LCPC 2003: The 16th International Workshop on Languages and Compilers for Parallel Computing

Hosted by The Parasol Lab, Department of Computer Science, Texas A&M University

1. **Search Space Properties for Mapping Pipelined FPGA Applications**
   Heidi Ziegler, Mary Hall, and Byoungro So

2. **Adapting Convergent Scheduling Using Machine-Learning**
   Diego Puppin Mark Stephenson Saman Amarasinghe Martin Martin Una-May O’Reilly

3. **TFP: Time-sensitive, Flow-specific Profiling at Runtime**
   Sagnik Nandy Xiaofeng Gao Jeanne Ferrante

4. **A Hierarchical Model of Reference Affinity**
   Yutao Zhong, Xipeng Shen and Chen Ding

5. **Cache Optimization for Coarse Grain Task Parallel Processing using Inter-Array Padding**
   Kazuhisama Ishizaka, Motoki Obata, Hironori Kasahara

6. **Compiler-Assisted Cache Replacement: Problem Formulation and Performance Evaluation**
   Hongbo Yang, R. Govindarajan, Guang R. Gao and Ziang Hu

7. **Memory Constrained Data Locality Optimization for Tensor Contractions**
   Alina Bibireata Sandhya Krishnan Gerald Baumgartner Daniel Cociorva Chi-Chung Lam P. Sadayappan J. Ramamujam David E. Bernholdt Venkatesh Choppella

8. **Compositional Development of Parallel Programs**
   Nasim Mahmood, Guosheng Deng, and James C. Browne

9. **Supporting High-level Abstractions through XML Technologies**
   Xiaogang Li and Gagan Agrawal
10. *Applications of HPJava*
   Bryan Carpenter, Geoffrey Fox, Han-Ku Lee, Sang Boem Lim

11. *Programming for Locality and Parallelism with Hierarchically Tiled Arrays*
   Gheorghe Almasi, Luiz De Rose, Jose Moreira and David Padua

12. *Co-Array Fortran Performance and Potential: An NPB Experimental Study*
   Cristian Coarfa, Yuri Dotsenko, Jason Eckhardt, and John Mellor-Crummey

13. *Evaluating the Impact of Programming Language Features on the Performance of Parallel Applications on Cluster Architectures*
   Jan Prins, Bill Pugh, P. Sadayappan, Chau-Wen Tseng

14. *Putting Polyhedral Loop Transformations to Work*
   Cédric Bastoul, Albert Cohen, Sylvain Girbal, Saurabh Sharma, Olivier Temam

15. *Index-Association Based Dependence Analysis and Its Application in Automatic Parallelization*
   Yonghong Song and Xiangyun Kong

16. *Improving the Performance of Morton Layout by Array Alignment and Loop Unrolling*
   Jeyarajan Thiagalingam and Olav Beckmann and Paul H. J. Kelly

17. *Spatial Views: Space-Aware Programming for Networks of Embedded Systems*
   Yang Ni Ulrich Kremer Liviu Iftode

18. *Operation Reuse on Handheld Devices*
   Yonghua Ding and Zhiyuan Li

19. *Memory Redundancy Elimination to Improve Application Energy Efficiency*
   Keith D. Cooper and Li Xu

20. *Adaptive MPI*
   Chao Huang, Orion Lawlor, L. V. Kale

21. *MPJava: High-Performance Message Passing in Java using Java.nio*
   Bill Pugh Jaime Spacco

22. *Polynomial-time Algorithms for Enforcing Sequential Consistency in SPMD Programs with Arrays*
   Wei-Yu Chen Arvind Krishnamurthy Katherine Yelick
23. **C³: A System for Automating Application-level Checkpointing of MPI Programs**  
   Greg Bronevetsky, Daniel Marques, Keshav Pingali, Paul Stodghill

24. **The Power of Belady’s Algorithm in Register Allocation for Long Basic Blocks**  
   Jia Guo Maria Jesus Garzaran David Padua

25. **Load Elimination in the Presence of Side Effects, Concurrency and Precise Exceptions**  
   Christoph von Praun Florian Schneider Thomas Gross

26. **To Inline or Not to Inline? Enhanced Inlining Decisions**  
   Peng Zhao and Jose Nelson Amaral

27. **A Preliminary Study On the Vectorization of Multimedia Applications for Multimedia Extensions**  
   Gang Ren, Peng Wu and David Padua

28. **A Data Cache with Dynamic Mapping**  
   Paolo D’Alberto, Alexandru Nicolau and Alexander Veidenbaum

29. **Compiler-Based Code Partitioning for Intelligent Embedded Disk Processing**  
   Guilin Chen, Guangyu Chen, M. Kandemir, A. Nadgir

30. **Much Ado about Almost Nothing: Compilation for Nanocontrollers**  
    Henry G. Dietz, Shashi D. Arcot, and Sujana Gorantla

31. **Slice-hoisting for Array-size Inference in MATLAB**  
   Arun Chauhan Ken Kennedy

32. **Increasing the Accuracy of Shape and Safety Analysis of Pointer-basec Codes**  
    Pedro Diniz

33. **Efficient Execution of Multi-Query Data Analysis Batches Using Compiler Optimization Strategies**  
    Henrique Andrade Suresh Aryangat Tahsin Kurc Joel Saltz Alan Sussman

34. **Semantic-Driven Parallelization of Loops Operating on User-Defined Containers**  
    Dan Quinlan, Markus Schordan, Qing Yi, Bronis R. de Supinski

35. **Cetus - An Extensible Compiler Infrastructure for Source-to-Source Transformation**  
    Sang-Ik Lee, Troy A. Johnson, Rudolf Eigenmann