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Design Automation for Embedded Systems
Special Issue on:
“Automotive Embedded Systems”

About Design Automation for Embedded Systems (DAEM):

Design Automation for Embedded Systems is an international journal addressing the systematic design of embedded systems, published by Springer since 1996. It offers a forum for scientists and engineers to report their latest work and results on algorithms, tools, architectures, case studies, and actual design examples of embedded systems

SCOPE:

In recent years, functionalities of automotive vehicles have been growing rapidly, to improve safety, comfort and energy efficiency. Not only premium vehicles but also volume and budget ones have started including ADAS (Advanced Driving Assistance Systems) features such as lane keeping and automatic breaking, and extensive research and development are ongoing in the automotive industry to include self-driving capabilities. Embedded computers in modern ADAS and future self-driving cars are different from those of traditional vehicles in various aspects. For example, the computers in modern cars are tightly integrated, while those in traditional cars are distributed and loosely coupled. ADAS and self-driving require much higher computational power to process huge amounts of data coming from cameras, sensors and radars. Via car-to-car and car-to-infrastructure communication, modern cars are now part of the nation-wide computer network. In order to realize such complex and integrated functionalities under severe constraints on cost, timing, security, safety and so on, major advances are needed at every layer in the hardware/software stack of automotive systems, from innovative chip architectures and sensors, to new standards for communications, to novel methods, tools, and standards for the development of middle-ware and application-level software components.

This special issue of the Journal of Design Automation for Embedded Systems seeks novel research results in the broad area of automotive embedded systems. Topics of expected contributions include, but are not limited to:

- Multi-core and many-core architectures
- GPU, custom, and FPGA-based accelerators
- Model-driven design and analysis
• Mixed criticality systems
• Software platforms (middleware and operating systems)
• Automotive cyber-physical systems
• Practical experiences and use-cases
• Testing and Verification In-vehicle and car-to-X networks

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SUBMISSION INSTRUCTIONS
All submitted manuscripts will be subject to the standard review process of the Journal. Prospective authors should submit their manuscripts using the Editorial Manager system of Springer at http://www.editorialmanager.com/daem/, and selecting as article-type the option "SI: Automotive Embedded Systems". More information about the journal can be found at http://www.springer.com/engineering/electronics/journal/10617.

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KEY DATES:
- Submission Deadline: March 15, 2018
- First Review Due: May 15, 2018
- Notification of Acceptance: July 15, 2018
- Target Publication Date: September 2018

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