

Workshop on Parallel and Distributed Real-Time Systems (WPDRTS06)

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The 14th International Workshop on Parallel and Distributed Real-Time Systems (WPDRTS'06) held in Island of Rhodes, Greece, on April 25-26 2006, brought together researchers in the domain of parallel and distributed real-time systems.

WPDRTS'06 received 48 submissions and 11 invited papers. The proceedings contain 12 papers in general sessions, and 19 papers in four special sessions on feedback control, formal methods, soft and firm real-time systems, and wireless sensor networks. The proceedings also contain the abstract of the keynote speech by Joseph Sifakis.

The Program Chairs would like to thank all authors who submitted papers, the special session organizers, the members of the Technical Program Committee and the reviewers for their hard and conscientious work, the General Chairs, the Publicity Chairs, the Publication Chair, the Submission Chair, members of the Steering Committee, and the IPDPS organization for their assistance and support.

1 Keynote Speakers

Joseph Sifakis, VERIMAG, France, *Component-based Construction of Embedded Systems*.

2 General Paper Sessions

- Seongsoo Hong, Jaesoo Lee, Hyeonsang Eom, and Gwangil Jeon, *The Robot Software Communications Architecture (RSCA): Embedded Middleware for Networked Service Robots*
- Santiago Uruena Pascual, Juan Zamorano, Daniel Berjón, José Pulido Pavón, and Juan Antonio De La Puente, *Schedulability Analysis of AR-TP, a Ravenscar Compliant Communication Protocol for High-Integrity Distributed Systems*
- Roman Obermaisser and Philipp Peti, *Realization of Virtual Networks in the DECOS Integrated Architecture*
- Weirong Jiang, Qi Yu, Chao Zhang, Bin Li and Yunqing Bai, *A Portable Real-time Emulator for Testing Multi-Radio MANETs*
- Venkat Rao, Nicolas Navet, Gaurav Singhal, Anshul Kumar, and G.S Visweswaran, *Battery Aware Dynamic Scheduling for Periodic Task Graphs*
- Premysl Sucha and Zdenek Hanzalek, *Scheduling of Tasks with Precedence Delays and Relative Deadlines C Framework for Time-optimal Dynamic Reconfiguration of FPGAs*
- Jose Lorente, Giuseppe Lipari, and Enrico Bini, *A Hierarchical Scheduling Model for Component-Based Real-Time Systems*

- Sanjoy Baruah and Samarjit Chakraborty, *Schedulability Analysis of Non-Preemptive Recurring Real-time Tasks*
- Teresa Higuera-Toledano, *Towards an Analysis of Race Carrier Conditions in Real-Time Java*
- Damien Masson and Serge Midonnet, *Fault Tolerance with Real-Time Java*
- Vandy Bertin, Jol Goossens, and Emmanuel Jeannot, *A Probabilistic Approach for Fault Tolerant Multiprocessor Real-time Scheduling*
- Martin Skambraks, *A Real-Time PES Supporting Runtime State Restoration after Transient Hardware-Faults*

3 Special Session on Feedback Control and Real-Time Systems

- Tarak Gasmi, *Design and Evaluation of a new Aperiodic Tasks Control Technique in Distributed Real-time Systems*
- Ahmad Al-Hammouri, *Decentralized and Dynamic Bandwidth Allocation in Networked Control Systems*

4 Invited Session on Real-Time Issues in Wireless Sensor Networks

- Sherif Khattab, Daniel Mosse, and Rami Melhem, *Honeybees: Combining Replication and Evasion for Mitigating Base-station Jamming in Sensor Networks*
- Koen Langendoen, Aline Baggio, and Otto Visser, *Murphy Loves Potatoes: Experiences from a Pilot Sensor Network Deployment in Precision Agriculture*
- Tian He, Lin Gu, Liqian Lou, Ting Yan, John Stankovic, and Sang Son, *An Overview of Data Aggregation Architecture for Real-Time Tracking with Sensor Networks*
- Peter Olveczky and Stian Thorvaldsen, *Formal Modeling and Analysis of Wireless Sensor Network Algorithms in Real-Time Maude*
- Anis Koubaa, M3rio Alves, and Eduardo Tovar *GTS Allocation Analysis in IEEE 802.15.4 for Real-Time Sensor Networks*
- Sotiris Nikolettseas, *Power-Aware Data Dissemination Protocols in Wireless Sensor Networks*
- Stefan Schmid and Roger Wattenhofer, *Algorithmic Models for Sensor Networks*
- Christian Frank and Kay Romer, *Solving Generic Role Assignment Exactly*
- Ping Xia, Panos K. Chrysanthis, and Alexandros Labrinidis, *Similarity-Aware Query Processing in Sensor Networks*

5 Special Session on Formal Methods in Distributed Real-Time Systems

- Alexander Metzner, *An optimal approach to the task allocation problem on hierarchical architectures*
- Marcel Verhoef and Martijn Hendriks, *Timed Automata Based Analysis of Embedded System Architectures*
- Oleg Sokolsky, Insup Lee, and Duncan Clarke, *Schedulability Analysis of AADL Models*
- Jan Groote, Michel Reniers, and Yaroslav Usenko, *Time Abstraction in Timed μ CRL 'a la Regions and Zones*

6 Invited Session on Soft and Firm Real-Time Systems

- Steven Martin and Pascale Minet, *Schedulability analysis of flows scheduled with FIFO: Application to the Expedited Forwarding class*
- Eric Piel, Philippe Marquet, Julien Soula, Christophe Osuna, and Jean-Luc Dekeyser, *ARTiS, an Asymmetric Real-Time Scheduler on Multi-Processor Architectures*
- Klaus Ecker and Frank Drews, *QoS-based Management of Multiple Shared Resource in Dynamic Real-Time Systems*
- Costas Mourlas, *Adaptability Management and Deterministic Scheduling of Media Flows on Parallel Storage Servers*

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