



ICSE

4th International Workshop on
Software Engineering for Systems-of-Systems

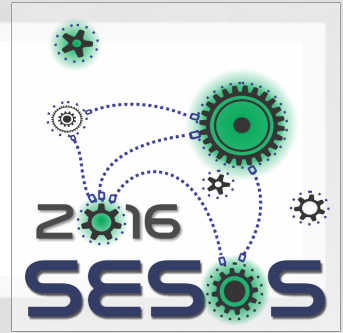
Austin, Texas, USA

Monday, May 16, 2016

SESOS 2016

<http://sesos2016.icmc.usp.br>

BRIEF HISTORY



- SESoS 2013 @ ECSCA 2013 (Montpellier, France)
 - <http://sesos2013.icmc.usp.br>
- SESoS 2014 @ ECSCA 2014 (Vienna, Austria)
 - <http://sesos2014.icmc.usp.br>
- SESoS 2015 @ ICSE 2015 (Florence, Italy)
 - <http://sesos2015.icmc.usp.br>
- SESoS 2016 @ ICSE 2016 (Austin, USA)
 - <http://sesos2016.icmc.usp.br>

MAIN GOAL OF SESoS



- SoS:
 - Increasingly complex and frequently used in highly distributed, dynamic, and open environments.
- Why is the development/maintenance of SoS a challenge for SE?
- Characteristics of SoS:
 - Managerial/operational independence of constituents
 - Distribution of constituents
 - Evolutionary development
 - Emergent behavior

MAIN GOAL OF SESoS



- Goal of SESoS:

Discuss on SE theories and tools needed to design, implement, operate, and even evolve such dynamic, complex software-intensive SoS.

ORGANIZERS

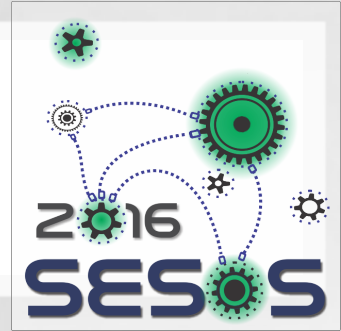


- Flavio Oquendo, IRISA - Univ. of South Brittany, France
- Paris Avgeriou, Univ. of Groningen, The Netherlands
- Carlos E. Cuesta, Rey Juan Carlos University, Spain
- Khalil Drira, LAAS-CNRS - Univ. of Toulouse, France
- Elisa Yumi Nakagawa, ICMC - Univ. of São Paulo, Brazil
- José Carlos Maldonado, ICMC - Univ. of São Paulo, Brazil
- Andrea Zisman, City University London, UK

Program Committee

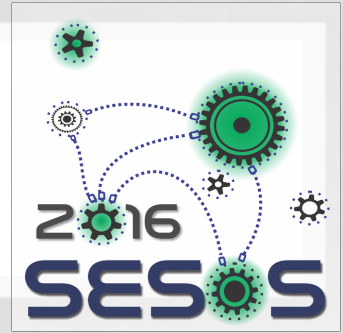
- 31 members from 12 different countries

WORKSHOP PROGRAM



- 9:00 - 09:15 Opening and Presentation
- 9:15 - 10:30 - Invited Keynote Speaker
 - Prof. Dewayne Perry, Univ. of Texas, Austin, USA
 - Systems of Systems and Statically Defined Dynamic Architecture Evolution
- 10:30 - 11:00 - Coffee Break
- 11:00 - 12:30 - Technical Session I
- 12:30 - 14:00 - Lunch Break
- 14:00 - 15:30 - Technical Session II
- 15:30 - 16:00 - Coffee Break
- 16:00 - 17:30 - Working session
 - Working groups: Challenges for Engineering SoS
 - Plenary session: Challenges for Engineering SoS
- 17:30 - Closing

TECHNICAL SESSION I

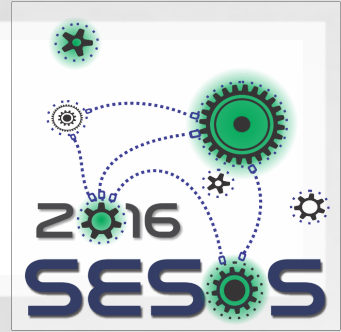


SoS Model-Based Engineering

Session chair: Elisa Yumi Nakagawa

- **Modeling and Analyzing Systems-of-Systems in the Multi-Attribute Prediction Language (MAPL)**
 - Pontus Johnson, Robert Lagerström, Mathias Ekstedt, Ulrik Franke
- **Modeling of Information Systems as Systems of Systems through DSM**
 - Paolo Salvaneschi
- **Modeling and Verification for Different Types of System of Systems using PRISM**
 - Dongwon Seo, Donghwan Shin, Young-Min Baek, Jiyoung Song, Wonkyung Yun, Junho Kim, Eunkyoung Jee, Doo-Hwan Bae

TECHNICAL SESSION II



SoS Architecture

Session Chair: Pontus Johnson

- **Building Dynamic, Long-Running Systems**
 - Steven Reiss, Qi Xin
- **ITE Arbitrator: A Reference Architecture Framework for Sustainable IT Ecosystems**
 - Soojin Park, Young B. Park
- **Approaches for Integration in System of Systems: A Systematic Review**
 - Iohan Gonçalves Vargas, Thiago Gottardi, Rosana Braga
(Presenter: Claudia Werner)

AUTHORS ORIGIN



- Country of the authors:
 - Brazil
 - Italy
 - Republic of Korea
 - Sweden
 - United States
- Papers from 8 different institutions

DISCUSSIONS



- Questions:
 - Main challenges to engineer SoS (?)
 - Evolution of SoS (?)
 - Relationship with other research areas (?)
 - Application domains (?)
 - ...



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