

Special Session on "Scalable and Flexible Many-Core Mapping and Runtime Techniques"

Call for Paper

Session Co-Organizers

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Abstract

Many-core architectures offer unprecedented computational performance and energy efficiency to embedded software designers. As such, many-core architecture have been successfully used to embed computational intensive applications, like artificial intelligence and computer vision algorithms. In this context, the efficient usage of heterogeneous processing elements, on-chip means of communications, and of the memory subsystem of many-core architectures remains a challenging task. Too often, when very strong real-time or performance design constraints need to be met, the allocation of many-core resources is still optimized "manually", at design time, by specialized software engineers.

The constant rise of embedded systems complexity, notably with emerging smart systems that constantly adapt their behavior to cope with an unpredictable environment, calls for new techniques to automate the allocation of many-core resources. The purpose of this special session is to discuss state of the art approaches to optimize aspects of the allocation of many-core resources for the deployment of embedded software, both at design and at run time.

Topics of interest include, but are not limited to:

- Model-based design methodology for many-cores
- Domain specific APIs and scalable resource allocation techniques for many-cores
- Compile-time scalable resource allocation for many-cores
- Run-time scalable resource allocation algorithm for many-cores

Submission Information:

Deadlines

- Abstract Submission: April 30, 2019
- Full Paper Submission: May 7, 2019
- Acceptance Notification: June 28, 2019
- Camera-read Paper: July 21, 2019

Paper

- Paper length: Up to 8 pages double-column
- Template: [IEEE Template](#)

Submission Site:

Please submit your paper via the [IEEE MCSoc 2019 submission site](#).