# IS2020 Schedule

## Monday at IS 2020

| Start time | End time | Start time | End time | Start time | End time | Start time | End time | Start time | End time | Start time | End time | Start time | End time | Start time | End time | | Track 1 | Track 2 | Track 3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South Africa and Europe | | UK | | US East Coast | | US West Coast | | India | | China Hongkong | | Korea and Japan | | Australia Sydney | | | Needs and Requirements Definition I | Technical Leadership I | Verification/Validation |
| | | | | | | | | | | | | | | | | | Richard Beasley, Duncan Kemp | Heather Feli, Benjamin Mogridge | Paul Schreinemakers, David Ward |
| 10:00 | 10:40 | 09:00 | 09:40 | 04:00 | 04:40 | 01:00 | 01:40 | 13:30 | 14:10 | 16:00 | 16:40 | 17:00 | 17:40 | 18:00 | 18:40 | | Paper#40: 1.1.1 / Towards Systemic Handling of Requirements in the Oil and Gas Industry – a Case Study<br><br>Siv Engen, Kristin Falk (University of South-eastern Norway); Kirsten Helle (TechnipFMC) | Panel#2: 1.2.1 / Everything you Wanted to Know about Technical Leadership but were Afraid to Ask<br><br>Moderator:Heather Feli ;<br>Panelists: Kerry Lunney (Thales Australia); Stueti Gupta (BlueKei Solutions); Courtney Wright (V1 Decisions, LLC); | Paper#75: 1.3.1 / Hatley-Pirbhai Control Flow Diagram with SysML for Early Validation<br><br>Habibi Husain Arifin (Dassault Systèmes); Yu Dong (PATAC); Ho Kit Robert Ong (Dassault Systèmes); Yaoying Gu (PATAC); Nasis Chimplee, Wu Daphne (Dassault Systèmes) |
| 10:45 | 11:25 | 09:45 | 10:25 | 04:45 | 05:25 | 01:45 | 02:25 | 14:15 | 14:55 | 16:45 | 17:25 | 17:45 | 18:25 | 18:45 | 19:25 | **Session 1** | Paper#65: 1.1.2 / (MBSE)2: Using MBSE to Architect and Implement the MBSE System<br><br>James Martin, Ryan Noguchi, Marilee Wheaton (Aerospace Corporation) | | Paper#38: 1.3.2 / Employing Model Based Conceptual Design to Identify Test Range Resources Required to Validate the Delivered Solution<br><br>David Flanigan (The Johns Hopkins University Applied Physics Laboratory); Kevin Robinson (Shoal Engineering) |
| 11:30 | 12:10 | 10:30 | 11:10 | 05:30 | 06:10 | 02:30 | 03:10 | 15:00 | 15:40 | 17:30 | 18:10 | 18:30 | 19:10 | 19:30 | 20:10 | | Paper#113: 1.1.3 / Establishing a Reference Model for Requirements Elicitation Behavior<br><br>Leon Pretorius, Naudé Scribante (Department of Engineering and Technology Management, University of Pretoria) | Presentation#55: 1.2.3 / How much Systems Engineering roles are needed in a project to create value?<br><br>Sven-Olaf Schulze, Christoph Nüse, Sven Hering (UNITY AG) | Paper#2: 1.3.3 / Applying Systems Thinking to Frame and Explore a Test System for Product Verification; a Case Study in Large Defence Projects<br><br>Rune Andre Haugen (Kongsberg Defence and Aerospace AS); Mo Mansouri (University of South-eastern Norway) |
| 12:10 | 12:30 | 11:10 | 11:30 | 06:10 | 06:30 | 03:10 | 03:30 | 15:40 | 16:00 | 18:10 | 18:30 | 19:10 | 19:30 | 20:10 | 20:30 | **Break** | | | |
| South Africa and Europe | | UK | | US East Coast | | US West Coast | | India | | China Hongkong | | Korea and Japan | | Australia Sydney | | | Systems Design/Artificial Intelligence | Processes | Systems Architecture |
