Advance Program: 12th International Workshop on Parallel and Distributed Real-Time Systems
Santa Fe, New Mexico, April 26th and 27th, 2004

Monday, April 26, 2004

8:15 – 8:30 Welcome and Opening Remarks by Workshop and Program Chairs

8:30 – 9:30 WPDRTS 2004 Keynote Speech

  Hermann Kopetz, Technische Universitat, Vienna, Austria

9:30 – 10:00 Coffee Break

10:00 – 12:00 Invited Paper Session: “Time/Utility Functions and Utility Accrual Scheduling”, organized by E. Douglas Jensen, MITRE


12:00 – 1:00 Lunch

1:00 – 3:30 General Paper Session I: Resource Management

- Jeffery Hansen, Sourav Ghosh, Ragunathan Rajkumar and John Lehoczky, “Resource Management of Highly Configurable Tasks”
- Reinhard Seyer, Christian Siemers, Rainer Falsett, Klaus Ecker and Harald Richter, “Robust Partitioning for Reliable Real-Time Systems”
3:30 – 4:00 Coffee Break

4:00 – 6:00 General Paper Session II: Scheduling and Computation

- Deming Liu and Yann-Hang Lee, *Pfair Scheduling Of Periodic Tasks With Allocation Constraints On Multiple Processors*
- UmaMaheswari Devi and James Anderson, *Improved Conditions for Bounded Tardiness under EPDF Fair Multiprocessor Scheduling*
- Michael Frisbie, Douglas Niehaus, Venkita Subramonian and Christopher Gill, *Group Scheduling in Systems Software*
- Qi Han, Matthew Ba Nguyen, Sandy Irani and Nalini Venkatasubramaniam, “Time-sensitive Computation of Aggregate Functions over Distributed Imprecise Data”

**Tuesday April 27, 2004**

8:30 – 9:30 IPDPS Plenary Session

9:30 – 10:00 Coffee Break

10:00 – 11:00 Invited Tutorial

- “The Need for Utility Accrual Scheduling in the JPL Mission Data System” Kirk Reinholtz, Chief Programmer, Mission Data System, NASA JPL, USA

11:00 – 12:00 General Paper Session III: System Synthesis

- Sanjoy Baruah, “Cost-efficient synthesis of real-time systems upon heterogeneous multiprocessor platforms”
- Paulo Palazzari, Luca Baldini and Moreno Coli, “Synthesis of Pipelined Systems for the Contemporaneous Execution of Periodic and Aperiodic Tasks with Hard Real-Time Constraints”

12:00 – 1:00 Lunch

1:00 – 2:00 General Paper Session IV: Middleware and Networks

- Rainer Finocchiaro, Stefan Lankes and Andreas Jabs, “Design of a Real-Time Corba Event Service customized for the CAN Bus”
2:00 – 3:30  Student Paper Session
organized by Vana Kalogeraki, U. of California, Riverside, USA

• Hoai Hoang, “Real-Time Communication for Industrial Embedded Systems Using Switched Ethernet”
• Sathish Gopalakrishnan, “Managing Communication in Integrated Modular Architectures”
• Talal Darwich, “Pulse-modulated Radar Display Processor on a Chip”
• Prashant Dewan, “Peer-to-Peer Reputations”
• Fang Chen, “A Utility-based Approach to Scheduling Multimedia Streams in Peer-to-Peer Systems”
• Murali Krishna Ramanathan, “Increasing Object Availability in Peer-to-Peer Systems”

3:30 – 4:00  Coffee Break

4:00 – 5:00  Challenge Problem Session
organized by Douglas Niehaus, University of Kansas, USA

• Uwe Brinkschulte, Joergen Becker and Theo Ungerer, “CARUSO - an Approach Towards a Network of Low Power Autonomic Systems on Chips for Embedded Real-time Applications”

5:00 – 6:00  Panel Session, “Static WCET Analysis vs. Measurement: What is the Right Way to Assess Real-Time Task Timing?”, organized by Lonnie Welch, Ohio University, USA, and Peter Puschner, Technische Universitat, Vienna, Austria

• Christian Ferdinand, “Worst Case Execution Time Prediction by Static Program Analysis”
• Charles Cavanaugh, “On Static WCET Analysis vs. Run-time Monitoring of Execution Time”
• Frank Mueller, “Timing Analysis: In Search of Multiple Paradigms”
• Scott Brandt, “The Case for Dynamic Real-Time Task Timing in Modern Real-Time Systems”

6:00 – 6:15  Closing Remarks