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Editorial to the Special Issue of Rapid System Prototyping'10

The IEEE International Symposium on Rapid System Prototyping explores trends in rapid prototyping of computer-based systems. Its scope ranges from embedded system design, formal methods for the verification of systems, engineering methods, process and tool chains to case studies of actual software and hardware systems. It aims to bring together researchers from the hardware and software communities to share their experiences and to foster collaboration of new and innovative science and technology.

Since its inception, the series of Workshop on Rapid System Prototyping evolved as a full-fledged symposium for its 19th occurrence. The symposium is an international forum for the cross-fertilization of ideas about the prototyping of complex systems, from both the hardware and software domains. Rapid system prototyping typically encompasses theoretical and practical methodologies, resolving technologies of specification, completeness, dynamics of change, technology insertion, complexity, integration, and time to market.

This special issue from selected papers of the 2010 venue of the symposium reflects this vision. The selected papers encompass the variety of challenges for the design and implementation of embedded systems: model-based design of systems by Forward *et al.* and of safe and secure systems by Delange *et al.* and Hillenbrand *et al.*, model checking techniques by Drusinsky *et al.*, challenges in multicore and many core systems by Lafi *et al.* and Bouchebaba *et al.*, and virtualization techniques by Aguiar *et al.*

As guest editors, we would like to thank all the authors of this special issue for contributing the high quality papers. We would also like to thank the reviewers who have critically evaluated the papers. Finally, we hope the readers will enjoy the content and find this special issue very useful for their own work.

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