Conference

Friday, October 1st

- **8.45 - Opening session**

Chair: Mateo Valero

- **9.00 - Keynote address : Wen-Mei Hwu, University of Illinois at Urbana Champaign, USA.**

Title: Breaking Down the Memory Wall for Scalable Microprocessor Platforms

- **10.00 - Break**

Chair: Mike O'Boyle

- **10.30 - Session 1: Code Generation**

⇢ Code Generation in the Polyhedral Model Is Easier Than You Think - *Cédric Bastoul – PriSM (Versailles)*

⇢ A Compiler Framework for Recovery Code Generation in General Speculative Optimizations.
Jin Lin, Wei-Chung Hsu, Pen-Chung Yew, Roy Dz-Ching Ju, Tin-Fook Ngai - University of Minnesota

⇢ A Portable, Multiplatform, High-Performance Co-Array Fortran Compiler.
Yuri Dotsenko, Cristian Coarfa, John Mellor-Crummey - Rice University

⇢ Retargeting JIT compilers by using C-compiler generated executable code - *M. Anton Ertl, David Gregg - TU Wien*

- **12.30 - LUNCH**

Chair: Toshinori Sato

- **14.00 - Session 2: Architecture**

⇢ Adding Limited Reconfigurability to Superscalar Processors - *Marc Epalza, Paolo Ienne, Daniel Mlynek - EPFL*

⇢ Architectural Support for Enhanced SMT Thread Scheduling
Alex Settle, Joshua Kihm, Andrew Janiszewski, Dan Connors - University of Colorado

⇢ Instruction Scheduling for Static Issue, Dynamic Placement (SPDI) Architectures.
Ramadass Nagarajan, Doug Burger, Kathryn S. McKinley, Calvin Lin, Stephen W. Keckler - University of Texas at Austin

⇢ A High-Performance SIMD Floating Point Unit for BlueGene/L: Architecture, Compilation, and Algorithm Design.
Gheorghe Almasi, Leonardo Bachega, Luiz H. Ceze, Siddharth Chatterjee, Kenneth A. Dockser, Maria Eleftheriou, John A. Gunnels, Manish Gupta, Fred G. Gustavson, Christopher A. Lapkowski, Gary K. Liu, Mark P. Mendell, Karin Strauss - IBM Research

- **16.00 - Break**

Chair : Jakob Engblom

- **16.30 - 18.00 - Session 3 : Parallel Systems**

⇢ Compiler Estimation of Load Imbalance Overhead in Speculative Parallelization
Jialin Dou, Marcelo Cintra - University of Edinburgh

⇢ Implementing Malleability on MPI jobs.
Gladys Utrera, Julita Corbalàn, Jesus Labarta - Universidad Politecnica de Catalunya

⇢ Partitioning of Code for a Massively Parallel Machine.
Michael Ball, Cristina Cifuentes, Deepankar Bairagi - Sun Microsystems

- **Banquet at «Keller plage»**

Saturday, October 2nd

Chair : Josep Lluis Larriba-Ley

- **9.00 - Keynote address : Tadashi Watanabe, NEC, Japan**

Title: The Earth Simulator and its Beyond - Technological Considerations towards the Sustained PetaFlops Machine

- **10.00 - Break**

Chair : Avi Mendelson

- **10.30 - Session 4 : Memory Hierarchy**

⇢ Impact of Java Memory Model on Out-of-order Multiprocessors
Tulika Mitra, Abhik Roychoudhury, Qinghua Shen - National University of Singapore

⇢ Fair Cache Sharing and Partitioning in a Chip Multiprocessor Architecture.
Seongbeom Kim, Dhruba Chandra, Yan Solihin - North Carolina State University

⇢ Architecture Support for High Speed Authentication of Shared Memory in Multi-processor System.
Weidong Shi, Hsien-Hsin Sean Lee, Mrinmoy Ghosh, Chenghuai Lu - Georgia Institute of Technology

⇢ AC/DC: Adaptive CZone / Delta Correlation Prefetcher.
Kyle J. Nesbit, Ashutosh S. Dhodapkar, James E. Smith - University of Wisconsin - Madison

- **12.30 - LUNCH**

Chair : Jesse Fang

- **14.00 - 16.00 - Session 5 : Compiler optimizations**

⇢ The Energy Impact of Aggressive Loop Fusion
Y. Zhu, G. Magklis, M. L. Scott, C. Ding, D. H. Albonesi - University of Rochester

⇢ Scalable High Performance Cross-Module Inlining.
Dhruva R. Chakrabarti, Luis A. Lozano, Xinliang D. Li, Robert Hundt, Shin-Ming Liu - HP

⇢ Decoupled Software Pipelining with the Synchronization Array for Latency Tolerance.
Ram Rangan, Neil Vachharajani, David August - Princeton University

⇢ Fast Paths in Concurrent Programs.
Wen Xu, Sanjeev Kumar, Kai Li - Princeton University & Intel Corporation

Sunday, October 3rd

Chair : Michel Cosnard

- **9.00 - Keynote address : Stamatis Vassiliadis, T.U. Delft, The Netherlands**

Title: Polymorphic Processors: How to Expose Arbitrary Hardware Functionality to Programmers