| | | | | | | | | | | | | | | | | | Barclay Brown, Courtney Wright | Daniel Spencer, Jen Narkevicius | Tony Williams, David Long |
| 12:30 | 13:10 | 11:30 | 12:10 | 06:30 | 07:10 | 03:30 | 04:10 | 16:00 | 16:40 | 18:30 | 19:10 | 19:30 | 20:10 | 20:30 | 21:10 | | Panel#6: 2.1.1 / Humans with AI: It's not like it is in the movies!<br><br>Moderator:Barclay Brown (Raytheon Technologies); Panelists: Christopher Eck (Raytheon Technologies); Moha Chami (Chami Consulting); | Paper#70: 2.2.1 / A sustainable software testing process for the Square Kilometre Array project<br><br>Giorgio Brajnik (Interaction Design Solutions & University of Udine); Marco Bartolini, Nicholas Rees (SKA Organization) | Paper#77: 2.3.1 / Bridging the Gap Between Architects, Engineers and Other Stakeholders in Complex and Multidisciplinary Systems – A Holistic, Inclusive and Interactive Design Approach<br><br>Joy Au, Ranjit Ravindranath (Airbus Operations Ltd.) |
| 13:15 | 13:55 | 12:15 | 12:55 | 07:15 | 07:55 | 04:15 | 04:55 | 16:45 | 17:25 | 19:15 | 19:55 | 20:15 | 20:55 | 21:15 | 21:55 | **Session 2** | | Paper#97: 2.2.2 / A generic Systems Engineering process tailoring methodology, based on lessons from MeerKAT<br><br>Thomas Kusel (SARAO) | Paper#35: 2.3.2 / Reverse architecting conventional footwear. Towards an A3 Architecture Overview that supports development of alternative footwear architectures.<br><br>Winnie Dankers, Gerrit Maarten Bonnema (University of Twente) |
| 14:00 | 14:40 | 13:00 | 13:40 | 08:00 | 08:40 | 05:00 | 05:40 | 17:30 | 18:10 | 20:00 | 20:40 | 21:00 | 21:40 | 22:00 | 22:40 | | Paper#130: 2.1.3 / Addressing Challenges of the Circular Economy using Model-Based Co-Creation and Systems Design<br><br>Jan Hendrik Roodt (Stone To Stars Ltd); Clemens Dempers (Polar Analytics Oy) | Paper#106: 2.2.3 / Towards a Common Systems Engineering Methodology to Cover a Complete System Development Process<br><br>Aurelijus Morkevicius (Dassault Systemes & Kaunas University of Technology); Aiste Aleksandraviciene, Andrius Armonas, Gauthier Fanmuy (Dassault Systemes) | |
| 14:40 | 15:00 | 13:40 | 14:00 | 08:40 | 09:00 | 05:40 | 06:00 | 18:10 | 18:30 | 20:40 | 21:00 | 21:40 | 22:00 | 22:40 | 23:00 | **Break** | | | |
| **15:00** | **16:00** | **14:00** | **15:00** | **09:00** | **10:00** | **06:00** | **07:00** | **18:30** | **19:30** | **21:00** | **22:00** | **22:00** | **23:00** | **23:00** | **00:00** | **Keynote** | **Keynote - Plenary#K1: K1 / System engineering and society - Bernie Fanaroff (Former Director Square Kilometer Array (SKA) South Africa)** | | |
| 16:00 | 16:20 | 15:00 | 15:20 | 10:00 | 10:20 | 07:00 | 07:20 | 19:30 | 19:50 | 22:00 | 22:20 | 23:00 | 23:20 | 00:00 | 00:20 | **Break** | | | |
| South Africa and Europe | | UK | | US East Coast | | US West Coast | | India | | China Hongkong | | Korea and Japan | | Australia Sydney | | | President's Invited Content I | Systems Engineering I | Risk Management |
| | | | | | | | | | | | | | | | | | Barclay Brown, Bill Chown | Rick Dove, Courtney Wright | |
