Call for Contributions

Note: Onsite and Online Options
In order to accommodate a large number of situations, we are offering the option for either physical presence or virtual participation. We would be delighted if all authors manage to attend in person, but are aware that special circumstances are best handled by having flexible options.

1. Inform the Chair: with the Title of your Contribution
2. Submission URL:
https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=ICONS+2020+Special
Please select Track Preference as **AIMBSE**

Special track

AIMBSE: Advanced and AI-based Methods for Model-based Systems Engineering

Chairs and Coordinators

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along with

ICONS 2020, The Fifteenth International Conference on Systems
https://www.iaria.org/conferences2020/ICONS20.html
February 23, 2020 to February 27, 2020 - Lisbon, Portugal

Systems thinking is vital for successful engineering of nowadays systems with an increasing amount of interfaces, subsystems, functionalities, and dynamic behavior. Systems Engineering (SE) picks up the basic understanding and elements of established system theory and is expected to 'connect' engineering disciplines and consequently integrate project management techniques. Based on the principles of SE, Model-based Systems Engineering (MBSE) aims to support and represent results of different development activities in one model. Thus, it shifts from heterogeneous, document-based product models to consistent and interlinked product models. In practice acceptance is often limited since experts have to transfer their established syntax, elements and tools for system modelling to the more generic languages like SysML. Although, objectives and benefits of SE and MBSE are mentioned in countless research works, industry companies across branches are facing challenges when introducing and adapting SE methodologies. A major challenge is a lack of methods to support introduction of MBSE into existing engineering processes.

The goal of AIMBSE, a special track at ICONS 2020, is to bring together researchers and practitioners interested in advanced methods in the field of MBSE. Modelling is an essential aspect in SE not only for

designing the system but also for the long-term evolution of any system. We are interested in methods to overcome the numerous obstacles when applying MBSE across disciplines and introduction into practice. Moreover, we welcome research works discussing current approaches and directions like learning and knowledge-based methods for MBSE.

We solicit both academic, research, and industrial contributions. We welcome technical papers presenting research and practical results, position papers, survey papers addressing the key problems and solutions on any of the above topics, and short papers on work in progress.

Topics include, but not limited to:

- New modelling concepts in MBSE
- Knowledge-based and data-driven methods
- Learning-based and feedback-based approaches
- Model-based requirements engineering
- Traceability of requirements (modelling and analysis)
- Domain-specific models and their integration into meta-models
- (Semi-)Formal methods in MBSE
- Automated generation of different views in development of complex systems
- Process models to support MBSE
- Approaches to improve the acceptance of MBSE in practice
- Case studies and other empirical studies as well as benchmark examples related to all of the above topics
- Experience reports related to all of the above topics
- Tools and methods supporting all of the above topics

Contribution Types
- Regular papers [in the proceedings, digital library]
- Short papers (work in progress) [in the proceedings, digital library]
- Posters: two pages [in the proceedings, digital library]
- Posters: slide only [slide-deck posted on www.iaria.org]
- Presentations: slide only [slide-deck posted on www.iaria.org]
- Demos: two pages [posted on www.iaria.org]

Important Datelines
Inform the Chair: As soon as you decide to contribute
Submission: January 5, 2020
Notification: January 24, 2020
Registration: February 1, 2020
Camera ready: February 1, 2020
Note: The submission deadline is somewhat flexible, providing arrangements are made ahead of time with the chair.

Paper Format
- See: http://www.iaria.org/format.html
- Before submission, please check and comply with the editorial rules: http://www.iaria.org/editorialrules.html

Publications
- Extended versions of selected papers will be published in IARIA Journals: http://www.iariajournals.org
- Print proceedings will be available via Curran Associates, Inc.: http://www.proceedings.com/9769.html
- Articles will be archived in the free access ThinkMind Digital Library: http://www.thinkmind.org

Paper Submission
https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=ICONS+2020+Special
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Registration
- Each accepted paper needs at least one full registration, before the camera-ready manuscript can be included in the proceedings.
- Registration fees are available at http://www.iaria.org/registration.html

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