IEEE – 13th System of Systems Engineering Conference

SoSE 2018 – June 19-22, 2018, Paris, France.

On behalf of the Organizing Committee of the IEEE – 13th System of Systems Engineering Conference, it is a great honor and pleasure to welcome you in Paris.

SoSE 2018 has vast ramifications in numerous engineering fields such as system management and engineering, control, multi-scale and multi-physics system modeling, risk analysis, safety, security, resilience, decision-making, interaction with humans, cooperation and coordination in competitive multi-systems, and in applications such as transportation, critical infrastructures, manufacturing, healthcare, environment, cyber-physical systems, defense, aerospace. The 2018 conference theme is "Systems of systems Management and Control: Frontiers between cyber, physical, and social systems".

The program includes plenary sessions, panel sessions, regular and poster sessions, and exhibitions. The fourth day focuses on ongoing projects, research priorities and innovation strategies at European level in systems of systems engineering.



Address: Sorbonne Université, Campus Pierre et Marie Curie - 4 place Jussieu - 75005 Paris.

Registration on: http://sosengineering.org/2018/registrations/



http://sosengineering.org/2018/

IEEE	SoSE	2018	- TIMET	ABLE
------	------	------	---------	------

08:00-09:30	Regi	stration (in room 101, catering zor	ne)		
09:30-09:55	inc _b	Welcome (in Lecture hall 44)			
10:00-12:00					
	Lecture hall 44	Room 105	Room 108		
	1A — System of systems integration	1B — SoS Applications I	1C — Software-intensive SoSs Engineering		
	Chair: Mohammad Rajabalinejad.	Chair: Paul C. Hershey.	Chairs: Flavio Oquendo, Khalil Drira, Axel Legay.		
	A System of Information Systems to Capitalize Resources of Collaborative Activities: the ECOPACK Project.	Towards a System-of-Systems for Improved Road Construction	Orchestration of Domain Specific Test Languages with a Behavior		
	Zoubida Afoutni; Claude Moulin; Marie- Hélène Abel; Majd Saleh; Veronique Misseri.	Efficiency Using Lean and Industry 4.0. Jakob Axelsson; Joakim Fröberg; Peter Eriksson.	Driven Development approach. Robin Bussenot; Hervé Leblanc; Christian Percebois.		
	Overview of System of Systems (SoS) Managerial and Operational Affinity. Michael Yokell.	Graphical User Interface definition processes in the frame of Systems-of-Systems. Vincent Arnould.	A Maude based Specification for SoS Architecture. Faiza Belala; Akram Seghiri; Zakaria Benzadri; Nabil Hameurlain.		
	Modeling a Community as a System of Systems: A Methodology For Data Integration. Inas S. Khayal.	Internet of Things Canvas for Ideation in Model-Based Product Generation Planning. Alexander A. Albers; Ruslan Bernijazov; Lydia Kaiser; Roman Dumitrescu.	Toward a Formal Multiscale Architectural Framework for Emerging Properties Analysis in Systems of Systems. Laurent Bobelin; Khalil Drira; Cédric Eichler.		
	Understanding the implementation of a Programs construct in order to establish an information structure and communicate the rich picture. Christopher French.	Using Social Network Analysis to Identify Systems of Systems in a Network of Systems. James Enos; Roshanak Nilchiani.	Extending Multi-Agent Systems for Systems-of-Systems Security Analysis. Jamal El Hachem; Vanea Chiprianov; Philippe Aniorte; Valdemar Neto.		
	Bucketology and an Enterprise Approach to System of Systems Development. Donald York; Marc Austin.	Geospatial & Geodetic Engineering - Contributions to Specialty Engineering Activities or a dedicated Specialty Engineering Discipline on their own in System of Systems Engineering? Ulrich Lenk.	On the Emergent Behavior Oxymoron of System-of-Systems Architecture Description. Flavio Oquendo.		
	Interfaces modeling for Product- Service System integration. Elaheh Maleki; Farouk Belkadi; Eric Bonjour; Alain Bernard.	A System Dynamics Model for Analyzing Swarming UAVs Air Combat System. Niping Jia; Zhiwei Yang; Tianjun Liao; Yajie Dou; Kewei Yang. (not presented at the conference).	System of Information Systems and Organizational Memory. Majd Saleh; Marie-Hélène Abel.		
