



PROGRAM

Tuesday, December 13, 2016 – Industrial and Societal Challenges & A la carte Program / Poster Workshop

09:00-09:30 – Opening of the Conference

Location: Ground floor, Plenary room

- 09:00-09:10 - Welcoming by the conference general chair **Daniel KROB**, CESAMES & Ecole Polytechnique
- 09:10-09:30 - Welcoming by the Program Committee co-chairs **Dominique LUZEAUX**, Ecole Polytechnique & **Gauthier FANMUY**, Dassault Systèmes & Welcoming by the Organizing Committee Chair **Francois STEPHAN**, IRT SystemX

09:30-12:20 – VIP Speakers presentations

Location: Ground floor, Plenary room

- 09:30-10:00 - **Andy ANDERSON**, Chief Operating Officer - AIRBUS Group
- 10:00-10:30 - **Paulien HERDER**, Head of the Engineering Systems and Services Department at the Faculty of Technology, Policy and Management - Delft University of Technology - “Comprehensive engineering for Energy System Transitions”
- 10:30-11:00 - **Pascal BROSSET**, SVP Strategy & Technology – Schneider Electric

11:00-11:20 - Coffee break (Ground floor)

- 11:20-11:50 - **Matthew SILVER**, CEO & Founder, Cambrian Innovation – “Sustainable and Economical Water & Energy Infrastructure”
- 11:50-12:20 - Discussion on “Opening Innovation and R&D” presented by **François STEPHAN**, IRT SystemX with **Olivier DE WECK**, **Paulien HERDER**, **Pascal BROSSET** and **Matthew SILVER**

12:20-12:50 - Plenary Success Stories Presentations

Location: Ground floor, Plenary room

- 12:20-12:35 – **Sodius**
- 12:35-12:50 – **Knowledge Inside & ESI France**

12:50-14:00 - Break Lunch Buffet (Ground floor)

14:00-14:45 - Plenary Success Stories Presentations

Location: Ground floor, Plenary room

- 14:00-14:15 – **The Cosmo Company** “Asset investment optimization for railway infrastructure with a complex systems approach”, Benoît Guyot - SNCF Réseau
- 14:15-14:30 – **MEGA International** “Supporting Digital Transformation with Enterprise Architecture”
- 14:30-14:45 – **Obeo & Thales** “Implementing the MBSE cultural change with Arcadia and Capella”, Samuel Rochet, Obeo & Stéphane Bonnet, Thales

14:50-17:10 – Contributed Talks

14:50-17:10 – Parallel session 1

Location: Level 1, Salon OCEANOS

- 14:50-15:20 - **Michael Schaefer** “Challenges for MBSE and PLE for Legacy Product-Based System Environments”

15:20-15:40- Coffee break (Ground floor)

- 15:40-16:10 - **Aiste Aleksandraviciene and Aurelijus Morkevicius** “Model-Based Systems Engineering Approach for Requirements Management”
- 16:10-16:40 - **Gauthier Fanmuy, Valérie Pegon, Arnaud Durantin and Ségolène Miet** “Design Thinking & Systems Engineering to sustain competitive innovations”
- 16:40-17:10 - **Thuy Nguyen** “Modelling and Simulation of the Dynamics of Complex Socio-Cyber-Physical Systems and Large Scale Systems of Systems all along their Lifetime”

14:50-17:10 – Parallel session 2

Location: Level 1, Salon ATLANTIDE

- 14:50-15:20 – **Olivier de Weck** “Complexity Management for Engineered Systems using System Value Definition”

15:20-15:40- Coffee break (Ground floor)

- 15:40-16:10 - **Thomas Peugeot, Nicolas Dupin and Catherine Dubecq** “MBSE, PLM, MIP and Robust Optimization for System of Systems management, application to SCCOA French Air Defense System”
- 16:10-16:40 - **Thao Dang** “Validation of Industrial Cyber-Physical Systems: an application to HVAC systems”
- 16:40-17:10 - **Guillaume Habault** “Defining a Distributed Architecture for Smart Energy Aware Systems”

