Sunday, May 5, 2002
17:30 - 19:00 Registration and Welcome Reception

Monday, May 6, 2002
7:30 - 8:30 Breakfast
8:30 - 8:45 Chair's Welcome
8:45 - 9:45 Session 1: Chair: Kees Vissers, Philips Research
Invited Talk: New Opportunities in Hardware/Software Codesign
By Albert Wang, Tensilica Inc., Santa Clara, California
9:45 - 10:00 Coffee Break

10:00 - 12:00 Session 2: Advances in System Specification and System Design Frameworks
Chair: Sri Parameswaran, University of New South Wales, Australia

Codesign-Extended Applications
Brian Grattan, Greg Stitt, and Frank Vahid

Algorithmic Transformation Techniques for Efficient Exploration of Alternative Application Instances
Todor Stefanov, Bart Kienhuis, and Ed Deprettere

Concurrent Execution Semantics and Sequential Simulation Algorithms for Metropolis Meta-Model
Felice Balarin, Luciano Lavagno, Claudio Passerone, Alberto Sangiovanni-Vincentelli, Yosinori Watanabe, and Guang Yang

(S) The Design Context of Concurrent Computation Systems
JoAnn M. Paul, Christopher M. Eatedali, and Donald E. Thomas

(S) A Language for Multiple Models of Computation
Dag Bjorklund and Johan Lilius

12:00 - 2:00 Lunch & Poster Session
Session Chair: Daniel Gajski, UC Irvine
Invited Talk: System-level Design – More of the same or something new?
By Joachim Kunkel, Synopsys Inc., Mountain View, California.

2:00 - 4:00 Session 3: System Design Methods: Analysis and Verification
Chair: Pai Chou, UC Irvine

FPGA Resource and Timing Estimation from Matlab Execution Traces
Per Bjureus, Mikael Millberg, and Axel Jantsch

Worst-Case Performance Analysis of Parallel, Communicating Software Processes
Siebenborn, O. Bringmann, and W. Rosenstiel

Symbolic Model Checking of Dual Transition Petri Nets
Mauricio Varea, Bashir M. Al-Hashimi, Luis A. Cortes, Petru Eles, and Zebo Peng
Simulation Bridge: A Framework for Multi-Processor Simulation  
G. D. Nagendra, V.G. Prem Kumar, and B.S. Sheshadri Chakravarthy

4:00 - 4:30   Coffee Break & Posters

4:30 - 6:30   Session 4: Design Space Exploration and Architectural Design of HW/SW Systems  
Chair: Frank Vahid, UC Riverside

Metrics for Design Space Exploration of Heterogeneous Multiprocessor Embedded Systems  
Donatella Sciuto, Fabio Salice, Luigi Pomante, and William Fornaciari

Fast Processor Core Selection for WLAN Modem Using Mappability Estimation  
Juha-Pekka Soininen, Jari Kreku, Yang Qu, and Martti Forsel

(s) Multi-Objective Design Space Exploration Using Genetic Algorithms  
Tony Givargis and Maurizio Palesi

(s) Scratchpad Memory: A Design Alternative for Cache On-Chip Memory in Embedded Systems  
Rajeshwari Banakar, Stefan Steinke, Bo-Sik Lee, M. Balakrishnan, and Peter Marwedel

(s) Hardware Support for Real-Time Embedded Multiprocessor System-on-a-Chip Memory Management  
Mohamed Shalan and Vincent J. Mooney III

(s) Large Exploration for HW/SW Partitioning of Multirate and Aperiodic Real-Time Systems  
Abdenour Azzedine, Jean-Philippe Diguet, and Jean-Luc Philippe

Tuesday, May 7, 2002

8:30 - 9:30   Session 5: Chair: Wayne Wolf, Princeton University

Invited Talk: Biomedical Microprocessors: Embedded Systems for The Human Body  
By Abe Lee, UC Irvine

9:30 - 9:45   Coffee Break

9:45 - 12:00   Session 6: Co-Design Architecture and Synthesis  
Chair: Donatella Sciuto, Politecnico Milano

Program Slicing for Codesign  
Jeffry T. Russell

Compiler-Directed Customization of ASIP Cores  
T. Vinod Kumar Gupta, Roberto E. Ko, and Rajeev Barua

A Study of CodePack: Optimizing Embedded Code Space  
Avishay Orpaz and Shlomo Weiss

A Novel Codesign Approach Based on Distributed Virtual Machines  
Christian Steger, Christian Kreiner, Egon Teiniker, and Reinhold Weiss

(s) Optimization and Synthesis for Complex Reactive Embedded Systems by Incremental Collapsing  
Massimiliano L. Chiodo

12:00 - 2:00   Lunch & Poster Session
Session Chair: Don Thomas, Carnegie Mellon University, USA

Invited Talk: System-level Semantics: What is needed and what is not needed?
By Daniel Gajski, Center for Embedded Computer Systems, UC Irvine, California.