| 16:20 | 17:00 | 15:20 | 16:00 | 10:20 | 11:00 | 07:20 | 08:00 | 19:50 | 20:30 | 22:20 | 23:00 | 23:20 | 00:00 | 00:20 | 01:00 | | Invited Content#PIC4: 3.1.1 / Exploring Real AI: A Systems Engineering Approach<br><br>Moderator:Barclay Brown ;<br>Panelists: Tom McDermott ; Peter Beling ; | Presentation#60: 3.2.1 / An introduction to Systems Safety<br><br>Duncan Kemp (Ministry of Defence); Meaghan Oneil (INCOSE) | Paper#87: 3.3.1 / Managing Integration and Verification Risks of the SKA Radio Telescope<br><br>Richard Lord, Donald Gammon (SARAO) |
| 17:05 | 17:45 | 16:05 | 16:45 | 11:05 | 11:45 | 08:05 | 08:45 | 20:35 | 21:15 | 23:05 | 23:45 | 00:05 | 00:45 | 01:05 | 01:45 | **Session 3** | | Presentation#10: 3.2.2 / Schema and Metamodels and Ontologies, Oh My!<br><br>David Long (Vitech Corporation) | Paper#115: 3.3.2 / Risk and Opportunity Management for Project Selection in the Road Construction Industry<br><br>Elisabet Syverud, Martha Stisen (University of South-Eastern Norway) |
| 17:50 | 18:30 | 16:50 | 17:30 | 11:50 | 12:30 | 08:50 | 09:30 | 21:20 | 22:00 | 23:50 | 00:30 | 00:50 | 01:30 | 01:50 | 02:30 | | | Paper#12: 3.2.3 / Toward Architecting the Future of System Security<br><br>Keith Willett (United States Department of Defense) | Paper#11: 3.3.3 / Creating and Applying Total Cost Model: A Case Study at Maritime Company for Last Time Buy Estimation<br><br>Satyanarayana Kokkula, Gerrit Muller (University of South-Eastern Norway); Lasse Andre Sletaker, Arild Gonsholt (Kongsberg Maritime A/S) |

Pre-recorded session
Live session

# IS2020 Schedule

## Tuesday at IS 2020

| Start time | End time | Start time | End time | Start time | End time | Start time | End time | Start time | End time | Start time | End time | Start time | End time | Start time | End time | Activity | Track 1 | Track 2 | Track 3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South Africa and Europe | | UK | | US East Coast | | US West Coast | | India | | China Hongkong | | Korea and Japan | | Australia Sydney | | | Systems Thinking | Diversity / Training | Modeling |
| | | | | | | | | | | | | | | | | | Richard Beasley, Duncan Kemp | Suja Joseph-Malherbe, David Long | Erika Palmer, Jean Duprez |
| 10:00 | 10:40 | 09:00 | 09:40 | 04:00 | 04:40 | 01:00 | 01:40 | 13:30 | 14:10 | 16:00 | 16:40 | 17:00 | 17:40 | 18:00 | 18:40 | | Paper#116: 4.1.1 / Addressing Cognitive Bias in Systems Engineering Teams<br><br>Leonie Hallo (Adelaide Business School The University of Adelaide); Tom McDermott (Stevens Institute of Technology); Dennis Folds (Lowell Scientific Enterprises) | Panel#7: 4.2.1 / The Role of Diversity, Equity, and Inclusion in Sustaining Earth's Future<br><br>Moderator:Suja Joseph-Malherbe (Letter27);<br>Panelists: Stueti Gupta (BlueKei Solutions); Alice Squires (Washington State University); Alan Harding (BAE Systems – Air); Lamona Rajah (Cummins Africa Middle East); | Paper#149: 4.3.1 / General Modeling Language to Support Model-based System Engineering Formalisms (Part 1)<br><br>Jinzhi Lu (Ecole Polytechnique Fédérale de Lausanne); Guoxin Wang, Junda Ma (Beijing Institute of Technology); Martin Törngren (KHT-Royal Insititute of Technology); Dimitris Kiritsis (Ecole Polytechnique Fédérale de Lausanne); Hang Zhang (Beijing ZK Fengchao Tech.Co.Ltd) |