14:50-17:10 – Workshop Partners

Location: Ground floor, Plenary room

- 14:50-15:20 – **Anylogic** “Multimethod modeling and simulation with AnyLogic 7”

15:20-15:40- Coffee break (Ground floor)

- 15:40-16:10 – **Pragmadev** “System optimization: a use case in the space domain” E. Gaudin

- 16:10-16:40 – **Clarity Project** "*Capella: the Birth of an Industrial Ecosystem*" C. Boudjennah
- 16:40-17:10 – **Mega International** "*System Engineering and Architecture practices: it's time for a change!*", Experience feedback on the latest trends from MEGA International and CESAMES

17:10-19:00 - Poster Workshop & Conference Cocktail

Location: Ground floor

1. "*An integrated approach for Sytem Driven Product Development (SDPD) by means of development of a mechatronic systems in an industrial context*" - **Prof. Dr. Salehi Vahid** and **Burseg Lukas** (EDMS - Germany)
2. "*Performance Analysis of SDL Systems*" - **Mihal Brumbulli** and **Emmanuel Gaudin** (PragmaDev - France)
3. "*Prerequisites for the Modeling and Analysis of a Product Development Process Using Network Theory*" - **Abdo Chahin**, **Kristin Paetzold** (Universität der Bundeswehr München - Germany), **Julian Hoffmeister** and **Vahid Salehi** (University of Applied Sciences Munich - Germany)
4. "*Challenges of Agile Development: A Cause-and-Effect Analysis*" - **Tobias Sebastian Schmidt** and **Kristin Paetzold** (University of the Federal Armed Forces Munich - Germany)
5. "*MBSE & MBSA with Capella and Safety Architect tools*" - **Marc Sango**, **Frédérique Vallée**, **Anne-Catherine ViÉ** (ALL4TEC - France), **Jean-Luc Voirin** (Thales Mission Systems - France), **Xavier Leroux** (Thales Global Services - France) and **Véronique Normand** (Thales Research and Technology - France)
6. "*A Synthetic Analytical Model for the Evaluation of Supply Chain Performance*" - **Cy Lam** (Hiroshima University - Japan) and **K Tai** (Nanyang Technological University - Singapore)
7. "*Direct democracy as the keystone of a smart city governance as a complex system?*" - **Claude Rochet** (CERGAM - France)
8. "*Fast and extensive model based project plan building in nuclear industry*" - Christian Marie, Gilles Beuzelin (AREVA - France), **Samuel Boutin** and **Eric Nicole** (Knowledge Inside - France)
9. "*Batteries For Buildings (B4B) A «System of Systems» development return on experience*" - **Yann Chazal** (RENAULT - France), **Do-Hieu Trinh**, **Eric Portales** (Bouygues Energies Services - France) and **Philippe Toussaint** (Knowledge Inside - France)
10. "*A governance framework for complex geographically bounded industrial business networks*" - **Larissa Statsenko** and **Vernon Ireland** (University of Adelaide - Australia)
11. "*Exploring Early Stage Cost-Estimation Methods Using Off-the-Shelf Tools: A Case Study*" - **Haifeng Zhu**, **Greg Ojard** (UTC Research Center - USA), **Eileen Arnold** (UTC Aerospace Systems - USA), **Narek Shougarian**, **Kaushik Sinha** and **Oliver de Weck** (MIT - USA)
12. "*Towards a Design-to-Value approach in early design stages*" - **Sonia Ben Hamida**, **Alain Huet** (Airbus Defense & Space - FR), **Marija Jankovic**, **Jean-Claude Bocquet** (CentraleSuepelec - FR) and **Martine Callot** (Airbus Group Innovation)
13. "*Categorizing Technical Change in a System: Resolving some of the Shortcomings in Henderson & Clarck's (1990) Framework*" - **Mohammadreza Arasti** (Sharif University of Technology - Iran) and **Mahdi Khaleghi** (University of Tehran - Iran)

