

IS2019 Schedule

Saturday at IS 2019

Start time	End time		Track 1 Grand Cypress Ballroom C	Track 2 Grand Cypress Ballroom GH	Track 3 Magniola BC	Track 4 Palm AB	Track 5 Grand Cypress Ballroom I
08:00	09:30	Session A	A.1 / Getting Ready for Industry 4.0 and IoT with Model-Based Systems Engineering Dov Dori (Technion, Israel & MIT, USA)	A.2 / Correcting Misperceptions of Systems Engineering Practices Ronald Carson (Seattle Pacific University)	A.3 / Introduction to Systems Security Engineering Mark Winstead, Michael McEvilly, Daryl Hild (The MITRE Corporation)	A.4 / Why the SEMP is not Shelfware: How to write a SEMP to ensure it delivers value to all. Ian Presland (Charterhouse Systems Ltd.); Becky Reed (Reed Integration Inc.)	A.5 / Developing Verification Requirements to Assure Project Success Mark Powell (Attwater Consulting)
09:30	10:00	Break	Break				
10:00	12:00	Session B	A.1 / Getting Ready for Industry 4.0 and IoT with Model-Based Systems Engineering Dov Dori (Technion, Israel & MIT, USA)	A.2 / Correcting Misperceptions of Systems Engineering Practices Ronald Carson (Seattle Pacific University)	A.3 / Introduction to Systems Security Engineering Mark Winstead, Michael McEvilly, Daryl Hild (The MITRE Corporation)	A.4 / Why the SEMP is not Shelfware: How to write a SEMP to ensure it delivers value to all. Ian Presland (Charterhouse Systems Ltd.); Becky Reed (Reed Integration Inc.)	A.5 / Developing Verification Requirements to Assure Project Success Mark Powell (Attwater Consulting)
12:00	13:30	Lunch	Lunch				
13:30	15:00	Session C	A.1 / Getting Ready for Industry 4.0 and IoT with Model-Based Systems Engineering Dov Dori (Technion, Israel & MIT, USA)	C.2 / Systems Engineering MBSE implementation in your organization Mark Sampson (Siemens)	A.3 / Introduction to Systems Security Engineering Mark Winstead, Michael McEvilly, Daryl Hild (The MITRE Corporation)	C.4 / A Practical Guide to Determine the Readiness of Systems - Innovative Methods, Metrics and Tools for the Systems Engineer Donald York (Engility Corp.)	A.5 / Developing Verification Requirements to Assure Project Success Mark Powell (Attwater Consulting)
15:00	15:30	Break	Break				
15:30	17:00	Session D	A.1 / Getting Ready for Industry 4.0 and IoT with Model-Based Systems Engineering Dov Dori (Technion, Israel & MIT, USA)	C.2 / Systems Engineering MBSE implementation in your organization Mark Sampson (Siemens)	A.3 / Introduction to Systems Security Engineering Mark Winstead, Michael McEvilly, Daryl Hild (The MITRE Corporation)	C.4 / A Practical Guide to Determine the Readiness of Systems - Innovative Methods, Metrics and Tools for the Systems Engineer Donald York (Engility Corp.)	A.5 / Developing Verification Requirements to Assure Project Success Mark Powell (Attwater Consulting)
19:00	22:00		Corporate Advisory Board Dinner (By invitation only)				

Sunday at IS 2019

Start time	End time		Track 1 Palm AB	Track 2 Palm DE	Track 3 Grand Cypress Ballroom GH	Track 4 Magniola BC	Track 5 Grand Cypress Ballroom I
08:00	09:30	Session E	E.1 / Back to Basics: Fundamentals for Systems Engineering Success David Long, Zane Scott (Vitech Corporation)	E.2 / Master your Product Lines and yield greater benefits through an integrated Model-Based Product Line Systems Engineering approach Hugo Guillermo Chalé Gongora, Stephane Bonnet, Juan Navas (Thales)	E.3 / Quantitative Risk Assessment Mark Powell (Attwater Consulting)	E.4 / The power of influence - how to lead without authority Jennifer Nash Phd (Nash Consulting & Associates)	E.5 / Overview of the INCOSE SE Handbook Version 4.0 John Clark (Old Dominion University)
09:30	10:00	Break	Break				
10:00	12:00	Session F	E.1 / Back to Basics: Fundamentals for Systems Engineering Success David Long, Zane Scott (Vitech Corporation)	E.2 / Master your Product Lines and yield greater benefits through an integrated Model-Based Product Line Systems Engineering approach Hugo Guillermo Chalé Gongora, Stephane Bonnet, Juan Navas (Thales)	E.3 / Quantitative Risk Assessment Mark Powell (Attwater Consulting)	E.4 / The power of influence - how to lead without authority Jennifer Nash Phd (Nash Consulting & Associates)	E.5 / Overview of the INCOSE SE Handbook Version 4.0 John Clark (Old Dominion University)
12:00	13:30	Lunch	Lunch				