| 10:45 | 11:25 | 09:45 | 10:25 | 04:45 | 05:25 | 01:45 | 02:25 | 14:15 | 14:55 | 16:45 | 17:25 | 17:45 | 18:25 | 18:45 | 19:25 | **Session 4** | Paper#143: 4.1.2 / Towards Defining the Systems Habits of an 'Aware' Student Engineer<br><br>Chris Browne (ANU) | | Paper#126: 4.3.2 / Models as enablers of agility in complex systems engineering<br><br>Jean-Luc Voirin (Thales Airborne Systems); Juan Navas (Thales Corporate Engineering); Stéphane Bonnet (Thales Avionics Technical Directorate); Guillaume Journaux (Thales Airborne Systems) |
| 11:30 | 12:10 | 10:30 | 11:10 | 05:30 | 06:10 | 02:30 | 03:10 | 15:00 | 15:40 | 17:30 | 18:10 | 18:30 | 19:10 | 19:30 | 20:10 | | Paper#157: 4.1.3 / Mechanisms for a Systems-Oriented Mindset - Towards Organizational Systems Thinking<br><br>Erik Karlsson (ÅFRY Industrial and Digital Solutions); Diana Malvius (AcademIQ Consultant); Mats Lindberg (AnalytikerByrån) | Paper#76: 4.2.3 / The Greatest Young System Engineers of the Year Challenge<br><br>Ad Sparrius (Graduate School of Technology Management, University of Pretoria) | Paper#102: 4.3.3 / Engaging Mechanical Engineers in System Modeling<br><br>Katrine Gullhav (USN); Cecilia Haskins (NTU/USN) |
| 12:10 | 12:30 | 11:10 | 11:30 | 06:10 | 06:30 | 03:10 | 03:30 | 15:40 | 16:00 | 18:10 | 18:30 | 19:10 | 19:30 | 20:10 | 20:30 | **Break** | | | |
| South Africa and Europe | | UK | | US East Coast | | US West Coast | | India | | China Hongkong | | Korea and Japan | | Australia Sydney | | | System of Systems Engineering | Systems Engineering II | Product Line Engineering |
| | | | | | | | | | | | | | | | | | Macaulay Osaisai, David Long | Tom Strandberg, Jen Narkevicius | Tony Williams, Courtney Wright |
| 12:30 | 13:10 | 11:30 | 12:10 | 06:30 | 07:10 | 03:30 | 04:10 | 16:00 | 16:40 | 18:30 | 19:10 | 19:30 | 20:10 | 20:30 | 21:10 | | Paper#43: 5.1.1 / Putting the "Systemic" (back) into the "Engineering of Systems"<br><br>Jawahar Bhalla (JB Engineering Systems) | Paper#28: 5.2.1 / Using your BRAIN to get beyond "It Depends…"<br><br>Ian Gibson (Atkins) | Paper#31: 5.3.1 / Do Product Lines Have Sweet Spots?<br><br>Andrew Pickard, Keith Harper (Rolls-Royce Corporation) |
| 13:15 | 13:55 | 12:15 | 12:55 | 07:15 | 07:55 | 04:15 | 04:55 | 16:45 | 17:25 | 19:15 | 19:55 | 20:15 | 20:55 | 21:15 | 21:55 | **Session 5** | Presentation#20: 5.1.2 / Practical experience of successful System of Systems delivery<br><br>Duncan Kemp (Ministry of Defence) | Paper#127: 5.2.2 / Modernization Challenges of Command and Control Systems<br><br>Abdullah Aykut Mert, Ali Ozturk, Suna Durmus, Serdar Uzumcu (HAVELSAN Inc.) | Paper#49: 5.3.2 / Patterns for Success in the Adoption and Execution of Feature-based Product Line Engineering: A Report from Practitioners<br><br>Susan Gregg (Lockheed Martin); David Hartley (General Dynamic Mission Systems); Morgan McAfee (General Dynamics Mission Systems); Randy Pitz (The Boeing Company); James Teaff (Raytheon); Paul Clements (BigLever Software, Inc.) |