12:00-13:15		Lunch			
13:15-14:00	Keynote 1: Judith S. Dahmann (The MITRE Corporation, USA) - Chair: Jakob Axelsson.				
			enant satis states off		
	Systems of Systems: Why	Model Based Approaches to System			
14:00-15:30	INCOSE Panel 1: Judith S.	Model Based Approaches to System Dahmann (moderator)	of Systems Engineering?		
14:00-15:30	INCOSE Panel 1: Judith S. I Application of Model-Based Systems E	Model Based Approaches to System Dahmann (moderator) ingineering to Systems of Systems.			
	INCOSE Panel 1: Judith S.	Model Based Approaches to System Dahmann (moderator) ingineering to Systems of Systems.	of Systems Engineering?		
15:30-15:45	INCOSE Panel 1: Judith S. I Application of Model-Based Systems E Jakob Axelsson, Vincent Arnould	Model Based Approaches to System Dahmann (moderator) ingineering to Systems of Systems. I, T. McDermott, Mike Yokell Parallel sessions 2	of Systems Engineering?		
15:30-15:45	INCOSE Panel 1: Judith S. I Application of Model-Based Systems E Jakob Axelsson, Vincent Arnould Lecture hall 44	Model Based Approaches to System Dahmann (moderator) ingineering to Systems of Systems. I, T. McDermott, Mike Yokell Parallel sessions 2 Room 105	of Systems Engineering? Poster session 1 — Room 106 Room 108		
15:30-15:45	INCOSE Panel 1: Judith S. I Application of Model-Based Systems E Jakob Axelsson, Vincent Arnould	Model Based Approaches to System Dahmann (moderator) ingineering to Systems of Systems. I, T. McDermott, Mike Yokell Parallel sessions 2	of Systems Engineering? Poster session 1 — Room 106 Room 108 2C — Novel engineering systems for SoSs		
15:30-15:45	INCOSE Panel 1: Judith S. I Application of Model-Based Systems E Jakob Axelsson, Vincent Arnould Lecture hall 44	Model Based Approaches to System Dahmann (moderator) ingineering to Systems of Systems. I, T. McDermott, Mike Yokell Parallel sessions 2 Room 105	of Systems Engineering? Poster session 1 — Room 106 Room 108 2C — Novel engineering systems		
15:30-15:45	INCOSE Panel 1: Judith S. I Application of Model-Based Systems E Jakob Axelsson, Vincent Arnould Lecture hall 44 2A — Resilience	Model Based Approaches to System Dahmann (moderator) ingineering to Systems of Systems. I, T. McDermott, Mike Yokell Parallel sessions 2 Room 105 2B — SoSE Education	of Systems Engineering? Poster session 1 — Room 106 Room 108 2C — Novel engineering systems for SoSs Chair: Vincent Arnould, Flavio		
15:30-15:45	INCOSE Panel 1: Judith S. I Application of Model-Based Systems E Jakob Axelsson, Vincent Arnould Lecture hall 44 2A — Resilience Chair: Jean-Pierre Cruciani. Towards a Model-Based method for Resilient Critical Infrastructure Engineering: How to model, check, simulate and evaluate the Resilience of Critical Infrastructures? Vincent Chapurlat; Blazo Nastoy; Aurelia Bony- Dandrieux; Jérome Tixier; Daouda	Model Based Approaches to System Dahmann (moderator) ingineering to Systems of Systems. I, T. McDermott, Mike Yokell Parallel sessions 2 Room 105 2B — SoSE Education Chair: Omar Hammami. Systems Engineering competencies in academic education. Iris Graessler; Julian Hentze; Christian Oleff.	of Systems Engineering? Poster session 1 — Room 106 Room 108 2C — Novel engineering systems for SoSs Chair: Vincent Arrould, Flavio Oquendo, Salah Sadou. Modelling System of Systems configurations. Franck Petitdemange; Isabelle Borne;		