13:30	15:00	Session G	G.1 / Inserting Systems Engineering into a Resistant Organization David Walden (Sysnovation, LLC)	E.2 / Master your Product Lines and yield greater benefits through an integrated Model-Based Product Line Systems Engineering approach Hugo Guillermo Chalé Gongora, Stephane Bonnet, Juan Navas (Thales)	G.3 / Tactical Strategies for Overcoming Systems Engineering Dysfunction Heidi Davidz (Aerojet Rocketdyne); Eileen Arnold (ConsideredThoughtfully.com); Dale Thomas (University of Alabama in Huntsville)	E.4 / The power of influence - how to lead without authority Jennifer Nash Phd (Nash Consulting & Associates)	E.5 / Overview of the INCOSE SE Handbook Version 4.0 John Clark (Old Dominion University)
15:00	15:30	Break	Break				
15:30	17:00	Session H	G.1 / Inserting Systems Engineering into a Resistant Organization David Walden (Sysnovation, LLC)	E.2 / Master your Product Lines and yield greater benefits through an integrated Model-Based Product Line Systems Engineering approach Hugo Guillermo Chalé Gongora, Stephane Bonnet, Juan Navas (Thales)	G.3 / Tactical Strategies for Overcoming Systems Engineering Dysfunction Heidi Davidz (Aerojet Rocketdyne); Eileen Arnold (ConsideredThoughtfully.com); Dale Thomas (University of Alabama in Huntsville)	E.4 / The power of influence - how to lead without authority Jennifer Nash Phd (Nash Consulting & Associates)	E.5 / Overview of the INCOSE SE Handbook Version 4.0 John Clark (Old Dominion University)

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Monday at IS 2019

Start time	End time		Track 1 Grand Cypress Ballroom DEF	Track 2 Grand Cypress Ballroom GH	Track 3 Grand Cypress Ballroom I	Track 4 Grand Cypress Ballroom A	Track 5 Grand Cypress Ballroom B	Track 6 Grand Cypress Ballroom C	Track 7 Poinciana	Track 8 Regency 6	Track 9 Regency 5
08:00	09:30	Opening Plenary	P1 / Interdisciplinary Systems Engineering inspired by da Vinci - Dr Wanda Austin (President, University of Southern California)								
09:30	10:00	Break	Break & Select Poster will be Presented – See Posters for Presentation Day (Exhibit Hall)								
	10:00	Session 1	MBSE: problem Framing/Ontology	SE Grand Challenges	Energy 1		Agile Systems Engineering	TechOps Invited Content	SE Fundamental Session	Sponsors/Exhibitors Track	Sponsors/Exhibitors Track
			1.1.1 / Problem Framing: Identifying the Right Models for the Job James Martin (Aerospace Corporation)	1.2 / Embarking on a Grand Challenge Kerry Lunney (Thales Group); Serge Landry (Anacle Systems); Patrick Godfrey (Systems Thinking); Michael Pennotti (Stevens Institute of Technology); Hillary Sillitto	1.3.1 / Improving the information transfer between engineering and installation; case study at AS Nymo Erik Thygesen (AS Nymo); Gerrit Muller, Satyanarayana Kokkula (University of South-Eastern Norway)	1.4 / 50 years ago we went to the moon; where have we been since? Hazel Woodcock (IBM); Christopher Hoffman (Cummins Inc); Amy Silberbauer (IBM); Barclay Brown (Raytheon); Larry Kennedy (Quality Management Institute)	1.5.1 / Agile Systems Engineering Life Cycle Model for Mixed Discipline Engineering Rick Dove (Paradigm Shift International); Bill Schindel (ICTT System Sciences)	1.6.1 / The Systems Engineering Competency Framework Cliff Whitcomb, Lori Zipes	1.7.1 / Systems Engineering Complexity in Context Sarah Sheard (Carnegie Mellon University Software Engineering Institute)	1.8.1 / Innoslate The Future of MBSE Dr. Steven Dam (SPEC Innovations)	1.9.1 / Polytechnic University STEM Luis Javier Delgado (Polytechnic University of Puerto Rico)
			1.1.2 / Approach to structure, formalize and map MBSE meta-models and semantic rules. Jean Duprez (Airbus Operations SAS)		1.3.2 / Integrating Program/Project Management and Systems Engineering in Practice Heidi Hahn (Los Alamos National Laboratory); Ann Hodges (Sandia National Laboratories)		1.5.2 / Implementing systems engineering and project management processes in a Canadian company – Overview and Results Achieved Jamil Menaceur (CSiT); Nicolas Tremblay, Claude Laporte (École de technologie supérieure); Denis Poliquin (CSiT)	1.6.2 / What makes a competent System of Systems engineer? Alan Harding, Beth Wilson	1.7.2 / What is Systems Thinking and how do I do it? Duncan Kemp (UK Ministry of Defence)	1.8.2 / An Excel-based Systems-Engineering Tool for Knowledge Sharing and Collaboration across the Enterprise Paul Goossens, Hisashi Miyashita (Maplesoft)	1.9.2 / Why Systems Engineering Is Too Important to be Left To The Systems Engineers Scott. A Fiore (Raytheon Missile Systems)
