JASE: Call for Papers Special Issue

Recent Trends in Model-based Engineering of Automotive Systems

Guest Editors

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Aims and Scope

In the last decades, the significance, size, and development costs of automotive software has grown to staggering levels. The automotive industry is increasingly relying on and becoming a driver of advances in system and software development and engineering methods, techniques and tools to deal with the many unique challenges the automotive industry faces. Significant advances have been made dealing with many of these challenges involving, for instance, variability modeling and software product lines, standardisation, model-based development, cyber-physical systems, and systems engineering. However, the remaining challenges are compounded by future trends. System and software complexities continue to grow and the industry is being forced to incorporate disruptive technology such as electrification, machine learning, autonomous vehicles and, in the near future, support for vehicle-to-vehicle and vehicle-to-infrastructure communications and collaborations. Model-based engineering has been playing a key role in the development of automotive software for a long time and many of the challenges in automotive system and software engineering might be addressed or alleviated with the use of some kind of model-based techniques.
The topics relevant to this special issue include, but are not restricted to, the following:

- architectures and component-based development and relevant technologies such as AUTOSAR, EAST-ADL, and UML,
- real-time systems and support for multi-core, mixed criticality, dynamic scheduling, etc.
- quality assurance and support for different quality attributes, such as functional and non-functional correctness, interoperability, fault tolerance, maintainability, etc.
- safety and security and support for safety standards such as ISO 26262,
- requirements and traceability,
- variability and configuration management,
- synthesis, transformation, iterative development, integration, and code generation,
- deployment,
- development processes and support for globally distributed development, and
- emerging technologies such as big data, mobile apps, social media, etc.

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Important Dates

Submission of papers:	**28 March 2021**
Notification of review results:	9 May 2021
Submission of revised papers:	27 June 2021
Second notification:	1 August 2021
Notification of final review results:	12 September 2021

Submit your paper

All papers have to be submitted via the Editorial Manager online submission and peer review system. Instructions will be provided on screen and you will be stepwise guided through the process of uploading all the relevant article details and files associated with your submission. All manuscripts must be in the English language.

To access the online submission site for the journal, please visit https://www.editorialmanager.com/jasen/default.aspx. Note that if this is the first time that you submit to Journal of Automotive Software Engineering, you need to register as a user of the system first.

NOTE : Before submitting your paper, please make sure to review the journal's Author Guidelines first.