A*

Tutorial F02

What You Will Need to Know About Chaos, Complexity, and Complex Adaptive Systems to do System Engineering Well into the 21st Century

Sarah Sheard, Third Millennium Systems, LLC

Location: *Royal Melbourne B*

1000-1200

SESSION 1: Technical Paper & Panel Tracks

See page 24

1000-1700

Academic Forum - sponsored by The Aerospace Corporation

ChampionsGate (Lobby Level) - See page 28

1000-2200

INCOSE Meetings - See INCOSE Business Meetings - pg 159

1200-1330

Lunch *sponsored by Pratt & Whitney Rocketdyne - Foyer*

Monday, 10 July *(continued)*

1330-1500

SESSION 2: Technical Paper Tracks

See page 25

1300-1700

Half-Day Optional Tutorials (*Ticket Required*) - See page 30

Tutorial H01 **Working Through the Tough Issues of Systems of Systems Planning, Estimating, and Execution**

Barry Boehm and Jo Ann Lane,
USC Center for Software Engineering

Location: *Royal Dublin A*

Tutorial H02 **Verifying Requirements**

David Gelperin, *ClearSpecs Enterprises*

Location: *Royal Dublin B*

1500-1530

Coffee Break - *Foyer*

1530-1700

SESSION 3: Technical Paper Tracks

See page 26

1800-2030

Exhibits Open

Ice Breaker Reception in Exhibit Hall

Technical Paper Matrix

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SESSION	ENABLER	APPLICATION SECTOR	PAPERS
1.1	Systems Science	Aerospace & Defense	4
1.2	S.E. Management Process	Emerging Technologies	2
		Multiple	2
1.3	S.E. Support Process	Enterprise	3
1.4	Modeling & Tools	Information Sciences	1
		Multiple	2
		Transportation	1
2.1	Systems Science	Consumer Goods	1
		Multiple	1
2.2	S.E. Technical Process	Emerging Technologies	3
2.3	S.E. Management	Enterprise	3
2.4	S.E. Support Process	Multiple	2
3.1	Modeling & Tools	Aerospace & Defense	3
3.2	Specialty Engineering	Enterprise	1
		Multiple	1
3.3	Systems Science	Emerging Technologies	3
3.4	S.E. Technical Process	Enterprise	3

Session Chair:	1.1 Systems Science <i>M. Forkosh</i>	1.2 SE Management Process <i>A. El-Fatraty</i>	1.3 SE Support Process <i>E. Arnold</i>	1.4 Modeling & Tools <i>J. Hofmeister</i>	1.5 PANEL <i>Moderator: W. Mackey</i>	1.6 PANEL <i>Moderator: D. Kemp</i>
1000-1025	1.1.1 START Analysis for ESAS Capability Needs Prioritization W. P. Lincoln, J. Mroczinski, H. Hsu, S. Merida, K. Shelton, V. Adumitroaie, C.R. Weiskin, J. Derteth <i>Jet Propulsion Laboratory</i>	1.2.1 A Requirements Guide for All (REGAL) J. Dick, INTEGRATE Systems Engineering; G. Fanmy, PSA Peugeot Citroën; L-H Thevenel, <i>Université de Paris 1</i>	1.3.1 Quantifying the Benefit of Introducing Systems Engineering Processes - Myth or Reality? E. Knippel, BMW AG; A. Schulz, <i>3D Systems Engineering GmbH</i>	1.4.1 Using the Knowledge Pyramid to Characterize Systems J. N. Martin, The Aerospace Corporation	1.5.0 Are Natural Disasters Similar or Dissimilar to Terrorist Attacks? Panelists: S. Sutton, Northrop Grumman TASC J. Long, Vitech Corp. J. Carl, Retired J.P. Lerat, SODIUS S. Jackson, Boeing C. Tulodteski, Northrop Grumman	1.6.0 Different Approaches to Realising Net-Centric Solutions Panelists: F. Stein, MITRE J. Hsu, Boeing K. Geist, NAVAIR J.D. Stanley, Cisco Company S. Stroembaeck, Swedish Defence Material Agency, FMV C. Dagli, University of Missouri-Rolla
1030-1055	1.1.2 Defining the "Trade Space" for CNV Optimization Using a Cost Model Derived from Linear Regression of NASA Project Data J. F. Krupa, Westinghouse Savannah River Company P.J. Compton, University of Alabama at Huntsville	1.2.2 Enhancing SE Deployment in Large Organisations by Proactively Managing Service Quality of SE Training and Support Services M. E. Kossmann, AIRBUS UK	1.3.2 Context Based Measurement of Requirements Instability M. A. Biddle, S. J. Moritz, SAIC	1.4.2 An Approach to Simulation Effectiveness D. P. Goncalves, CSIR		
1100-1125	1.1.3 Part Count and Design of Robust Systems D. Frey, MIT; J. Palladino <i>General Electric Aircraft Engines;</i> J. Sullivan, Pratt & Whitney; M. Atherton, Rolls-Royce International Limited	1.2.3 Role of Flow-Down Approach and Orthogonal Arrays in System Design and Testing R. Jugulum, J. Singh, MIT	1.3.3 On the Alignment between System Architectures and Organizational Structures T. Strandberg, D. Verma, <i>Stevens Institute of Technology;</i> H. Burton, Madera Consulting	1.4.3 Cross Cutting Concerns and Ergonomic Profiling Using UML/SysML M. C. House, Artisan Software Tools, Ltd		
1130-1155	1.1.4 Joint Cognitive Systems: Considering the User and Technology as One System B. P. McKenna, J. W. Gualtieri, W. Elm, ManTech - CSEC	1.2.4 How Do We Win This Game When the Rules Keep Changing? A Case for the Increased Application of Design for Six Sigma in Systems Engineering M. A. Maderich, D. G. Cleotils, Raytheon Network Centric Systems	1.4.4 Introducing Structured Information Handling in Automotive EE Development D. Malvius, O. Redell, S. Ritzén, <i>Royal Institute of Technology, KTH</i>			