| 14:00 | 14:40 | 13:00 | 13:40 | 08:00 | 08:40 | 05:00 | 05:40 | 17:30 | 18:10 | 20:00 | 20:40 | 21:00 | 21:40 | 22:00 | 22:40 | | Paper#57: 5.1.3 / Towards an Automated UAF-based Trade Study Process for System of Systems Architecture<br><br>Aurelijus Morkevicius (Dassault Systemes & Kaunas University of Technology); Jovita Bankauskaitė (Kaunas University of Technology) | Paper#41: 5.2.3 / Implementing Systems Engineering in Early Stage Research and Development (ESR&D) Engineering Projects<br><br>Frederic Autran (Airbus Defence & Space); Heidi Hahn (Los Alamos National Laboratory); Ann Hodges (Sandia National Laboratories); Nick Lombardo (Pacific Northwest National Laboratory); Mitchell Kerman (Idaho National Laboratory) | Paper#48: 5.3.3 / Digital Product-Service Systems meet Product Line Systems Engineering – The Cart before the Horse?<br><br>Hugo Guillermo Chalé Gongora, Pierre-Olivier Robic (Thales); Danilo Beuche (pure-systems GmbH) |
| 14:40 | 15:00 | 13:40 | 14:00 | 08:40 | 09:00 | 05:40 | 06:00 | 18:10 | 18:30 | 20:40 | 21:00 | 21:40 | 22:00 | 22:40 | 23:00 | **Break** | | | |
| **15:00** | **16:00** | **14:00** | **15:00** | **09:00** | **10:00** | **06:00** | **07:00** | **18:30** | **19:30** | **21:00** | **22:00** | **22:00** | **23:00** | **23:00** | **00:00** | **Keynote** | **Keynote - Plenary#K2: K2 / System Engineering of Low-Cost Earth Observing Systems - Jakob van Zyl (Hydrosat, Inc.)** | | |
| 16:00 | 16:20 | 15:00 | 15:20 | 10:00 | 10:20 | 07:00 | 07:20 | 19:30 | 19:50 | 22:00 | 22:20 | 23:00 | 23:20 | 00:00 | 00:20 | **Break** | | | |
| South Africa and Europe | | UK | | US East Coast | | US West Coast | | India | | China Hongkong | | Korea and Japan | | Australia Sydney | | | President's Invited Content II | Manufacturing Systems And Operational Aspects | Technical Leadership II |
| | | | | | | | | | | | | | | | | | Bill Miller, Bill Chown | Greg Parnell, Courtney Wright | Cecilia Haskins, Nicole Hutchison |
| 16:20 | 17:00 | 15:20 | 16:00 | 10:20 | 11:00 | 07:20 | 08:00 | 19:50 | 20:30 | 22:20 | 23:00 | 23:20 | 00:00 | 00:20 | 01:00 | | Invited Content#PIC3: 6.1.1 / Managing the Interstitials: Future of Systems Engineering Suited for Urban Infrastructure 4.0<br><br>Moderator:William Miller (Innovative Decisions, Inc.);<br>Panelists: David Long (Vitech / Zuken); Tom McDermott ; Ad Sparrius (South Africa Chapter); Serge Landry ; | Paper#30: 6.2.1 / What's the Problem? Issue Investigation and Engineering Change on Legacy Products<br><br>Andrew Pickard (Rolls-Royce Corporation); Charlotte Dunford (Rolls-Royce plc) | Paper#114: 6.3.1 / Complexity, Systems Thinking and an Integrated Systems Engineering and Project Management Model<br><br>Raymond Jonkers, Kamran Shahroudi (Colorado State University) |
| 17:05 | 17:45 | 16:05 | 16:45 | 11:05 | 11:45 | 08:05 | 08:45 | 20:35 | 21:15 | 23:05 | 23:45 | 00:05 | 00:45 | 01:05 | 01:45 | | | Paper#104: 6.2.2 / Pervasive Simulation in a PLM Platform – The key to effective management of ever-increasing product complexity<br><br>Pawel Chadzynski, Malcolm Panthaki, Matteo Nicolich, Rama Asuri (Aras Corp.) | Paper#58: 6.3.2 / Comparing INCOSE and PMI Portfolio Management Practices<br><br>Gregory Parnell, Eric Specking, Ed Pohl (University of Arkansas) |