15:30-15:45	INCOSE Panel 1: Judith S. I Application of Model-Based Systems E Jakob Axelsson, Vincent Arnould Lecture hall 44 2A — Resilience Chair: Jean-Pierre Cruciani. Towards a Model-Based method for Resilient Critical Infrastructure Engineering: How to model, check, simulate and evaluate the Resilience of Critical Infrastructures? Vincent Chapurlat; Blazo Nastov; Aurelia Bony- Dandrieux; Jérome Tixier; Daouda Kamissoko; Frederick Benaben. Using Requirements Engineering in the Development of Resilience Guidelines for Critical Infrastructure. Rogier Woltjer; Jonas Hermelin; Susanna Nilsson; Per-Anders Oskarsson; Niklas	Model Based Approaches to System Dahmann (moderator) ingineering to Systems of Systems. I, T. McDermott, Mike Yokell Parallel sessions 2 Room 105 2B — SoSE Education Chair: Omar Hammami. Systems Engineering competencies in academic education. Iris Graessler; Julian Hentze; Christian Oleff. Teaching Conceptualization in System of Systems. Eng Seng	of Systems Engineering? Poster session 1 — Room 106 Room 108 2C — Novel engineering systems for SoSs Chair: Vincent Arnould, Flavio Oquendo, Salah Sadou. Modelling System of Systems configurations. Franck Petitdemange; Isabelle Borne; Jeremy Buisson. A Formal Approach for Architecting Software-intensive Systems-of- Systems with Guarantees. Flavio Oquendo; Jeremy Buisson; Elena		
<u>15:30-15:45</u> 15:45-16:45	INCOSE Panel 1: Judith S. I Application of Model-Based Systems E Jakob Axelsson, Vincent Arnould Lecture hall 44 2A — Resilience Chair: Jean-Pierre Cruciani. Towards a Model-Based method for Resilient Critical Infrastructure Engineering: How to model, check, simulate and evaluate the Resilience of Critical Infrastructures? Vincent Chapurlat; Blazo Nastov; Aurelia Bony- Dandrieux; Jérome Tixier; Daouda Kamissoko; Frederick Benaben. Using Requirements Engineering in the Development of Resilience Guidelines for Critical Infrastructure. Rogier Woltjer; Jonas Hermelin; Susanna Nilsson; Per-Anders Oskarsson; Niklas Hallberg. A system of systems engineering perspective on IoT trustworthiness.	Model Based Approaches to System Dahmann (moderator) ingineering to Systems of Systems. I, T. McDermott, Mike Yokell Parallel sessions 2 Room 105 2B — SoSE Education Chair: Omar Hammami. Systems Engineering competencies in academic education. Iris Graessler; Julian Hentze; Christian Oleff. Teaching Conceptualization in System of Systems. Eng Seng	of Systems Engineering? Poster session 1 — Room 106 Room 108 2C — Novel engineering systems for SoSs Chair: Vincent Arnould, Flavio Oquendo, Salah Sadou. Modelling System of Systems configurations. Franck Petitdemange; Isabelle Borne; Jeremy Buisson. A Formal Approach for Architecting Software-intensive Systems-of- Systems with Guarantees. Flavio Oquendo; Jeremy Buisson; Elena Leroux; Gersan Moguerou. Using Model-Driven approach for engineering the System Engineering		
14:00-15:30 15:30-15:45 15:45-16:45 15:45-17:00 17:00-17:45	INCOSE Panel 1: Judith S. I Application of Model-Based Systems E Jakob Axelsson, Vincent Arnould Lecture hall 44 2A — Resilience Chair: Jean-Pierre Cruciani. Towards a Model-Based method for Resilient Critical Infrastructure Engineering: How to model, check, simulate and evaluate the Resilience of Critical Infrastructures? Vincent Chapurlat; Blazo Nastov; Aurelia Bony- Dandrieux; Jérome Tixier; Daouda Kamissoko; Frederick Benaben. Using Requirements Engineering in the Development of Resilience Guidelines for Critical Infrastructure. Rogier Woltjer; Jonas Hermelin; Susanna Nilsson; Per-Anders Oskarsson; Niklas Hallberg. A system of systems engineering perspective on IoT trustworthiness. François Coallier.	Model Based Approaches to System Dahmann (moderator) ingineering to Systems of Systems. I, T. McDermott, Mike Yokell Parallel sessions 2 Room 105 2B — SoSE Education Chair: Omar Hammami. Systems Engineering competencies in academic education. Iris Graessler; Julian Hentze; Christian Oleff. Teaching Conceptualization in System of Systems. Eng Seng	of Systems Engineering? Poster session 1 — Room 106 Room 108 2C — Novel engineering systems for SoSs Chair: Vincent Arnould, Flavio Oquendo, Salah Sadou. Modelling System of Systems configurations. Franck Petitdemange; Isabelle Borne; Jeremy Buisson. A Formal Approach for Architecting Software-intensive Systems-of- Systems with Guarantees. Flavio Oquendo; Jeremy Buisson; Elena Leroux; Gersan Moguerou. Using Model-Driven approach for engineering the System Engineering System. Vincent Arnould. François Coallier.		