Session Chair:	2.1 Systems Science	2.2 SE Technical Process	2.3 SE Management Process	2.4 SE Support Process
1330-1355	<p>2.1.1 Feelings and Physics: Emotional, Psychological, and Other Soft Human Requirements, by Model-Based Systems Engineering W. D. Schindele, <i>ICTT, Inc. and System Sciences, LLC</i></p>	<p>2.2.1 Test Time Reduction by Optimal Test Sequencing R. Boumen, <i>ISM . de Jong, J.E. Rooda, A. van de Mortel-Fronczak Technische Universiteit Eindhoven</i></p>	<p>2.3.1 A Practical Program of Research to Measure Systems Engineering Return on Investment (SE-ROI) E. C. Honour, <i>University of South Australia</i></p>	<p>2.4.1 Evolution of a Standard - EIA-632 From 1994 to 2006 R. M. Harwell, <i>SYSTEM Perspectives</i> * * *</p>
1400-1425	<p>2.1.2 Designing Systems for Adaptability by Means of Architecture Options A. Engel, <i>Israel Aircraft Industries; T. R. Browning, Texas Christian University</i></p>	<p>2.2.2 Integration and Test Strategies for Semiconductor Manufacturing Equipment ISM de Jong, <i>ASML and Technische Universiteit Eindhoven</i> R. Boumen, <i>J.E. Rooda, J.M. van de Mortel-Fronczak, Technische Universiteit Eindhoven</i></p>	<p>2.3.2 Towards a Work Breakdown Structure for Net Centric System of Systems Engineering and Management G. Wang, <i>BAE Systems; J. Lane, B. Boehm, USC; R. Valerdi, MIT</i></p>	<p>2.4.2 A Proposed Paper Template for Improving the Quality of Practitioner Written Papers at Conferences and Symposia J. E. Kasser, <i>Systems Engineering and Evaluation Centre</i></p>
1430-1455	<p>2.2.3 Directed Energy Weapon System Architecture to Meet Network Centric Operations Requirements P. R. Marbach, <i>The Boeing Company</i></p>	<p>2.3.3 Uniting Three Families of Risk Management—Complexity of Implementation x 3 T. H. Holzer, <i>National Geospatial-Intelligence Agency</i></p>		

National A

National B

National C

National D

Session Chair:	3.1 Modeling & Tools <i>M. Sampson</i>	3.2 Specialty Engineering <i>M. Mull</i>	3.3 Systems Science <i>A. El-Fatry</i>	3.4 SE Technical Process <i>E. Aslaksen</i>
1530-1555	3.1.1 COCOMO-SCORM Interactive Courseware Project Cost Modeling R. Smith, L. Edwards, SPARTA Inc.	3.2.1 Corporate Social Responsibility(CSR)-the System Perspective & the Systems Engineering Role A. Zonnenstein, RAFAEL	3.3.1 Network Centric Operation Implementations in Several Domains C. Adler, The Boeing Company; C. Dagli, University of Missouri-Rolla	3.4.1 Technology and Obsolescence Sustainment for Integrated Systems T. E. Herald, D. J. Genow, Lockheed Martin
1600-1625	3.1.2 Human Performance Modeling for Enterprise Transformation G. Lintern, General Dynamics-AIS	3.2.2 Cost as an Independent Variable Balancing Performance with Affordability E. J. Casey, D. M. Allen, Raytheon Missile Systems	3.3.2 How Should We Use the Term "System of Systems" and Why Should We Care? D. T. Cocks, Lockheed Martin - MS2	3.4.2 Capability Engineering for Strategic Decision Making M. Lizotte, C. Nécaille, C. Lalancette, Defence R&D Canada - Valcartier
1630-1655	3.1.3 Strategy For the Composition and Development of the Authoritative System Representation (ASR) R. Clayton, Booz Allen Hamilton		3.3.3 A Novel Modeling Approach Enhancing Classic Scenario Generation Techniques S. J. Eelman, S. Föllner, Technical University of Munich	3.4.3 Systems Engineering Network Solutions: An Analysis of Different Perspectives D. H. Kemp, G. Crosby, D. Snell, UK Ministry of Defence