Wednesday, October 27th

07:30–08:00 Conference Registration
08:00–09:30 Tutorial 1 (Part 1) Just-in-Time HW/ISA/SW Co-optimization Techniques for SoC (System-on-a-Chip) (Kazuki Murakami and Victor Mauro Goulart Ferreira)
09:30–09:45 Coffee Break
09:45–11:25 Session 1: Cache and Memory Architectures
- Cache Filtering Techniques to Reduce the Negative Impact of Useless Speculative Memory References on Processor Performance (Omar Mutla, Hyunsoo Kim, David Armstrong, Yale Patt)
- Self-Monitored Adaptive Cache Warm Up for Microprocessor Simulation (Yue Luo, Lizy John)
- The eDRAM based L3-Cache of the BlueGene/L Supercomputer Processor Node (Martín Obmacht, Dirk Hoeinecke, Raud Haring, Alan Gara)
- Multi-Profile Instruction Based Compression (Rodolfo Azevedo, Paulo Cesar Centoducate, Guido Araujo)
11:25–12:25 Invited Talk 1 The Role of Virtual Machines in Future Computer Systems (Jim Smith, University of Wisconsin-Madison, USA)
12:25–13:45 Lunch
13:45–15:00 Session 2: Processor Architectures I
- A Study of Errant Pipeline Flushes caused by Value Misspec-ulation (Dennis Balkan, John Kalakanian, David Kaeli)
- Design Space Exploration using T&D-Bench (Sandro Soares, Flavio Wagner)
- Value Predictors for Reuse through Specification on Traces (Maurício Pilla, Philippe Navaux, Bruce Childers, Amarildo da Costa, Felipe França)
15:00–16:00 Lunch
16:00–16:15 Coffee Break
16:15–17:30 Session 3: Processor Architectures II
- IATQ: A Flexible EPIC Simulation Environment (Amaury Darsch, Andre Senece)
- ArchC: A System-C-Based Architecture Description Language (Sandro Rigo, Guido Araujo, Marcus Bartholomeu, Rodolfo Azevedo)
- Optimizations for Compiled Simulation using Instruction Type Information (Marcus Bartholomeu, Rodolfo Azevedo, Sandro Rigo, Guido Araujo)
17:30–19:00 Tutorial 1 (Part 2) Just-in-Time HW/ISA/SW Co-optimization Techniques for SoC (System-on-a-Chip) (Kazuki Murakami and Victor Mauro Goulart Ferreira)
19:00–20:30 Panel Computing Challenges: What Will Influence Progress (for better or worse) (Moderator: Yale Patt, Members: Jean-Luc Gaudiot, James E. Smith, Siang Song, Philippe Navaux)
21:00– Conference Dinner
Thursday, October 28th

07:40–09:10 Tutorial 2 (Part 1) Grid Computing: Making the Global Cyberinfrastructure for eScience and eBusiness a Reality (Rajkumar Buyya, from The University of Melbourne)
09:10–10:25 Session 4: Languages and Tools for Parallel and Distributed Programming
- Improving Server Performance on Transaction Processing Workloads by Enhanced Data Placement (Juan Rubio, Charles Lamy, Lizy John)
- High Performance Communication System Based on Generic Programming (André Luís Gobbi Sanches, Fernando Roberto Secco, Antonio Augusto Fröhlich)
- Performance Evaluation of a Prototype Distributed NFS Server (Rafael Avila, Philippe Navaux, Pierre Lombard, Adrien Lebre, Yves Denneulin)
10:25–10:40 Coffee Break
10:40–11:40 Invited Talk 3 High Performance Computing using Reconfigurable Hardware (Viktor Prasanna, University of Southern California, USA)
11:40–13:40 Lunch Talk – offered by NEC
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13:40–17:20 Visit to Iguazu Falls
17:20–19:00 Session 5: Grid, Cluster and Pervasive
- FlowCert: Probabilistic Certification for Peer-to-Peer Computations (Jean-Louis Roch)
- A Performance Evaluation of a Qudrum-Based Sate-Machine Replication Algorithm For Computing Grids (Jean-Michel Bocca, Marin Bitterer, Fatima Belkouch, Pierre Sents, Luciana Avanter)
- MIEn: Unifying Application Modeling and Cluster Exploita-
tion (Albano Alves, António Pina, José Esposito, José Rufino)
19:00–20:40 Session 6: High Performance Applications
- Parallel Implementation of a Lagrangian Stochastic Model for Pollution Dispersion (Deborah Roberti, Roberto Soanto, Gervasto Deogracia, Haroldo Campos Velho, Domenico Anfossi)
- A Parallel Engine for Graphical Interactive Molecular Dynamics (Eduardo Rodrigues, Airam Pretto, Stephan Stephany)
- Parallel Adaptive Mesh Coarsening for Seismic Tomography (Marc Grundeg)
- Combining a Shared-Memory High Performance Computer and a Heterogeneous Cluster for the Simulation of Light Interaction with Human Skin (Arunravds Krishnarwamy, Vladimir Baranowski)
19:00–20:40 Session 7: Parallel and Distributed Algorithms
- Revisiting a BSP/CGM Transitive Closure Algorithm (Edson Cáceres, Cristimano Vieira)
- Improving Parallel Execution Time of Sorting on Heteroge-
neous Clusters (Christophe Cérin, Michel Kossak, Hazem Fkaer, Mohamed Jenni)
14:45–15:45 Invited Talk 4 The Microprocessor of the Year 2014: Do Pentium 4, Pen-
tium M, and Power 5 provide any hints? (Yale N. Patt, The University of Texas at Austin, USA)
15:45–16:00 Coffee Break
16:00–17:40 Session 8: Load Balancing and Scheduling
- Graph Partitioning with the Party Library: Helpful-Sets in Practice (Stefan Schwamberger)
- On the Combined Scheduling of Malleable and Rigid Jobs (Jan Hungershofer)
- A Cluster-based Strategy for Scheduling Task on Heteroge-
neous Processors (Cristina Boeres, Josê Viterbo Filho, Vinod Re-
delia)
- A New Migration Model based on the Evaluation of Processes Load and Lifetime on Heterogeneous Computing Environ-
ments (Rodrigo Mello, Luciano Senger)
17:40–19:20 Session 9: Benchmarking, Performance Measurements and Anal-
ysis
- Characterizing the Dynamic Behavior of Workload Execution in SVM Systems (Salvador Pett, Julio Saluquillo, Ana Pont, David Kaeli)
- A Performance Evaluation of ARM ISA Extensions for Elliptic Curve Cryptography over Binary Finite Fields (Roberto Guagli, Enrico Martinelli)
- PPEMiPs: A New Methodology for Modeling and Predic-
tion of MPI Programs Performance (Edson Madorikawa, Helio Oliveira, Jean Lame)
- Performance Characterisation of Intra-Cluster Collective Communications (Luc Agnelo Barchet-Estefanel, Grégory Mouié)
19:20–20:20 SBAC-PAD Meeting and Closing Remarks