| 17:50 | 18:30 | 16:50 | 17:30 | 11:50 | 12:30 | 08:50 | 09:30 | 21:20 | 22:00 | 23:50 | 00:30 | 00:50 | 01:30 | 01:50 | 02:30 | **Session 6** | | Paper#59: 6.2.3 / Evaluation of Lean Business Process Improvement Methodology<br><br>Gerrit Jan Muller (University of South-Eastern Norway); Niclas Maaren (GKN Aerospace Norway); Elisabet Syverud (University of South-Eastern Norway) | Paper#80: 6.3.3 / Experiments in Leading through Influence: Reflections from a Group of Emerging Technical Leaders<br><br>Chris Browne (The Australian National University); Ming Wah Tham (Thales Solutions Asia); Luca Stringhetti (SKA Organisation); Brad Spencer (Nova Professional Services); Louis-Emmanuel Romana (Airbus Operations); Al Meyer (Lockheed Martin Corporation); Clement Lee (Thales Solutions Asia); Maz Kusunoki (Nissan Motor); Myra Parsons Gross (JONY Software Solutions); Karl Geist (Precise Systems); Heather Feli (Ensign-Bickford Aerospace & Defense); David Fadeley (Integrity Technology Consultants); Heidi Davidz (Aerojet Rocketdyne); John Cadigan (Prime Solutions Group); Lauren Stolzar (Grubhub); Jeffrey Brown (United States Navy) |

Pre-recorded session
Live session

Disclaimer: Technical program as of July 19, 2020 - Subject to change.

# IS2020 Schedule

## Wednesday at IS 2020

| Start time | End time | Start time | End time | Start time | End time | Start time | End time | Start time | End time | Start time | End time | Start time | End time | Start time | End time | Activity | Track 1 | Track 2 | Track 3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| South Africa and Europe | | UK | | US East Coast | | US West Coast | | India | | China Hongkong | | Korea and Japan | | Australia Sydney | | | System Security / System Safety | Environmental Systems | Ontology |
| | | | | | | | | | | | | | | | | | Alice Squires, Duncan Kemp | Richard Beasley, Benjamin Mogridge | Erika Palmer, David Ward |
| 10:00 | 10:40 | 09:00 | 09:40 | 04:00 | 04:40 | 01:00 | 01:40 | 13:30 | 14:10 | 16:00 | 16:40 | 17:00 | 17:40 | 18:00 | 18:40 | | Panel#8: 7.1.1 / How Cyber and Systems Security Engineering is Fighting for a Safe and Reliable Future<br><br>Moderator:Alice Squires (Washington State University); Panelists: Peter Beling (University of Virginia); Keith Willett (Department of Defense); Peggy Brouse (George Mason University); | Paper#81: 7.2.1 / Addressing the Sustainable Development Goals with a System-of-Systems for Monitoring Arctic Coastal Regions<br><br>Evelyn Honoré-Livermore, Roger Birkeland, Cecilia Haskins (Norwegian University of Science and Technology) | Paper#42: 7.3.1 / Achieving System-of-Systems Interoperability Levels Using Linked Data and Ontologies<br><br>Jakob Axelsson (Mälardalen University) |
| 10:45 | 11:25 | 09:45 | 10:25 | 04:45 | 05:25 | 01:45 | 02:25 | 14:15 | 14:55 | 16:45 | 17:25 | 17:45 | 18:25 | 18:45 | 19:25 | **Session 7** | | Paper#118: 7.2.2 / Distributed Architecture for Monitoring Urban Air Quality: A Systems Engineering Approach<br><br>Philip Dewire, Tom McDermott, Adrian Unger, Fabio Guimaraes da Silva, Jennifer Nguyen, Dylan Shean, Stephen Grzelak, Laura Beth Beebe (Georgia Institute of Technology) | Paper#52: 7.3.2 / Towards an Ontology for Collaboration in System of Systems Context<br><br>Robert Nilsson (Volvo Cars Corporation); Dov Dori (Technion - Israel Institute of Technology and Massachusetts Institute of Technology); Yatin Jayawant (John Deere); Leonard Petnga (University of Alabama in Huntsville (UAH)); Hanan Kohen (Technion - Israel Institute of Technology); Michael Yokell (Raytheon) |