		DAY 2: JUNE 20, 2018		
08:00-08:30				
08:30-09:15	Investigating in SoS Taxonomies to Improve Systems Engineering.			
09:15-10:00				
09:15-10:00	Unlocking value creation through Systems of Systems thinking: can we create new opportunities through platforms and services?			
10:00-10:30	· · · · · · · · · · · · · · · · · · ·			
10:30-12:30	Lecture hall 44	Parallel sessions 3 Room 105	Room 108	
	3A — Risk analysis, reliability, safety,	3B — Transportation systems	3C — SoS Applications II	
	security in SoS Chair: Eric Bonjour.	Chair: Franck Davoine.		
	An Efficient Architecture for Trust Management in IoE Based Systems of Systems. Djamel Eddine Kouicem; Abdelmadjid Bouabdallah; Hicham Lakhlef.	The Autonomous Train. Damien Trentesaux; Rudy Dahyot; Abel Ouedraogo; Diego Arenas; Sebastien Lefebvre; Walter Schon; Benjamin Lussier; Hugues Cheritel.	Chair: Gerrit Muller. Dimensional Analysis Conceptual Modeling Supporting Adaptable Reasoning. Eric Coatanea; Ric Roca.	
	System of Systems Characterisation assisting Security Risk Assessment. Duncan Ki-Aries; S Faily; Huseyin Dogan; Chris Williams.	A Fusion Model for Road Detection based on Deep Learning and Fully Connected CRF. Fei Yang; Zhong Jin; Jian Yang.	Systems of Systems. Imane Cherfa; Salah Sadou.	
	A collaboration policy model for system of systems. Zelalem Mihret Belay; Eunkyoung Jee; Young-Min Baek; Bae Doo-Hwan.	A Methodology for Architecting Collaborative Product Service System of Systems. Andreas Hein; Yann Chazal; Samuel Boutin; Marija Jankovic.	Customer Review Analytics using Subjective Loss Function for Conceptual-based Learning. Seyed Ali Miraftabzadeh; Paul Rad; Mo Jamshidi.	
	A Language for Analyzing Security of IOT Systems. Delphine Beaulaton; Jean Quilbeuf; Najah Ben Said; Ioana Domnina Cristescu; Axel Legay; Salah Sadou; Régis Fleurquin.	Challenges for the Self-Safety in Autonomous Vehicles. Matthieu Carré; Ernesto Exposito; Javier Ibañez-Guzmán.	What can (Systems of) Systems Engineering contribute to Oil and Gas? An illustration with case studies from subsea. Gerrit Muller; Kristin Falk.	
	Irrational System Behavior in a System of Systems. Douglas Van Bossuyt; Bryan O'Halloran; Ryan Arlitt.	Train scheduling and rescheduling model based on customer satisfaction. Application to Genoa railway network. Fabio Donzella; María del Cacho Estil-les; Chiara Bersani; Roberto Sacile; Luca Zero.	Meta-Network Framework for Analyzing Disaster Management System-of-Systems. Chao Fan; Cheng Zhang; Ali Mostafavi. (not presented at the conference).	
		Fusion of evidential occupancy grids for cooperative perception. Federico Camarda; Franck Davoine; Véronique Cherfaoui.	Exchanging Systems Engineering data for teaming in a System of Systems and Services. Andre Ayoun Pierre-Olivier Robic.	
12:30-13:45		Lunch		
13:45-14:30	Keynote 5: Philippe Bonnifait	(Heudiasyc, UTC, CNRS, France) -	Chair: Alessandro Golkar.	
	Autonomous cars	navigation: from standalone to coop	erative systems.	
	The Role of Systems of Systems Engineering in Systems Engineering of			
14:30-16:00	The Role of Systems of Systems Engin the Fut Judith Dahmann, Jakob Axelsson, Ch McDermott, Mo Jamshidi, Mike Yok Ramakrishnan Raman, Don York, Mc	eering in Systems Engineering of ure. ris French, Vincent Arnould, Tom ell, Gerrit Muller, Paul Hershey, Mansouri, Cihan Dagli, Francois	Poster session 2 — Room 106	
16:00-16:15	The Role of Systems of Systems Engin the Fut Judith Dahmann, Jakob Axelsson, Ch McDermott, Mo Jamshidi, Mike Yok Ramakrishnan Raman, Don York, Mc	neering in Systems Engineering of ure. ris French, Vincent Arnould, Tom ell, Gerrit Muller, Paul Hershey, Mansouri, Cihan Dagli, Francois dens, Kerry Lunney.	Poster session 2 — Room 106	
	The Role of Systems of Systems Engin the Fut Judith Dahmann, Jakob Axelsson, Ch McDermott, Mo Jamshidi, Mike Yok Ramakrishnan Raman, Don York, Mc	eering in Systems Engineering of ure. ris French, Vincent Arnould, Tom ell, Gerrit Muller, Paul Hershey, Mansouri, Cihan Dagli, Francois	Poster session 2 — Room 106 Room 108	
16:00-16:15	The Role of Systems of Systems Enginer the Futt Judith Dahmann, Jakob Axelsson, Chu McDermott, Mo Jamshidi, Mike Yok Ramakrishnan Raman, Don York, Mc Coallier, Matthew Joor	eering in Systems Engineering of ure. ris French, Vincent Arnould, Tom ell, Gerrit Muller, Paul Hershey, Mansouri, Cihan Dagli, Francois dens, Kerry Lunney. Parallel sessions 4	Room 108 4C — Healthcare	
16:00-16:15	The Role of Systems of Systems Engin the Fut Judith Dahmann, Jakob Axelsson, Chu McDermott, Mo Jamshidi, Mike Yok Ramakrishnan Raman, Don York, Mo Coallier, Matthew Joor Lecture hall 44	eering in Systems Engineering of ure. ris French, Vincent Arnould, Tom ell, Gerrit Muller, Paul Hershey, Mansouri, Cihan Dagli, Francois dens, Kerry Lunney. Parallel sessions 4 Room 105	Room 108 4C — Healthcare Chairs: Alex Gorod, Leonie Hallo,	
