SPECIAL SESSION ON

Systems Engineering

Special Session jointly organized by Co-Chairs:

Guido Guizzi	(University of Naples Federico II, Italy	g.guizzi@unina.it
Lucio Tirone	(Aster s.p.a., A.I.S.E. – Italian Association of System Engineering – INCOSE Italian Chapter, Italy)	lucio.tirone@aster-te.it
Davide Fierro	(I.N.A.F. – National Institute of Astrophysics)	davide.fierro@inaf.it
Eric Levrat	(Research Center for Automatic Control of Nancy CRAN UMR CNRS 7039, Lorraine University)	eric.levrat@univ-lorraine.fr
Eric Bonjour	(ERPI - Lorraine University)	eric.bonjour@univ-lorraine.fr
Frederique Mayer	(ERPI - Lorraine University)	frederique.mayer@univ-lorraine.fr
David Gouyon	(Research Center for Automatic Control of Nancy, CRAN UMR CNRS 7039, Lorraine University)	david.gouyon@univ-lorraine.fr

Systems Engineering is a discipline whose responsibility it is to create and operate technologically enabled systems that satisfy stakeholder needs throughout their life cycle. Systems engineers reduce ambiguity by clearly defining stakeholder needs and customer requirements, they focus creativity by developing a system's architecture and design and they manage the system's complexity over time. Considerations taken into account by systems engineers include, among others, quality, cost and schedule, risk and opportunity under uncertainty, manufacturing and realization, performance and safety during operations, training and support, as well as disposal and recycling at the end of life. The session welcomes original submissions in the field of Systems Engineering as defined above, but also encourages contributions that take an even broader perspective including the design and operation of systems-of-systems, the application of Systems Engineering to enterprises and complex socio-technical systems, the identification, selection and development of systems engineers as well as the evolution of systems and systems-of-systems over their entire lifecycle.

Systems Engineering integrates all the disciplines and specialty groups into a coordinated team effort forming a structured development process that proceeds from concept to realization to operation. Increasingly important topics in Systems Engineering include the role of executable languages and models of systems, the concurrent use of physical and virtual prototyping, as well as the deployment of agile processes.

Systems Engineering considers both the business and the technical needs of all stakeholders with the goal of providing a quality product that meets the user needs. Systems Engineering may be applied not only to products and services in the private sector but also to public infrastructures and socio-technical systems whose precise boundaries are often challenging to define. The session aims to provide researchers, practitioners implementing Systems Engineering opportunity to meet, exchange and discussion of their experiences on the basis of which to establish future collaborations and synergies.

Proposal submitted to 16th IFAC Symposium on Information Control Problems in Manufacturing. Uploaded October 2, 2017.

The main topics of interest include, but are not limited to:

- Systems Science, Systems Thinking, Systems Dynamics
- Needs And Requirements Definition
- System Architecture/Design Definition
- Architectural Design & System Integration
- Verification / Validation
- Transition / Operation / Maintenance
- Project Planning / Assessment / Control
- Decision Analysis / Management
- Cause Analysis
- Risk / Opportunity Management
- Configuration / Information Management
- Measurement
- Resource Management
- Human Factors / Human-Systems Integration
- Reliability / Availability / Maintainability
- Safety / Security
- Logistics / Supportability
- Life-cycle Costing / Economic Evaluation
- Environmental Compatibility
- SE Processes
- Agile & Lean Systems Engineering
- Model-Based Systems Engineering (MBSE)
- Systems of Systems (SOS)
- Product Line Engineering
- Modeling and Simulation
- Teaching and Training
- Acquisition / Supply

Contributions in all application domains are welcomed

INVITATION CODE: 8m2n2

Standard papers (6 pages), Survey papers (6 pages) and extended abstracts (2-4 pages) are welcome. When you submit your paper to the IFAC system, you will be required this ID number in order to associate your paper to the invited session:
https://ifac.papercept.net/conferences/scripts/start.pl

IMPORTANT DATES:

Draft papers submission deadline: ~~**31st October 2017**~~ **15th November 2017**

Notification of acceptance: **12th January 2018**

Full papers submission deadline: **16th February 2018**

Early registration deadline: **2nd March 2018**

Late registration deadline: **1st April 2018**

Conference date: **11th-13th June 2018**

Best regards

Guido Guizzi, Lucio Tirone, Davide Fierro, Eric Levrat, Eric Bonjour, Frederique Mayer, David Gouyon