			1.1.3 / An Evaluation Ontology Applied to Connected Vehicle Security Assurance Stephen Powley (Coventry University); Simon Perry (Scarecrow Consultants Ltd.); Jeremy Bryans (Coventry University); Jon Holt (Scarecrow Consultants Ltd.)		1.3.3 / Modeling and Optimization of Interconnected Systems to Improve Economic and Sustainability Considerations: Applications to Energy Systems and Process Operations Ali Elkamel (Khalifa University of Science & Technology)		1.5.3 / Managing Complexity with Agility and Openness Larri Rosser (Raytheon)	1.6.3 / Systems Engineering: Cracking the Code of Digital Transformation Troy Pedersen	1.7.3 / Framing (and modeling) the Problem: Eliciting needs and deriving requirements Alejandro Salado (Virginia Tech)	1.8.3 / Engineering Collaboration and Tool Interoperability in MBSE Christoph Bergner (MID AG)	
12:10	13:30	Lunch	Lunch & 12:30-13:30 Select Poster will be Presented – See Posters for Presentation Day (Exhibit Hall)								
12:15	13:15		Welcome Lunch for New Members and First-Time Delegates								
13:30	14:55	Session 2	Safety: Model-Based 0	SE Professional Development	Energy 2			TechOps Invited Content	SE Fundamental Session	Sponsors/Exhibitors Track	Sponsors/Exhibitors Track
			2.1.1 / Use of SysML for the creation of FMEAs for Reliability, Safety, and Cybersecurity for Critical Infrastructure David Baum, Myron Hecht (Aerospace Corp.)	2.2 / Professional Development for Systems Engineers; Evolving today's engineers to meet society's changing needs Don Gelosh (Worcester Polytechnic); Serge Landry (Anacle Systems); Ed Moshinsky (Lockheed Martin); Nicole Hutchison (Stevens Institute); Duncan Kemp (UK MoD)	2.3.1 / Meeting the Challenge of Tomorrow Zane Scott (Vitech Corporation)	2.4 / Social Systems-Where Are We and Where Do We Dare to Go? Ian Presland (Charterhouse Systems); Erika Palmer (Ruralis-Institute for Rural and Regional Research); Donna Rhodes (Massachusetts Institute of Technology); Cecilia Haskins (Norwegian University of Science and Technology); Christopher Glazner (MITRE Corporation); Camilo Olaya (Universidad de los Andes)	2.5 / Improving our Definitions of System and Systems Engineering Patrick Godfrey (Systems-Thinking); Dorothy McKinney, Hillary Sillitto	2.6.1 / From Apollo to the Space Shuttle and All Industries: The Trace-Elements of the Transformation of Systems Engineering Dr. Larry Kennedy (CEO Quality Management Institute, Co-Founder Systems Engineering Quality Management Working Group)	2.7.1 / An Approach for Implementing MBSE in Aerospace Organizations Chris Schreiber (Lockheed Martin Space)	2.8.1 / True North Enterprise Calibration - Empowering and Enabling your Digital DNA Todd Egan (Institute for Process Excellence)	2.9.1 / How AI contributes to improved quality, efficient resource use and time to market of requirements creation. Stella Liu (Watson IoT, IBM)
			2.1.2 / OMG standard for integrating safety and reliability analysis into MBSE: Concepts and applications Geoffrey Biggs (National Institute of Advanced Industrial Science and Technology (AIST)); Andrius Armonas, Tomas Juknevicius (No Magic Europe); Kyle Post (Ford Motor Company); Nataliya Yakymets (CEA LIST LECS); Axel Berres (German Aerospace Center)		2.3.2 / Using Systems Theoretic Perspectives for Risk-Informed Cyber Hazard Analysis in Nuclear Power Facilities Adam Williams, Andrew Clark (Sandia National Laboratories)					2.7.2 / Introduction to Systems of Systems Mike Ryan (University of New South Wales)	2.8.2 / Eight Practices for Building Really Big Systems using Lean-Agile and SAFE Agile Harry Koehnemann (Scaled Agile Inc.)
14:55	15:30	Break	Break & Select Poster will be Presented – See Posters for Presentation Day (Exhibit Hall)								
15:30	16:55	Session 3	Code Generation 0	Enterprise SE	Energy 2	Social systems	SE and System Definitions	TechOps Invited Content	SE Fundamental Session	Sponsors/Exhibitors Track	Sponsors/Exhibitors Track
			3.1.1 / General Modeling Language for Supporting Model-based Systems Engineering Formalisms (Part 1) Lu Jinzhi (KTH Royal Institute of Technology); Guoxin Wang, Jiangmin Guo, Hongwei Wang (Beijing Institute of Technology); Hang Zhang (Beijing ZK Fengchao Tech. Co. Ltd.); Martin Torngren (KTH Royal Institute of Technology)	3.2.1 / Top 10 Ways Engineers Undermine Their Own Success Sean McCoy (Trane/Ingersoll Rand)	3.3.1 / Health Impact Assessment of Subcritical Pulverized Coal Fired Power Plants in Luzon Using Life Cycle Assessment Marvin Laguerta, Mili-Ann Tamayao (University of the Philippines Diliman)	2.4 / Social Systems-Where Are We and Where Do We Dare to Go? Ian Presland (Charterhouse Systems); Erika Palmer (Ruralis-Institute for Rural and Regional Research); Donna Rhodes (Massachusetts Institute of Technology); Cecilia Haskins (Norwegian University of Science and Technology); Christopher Glazner (MITRE Corporation); Camilo Olaya (Universidad de los Andes)	3.5 / Beyond Space and Weapons: System Engineering in the Commercial Enterprise David Long, Alejandro Salado, Patrick Godfrey, Kerry Lunney, Zane Scott (Vitech Corporation)	3.6 / PM-SE Integration Workshop Tina Srivastava, Randy Iliff	3.7.1 / Being Agile: Systems Engineering for Continuous Lifecycles Tom McDermott (Stevens Institute of Technology)	3.8.1 / Increasing Engineering Competitiveness with PLE & MBSE Robert Hellebrand (pure-systems GmbH)	