16:00-16:15	The Role of Systems of Systems Engi the Fut Judith Dahmann, Jakob Axelsson, Ch McDermott, Mo Jamshidi, Mike Yok Ramakrishnan Raman, Don York, Mc Coallier, Matthew Joor Lecture hall 44 4A — Robotics	eering in Systems Engineering of ure. ris French, Vincent Arnould, Tom ell, Gerrit Muller, Paul Hershey, Mansouri, Cihan Dagli, Francois dens, Kerry Lunney. Parallel sessions 4 Room 105 4B — System Architecture I	Room 108 4C — Healthcare Chairs: Alex Gorod, Leonie Hallo, Sue Merchant, Brian White. Developing Systems Thinking Skills	
16:00-16:15	The Role of Systems of Systems Engi the Fut Judith Dahmann, Jakob Axelsson, Ch McDermott, Mo Jamshidi, Mike Yok Ramakrishnan Raman, Don York, Mor Coallier, Matthew Joor Lecture hall 44 4A — Robotics Chair: Philippe Bonnifait. On The Development of Robot Fish Swarms in Virtual Reality with Digital Twins. Matthew Joordens; Mo	eering in Systems Engineering of ure. ris French, Vincent Arnould, Tom ell, Gerrit Muller, Paul Hershey, Mansouri, Cihan Dagli, Francois dens, Kerry Lunney. Parallel sessions 4 Room 105 4B — System Architecture 1 Chair: John J. Prevost System of Systems for Tripwires Activation of Algorithms and Reasoning (STAAR) for Analysis of Mission Success. Paul C. Hershey;	Room 108 4C — Healthcare Chairs: Alex Gorod, Leonie Hallo, Sue Merchant, Brian White. Developing Systems Thinking Skills using Healthcare as a Case Study.	
16:00-16:15	The Role of Systems of Systems Enginet the Futter State Stat	eering in Systems Engineering of ure. is French, Vincent Arnould, Tom ell, Gerrit Muller, Paul Hershey, Mansouri, Cihan Dagli, Francois dens, Kerry Lunney. Parallel sessions 4 Room 105 4B — System Architecture I Chair: John J. Prevost System of Systems for Tripwires Activation of Algorithms and Reasoning (STAAR) for Analysis of Mission Success. Paul C. Hershey; Michael Sica. Exogenously Describing Architectural Emergent Behaviors of Systems-of-Systems with	Room 108 4C — Healthcare Chairs: Alex Gorod, Leonie Hallo, Sue Merchant, Brian White. Developing Systems Thinking Skills using Healthcare as a Case Study. Thomas A McDermott, Jr. Designing Patient-Oriented Healthcare Services as a System of Systems. Inas S. Khayal; Amro M.	
16:00-16:15	The Role of Systems of Systems Enginet the Futtor of Systems of Systems Enginet (Second Second Secon	A System-of-Systems approach to Improving Intelligent Predictions and Decisions in a Time-series Exogenously Describing Exogenously Describing Architectural Emergent Behaviors of System-of-Systems Approach to Improving Intelligent Predictions and Decisions in a Time-series Environment. William Beaver; William Beaver;	Room 108 4C — Healthcare Chairs: Alex Gorod, Leonie Hallo, Sue Merchant, Brian White. Developing Systems Thinking Skills using Healthcare as a Case Study. Thomas A McDermott, Jr. Designing Patient-Oriented Healthcare Services as a System of Systems. Inas S. Khayal; Amro M. Farid. Toward Systemic Governance of Cancer Treatment as a System of Systems. Alex Gorod; Susan	
16:00-16:15	The Role of Systems of Systems Enginithe Futt Judith Dahmann, Jakob Axelsson, Chu McDermott, Mo Jamshidi, Mike Yok Ramakrishnan Raman, Don York, Mc Coallier, Matthew Joor Lecture hall 44 4A — Robotics Chair: Philippe Bonnifait. On The Development of Robot Fish Swarms in Virtual Reality with Digital Twins. Matthew Joordens; Mo Jamshidi. Analysis of the Effect Waveform Parameters have on Stingray Surface Velocity. Jordan Nowell; Jack Connor; Matthew Joordens; Benjamin Champion. Cooperative Frontier-Based Exploration Strategy for Multi-Robot System. Nesrine Mahdoui; Vincent Fremont; Enrico Natalizio. Integrated scenarios of formation tracking and collision avoidance of multi-vehicles. Hoang Anh Pham; Thierry Soriano; Ngo Van Hien.	eering in Systems Engineering of Jare. Tis French, Vincent Arnould, Tom ell, Gerrit Muller, Paul Hershey, Mansouri, Cihan Dagli, Francois dens, Kerry Lunney. Parallel sessions 4 Room 105 4B — System Architecture 1 Chair: John J. Prevost System of Systems for Tripwires Activation of Algorithms and Reasoning (STAAR) for Analysis of Mission Success. Paul C. Hershey; Michael Sica. Exogenously Describing Architectural Emergent Behaviors of Systems-of-Systems with SosADL. Flavio Oquendo. A System-of-Systems Approach to Improving Intelligent Predictions and Decisions in a Time-series Environment. William Beaver; David M Curry; Cihan H Dagli. Model-Based Semi-Physical Simulation Platform Architecting for Satellite Communication System. Su Gao; Guangyu Long;	Room 108 4C — Healthcare Chairs: Alex Gorod, Leonie Hallo, Sue Merchant, Brian White. Developing Systems Thinking Skills using Healthcare as a Case Study. Thomas A McDermott, Jr. Designing Patient-Oriented Healthcare Services as a System of Systems. Inas S. Khayal; Amro M. Farid. Toward Systemic Governance of Cancer Treatment as a System of Systems. Alex Gorod; Susan Merchant; Leonie Hallo. The Future of Healthcare through a Systems Approach. Alan Ravitz; Michael Grant; Conrad Grant.	