| 11:30 | 12:10 | 10:30 | 11:10 | 05:30 | 06:10 | 02:30 | 03:10 | 15:00 | 15:40 | 17:30 | 18:10 | 18:30 | 19:10 | 19:30 | 20:10 | | Paper#103: 7.1.3 / Integrating Process Standards for System Safety Analysis to Enhance Efficiency in Initial Airworthiness Certification of Military Aircraft: A Systems Engineering Perspective<br><br>Morten Reinfjord Guldal (Norwegian Defence Materiel Agency/Air Systems Division); Jonas Andersson (University of South-Eastern Norway) | Paper#96: 7.2.3 / A Transdisciplinary Design and Implementation of Sustainable Agricultural Principles in the Waikato Region of New Zealand<br><br>Hendrik van Zyl (University of Otago); Jan Hendrik Roodt (Stone To Stars Limited) | Paper#148: 7.3.3 / Linking Behaviour Data to Knowledge: Contextualization and De-Contextualization<br><br>Anand Kumar, Swaminathan Natarajan, Subhrojyoti Roy Chaudhuri, Rahul Sinha (Tata Consultancy Services Research) |
| 12:10 | 12:30 | 11:10 | 11:30 | 06:10 | 06:30 | 03:10 | 03:30 | 15:40 | 16:00 | 18:10 | 18:30 | 19:10 | 19:30 | 20:10 | 20:30 | **Break** | | | |
| South Africa and Europe | | UK | | US East Coast | | US West Coast | | India | | China Hongkong | | Korea and Japan | | Australia Sydney | | | Infrastructure | Technical Leadership III | Digital Engineering |
| | | | | | | | | | | | | | | | | | Paul Schreinemakers, Courtney Wright | Heather Feli, Tony Williams | Tom McDermott, David Long |
| 12:30 | 13:10 | 11:30 | 12:10 | 06:30 | 07:10 | 03:30 | 04:10 | 16:00 | 16:40 | 18:30 | 19:10 | 19:30 | 20:10 | 20:30 | 21:10 | | Paper#24: 8.1.1 / Creating a Roadmap to Capture a Vision for a Sustainable Community in Transition; a Case Study in a Dutch town Best<br><br>Gerrit Muller, Laura Elvebakk (University of South-Eastern Norway) | Paper#61: 8.2.1 / Interface Management – the Neglected Orphan of Systems Engineering<br><br>Paul Davies (thesystemsengineer.uk) | Paper#69: 8.3.1 / Implementing a Model-Based, Digital Engineering Enterprise for a Defense Systems Integrator - an Ongoing Journey<br><br>Gan Wang (BAE Systems) |
| 13:15 | 13:55 | 12:15 | 12:55 | 07:15 | 07:55 | 04:15 | 04:55 | 16:45 | 17:25 | 19:15 | 19:55 | 20:15 | 20:55 | 21:15 | 21:55 | **Session 8** | Paper#101: 8.1.2 / Model-Based System Engineering for Life Cycle Development of Digital Twins of Real Estate<br><br>Kirstin Kusel (CloudEstate) | Paper#162: 8.2.2 / Systems Engineering as a Data-Driven and Evidence-Based Discipline<br><br>Avigdor Zonnenshain (Technion); Ron Kenett (KPA Ltd. and Samuel Neaman Institute, Technion); Robert Swarz (WPI) | Presentation#59: 8.3.2 / Digital Engineering in Practice<br><br>Eran Gery (IBM Isreal); Graham Bleakley (IBM UK Ltd.) |
| 14:00 | 14:40 | 13:00 | 13:40 | 08:00 | 08:40 | 05:00 | 05:40 | 17:30 | 18:10 | 20:00 | 20:40 | 21:00 | 21:40 | 22:00 | 22:40 | | Paper#68: 8.1.3 / Systems Engineering Issues in Microgrids for Military Installations<br><br>Douglas L. Van Bossuyt, Ronald E. Giachetti, Gary W. Parker (Naval Postgraduate School); Christopher J. Peterson (US.. Navy Expeditionary Warfare Center) | Paper#21: 8.2.3 / Dream the future: Systems engineering in 2030<br><br>Jean-Luc Voirin (Thales Airborne Systems, Thales Technical Directorate); Olivier Constant (Thales Corporate Engineering); Eric Lépicier, Frédéric Maraux (Thales Airborne Systems) | Presentation#5: 8.3.3 / A survey of emerging standards for supporting Digital Engineering Information Exchange<br><br>Celia Tseng (Raytheon) |
