ECRTS05.
Final Conference programme

Wednesday, July 6

09:15 – 09:45 Registration at *Fundació "la Caixa"*.

09:30 – 09:45 Welcome and Opening Remarks.

09:45 – 11:15 Session 1: Energy-Aware Computing. Chair: Gerhard Fohler.

Speed Modulation in Energy-Aware Real-Time Systems.
E. Bini, G. Buttazzo, G. Lipari; Scuola Superiore Sant'Anna and University of Pavia, Italy.

Energy-Aware Memory Firewalling for QoS-Sensitive Applications.
A. Eswaran, R. Rajkumar; Carnegie Mellon University, USA.

Energy Aware Non-preemptive Scheduling for Hard Real-time Systems.
R. Jejurikar, R. Gupta; Univ. of California at Irvine and Univ. of California at San Diego. USA.

11:15 – 11:45 Coffee break.

11:45 – 13:15 Session 2: Worst-Case Execution Time Analysis. Chair: Peter Puschner.

A WCET-Oriented Static Branch Prediction Scheme for Real-time Systems.
F. Bodin, I. Puaut; IRISA, France.

Scheduling Analysis of Real-time Systems with Precise Modeling of Cache Related Preemption Delay.
J. Staschulat, S. Schliecker, R. Ernst; University of Braunschweig, Germany.

Cache Contents Selection for Statically-locked Instruction Caches: an Algorithm Comparison.
A. Campoy, I. Puaut, A. Ivars, J. Mataix; Technical University of Valencia, Spain and IRISA, France.

13:15 – 14:45 Lunch break

Restaurant Rodeo Grill.

14:45 – 15:45 Keynote Address 1. Chair: Eduardo Tovar.

Embedded Software for Mobile Terminals.
Johan Eker; Ericsson Mobile Platforms AB.

15:45 – 16:45 Work-In-Progress Session 1. Chair: Isabelle Puaut.

(See WIP program)

16:45 – 17:15 WIP Poster Session 1 and coffee break.

17:15 – 18:15 Session 3 Programming Languages, Modeling and Validation Techniques. Chair: Luís Miguel Pinho.

On the Automated Generation of Ravenscar-compliant Source Code.
M. Bordin, T. Vardanega; University of Padua, Italy.

Component-Based Approach to Run-Time Kernel Specification and Verification.
G. Naeser, K. Lundqvist; Mälardalen University, Sweden and MIT, USA.

19:30 Welcome Cocktail.

Bus departs from *Fundació "la Caixa"*.

Thursday, July 7

9:15 – 11:15 Session 4: Operating Systems Support. Chair: Sanjoy Baruah.

***A* Space-Optimal Wait-Free Real-Time Synchronization Protocol.**
H. Cho, B. Ravindran, E. Douglas Jensen; Virginia Tech and The MITRE Corporation, USA.

Fast Component Interaction for Real-Time Systems.
U. Steinberg, J. Wolter, H. Härtig; Technical University of Dresden, Germany.

Non-Preemptive Interrupt Scheduling for Safe Reuse of Legacy Drivers in Real-Time Systems.
T. Fachinetti, G. Buttazzo, M. Marinoni, G. Guidi; University of Pavia, Italy.

Non-blocking Deterministic Replacement of Functionality, Timing, and Data-Flow for Hard Real-Time Systems at Runtime.
S. Fischmeister, K. Winkler; University of Pennsylvania, USA and University of Salzburg, Austria.

11:15 – 11:45 Coffee break.

11:45 – 13:15 Session 5: Scheduling and Schedulability Analysis. Chair: Giorgio Buttazzo.

A Fully Polynomial-Time Approximation Scheme for Feasibility Analysis in Static-Priority Systems with Arbitrary Relative Deadlines.
N. Fisher, S. Baruah; University of North Carolina at Chapel Hill, USA.