Wednesday, December 14, 2016 – Industrial and Societal Challenges & A la carte Program

09:00-10:00 – VIP Speakers presentations

Location: Ground floor, Plenary room

- 09:00-09:30 - **Garry ROEDLER**, IncoSE Fellow and Engineering Outreach Program Manager, Lockheed Martin Corporation "*Shaping INCOSE for Tomorrow*"

- 09:30-10:00 - Round table discussion with **Omar HAMMAMI**, ENSTA ParisTech and other experts
“System Engineering Education”

10:05-12:55 – Contributed Talks

10:05-12:55 – Parallel session 1

Location: Level 1, Salon OCEANOS

- 10:05-10:35 - **Leila Kloul, Antoine Rauzy** *“Incremental Modeling Methodology of Railway System Specifications”*
- 10:35-11:05 - **Samuel Vogel, Stephan Rudolph** *“Automated Piping With Standardized Bends in Complex Systems Design”*

11:05-11:25 – Coffee break (Ground floor)

- 11:25-11:55 - **Abdelkrim Doufene, Olivier de Weck** *“Assessment of Resilience in Desalination Infrastructure Using Semi-Markov Models”*
- 11:55-12:25 - **Juste Rimbault** *“A Discrepancy-based Framework to Compare Robustness between Multi-Attribute Evaluations”*
- 12:25-12:55 – **Robert S. Swarz** *“The Trans-Alaska Pipeline System”*

10:05-12:55 – Parallel session 2

Location: Level 1, Salon ATLANTIDE

- 10:05-10:35 - **William Edmonson** *“Systems Engineering Education for East Africa”*
- 10:35-11:05 - **Jon Wade** *“Systems Engineering Human Capital Development: Objectives and Research Directions”*

11:05-11:25 – Coffee break (Ground floor)

- 11:25-11:55 - **Omar Hammami** *“System Engineering Education for Confirmed Engineers: The FAIS Case Study – A 6 years Feedback”*
- 11:55-12:25 - **Michel-Alexandre Cardin** *“Empirical Studies in Decision Rule-Based Flexibility Analysis for Complex Systems Design and Management”*
- 12:25-12:55 - **José Fuentes** *“Requirements Quality Analysis: A successful case study in the industry”*

10:05-11:05 – Workshop Partners

Location: Ground floor, Plenary room

- 10:05-10:35 – **IRT SystemX** – *“Autonomous transport: a new complex system”* Paul Labrogere
- 10:35-11:05 – **Dassault Systèmes** – *“Systems Engineering in the age of Experience”* Eliane Fourgeau

11:05-11:25 – Coffee break (Ground floor)

12:55-14:10 - Break Lunch Buffet (Ground floor)

14:10-14:40 - Plenary Success Stories Presentations

Location: Ground floor, Plenary room

- 14 :10-14 :25 – **PTC** - *“(Model-Based) System Engineering in the IOT era”* Eric Andrianarison
- 14:25-14:40 - **Dassault Systèmes** - *“Digital Continuity for Systems Engineering”* Eliane Fourgeau

14:40-17:10 – VIP Speakers presentations

Location: Ground floor, Plenary room

- 14:40-15:10 - **Thierry JEAN-MARIUS**, Head of Systems Engineering, Airbus Safran Launchers *“On-going transformation from a System Engineering point of view at Airbus Safran Launchers”*
- 15:10-15:40 - **Virginie MAILLARD**, Vice President Research, Renault *“How the automotive industry will survive to the complexity?”*

15:40-16:00 – Coffee break (Ground floor)

- 16:00-16:30 - **Thierry BRIZARD**, Executive Vice President Technology, CGG *“The new engineering methods in oil & gas sectors”*
- 16:30-17:00 - **Alan HARDING**, INCOSE President *“Achieving the Systems Engineering Vision 2025”*
- 17:00-17:10 - Final Conclusion - **Daniel KROB**, Cesames & Ecole Polytechnique, France

17:10-18:00 - Farewell Cocktail