8:00-08:30		Registration				
08:30-08:30 08:30-09:15						
	Internet of Things, Real-Time Decision Making and Artificial Intelligence.					
09:15-10:00	Keynote 7: Philippe Convain (Plastic Omnium Auto Inergy, France) - Chair: Eric Bonjour. Industrial Process Monitoring: from fault analysis to prediction.					
10:00-10:30						
10:30-12:30		Coffee break Parallel sessions 5				
10.50-12.50	Lecture hall 44	Room 105	Room 108			
	5A — Cyberphysical systems and IoT: engineering issues	5B — SoS approach for Ambient Assisted Living and vital telemonitoring	5C — System management and engineering			
	Chair: Enrico Natalizio	Chairs: Carla Taramasco, Dan	Chair: Marie-Hélène Abel.			
	Towards A Service-oriented Framework for MBSE Tool-chain Development. Jinzhi Lu; De-Jiu Chen; Jian Wang; Martin Toerngren.	Istrate. Towards Data-Centric Genetic Cryptography for Telemonitoring and Ambient Assisted Living Systems. Zoubir Hamici.	Data-driven Aspects of Engineering. Michael Borth; Emile van Gerwen.			
	Attack Modeling and Verification for Connected System Security. Saoussen Mili; Nga Thi Viet Nguyen; Rachid Chelouah.	Cognitive and functional rehabilitation using serious games and a system of systems approach. Halim Tannous; Cyrille Grébonval; Mircea Dan Istrate; Anaick Perrochon; Tien Tuan Dao.	Regional Sensitivity Analysis Applied To Train Traffic Rescheduling in Case of Power Shortage. Soha Saad; Florence Ossart; Jean Bigeon; Etienne Sourdille; Harold Gance.			
	A Model-based Approach for Managing Criticality Requirements in e-Health IoT Systems. Christos Kotronis; Mara Nikolaidou; George Dimitrakopoulos; Dimosthenis Anagnostopoulos; Abbes Amira; Faycal Bensaali.	ADL Platform: Using Technology to Enhance the Quality of Life of the Aging Population. Carla Taramasco; Rodrigo Olivares; Roberto Munoz; Tomas Rodenas; Felipe Martinez; Jacques Demongeot.	Theory of Complex Activity as a Tool to Analyze and Govern an Enterprise. Mikhail Belov.			
	Predictive Thermal Comfort Control for Cyber-Physical Home Systems. Sian En Ooi; Yoshiki Makino; Yuto Lim; Yasuo Tan.	Monitoring chronic disease at home using connected devices. Amira Tilja; Dan Istrate; Az-eddine Bennani; Hoai Huong Ngo; Said Gattoufi; Wegrzyn-Wolska Katarzyna.	A system of systems framework: Cooperative Maneuvers Manager fo Autonomous Vehicles. Mohamad Al Assaad; Reine Talj; Ali Charara.			
	MBSE Driven IoT for Smarter Cities. Matthew Hause; James Hummell; Fabrice Grelier.	AAL Platforms Challenges in IoT Era: A Tertiary Study. Paulo Duarte; Felipe Barreto; Paulo A C Aguilar; Windson Viana; Rossana Maria de Castro Andrade; Jérôme Boudy.	On the systems engineering process of some systems(-of-systems). Freddy K Simo; Dominique Lenne.			
	Blockchain Design for Trusted Decentralized IoT Networks. Juah Song; Mevlut A Demir; John J Prevost; Paul Rad.	An Algorithm for Fall Detection using Data from SmartWatch. Italo Araújo; Lucas Dourado; Letícia Fernandes; Rossana Maria de Castro Andrade; Paulo A C Aguilar.				
12:30-13:45		Lunch				
13:45-14:30	Framework Architecture for Multi-Modal Sensing and Situation Assessment of Human Gait Dynamics to Suppor					
14:30-15:15	Mobile Gait Rehabilitation. Keynote 9: Kerry Lunney (Thales, Australia) - Chair: Garry Roedler. Is Systems Engineering Ready for the Future?					
15:15-15:30						
15:30-16:50	Lecture hall 44	Parallel sessions 6 Room 105	Room 108			
	6A — Systems Policy and Governance	6B — Tensorial analysis of	6C — System architecture II			
		networks				
	Chair: Mo Mansouri. System Integration: Challenges and Opportunities for Rail Transport. Mohammad Rajabalinejad.	Chair: Olivier Maurice. A first Cyber-Physical Systems of Systems Modeling. Olivier Maurice.	Chair: Isabelle Borne. Domain-Specific Requirements Elicitation for Socio-Technical System of Systems. Benjamin Weinert; Mathias Uslar; Axel Hahn.			
	A Framework for Development Process Design and its use for Establishing Intellectual Property Governance. Avi Shaked, Yoram Reich.	ADAPT: A EU transdisciplinary research project for assistive robotics rehabilitation. Nicolas Ragot; Bastien Fraudet; Emilie Leblong.	MBA: A Framework for Building Systems of Systems. Gregory Wanderley; Marie-Hélène Abel; Emerson Paraiso; Jean-Paul Barthes			
	Comparison and Analysis of Governance Mechanisms Employed by Blockchain-Based Distributed Autonomous Organizations. Stephen DiRose; Mo Mansouri.	Equivalent dipole model optimized by Ant Colony Optimization Algorithm for modeling antennas in their context. Alain Reineix; Christophe Guiffaut.	The challenge of increasing heterogeneity in Systems of Systems for architecting. Gerrit Muller.			
	Applying Systems-of-Systems Principles to Purposeful Design of Human Systems. Thomas A McDermott, Jr.	Quantitative and Qualitative Reliability Assessment of Reparable Electrical Power Supply Systems using Fault Tree Analysis Method and Importance Factors. Dallal Kemikem; Mohamed Boudour; Rabah Benabid; Kambiz Tehrani. (not presented at the				

