

PLDI 2006 - Final Program

Sunday, June 11

Morning Tutorials

- 8:00 am **T3: *bddbdb: Using Datalog and BDDs for Program Analysis***
to
noon John Whaley (Stanford University)
Location: York Salon
- 8:30 am **T2: *Binary Program Rewriting with Diablo***
to
noon Bjorn De Sutter (Ghent University)
Location: Cartler III
- 9:00 am **T1: *Expressing and Enforcing Security with Programming Languages***
to
noon Andrew Myers (Cornell University)
Location: Cartler I

Lunch break

- 12:00 pm Lunch provided only for full-day participants (Laurier Salon)

Afternoon Tutorial (Cartler)

- 1:30 pm **T4: *The Fortress Programming Language***
to 5pm Guy L. Steele Jr., Jan-Willem Maessen, and Sukyoung Ryu (Sun Microsystems)

PLDI Reception and Poster Session

- 6:00 pm Victoria Ballroom
to 9pm

Monday, June 12 (Victoria Ballroom)

Welcoming Remarks (Michael Schwartzbach and Thomas Ball)

- 8:45 am

Transactions (Chair: Eliot Moss)

- 9:00 am ***The Atomos Transactional Programming Language***
Brian D. Carlstrom, Austen McDonald, Hassan Chafi, JaeWoong Chung,
Chi Cao Minh, Christos Kozyrakis, Kunle Olukotun (Stanford University)
- 9:25 am ***Optimizing Memory Transactions***
Timothy Harris, Mark Plesko (Microsoft Research)
Avraham Shinnar (Harvard University), David Tarditi (Microsoft Research)
- 9:50 am ***Compiler and Runtime Support for Efficient Software Transactional Memory***
Ali-Reza Adl-Tabatabai, Brian T. Lewis, Vijay Menon,
Brian R. Murphy, Bratin Saha, Tatiana Shpeisman (Intel)

Break

- 10:15 am

Compilers (Chair: Jack Davidson)

- 10:40 am ***Better Extensibility through Modular Syntax***
Robert Grimm (New York University)
- 11:05 am ***Fast and Flexible Instruction Selection with On-Demand Tree-Parsing Automata***
M. Anton Ertl (TU Wien)
Kevin Casey, David Gregg (University of Dublin, Trinity College)
- 11:30 am ***A Framework for Unrestricted Whole-Program Optimization***
Spyridon Triantafyllis, Matthew J. Bridges, Easwaran Raman,
Guilherme Ottoni, David I. August (Princeton University)

Lunch and SIGPLAN awards presentation

- 12:00 pm

Dynamic Techniques (Chair: Jeff Foster)

- 1:30 pm ***Practical Dynamic Software Updating for C***
Iulian Neamtii, Michael Hicks (University of Maryland)
Gareth Stoye (University of Cambridge)
Manuel Oriol (ETH Zurich)

1:55 pm **Artemis: Practical Runtime Monitoring of Applications for Errors**
Long Fei, Samuel P. Midkiff (Purdue University)

2:20 pm **An Experimental Analysis of Self-Adjusting Computation**
Umut A. Acar (Toyota Technological Institute)
Guy Blelloch (Carnegie Mellon University)
Matthias Blume (Toyota Technological Institute)
Kanat Tangwongsan (Carnegie Mellon University)

Break

2:45 pm

Parallelism (Chair: Michael Schwartzbach)

3:10 pm **Shared Memory Programming for Large Scale Machines**
Christopher Barton (University of Alberta)
Calin Cascaval, Siddhartha Chatterjee, George Almasi (IBM Watson Research Center)
Yili Zheng (Purdue University) Montse Ferreras (UPC Barcelona)
Jose Amaral (University of Alberta)

3:35 pm **Optimizing Data Permutations for SIMD Devices**
Gang Ren (University of Illinois at Urbana-Champaign)
Peng Wu (IBM T.J. Watson Research Center)
David Padua (University of Illinois at Urbana-Champaign)

4:00 pm **Auto-Vectorization of Interleaved Data for SIMD**
Dorit Nuzman, Ira Rosen, Ayal Zaks (IBM Haifa Labs)

Break

4:25 pm

Memory Safety (Chair: Satish Chandra)

4:50 pm **SAFECode: Enforcing Alias Analysis for Weakly Typed Languages**
Dinakar Dhurjati, Sumant Kowshik,
Vikram Adve (University of Illinois at Urbana-Champaign)

5:15 pm **DieHard: Probabilistic Memory Safety for Unsafe Languages**
Emery D. Berger (University of Massachusetts Amherst)
Benjamin G. Zorn (Microsoft Research)

SIGPLAN open meeting

5:45 pm report of the PLDI 2006 program chair

6:00 pm other SIGPLAN business
to 7pm

Tuesday, June 13 (Victoria Ballroom)

Medley (Chair: Thomas Ball)

