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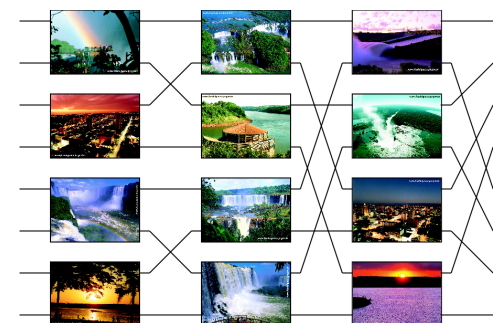


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SBAC-PAD'2004

16th Symposium on Computer Architecture
and High Performance Computing



October 27th–29th, 2004
Foz do Iguaçu, PR – Brazil

Conference Program

Wednesday, October 27 th	
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) (<i>Kazuaki Murakami and Victor Mauro Goulart Ferreira</i>)
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 (<i>Onur Mutlu, Hyesoon Kim, David Armstrong, Yale Patt</i>) Self-Monitored Adaptive Cache Warm Up for Microprocessor Simulation (<i>Yue Luo, Lizy John</i>) The eDRAM based L3-Cache of the BlueGene/L Supercomputer Processor Node (<i>Martin Ohmacht, Dirk Hoenicke, Ruud Haring, Alan Gara</i>) Multi-Profile Instruction Based Compression (<i>Rodolfo Azevedo, Paulo Cesar Centoducatte, Guido Araujo</i>)
11:25–12:25	Invited Talk 1 The Role of Virtual Machines in Future Computer Systems (<i>Jim Smith, University of Wisconsin-Madison, USA</i>)
12:25–13:45	Lunch
13:45–15:00	Session 2: Processor Architectures I A Study of Errant Pipeline Flushes caused by Value Misspeculation (<i>Deniz Balkan, John Kalamatianos, David Kaeli</i>) Design Space Exploration using T&D-Bench (<i>Sandro Soares, Flavio Wagner</i>) Value Predictors for Reuse through Speculation on Traces (<i>Maurício Pilla, Philippe Navaux, Bruce Childers, Amarildo da Costa, Felipe França</i>)
15:00–16:00	Invited Talk 2 The Gridbus Toolkit for Building and Deploying eScience Applications on Utility Grids (<i>Rajkumar Buyya, from The University of Melbourne, Australia</i>)
16:00–16:15	Coffee Break
16:15–17:30	Session 3: Processor Architectures II IATO: A Flexible EPIC Simulation Environment (<i>Amaury Darsch, Andre Seznec</i>) ArchC: A SystemC-Based Architecture Description Language (<i>Sandro Rigo, Guido Araujo, Marcus Bartholomeu, Rodolfo Azevedo</i>) Optimizations for Compiled Simulation using Instruction Type Information (<i>Marcus Bartholomeu, Rodolfo Azevedo, Sandro Rigo, Guido Araujo</i>)
17:30–19:00	Tutorial 1 (Part 2) Just-in-Time HW/ISA/SW Co-optimization Techniques for SoC (System-on-a-Chip) (<i>Kazuaki Murakami and Victor Mauro Goulart Ferreira</i>)
19:00–20:30	Panel Computing Challenges: What Will Influence Progress (for better or worse) (<i>Moderator: Yale Patt; Members: Jean-Luc Gaudiot, James E. Smith, Siang Song, Philippe Navaux</i>)