Fast and Tight Response-Times for Tasks with Offsets.
J. Mäki-Turja, M. Nolin; Mälardalen University, Sweden.

The Limited-Preemption Uniprocessor Scheduling of Sporadic Task Systems.
S. Baruah; University of North Carolina at Chapel Hill, USA.

13:15 – 14:45 Lunch break.
Restaurant Rodeo Grill.

14:45 – 16:45 Session 6: Quality of Service Support and Wireless Sensor Networks. Chair: Luis Almeida.

Spare CASH: Reclaiming Holes to Minimize Aperiodic Response Times in a Firm Real-Time Environment.
D. Thomas, S. Gopalakrishnan, M. Caccamo, C-H Lee; Univ. of Illinois at Urbana-Champaign, USA.

Scheduling Tasks with Markov-Chain Based Constraints.
D. Liu, X. Hu, M. Lemmon, Q. Ling; University of Notre Dame, USA.

Real-time Scheduling for Data Stream Management Systems.
S. Schmidt, T. Legler, D. Schaller, W. Lehner; Dresden University of Technology, Germany.

A Robust Implicit Access Protocol for Real-Time Wireless Collaboration.
T. Crenshaw, A. Tirumala, S. Hoke, M. Caccamo; University of Illinois at Urbana-Champaign, USA.

16:45 – 17:15 Coffee break.

17:15 – 18:15 Keynote Address 2. Chair: Guillem Bernat.

Overwhelming Complexity.
Jan Lindblad; ENEA AB. Sweden.

19:30 – Excursion and Banquet.

Bus departs from *Fundació "la Caixa"*.

Friday, July 8

10:00 – 11:00 Session 7a: Multiprocessor Systems. Chair: Michael Gonzalez-Harbour.

Bounding Worst-Case Access Times in Modern Multiprocessor Systems .
J. Stohr, Al. von Bülow, G. Färber; Technical University of Munich, Germany.

An EDF-based Scheduling Algorithm for Multiprocessor Soft Real-Time Systems.
J. H. Anderson, V. Bud, U. Maheswari C. Devi; University of North Carolina at Chapel Hill, USA.

11:00 – 11:30 Coffee break.

11:30 – 12:30 Session 7b: Multiprocessor Systems. Chair: Michael Gonzalez-Harbour.

Improved Schedulability Analysis of EDF on Multiprocessor Platforms.
M. Bertogna, M. Cirinei, G. Lipari; Scuola Superiore Sant'Anna, Italy.

Task Assignment on Uniform Heterogeneous Multiprocessors.
S. Funk, S. Baruah; Univ. of Georgia at Athens and Univ. of North Carolina at Chapel Hill, USA.

12:30 – 13:00 Keynote Address. Chair: Gerhard Fohler.

Real-Time and Embedded Systems: Research Opportunities in the IST Thematic Priority of the 6FP.
Mercè Griera I Fisa, Project Officer, Embedded Systems Unit of the IST Programme, European Commission - DG Information Society.

13:00 – 14:30 Lunch break.

14:30 – 15:30 Work-In-Progress Session 2. Chair: Isabelle Puaut.

(see WIP program)

15:30 – 16:00 WIP Poster Session 2 and coffee break.

16:00 – 17:30 Session 8: Applications of Real-time Computing. Chair: Jean-Dominique Decotignie.

A Similarity-aware Multiversion Concurrency Control and Updating Algorithm for Up-to-date Snapshots of Data.
T. Gustafsson, H. Hallqvist, J. Hansson; Linköping University, Sweden.

A Performance and Schedulability Analysis of an Autonomous Mobile Robot.
A. Qadi, S. Goddard, J. Huang, S. Farritor; University of Nebraska at Lincoln, USA.

Applying Static WCET Analysis to Automotive Communication Software.
S. Byhlin, A. Ermedahl, J. Gustafsson, Björn Lisper; Mälardalen University, Sweden.

17:30 Closing remarks.