Introduction

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The Parallel and Distributed Programming Topic, Topic 9, is concerned with the development of parallel or distributed applications. Developing such applications is a difficult task and it requires advanced algorithms, realistic modeling, efficient design tools, high performance languages and libraries, and experimental evaluation. This topic provides a forum for presentation of new results and practical experience in this domain. It emphasizes research that facilitates the design and development of correct, high-performance, portable, and scalable parallel program. Related to these central needs, this Topic also includes contributions that assess methods for reusability, performance prediction, large-scale deployment, self- adaptivity, and fault-tolerance. The focus of Topic 9 in 2009 is:

- Parallel-programming paradigms, their evaluation and their comparison.
- Innovative languages for parallel and distributed applications.
- Development and debugging tools for parallel programs.
- Performance analysis, design and implementation of models for parallelism.
- Large-scale experiments and validation of parallel applications.
- Methodological aspects of developing, optimizing and validating parallel programs.
- Domain-specific libraries and languages.
- Parallel-programming productivity and pattern-based parallel programming.
- Abstractions for patterns and usage models on distributed systems.
- Parallel software reusability.

Out of 18 papers submitted to Topic 9, 7 were accepted for presentation at Euro-Par 2009. We thank the authors for submitting papers to this topic and the reviewers for very insightful evaluation of the papers. We specially thank the global chair of topic 9, Domenico Talia, and the vice chair, Shantenu Jha, for coordinating the reviews and for their active participation in the discussions.

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