

CALL FOR PAPERS

IEEE Embedded Systems Letters

Special Issue on Languages Compilers Tools and Theory of Embedded Systems

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TOPIC SUMMARY:

The ACM SIGPLAN/SIGBED Conference on Languages, Compilers, Tools and Theory for Embedded Systems (LCTES 2024) will be held on June 24, 2024 in Copenhagen, Denmark. This special issue in the IEEE Embedded Systems Letters will consider peer-reviewed journal versions of submissions to LCTES 2024, as well as other papers received from the open call that fit within the scope of LCTES.

Embedded system design faces many challenges both with respect to functional requirements and nonfunctional requirements, many of which are conflicting. They are found in areas such as design and developer productivity, verification, validation, maintainability, and meeting performance goals and resource constraints. Novel design-time and run-time approaches are needed to meet the demand of emerging applications and to exploit new hardware paradigms.

This special issue solicits papers presenting original work on programming languages, compilers, tools, theory, and architectures that help in overcoming these challenges. Research papers on innovative techniques are welcome, as well as experience papers on insights obtained by experimenting with real-world systems and applications.

We solicit original papers on the following topics of interest related to LCTES:

- Programming language challenges
- Interaction between embedded architectures, operating systems, and compilers
- Predictability of resource behavior: energy, space, time
- Design and implementation of novel architectures
- Operating systems for mobile and IoT devices
- Large language models (LLMs) and programming languages/compilers

IMPORTANT DATES:

- Open for submissions in ScholarOne Manuscripts: April 15, 2024
- Closed for submissions: June 15, 2024
- Results of first round of reviews: Aug 15, 2024
- Submission of revised manuscripts: Sept 15, 2024
- Results of second round of reviews: Oct 15, 2024
- Publication materials due: Nov 15, 2024

SUBMISSION GUIDELINES: Prospective authors are invited to submit their manuscripts electronically after the “open for submissions” date, adhering to the IEEE Embedded Systems Letters guidelines ([IEEE ESL webiste](https://www.ieee.org/publications_standards/publications_standards_info/ieee_guidelines.html)). Please submit your papers through the online system (<https://mc.manuscriptcentral.com/les-ieee>) and be sure to select the “SI:LCTES2024” option for the paper-type. Also, please indicate that you are submitting to the Special issue on LCTES 2024 in author's cover letter. Submitted manuscripts should not have been previously published nor be currently under consideration for publication elsewhere. Extensions to accepted LCTES conference paper must focus on intellectual merits that are separate from the LCTES paper. Conference extension papers may only be submitted if the paper has been completely rewritten, appropriate written permissions have been obtained from any copyright holders of the original paper, and the paper has been extended conceptually by at least 30%. All papers are refereed through a peer review process. All papers must be limited to 4 pages written in English. Accepted papers will be required to submit a 3-minute Video Preview, introducing and motivating the paper. Any questions on this special issue should be addressed to Aviral Shrivastava, Aviral.Shrivastava@asu.edu.