| 14:40 | 15:00 | 13:40 | 14:00 | 08:40 | 09:00 | 05:40 | 06:00 | 18:10 | 18:30 | 20:40 | 21:00 | 21:40 | 22:00 | 22:40 | 23:00 | **Break** | | | |
| **15:00** | **16:00** | **14:00** | **15:00** | **09:00** | **10:00** | **06:00** | **07:00** | **18:30** | **19:30** | **21:00** | **22:00** | **22:00** | **23:00** | **23:00** | **00:00** | **Keynote** | **Keynote - Plenary#K3: K3 / Water Supply Systems : A Broad Overview - Dr. Ronnie S. McKenzie (Former Chairman, Water Loss Group, International Water Association)** | | |
| 16:00 | 16:20 | 15:00 | 15:20 | 10:00 | 10:20 | 07:00 | 07:20 | 19:30 | 19:50 | 22:00 | 22:20 | 23:00 | 23:20 | 00:00 | 00:20 | **Break** | | | |
| South Africa | | UK | | US East Coast | | US West Coast | | India | | China | | Korea and | | Australia | | | TechOps Invited Content | Integration | Needs and Requirements Definition II |
| | | | | | | | | | | | | | | | | | Chris Hoffman, David Endler | Bill Chown | Stephanie Chiesi, Jen Narkevicius |
| 16:20 | 17:00 | 15:20 | 16:00 | 10:20 | 11:00 | 07:20 | 08:00 | 19:50 | 20:30 | 22:20 | 23:00 | 23:20 | 00:00 | 00:20 | 01:00 | | Invited Content#techops1: 9.1.1 / Smart Cities: Who are the winners?<br><br>Dale Brown, Marcel van de Ven, Jargalsaikhan Dugar, Jennifer Russell | Panel#1: 9.2.1 / Issues, impediments, and Inspiration for Continuous Integration in Mixed Discipline Development Projects<br><br>Moderator:Rick Dove (Paradigm Shift International); Panelists: Barry Papke (Catia I No Magic); Kerry Lunney (Thales Australia); Robin Yeman (Lockheed Martin Corporation); Tom McDermott (Systems Engineering Research Center, Stevens Institute of Technology); Duncan Kemp (Ministry of Defence); | Paper#142: 9.3.1 / Model Integrated Decomposition and Assisted Specification (MIDAS)<br><br>Yogananda Jeppu (Honeywell Technology Solutions); Jan Fiedor (Honeywell); Brendan Hall (Honeywell International) |
| 17:05 | 17:45 | 16:05 | 16:45 | 11:05 | 11:45 | 08:05 | 08:45 | 20:35 | 21:15 | 23:05 | 23:45 | 00:05 | 00:45 | 01:05 | 01:45 | **Session 9** | Invited Content#techops2: 9.1.2 / Being Social with Social Systems<br><br>Erika Palmer, Randy Anway (Chairs of the Social Systems Working Group) | | Paper#15: 9.3.2 / When to Constrain the Design? Application of Design Standards on a New Development Program<br><br>Tami Katz (Ball Aerospace) |
| 17:50 | 18:30 | 16:50 | 17:30 | 11:50 | 12:30 | 08:50 | 09:30 | 21:20 | 22:00 | 23:50 | 00:30 | 00:50 | 01:30 | 01:50 | 02:30 | | Invited Content#techops4: 9.1.3 / Developing the INCOSE-PPI Systems Engineering Tools Database Using a Systems Engineering Approach<br><br>John F. Nallon, Robert Halligan | Paper#123: 9.2.3 / Case Study: Achieving System Integration through Interoperability in a large System of Systems (SoS)<br><br>Oliver Hoehne (WSP USA) | Paper#129: 9.3.3 / Top-down functional composition<br><br>Johan Bredin (SAAB Aeronautics) |

Pre-recorded session
Live session