2:00 - 4:30 Session 7: System Partitioning and Timing Analysis
Chair: Luciano Lavagno, Politecnico di Torino

Transformation of SDL Specifications for System-Level Timing Analysis,
Marek Jersak, Kai Richter, Rafik Henia, Rolf Ernst, and Frank Slomka

A Strongly Polynomial-Time Algorithm for Over-Constraint Resolution
Ali Dasdan

Hardware-Software Cosynthesis of Multi-mode Multi-Task Embedded Systems with Real-Time Constraints
Hyunok Oh and Soonhoi Ha

Design of Multi-Tasking Coprocessor Control for Eclipse
Martijn J. Rutten, Jos T.J. van Eijndhoven, and Evert-Jan D. Pol

(s) Hardware-Software Bipartitioning for Dynamically Reconfigurable Systems,
Sarma B.K. Vrudhula and Daler N. Rakhmatov

(s) HW/SW Partitioning and Code Generation of Embedded Control Applications on a Reconfigurable Architecture Platform,
Massimo Baleani, Frank Gennari, Yunjian Jiang, Yatish Patel, Robert K. Brayton, and Alberto Sangiovanni-Vincentelli

4:30 - 5:00 Poster session

5:30 - 9:30 Social Program and Banquet
Country Singer Cowboy Fitch

Wednesday, May 8, 2002

8:00 - 10:15 Session 8: Energy Efficiency in System Design
Chair: Zebo Peng, Linkoping University, Sweden

Fast System-Level Power Profiling for Battery-Efficient System Design
Kanishka Lahiri, Anand Raghunathan, and Sujit Dey

Energy Savings Through Compression in Embedded Java Environments
G. Chen, M. Kandemir, N. Vijaykrishnan, M. J. Irwin, and W. Wolf

Communication Speed Selection for Embedded Systems with Networked Voltage-Scalable Processors
Jinfeng Liu, Pai H. Chou, and Nader Bagherzadeh

Pruning-Based Energy-Optimal Device Scheduling for Hard Real-Time Systems
Vishnu Swaminathan and Krishnendu Chakrabarty

(s) Energy Frugal Tags in Reprogrammable I-Caches for Application-Specific Embedded Processors
Peter Petrov and Alex Orailoglu

10:15 - 10:45 Break & Poster Session

The Tenth IEEE/ACM International Workshop on Hardware/Software Codesign (CODES'02) Page 3 of 4
ADVANCE PROGRAM
10:45 - 1:00  Session 9: System Design Methods: Scheduling Advances  
Session Chair: Joerg Henkel, NEC C&C Research Labs, New Jersey

Holistic Scheduling and Analysis of Mixed Time/Event-Triggered Distributed Embedded Systems  
Traian Pop, Petru Eles, and Zebo Peng

Locality-Conscious Process Scheduling in Embedded Systems  
I Kadayif, M. Kandemir, and I. Kolcu

Reconfigurable SoC Design with Hierarchical FSM and Synchronous Dataflow Model  
Sunghyun Lee, Sungjoo Yoo, and Kiyoung Choi

Dynamic Run-Time HW/SW Scheduling Techniques for Reconfigurable Architectures  
Juanjo Noguera and Rosa M. Badia

(s) Extended Quasi-Static Scheduling for Formal Synthesis and Code Generation of Embedded Software  
Feng-Shi Su and Pao-Ann Hsiung

1:00 - 2:00  Lunch

2:00 – 3:00  Session 10: Chair: Rolf Ernst, TU Braunschweig

Invited Talk: Defining Platform-Based Design: a look into a formal approach to design from conception to HW/SW implementation  
By Alberto Sangiovanni-Vincentelli

3:15 - 4:45  Session 11: Panel: "A Look-back, Look-forward on Hardware/Software Co-design"  
Organized by Petru Eles,  
Moderated by Grant Martin, Cadence Labs

Panelists:  
Wayne Wolf, Princeton University  
Luciano Lavagno, Politecnico Torino  
Rolf Ernst, TU Braunschweig  
Ramesh Chandra, ST Microelectronics, San Diego, CA  
Kees Vissers, Trimedia  
Alberto Sangiovanni-Vincentelli, UC Berkeley  
Evert-Jan Pol, Philips Semiconductors  
Steven Tjiang, Tensilica

4:45-5:00  Wrap Up and Closing Comments