Topic 9: Parallel and Distributed Programming

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Topic Committee

This topic provides a forum for the presentation of the latest research results and practical experience in parallel and distributed programming in general, except for work specifically targeting multicore and manycore architectures, which has matured to becoming a Euro-Par topic of its own.

The challenge addressed by the topic is how to produce correct, portable parallel software with predictable performance on existing and emerging parallel and distributed architectures. This requires advanced algorithms, realistic modeling, efficient design tools, high-level programming abstractions, high-performance implementations, and experimental evaluation. Related to these central needs, it is also important to address methods for reusability, performance prediction, large-scale deployment, self-adaptivity, and fault-tolerance. Given the rich history in this field, practical applicability of proposed methods, models, algorithms, or techniques is a key requirement for timely research.

Each submission was reviewed by at least four reviewers and, finally, we were able to select 7 high-quality papers, one of them as distinguished paper. The presented research spans the broad scope, ranging from low-level issues like transactional access to shared memory and dynamic thread mapping, over algorithmic methods for partitioning and fault-tolerance, all the way up to scalable collective operations and pipelined MapReduce.

We are proud of the ambitious scientific program that we managed to assemble for this topic. Of course, this was only possible by combining the efforts of many people. We would like to take the opportunity to thank the authors who submitted their contributions, the external referees who have made the efficient selection process possible, and the conference organizers for a perfectly organized and very pleasant cooperation.

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