

Call for Paper: ACM TECS Special Issue on “Emerging Technologies in Embedded Software and Systems”

The design and development of embedded software and systems is evolving rapidly over the recent years. This is partially due to advanced communication techniques and processor technologies (e.g., multicores) and the evolution of new application domains, such as Cyber-Physical Systems (CPS) and Internet of Things (IoTs).

Embedded systems now influence more areas of our daily life, starting from smart appliances to automotive, health-care devices and public transportation infrastructure. These new applications bring increased complexity in functional requirements and demand close-interaction between embedded systems, their users and the surrounding environment. These requirements and demands pose a new set of challenges (such as safety, security and adaptivity) for the effective and efficient design and development of embedded software and systems.

In response to these challenges, this special issue seeks original technical contributions on novel and bold ideas and emerging technologies for embedded software and systems. This issue considers all kinds of emerging technologies (including but not limited to IoTs) in various aspects of designing and developing modern embedded software and systems, such as novel embedded system architecture, flexible and adaptive scheduling algorithms and system software, new design software and tools, and emerging embedded applications. More specifically, topics of interest include:

- Novel Embedded System Architectures (e.g., heterogeneous SoC and Multicore)
- Pervasive/Ubiquitous Computing Software and Systems
- Mixed-Critical Cyber-Physical Systems (Automotive, Medical and Avionics Systems)
- Novel Design Methodology and Tools for Embedded Software and Systems
- Mobile and Embedded Cloud Computing
- Novel Privacy and Security Techniques for Embedded Software and Systems
- Emerging Ideas and Applications in Internet of Things (IoT)

This special issue of the ACM TECS is related to the 2015 IEEE International Conference on Embedded Software and Systems (ICESS). This special issue is also open to submissions that were not part of ICESS 2015. All submissions will go through the same review process and will be treated equally in their consideration for publication in the special issue.

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Previously published conference papers may only be submitted if the paper is substantially extended with at least 30% new material. The extension requirement of 30% is not in textual volume but in novelty. Papers should be submitted via the Manuscript Central website and should adhere to standard ACM TECS formatting requirements (where page count limit is 25, including figures and references).

Moreover, please indicate that you are submitting to the **Special issue on Emerging Technologies in Embedded Software and Systems** on the first page and in the field "Author's Cover Letter:" in Manuscript Central. Any questions on this special issue should be addressed to Dakai Zhu at dakai.zhu@utsa.edu.

Important Dates:

- Submission deadline: Oct. 15, 2015
- Preliminary notification: Jan. 15, 2016
- Final paper due: Mar. 15, 2016
- Publication: Fall 2016 (subject to editorial calendar)

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