Thursday, October 28 th	
07:40–09:10	Tutorial 2 (Part 1) Grid Computing: Making the Global Cyberinfrastructure for eScience and eBusiness a Reality (<i>Rajkumar Buyya, from The University of Melbourne</i>)
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 (<i>Juan Rubio, Charles Lefurgy, Lizy John</i>) High Performance Communication System Based on Generic Programming (<i>André Luis Gobbi Sanches, Fernando Roberto Secco, Antônio Augusto Fröhlich</i>) Performance Evaluation of a Prototype Distributed NFS Server (<i>Rafael Ávila, Philippe Navaux, Pierre Lombard, Adrien Lebre, Yves Denneulin</i>)
10:25–10:40	Coffee Break
10:40–11:40	Invited Talk 3 High Performance Computing using Reconfigurable Hardware (<i>Viktor Prasanna, University of Southern California, USA</i>)
11:40–13:40	Lunch Talk – offered by NEC The High Performance Computing After the Earth Simulator (<i>Marcos A. de Souza, Technical Manager – HPC Systems – NEC do Brasil S/A</i>)
13:40–17:20	Visit to Iguaçu Falls
17:20–19:00	Session 5: Grid, Cluster and Pervasive FlowCert: Probabilistic Certification for Peer-to-Peer Computations (<i>Jean-Louis Roch</i>) A Performance Evaluation of a Quorum-Based Sate-Machine Replication Algorithm For Computing Grids (<i>Jean-Michel Busca, Marin Bertier, Fatima Belkouch, Pierre Sens, Luciana Arantes</i>) Scheduling in Bag-of-Task Grids: The PAUÁ Case (<i>Walfredo Cirne, Francisco Brasileiro, Lauro Costa, Daniel Paranhos da Silva, Elizeu Santos-Neto, Nazareno Andrade</i>) MEU: Unifying Application Modeling and Cluster Exploitation (<i>Albano Alves, Antônio Pina, José Exposto, José Rufino</i>)
19:00–20:40	Session 6: High Performance Applications Parallel Implementation of a Lagrangian Stochastic Model for Pollution Dispersion (<i>Debora Roberti, Roberto Souto, Gervasio Degrazia, Haroldo Campos Velho, Domenico Anfossi</i>) A Parallel Engine for Graphical Interactive Molecular Dynamics (<i>Eduardo Rodrigues, Airam Preto, Stephan Stephany</i>) Parallel Adaptive Mesh Coarsening for Seismic Tomography (<i>Marc Grunberg</i>) Combining a Shared-Memory High Performance Computer and a Heterogeneous Cluster for the Simulation of Light Interaction with Human Skin (<i>Aravind Krishnaswamy, Gladimir Baranoski</i>)
21:00–	Conference Dinner

Friday, October 29 th	
07:40–09:10	Tutorial 2 (Part 2) Grid Computing: Making the Global Cyberinfrastructure for eScience and eBusiness a Reality (<i>Rajkumar Buyya, from The University of Melbourne</i>)
09:10–12:00	Visit to Itaipu Hydroelectric Power Plant
12:00–13:30	Lunch
13:30–14:45	Session 7: Parallel and Distributed Algorithms Revisiting a BSP/CGM Transitive Closure Algorithm (<i>Edson Cáceres, Cristiano Vieira</i>) Improving Parallel Execution Time of Sorting on Heterogeneous Clusters (<i>Christophe Cérin, Michel Koskas, Hazem Fkaier, Mohamed Jenni</i>) An Approach for Pre-Runtime Scheduling in Embedded Hard Real-Time Systems with Power Constraints (<i>Eduardo Antonio Guimaraes Tavares, Raimundo Barreto, Meuse Nogueira Oliveira Junior, Paulo Maciel, Marília Neves, Ricardo Lima</i>)
14:45–15:45	Invited Talk 4 The Microprocessor of the Year 2014: Do Pentium 4, Pentium M, and Power 5 provide any hints? (<i>Yale N. Patt, The University of Texas at Austin, EUA</i>)
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 (<i>Stefan Schamberger</i>) On the Combined Scheduling of Malleable and Rigid Jobs (<i>Jan Hungersjöfer</i>) A Cluster-based Strategy for Scheduling Task on Heterogeneous Processors (<i>Cristina Boeres, José Viterbo Filho, Vinod Rebello</i>) A New Migration Model based on the Evaluation of Processes Load and Lifetime on Heterogeneous Computing Environments (<i>Rodrigo Mello, Luciano Senger</i>)
17:40–19:20	Session 9: Benchmarking, Performance Measurements and Analysis Characterizing the Dynamic Behavior of Workload Execution in SVM Systems (<i>Salvador Petit, Julio Sahuquillo, Ana Pont, David Kaeli</i>) A Performance Evaluation of ARM ISA Extensions for Elliptic Curve Cryptography over Binary Finite Fields (<i>Roberto Giorgi, Enrico Marinelli</i>) PEMPIs: A New Methodology for Modeling and Prediction of MPI Programs Performance (<i>Edson Midorikawa, Helio Oliveira, Jean Laine</i>) Performance Characterisation of Intra-Cluster Collective Communications (<i>Luiz Angelo Barchet-Estefanel, Grégory Mounié</i>)
19:20–20:20	SBAC-PAD Meeting and Closing Remarks