			3.1.2 / General Modeling Language Supporting Architecture-driven and Code-generation of MBSE (Part 2) Lu Jinzhi (KTH Royal Institute of Technology); Guoxin Wang, Jiangmin Guo (Beijing Institute of Technology); Hang Zhang (Beijing ZK Fengchao Tech. Co. Ltd.); Shengnan Sun (Shanghai Jiao Tong University)	3.2.2 / Women in Engineering – Not a Damsel in Distress! Adriana D'Souza (Airbus); Alan Harding (BAE Systems – Air); Angelika Spängler (Airbus); Anne Pickard (Retired); Andrew Pickard (Rolls-Royce)		3.4.2 / Encoding Technique of Genetic Algorithms for Block Definition Diagram using OMG SysML™ Notations Habibi Husain Arifin (MBSE Consultant); Ho Kit Robert Ong (Dassault Systèmes); Jirapun Daengdej (Assumption University of Thailand); Dianing Novita (Universitas Trisakti)			3.7.2 / How to talk about SE without scaring people Courtney Wright (V1 Decisions)		
17:00	18:00		Working Group Sessions								
18:00	19:30		Ice Breaker Reception (Exhibit Hall)								

IS2019 Schedule

Tuesday at IS 2019

Start time	End time	Activity	Track 1 Grand Cypress Ballroom DEF	Track 2 Grand Cypress Ballroom GH	Track 3 Grand Cypress Ballroom I	Track 4 Grand Cypress Ballroom A	Track 5 Grand Cypress Ballroom B	Track 6 Grand Cypress Ballroom C	Track 8 Regency 6	Track 9 Regency 5
08:00	09:30	Tuesday Plenary	P2 / Biomimicry - A Bioinspired approach to Systems Thinking - Prashant Dhawan (Co-Founder, Biomimicry India)							
09:30	10:00	Break	Break & Select Poster will be Presented – See Posters for Presentation Day (Exhibit Hall)							
10:00	12:10	Session 4	Requirements 1	Defense	System Thinking 1	Verification/Validation 1			Sponsors/Exhibitors Track	Sponsors/Exhibitors Track
			4.1.1 / Optimizing the Requirement Engineering Process: A Case Study of I/O List Management in Integrated Automation Systems Yangyang Zhao (University of Oslo); Snorre Kløcker (University of Southeast Norway)	4.2.1 / Systems Engineering--Software Engineering Interface for Cyber-Physical Systems Sarah Sheard, Mike Phillips (CMU Software Engineering Institute); Michael E. Pafford (Johns Hopkins University Whiting School of Engineering)	4.3.1 / Professional Competencies - The Soft Skills to give Systems Engineers a Hard Edge Richard Beasley (Rolls-Royce); Donald Gelosh (Worcester Polytechnic Institute); Andrew Pickard (Rolls-Royce)	4.4.1 / Solution Validation and Customer Needs Understanding in the Early Phases of Product Platform Development; a Case Study in Digital Manufacturing Machines Gerrit Muller (University of South-Eastern Norway); Simon Kvanvik, Lidvar Budal (Esko)	4.5 / How Essential are Cognitive Flexibility and Cognitive Diversity to Developing Effective World-Wide Sustainable System Solutions? Bill Parkins (SESA, Rockwell Collins (RET'D)); Lisa Hoverman (lisa@hsmcgroup.biz); Hazel Woodcock (IBM); Alice Squires (Washington State University); Emmet Eckman Iii (Northrop Grumman); Eric Specking (University of Arkansas)	4.6 / Set-Based Design Gregory Parnell (University of Arkansas); Dennis Buede (Innovative Decisions Inc.); William Miller (Steven Institute of Technology); Robert Borderly (University of Michigan); Ed Pohl (University of Arkansas); Simon Goerger (Engineering Research and Development Center)	4.8.1 / Syndeia: Building the Digital Thread Dirk Zwemer (InterCax)	4.9.1 / Education that fits – Systems Engineering Sylvia Skouby , Cihan H. Dagli, PhD (Missouri S&T)
			4.1.2 / Using Set-Based Design to Inform System Requirements and Evaluate Design Decisions Eric Specking (Univeristy of Arkansas); Gregory Parnell (University of Arkansas); Simon Goerger (Engineer Research and Development Center); Mathew Cilli (US Army ARDEC); Ed Pohl (University of Arkansas)	4.2.2 / Applying Feature-Based Systems and Software Product Line Engineering in Unclassified and Classified Environments Jim Teaff, Bobbi Young (Raytheon); Paul Clements (BigLever Software, Inc.)	4.3.2 / A Subjective Toolbox for Sociotechnical Systems Kevin Devaney (SRC, Inc. / INCOSE Finger Lakes Chapter)	4.4.2 / A Concept for Set-based Design of Verification Strategies Peng Xu, Alejandro Salado (Virginia Tech)			4.8.2 / Proposed Master of Science in Systems Engineering Leadership Donald Gelosh (Worcester Polytechnic Institute)	4.9.2 / ClearObject