Ro	oom 106 - Chair: Nesrine Mahdoui.	
An Analysis of Systems-of-Systems Opportunities and Challenges Related to Mobility in Smart Cities. Jakob Axelsson; Stina Nylander.	Behaviour Modelling in the Design of Systems of Systems. Craig Wrigley.	Learning Framework For Maturing Architecture Design Decisions For Evolving Complex SoS. Ramakrishnan Raman; Meenakshi Dsouza.
Designing Cyber-Physical Systems with aDSL: a Domain-Specific Language and Tool Support. Freek G.B. Van Den Berg; Boudewijn R. Haverkort; Bedir Tekinerdogan; Vahid Garousi.	Autonomous Systems of Systems.	Identification of the mechanical properties of microcapsules using diffuse approximation. Carlos Quesada; Pierre Villon; Anne- Virginie Salsac.
Hexagonal digital actuator array for micro conveyance application. Ajinkya Deshmukh; Laurent Petit; Muneeb- ullah Khan; Frédéric Lamarque; Christine Prelle.	Risk analysis for hazardous material transport by road: case study on Tangier-Tetouan region, Morocco. Abdellatif Soussi; Ahmed El Amarti; Chiara Bersani; Dounia Bouchta; Massimo D'Incà; Roberto Sacile; Hamid Seghiouer; Anita Trotta; Enrico Zero. (not presented at the conference).	A New Spatial Learning Control for Autonomous Vehicles: Experimenta Results. Ciro D'Ambrosio; Gianmarco Sbarra; Marco Tiberti; Cristiano Maria Verrelli; Luca Consolini.
Multi-scale approach to reconstruct a bioartificial system of system: the example of the bone-tendon-muscle continuum. Alejandro Garcia Garcia; Megane Beldjilali Labro; Firas Farhat; Jean-Baptiste Perot; Quentin Dermigny; Murielle Dufresne; Jean- Francois Grosset; Fahmi Bedoui; Cecile Legallais.	The Utilization of Virtual Reality as a System of Systems Research Tool. Jonathan Lwowski; Matthew Joordens; Abhijit Majumdar; Patrick J Benavidez; John J Prevost; Mo Jamshidi. (not presented at the conference).	