- **10.00 - Break**

Chair : Pedro Trancoso

- **10.30 - Session 6 : Memory Parallelism**

⇢ The Value Evolution Graph and its Use in Memory Reference Analysis.
Silvius Rus, Dongmin Zhang, Lawrence Rauchwerger - Texas A&M University

⇢ TO-lock: Removing Lock Overhead Using the Owners' Temporal Locality.
Takeshi Ogasawara, Hideaki Komatsu, Toshio Nakatani - IBM Research

⇢ The Stream Virtual Machine
François Labonte, Ian Buck, Bill Thies, Peter Mattson, Christos Kozyrakis, Mark Horowitz - Stanford University

⇢ An Adaptive Algorithm Selection Framework.
Hao Yu, Dongmin Zhang, Francis Dang, Lawrence Rauchwerger - Texas A&M University

- **12.30 - Concluding Remarks**

Workshops

Wednesday, september 29

Room	AM	PM
Van Gogh	HIPEAC steering committee	HIPEAC steering committee
Picasso	MEDEA workshop	Tutorial 2: Itanium: Architecture, compilation techniques and multi-processor systems – Jean François Collard and Stéphane Eranian, Hewlett-Packard Laboratories
Monet	Tutorial 1: Exploitation of Locality and Parallelism in Pointer-based Programs - Oscar Plata and Rafael Asenjo, University of Malaga, Spain	
Renoir	Meeting of french phd students in parallel architecture and compilation	

Thursday, september 30

Room	AM	PM
Van Gogh		
Picasso	AGRID workshop	Tutorial 3: UPC: Unified Parallel C - Tarek El-Ghazawi, The George Washington University
Monet	SNAPI workshop	SNAPI workshop
Renoir	Meeting of HiPEAC network of excellence	Meeting of HiPEAC network of excellence

6.00 PM : REGISTRATION and WINE TASTE

General Chairs
Michel Cosnard, INRIA & UNSA, France
Ulrich Finger, EURECOM, France

Program Chairs
Mateo Valero, UPC,Spain
Josep-L. Larriba-Pey,UPC, Spain

Program Committee
Alex Veidenbaum, UC Irvine
Angelos Bilas, Forth
Daniel Jiménez, Rutgers
David Bernstein, IBM
David Padua, UIUC
Eduard Ayguadé, UPC
Hitoshi Sakagami, Himeji Inst. of Tech.
Jaime Moreno, IBM
Jakob Engblom, Virtutech
James Larus, Microsoft
Jesse Fang, Intel
Jim Dehnert, Transmeta
José F. Martínez, Cornell Univ.
Kazuki Joe, Nara Women's Univ.
Konrad Lai, Intel
Kristian Flautner, ARM
Luiz A. Barroso, Google
Marco Cornero, STMicroelectronics
Mario Nemirowski, Tidal Networks
Michel Dubois, USC
Mike O'Boyle, Univ. of Edinburgh
Olivier Temam, LRI
Paolo Faraboschi, HP Labs
Pascal Sainrat, Univ. of Tolouse
Patrick Crowley, Washington Univ.
Pedro Trancoso, Cyprus Univ.
Per Stenstrom, Chalmers Univ.
Rainer Leupers, Aachen Univ.
Sandhya Dwarkadas, Univ. of Rochester
Stamatis Vassiliadis, Delft Univ.
Theo Ungerer, Augsburg Univ.
Toshinori Sato, Kyushu Inst. of Tech.
Wen-mei Hwu, UIUC
Yale Patt, Univ. of Texas

Local Arrangements
Laurence Grammare, EURECOM
Marie-Hélène Zeitoun, INRIA

Finance Chair
Christophe Cérin, Univ. de Picardie

Publications Chair
Josep Torrellas, UIUC

Publicity Chair
Renaud Pacalet, ENST, Sophia Antipolis

Tutorials Chairs
Michel Auguin, CNRS Sophia Antipolis
Daniel Litaize, Univ. de Toulouse

Workshops Chair
Dave Kaeli, Northeastern Univ.

Web Masters
Alex Ramirez, UPC
Christophe Cérin, Univ. de Picardie

Travel Awards Chair
Qing Yang, Rhode Islands
Jean-Luc Gaudiot, UCI

Steering Committee
Gabby Silberman, IBM (Chair)
Erik Altman, IBM
Michel Cosnard, INRIA
Jack Davidson, Virginia
Kemal Ebcioglu, IBM
Jean-Luc Gaudiot, UCI
Mary Hall, ISI/USC
David Kaeli, Northeastern
David Koppelman, Louisiana State
Sally McKee, Cornell
Vivek Sarkar, IBM
Kevin Skadron, Virginia

Visit our website : http://www.pactconf.org/

13th International Conference on

Parallel architectures & compilation techniques

PACT'04

Sept. 29 to October 3, 2004

Antibes Juan les Pins, France
Hotel Ambassadeur ****

PACT'04 SPONSORS :

acm IEEE IFIP Sun microsystems
Région PACA IBM intel Microsoft
INRIA EURECOM Sophia Antipolis