			4.1.3 / Information-based Requirement Development & Management Mike Ryan (The University of New South Wales); Juan Llorens (Universidad Carlos III de Madrid); Louis Wheatcraft (Requirements Experts/Seilevel); Jeremy Dick (SyntheSys System Engineers Ltd.)	4.2.3 / Inclusion of human values in the specification of systems: bridging design and systems engineering Kristin Falk, Marianne Kjørstad (University of South-Eastern Norway); José Pinto (University Of Lapland)	4.3.3 / The Application of Systemic Thinking to Understanding the Interoperability Challenges of Integrated Live Virtual & Constructive Training Jawahar Bhalla (CAE Australia)	4.4.3 / Boosting Reuse and Quality in the engineering process: revamping Product Lines Jose María Alvarez Rodríguez (Carlos III University of Madrid); Elena Gallego (The Reuse Company)			4.8.3 / Advancing MBSE for Government Applications and Facilitating Collaboration with Industry and Academia Ryan Noguchi, Marilee Wheaton (The Aerospace Corporation)	
12:10	13:30	Lunch	Lunch & 12:30-13:30 Select Poster will be Presented – See Posters for Presentation Day (Exhibit Hall)							
13:30	14:55	Session 5	Requirements 2	Biomed/Healthcare/Social Services 1	System Thinking 2	Verification/Validation 2	Complexity 1		Sponsors/Exhibitors Track	Sponsors/Exhibitors Track
			5.1.1 / Addressing Uncertain Requirements Robert Bordley (University of Michigan); Jeff Keisler (University of Massachusetts); Tom Logan (University of Michigan)	5.2.1 / A Systems Approach to Technology Development Mike Celentano (Eli Lilly & Co)	5.3.1 / An SSM-TRIZ Methodology for Business Problem Structuring Ibukun Phillips, C. Robert Kenley (Purdue University)	5.4.1 / Applying Model Based Systems Engineering to Reduce Weapon System Development Cycle Time Mary Compton, Marissa Conroy, Arno Granados, Evan Richardson (Sandia National Laboratories)	5.5.1 / Famous Failures Revisited: A Focus on System Integration James Armstrong (Stevens Institute of Technology)		5.8.1 / A journey in the Arcadia-Capella model-based engineering tool Stephane Bonnet (Capella)	5.9.1 / Integrating MBSE and ISO 26262 Functional Safety Analysis Andrius Armonas (No Magic / Dassault Systemes)
14:55	15:30	Session 6	5.1.2 / Requirements Efficiency: Questionnaire Results Celeste Drewien, Raymond Wolfgang, Cheryl Bolstad (Sandia National Labs)	5.2.2 / Using the Model-Based System Architecture Process (MBSAP) for Utilization Management in Outpatient Imaging Jill Speece (Colorado State University)	5.3.2 / Systems engineering and complex systems governance - Lessons for better integration Charles Keating (Old Dominion University); Joseph Bradley (Leading Change, LLC); Richard Hodge (DrRichardHodge.com); Stephen Craig (Stephen Craig Consulting)	5.4.2 / The Future of Assurance and Certification of Cyber-Physical Systems exists today: the AMASS platform. Jose María Alvarez Rodríguez, Jose Luis de la Vara (Carlos III University of Madrid); Luis Alonso (The Reuse Company)	5.5.2 / Appreciative Methods Applied to the Assessment of Complex Systems John MacCarthy (University of Maryland); Michael Watson (NASA); Dorothy Mckinney (Considered Thoughtfully, Inc.); Randall Anway (New Tapestry, LLC); Larri Ann Rosser (Raytheon)			5.9.2 / Lifecycle Engineering for AI Tim Walden
			Break & Select Poster will be Presented – See Posters for Presentation Day (Exhibit Hall)							
			Acquisition	Human-Systems Integration	System Thinking 3	Verification/Validation 3	Complexity 2	MBSE Lightning Round	Sponsors/Exhibitors Track	Sponsors/Exhibitors Track
15:30	16:55	Session 6								
			6.1.1 / Doing Things Better, Doing Things Differently, Doing Different Things Ian Gibson (Atkins)	6.2.1 / A Systems Engineering Approach for Cancer Control Guru Madhavan, Francis Amankwah (National); William Rouse (Stevens Institute of Technology); Michael Johns (Emory University School of Medicine and School of Public Health)	6.3.1 / Manufacturer to Industry Partner: A review of the Inauguration of Systems Engineering within an Organization Julianne Alexander (Great Plains Chapter)	6.4.1 / Eliciting Human Values by Applying Design Thinking Techniques in Systems Engineering Nina Marie Sjoekvist (Semcon Devotek AS); Marianne Kjoerstad (University of South-Eastern Norway)	6.5.1 / Systems Engineering: Transforming Digital Transformation Troy Peterson (SSI)	6.6.1 / MBSE Lightning Round - Introduction Mark Sampson, Troy A. Peterson 6.6.2 / Using System Architecture Models to Populate Structured Requirements Ron Carson (Seattle Pacific University)	6.8.1 / Increase the supply chain quality through a knowledge-based approach Elena Gallego, Christer Fröling, José Fuentes (The REUSE Company)	