Address: Sorbonne Université, Campus Pierre et Marie Curie - 4 place Jussieu 75005 Paris.

SoSE 2018 conference rooms:

• Lecture hall 44, on the ground floor under the tower 44: Welcomes and all Keynote, Panel and Plenary sessions.

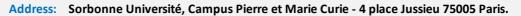
- On the 1st floor between towers 44-45: rooms **106** (Sponsors and Posters), **108**, and the catering zone. On the 1st floor (above the ground floor) between towers 44-54: room **105**.

Cocktail of June 19: in the Patio 15-25, between towers 15-25.

A small hunger between breaks? --> Atrium café, in the basement of the Atrium.



	IEEE – 13th System of Systems Engineering Conference. SoSE 2018
	JUNE 22, 2018
	Special day on Systems of Systems and Cyber-Physical Systems:
	Ongoing projects in France, EU research priorities and innovation strategies.
08:30-09:35	Registration
09:35-09:45	Welcome
09:45-10:00	François James (French National Research Agency – ANR) - Chair: Dominique Luzeaux.
	Investments for the Future in France: Laboratories of Excellence (Labex) program.
10:00-10:30	Thierry Denoeux (Laboratory of Excellence – Labex MS2T) - Chair: Dominique Luzeaux.
	Control of Technological Systems-of-Systems.
10:30-11:00	Raja Chatila (Laboratory of Excellence – Labex SMART) - Chair: Dominique Luzeaux.
	Smart human/machine/human interactions in the digital society.
11:00-11:30	Coffee break
11:30-12:00	André Ayoun (AFIS, Ariane Group) - Chair: Michael Henshaw.
	Overview of French organisations (academics, industrial, administrations) active in SoS: an AFIS point of view.
12:00-12:30	Yann Chazal (Renault) - Chair: Michael Henshaw.
	SoS approach at Renault and its implementation in the design of new mobility.
12:30-14:00	Lunch
14:00-14:30	Sandro D'Elia (Programme Officer at European Commission – DG Connect) - Chair: Thierry Denoeux.
	A European vision for Cyber-Physical Systems in 2030.
14:30-15:00	Michael Paulweber (Vice president ARTEMIS-IA) - Chair: Thierry Denoeux.
	Pan-European research and innovation strategies in the field of CPS and Embedded Intelligent Systems.
15:00-15:30	Charles Robinson (Thales, EU Platforms4CPS coordinator) - Chair: Thierry Denoeux.
	Platforms4CPS, a coordination and support action in the area of Smart Cyber-Physical Systems.
15:30-16:00	Coffee break
16:00-17:00	Panel (Moderator: Roberto Sacile, University of Genova, Italy)
	Research priorities and agenda in SoSE (including large-scale complex systems, CPS) at European level.
	Jakob Axelsson (RISE, SICS), Sweden
	Michael Henshaw (Systems Division, Loughborough University), UK
	Robert Plana (Assystem), France
	Garry Roedler (Lockheed Martin / INCOSE), USA
17:00-17:10	Closing



SoSE 2018 conference rooms:

- On the ground floor of tower 44: Lecture hall 44.
- On the 1st floor between towers 44-45: Catering zone (Coffee breaks and Lunch).



Registration on: http://sosengineering.org/2018/registrations/

http://sosengineering.org/2018/june-22/