			6.1.2 / Systems Engineering on Legacy Systems Paul White (KIHOMAC)	6.2.2 / The Systems Engineering Advisor - Exploring Augmented Intelligence for SE Tom Mcdermott (Stevens Institute of Technology); Thomas Shortell, John Artus (Lockheed Martin)	6.3.2 / MBSE 2.0- The Next Steps for MBSE Zane Scott, David Long (Vitech Corporation)	6.4.2 / A practical study on how proactive quality approach can improve system development process to ensure system-effectiveness and -performance Haokar Aziz, Rolf Qvenhild, Kristin Falk (University College of Southeast Norway)	6.5.2 / Projects as Interventions in Infrastructure Systems-of-Systems Jennifer Whyte (Imperial College London); John Fitzgerald (Newcastle University); Martin Mayfield, Dan Coca (The University of Sheffield); Ken Pierce (Newcastle University); Nilay Shah (Imperial College London)	6.6.3 / Using the Viable System Model to Focus on the Human Aspects of Problems. Bob Kenley (Purdue's School of Industrial Engineering) 6.6.4 / MBSE—a Major Force for Enabling Digital Enterprises Heinz Stoewer (Airbus) 6.6.5 / Enhancing the Value of Architecture Models James Martin (the Aerospace Corporation)	6.8.2 / The role of AI and Simulation in Model Based Systems Engineering when implementing a Digital Twin Graham Bleakley (IBM)	6.9.2 / UConn UTC Graduate Education Programs in Advanced Systems Engineering Amy Thompson, George Bollas (University of Connecticut UTC Institute for Advanced Systems Engineering)
17:00	18:00		The Exhibitors' Reception (Exhibit Hall)							
18:00	19:00		Certification Reception (ASEP, CSEP, ESEP only)							

IS2019 Schedule

08:00	09:30	Wednesday Plenary	P3 / To the Stars. The Sky Is No Longer the Limit - Capt. Winston Scott (Director, Environmental, Tectonics Corporation)							
09:30	10:00	Break	Break & Select Poster will be Presented – See Posters for Presentation Day (Exhibit Hall)							
10:00	12:10	Session 7	Machine Learning/Artifical Intelligence 1	Enterprise SE	System Science	Academia 2			Sponsors/Exhibitors Track	Sponsors/Exhibitors Track
			7.1.1 / Implementing Augmented Intelligence In Systems Engineering Mark Petrotta, Troy Peterson (SSI)	7.2.1 / 12 principles for SE leaders Duncan Kemp (Ministry of Defence); Meaghan Oneil (INCOSE)		7.4.1 / Emerging Education Challenges for Resilient Cyber Physical Systems Tom McDermott (Stevens Institute of Technology)	7.5 / Application of Systems Engineering in Submarine Programs Quoc Do (Frazer Nash Cpnslutancy (Australia)); Andrew Smith (Future Submarine Program, Depart of Defence); Terje Fossnes (Norwegian Navy); Olivier Dessoude (Naval Group (France)); Joseph Bradley (Patrona Corp.)	7.6 / Implementing Systems Engineering in Early Stage Research & Development Projects Gina Guillame-Joseph (MITRE Corp.); Heidi Hahn (Los Alamos National Laboratory); Ann Hodges (Sandia National Laboratories); Mitchell Kerman (Idaho National Laboratory); Nick Lombardo (Pacific Northwest National Laboratory)	7.8.1 / MBSE 2.0: How Concurrent Systems Engineering Can Help Your Organization Mark Malinoski (Vitech)	7.9.1 / Bridging the Gap: Enabling MBSE Through the Integration of System and Analysis Models Scott Ragon, Dave Mastrorocco (Phoenix Integration)
			7.1.2 / An Approach for Formal Verification of Machine Learning based Complex Systems Ramakrishnan Raman, Yogananda Jeppu (Honeywell Technology Solutions)	7.2.2 / The State of Systems Engineering Technical Practice versus Discipline: A Survey of INCOSE Chapter Attendees in North America Charles Wasson (Wasson Strategics, LLC)	7.3.2 / Systems Literacy for 21st Century Systems Engineering Peter Tuddenham (International Society for the Systems Sciences)	7.4.2 / Raising the Bar on SE: Lessons Learned Improving the Practice at a Navy Research Center Lori Zipes (US)			7.8.2 / How Systems Engineering Could Have Prevented the Aral Sea Human Disaster Robert Halligan (Project Performance International)	7.9.2 / An open platform approach to Systems Lifecycle Management Pawel Chadzynski (ARAS Corp.)
7.1.3 / Challenges and opportunities in the integration of the Systems Engineering process and the AI/ML Lifecycle Jose María Alvarez Rodríguez (Carlos III University of Madrid); Roy Mendieta (The Reuse Company); Valentín Moreno, Juan Llorens (Carlos III University of Madrid)	7.2.3 / Can We Use Wisdom-of-the-Crowd to Assess Risk of Systems Engineering Failures? Georgios Georgalis, Karen Marais (Purdue University)	7.3.3 / Systems Engineering Principles Chuck Keating (Old Dominion University); Michael Watson (NASA); David Rousseau (Centre for Systems Philosophy); Bryan Mesmer (University of Alabama in Huntsville); Garry Roedler (Lockheed Martin); William Miller (Stevens Institute of Technology); Javier Calvo-Amodio (Oregon State University)	7.4.3 / Evolution of the Helix Project: From Investigating the Effectiveness of Individual Systems Engineers to Systems Engineering Organizations Suchita Kothari, Shikha Soneji, Jose Ramirez-Marquez, Araceli Zavala, Nicole Hutchison, Hoong Yan See Tao, Pamela Burke, Sergio Luna (Stevens Institute of Technology)							
12:10	13:30	Lunch	Lunch & 12:30-13:30 Select Poster will be Presented – See Posters for Presentation Day (Exhibit Hall)							
13:30	14:55	Session 8	Machine Learning/Artifical Intelligence 2	Sys Arch/Design Definition 1	Model Based Systems 1	Teaching and Training		Business and Mission Analysis	Sponsors/Exhibitors Track	Sponsors/Exhibitors Track
			8.1.1 / The Dawn of Intelligent Systems Barclay Brown (Raytheon)	8.2.1 / Mastering the impacts of modes and states on the system: model-based method and tool perspectives Stephane Bonnet, Jean-Luc Voirin (THALES)	8.3.1 / A Roadmap for Advancing the State of the Practice of Model Based Systems Engineering for Government Acquisition Ryan Noguchi (The Aerospace Corporation)	8.4.1 / Experience from a Program for Accelerating the Creation of T-shaped Technical Leaders Erik Herzog (SAAB AB); Linda Cederberg, Johanna Axehill (Saab AB)	8.5 / Actual and Potential Impacts of Cyberterrorism Attacks on Major National Strategic Systems and the Use of Systems Engineering to Mitigate These Impacts William Mackey (Systems Engineering Solutions); Stephen Sutton, Bruce Shelton, Anthony Giglioli, Kenneth Kepchar, Gang Qu (INCOSE)	8.6.1 / Benefit Study on Digital Transformation for Integrated Project Planning and Control, Systems Engineering, and Safety and Mission Assurance Processes Phojanamongkolkij, Moreland (NASA)	8.8.1 / New Frontiers in Model Visualization Liana Kiff (Tom Sawyer Software)	8.9.1 / Master of Science in Systems Engineering Daniel Georgiadis, Changchun Zeng (FAMU-FSU College of Engineering)
			8.1.2 / Artificial Intelligence (AI) and Requirements Inspection and Evaluation Amar Zabarah, Ed Spriggs (Logapps LLC)	8.2.2 / Applying Mission-Based Adaptability to Discipline Designs Haifeng Zhu (United Technologies)	8.3.2 / Frenemies: OPM and SysML Together in an MBSE Model Matthew Hause (PTC); Robert Day (John Deere)	8.4.2 / INCOSE Handbook V4 to CMMI Development V2.0 mapping Oscar Mondragon, Rene Jasso (University of Texas at El Paso)		8.6.2 / Affordable Rocks (and Batteries): A lighthearted Dialogue About Value Mike Yokell (Lockheed Martin)	8.8.2 / SE Scholar	8.9.2 / SE Metamodel and Ontology Chris Schreiber
14:55	15:30	Break	Break & Select Poster will be Presented – See Posters for Presentation Day (Exhibit Hall)							
15:30	16:55	Session 9		Machine Learning/Artifical Intelligence 2	Model Based Systems 2	Teaching and Training	System Dynamics	Business and Mission Analysis	Sponsors/Exhibitors Track	Sponsors/Exhibitors Track
				9.2.1 / Innovation in the Spirit of Design Thinking Dennis Buede, Robert Liebe, Jared Beekman (Innovative Decisions, Inc.)	9.3.1 / Recommended Best Practices based on MBSE Pilot Projects Ryan Noguchi (The Aerospace Corporation)	9.4.1 / Why a Systems Engineering Competency Framework is not enough. Enablers for successful organisational framework roll-out. Ian Presland (Charterhouse Systems Limited)	9.5.1 / A strategic asset planning decision analysis: An integrated system dynamics and multi-criteria decision-making method Sondoss Elsawah, Michael Ryan, Darius Danesh (UNSW)	9.6.1 / The Enduring Path to System Success: Investment in Early-phase Quality Systems Engineering Stephen Cook (Shoal Engineering and the University of Adelaide); Shaun Wilson (Shoal Engineering)	9.8.1 / Social system engineering supported by Nomadic mindset Jargalsaikhan Dugar (TUS Solution LLC)	9.9.1 / Feature-Based Product Line Engineering for the Enterprise Drew Stovall (BigLever Software)
				9.2.2 / Machine Learning for Project Management Functions Phojanamongkolkij, Moreland, Price, Vangundy (NASA)	9.3.2 / A Model-Based V&V Test Strategy Based on Emerging System Modeling Techniques Gan Wang (BAE Systems Intelligence & Security); Saulius Pavalkis (No Magic, Inc.)	9.4.2 / How Model-Based Systems Engineering practices support the effective implementation of a Product Line Engineering approach Stephane Bonnet, Juan Navas (Thales)	9.5.2 / A System Dynamics Model for Systems Security Engineering Analysis of Internet Service Provider Customer Modem Cyber Defense David Eason (Eason Consulting, LLC); Don Gelosh (Worcester Polytechnic Institute)	9.6.2 / Speaking in Tongues: The Systems Engineering Challenge Zane Scott (Vitech Corporation)		
17:00	18:00		Working Group Sessions							
20:00	22:00		INCOSE Island Night (ticket required)							

IS2019 Schedule

08:30	09:30	Session 10	System Architecture	Sys Arch/Design Definition 3	Autonomous 1	Aerospace	Information Technology	
			10.1.1 / Towards a model-based approach to Systems and Cybersecurity co-engineering Stephane Bonnet, Jean-Luc Voirin, Juan Navas, Stephane Paul (Thales)	10.2.1 / Evaluation of COTS Hardware Assemblies for use in Risk Averse, Cost Constrained Space-based Systems Tami Katz (Sierra Nevada Corporation)	10.3.1 / System Theoretic Process Analysis for Layers of System Safety Rashmi Hegde, Sarra Yako, Kyle Post, Sandro Nuesch (Ford Motor Company)	10.4.1 / A Definition Abstraction and Implementation (DAI) Process for System-of-Systems Engineering Ali Raz, Daniel Delaurentis (Purdue University)	10.5.1 / Smart system assets development: Use your knowledge! Elena Gallego (The REUSE Company); Thomas Zoller (AES Aerospace Embedded Solutions)	
			10.1.2 / Practical tailored MBSE process “Nissan-7” Yutaka Ayame (Nissan Motor Co.,Ltd)	10.2.2 / Transitioning from technical 2D drawings to 3D models: a case study at defense systems Gerrit Muller, Satyanarayana Kokkula (University of South-Eastern Norway); Martin Sandberg (KDA)	10.3.2 / The Drone System II: Availability Performance Analysis and Modeling John MacCarthy (University of Maryland)	10.4.2 / Developing Standards for Space & CubeSat Model-Based System Engineering (MBSE) Steven MacLaird (Object Management Group); David Kaslow (INCOSE)		
09:30	10:00	Break	Break & Select Poster will be Presented – See Posters for Presentation Day (Exhibit Hall)					
10:00	12:10	Session 11	Architecture	Sys Arch/Design Definition 4	Artificial Intelligence and Autonomy - Trends and Potential Impact on SE	Measurements and Metrics	Information Technology	Systems Engineering Transformation and the Future of Systems Engineering: Digital Engineering's opportunities and challenges
			11.1.1 / Alternatives for Managing Atmospheric Warming Ronald Carson (Seattle Pacific University)	11.2.1 / London Underground Deep Tube Upgrade Programme: System Function Definition Model Case Study Luke Fischer, Nathan Everett (WSP in the UK); Michael Coultharde-Steer (London Underground)	11.3 / AI in Systems Engineering Thomas Shortell, John Artus (Lockheed Martin); Tom McDermott (Stevens Institute)	11.4.1 / The Good, The Bad and The Ugly Andrew Nolan (Rolls-Royce plc); Jennifer Russell (Garver); Judy Nolan, Timothy Puritt (Rolls-Royce)		11.6 / FuSE, SE Transformation, and Digital Engineering Bill Miller (Stevens Institute of Technology); Troy Peterson (System Xi); Kevin Robinson (Shoal Group); Heinz Stoewer (Space Associates); Monica Nogueira (SAE International)
			11.1.2 / Applying and analyzing A3 Architecture Overviews in a complex and dynamic engineering environment Gerrit Muller (University of South-Eastern Norway); Wilco Pesselse, Theo Hofman (Eindhoven University of Technology); Martin Simons (Daimler)	11.2.2 / An A3AOs Method of Software Tools Integration in the Complex System Development Marius Johanssen (University of Southeast Norway); Yangyang Zhao (University of Oslo)		11.4.2 / Elevating the meaning of data and operations within the development lifecycle through an interoperable toolchain Jose María Alvarez Rodríguez (Carlos III University of Madrid); Roy Mendieta (The REUSE Company); Juan Llorens (Carlos III University of Madrid)		
			11.1.3 / A3 architecture views – A Project Management tool? Kristin Falk, Tore Boge (University College of Southeast Norway)	11.2.3 / Augmenting requirements with models to improve the articulation between system engineering levels and optimize V&V practices Stephane Bonnet, Jean-Luc Voirin, Juan Navas (THALES)		11.4.3 / Exploring the Test and Evaluation Space using Model Based Conceptual Design (MBCD) Techniques David Flanigan (The Johns Hopkins University Applied Physics Laboratory); Kevin Robinson (Shoal Engineering)	11.5.3 / Brownfield Systems Development: Moving from the Vee Model to the N Model for Legacy Systems David Walden (Sysnovation, LLC)	
12:10	13:30	Lunch	Lunch & 12:30-13:30 Select Poster will be Presented – See Posters for Presentation Day (Exhibit Hall)					
13:30	15:30	Closing Plenary	P4 / The Underway Global Unmanned Systems and Robotics Revolution - Grant Begley (CEO, Rocket Crafters)					
15:30	16:30		Networking Reception					