9:00 am **Pruning Dynamic Slices With Confidence**
Xiangyu Zhang, Neelam Gupta, Rajiv Gupta (University of Arizona)

9:25 am **Context-Sensitive Domain-Independent Algorithm Composition and Selection**
Troy A Johnson, Rudolf Eigenmann (Purdue University)

9:50 am **Reducing NoC Energy Consumption Through Compiler-Directed Channel Voltage Scaling**
Guangyu Chen, Feihui Li, Mahmut Kandemir, Mary Jane Irwin (Penn. State University)

Break

10:15 am

Register Allocation and Instruction Scheduling (Chair: Keith Cooper)

10:40 am **A Global Progressive Allocator**
David Ryan Koes, Seth Copen Goldstein (Carnegie Mellon University)

11:05 am **Profile-Based Global Live-Range Splitting**
Takuya Nakaïke, Tatsushi Inagaki, Hideaki Komatsu,
Toshio Nakatani (IBM Tokyo Research Laboratory)

11:30 am **Automatic Instruction Scheduler Retargeting by Reverse-Engineering**
Matthew Bridges, Neil Vachharajani, Guilherme Ottoni
David I. August (Princeton University)

Lunch

12:00 pm

Runtime Optimization and Profiling (Chair: Laurie Hendren)1:30 pm **Online Performance Auditing: Using Hot Optimizations Without Getting Burned**Jeremy Lau (UC San Diego)
Matthew Arnold, Michael Hind (IBM T.J. Watson Research Center)
Brad Calder (UC San Diego)1:55 pm **Cache-conscious Coallocation of Hot Data Streams**Trishul Chilimbi (Microsoft Research)
Ran Shaham (Amuse Toy & Game Development)2:20 pm **Accurate, Efficient, and Adaptive Calling Context Profiling**Xiaotong Zhuang (Georgia Institute of Technology)
Mauricio Serrano, Harold Cain, Jong-Deok Choi (IBM T.J. Watson Research Center)**Break**

2:45 pm

Language Constructs (Chair: Todd Millstein)3:10 pm **Algorithm Specialization in Generic Programming -
Challenges of Constrained Generics in C++**Jaakko Järvi (Texas A&M University),
Douglas Gregor, Jeremiah Willcock, Andrew Lumsdaine (Indiana University)
Jeremy Siek (Rice University)3:35 pm **Eventrons: A Safe Programming Construct for High-Frequency
Hard Real-Time Applications**Daniel Spoonhower (Carnegie Mellon University),
Joshua Auerbach, David F. Bacon, Perry Cheng,
David Grove (IBM Research)4:00 pm **Continuations and Transducer Composition**

Olin Shivers, Matthew Might (Georgia Institute of Technology)

Break

4:25 pm

Race Detection (Chair: Mooly Sagiv)4:50 pm **Effective Static Race Detection for Java**

Mayur Naik, Alex Aiken, John Whaley (Stanford University)

5:15 pm **LOCKSMITH: Context-Sensitive Correlation Analysis for Race Detection**

Polyvios Pratikakis, Jeffrey S. Foster, Michael Hicks (University of Maryland)

Microsoft Hospitality Suite5:45 pm Sussex Room: Top floor of hotel, great view, and with balcony area
to 8pm New release of Phoenix RDK will be available (free).**Wednesday, June 14 (Victoria Ballroom)****Garbage Collection** (Chair: Susan Graham)8:00 am **Profile-guided Proactive Garbage Collection for Locality Optimization**Wen-ke Chen, Sanjay Bhansali, Trishul Chilimbi (Microsoft Research)
Xiaofeng Gao, Weihaw Chuang (UC San Diego)8:25 am **Correctness-Preserving Derivation of Concurrent Garbage Collection Algorithms**Martin T. Vechev (Cambridge University)
Eran Yahav, David F. Bacon (IBM T.J. Watson Research Center)8:50 am **The Compressor: Concurrent, Incremental, and Parallel Compaction**

Haim Kermany, Erez Petrank (Technion)

9:15 am **Free-Me: A Static Analysis for Automatic Individual Object Reclamation**Samuel Z. Guyer (Tufts University)
Kathryn S. McKinley (University of Texas at Austin)
Daniel Frampton (Australian National University)**Break**

9:40 am

Static Analysis (Chair: Patrick Cousot)

- 10:05 am ***Combining Abstract Interpreters***
Sumit Gulwani (Microsoft Research)
Ashish Tiwari (SRI International)
- 10:30 am ***Refinement-based Context-sensitive Points-to analysis for Java***
Manu Sridharan, Rastislav Bodik (UC Berkeley)
- 10:55 am ***Modular Verification of Assembly Code with Stack-Based Control Abstractions***
Xinyu Feng, Zhong Shao, Alexander Vaynberg (Yale University)
Sen Xiang (University of Science and Technology of China)
Zhaozhong Ni (Yale University)
- 11:20 am ***Termination Proofs for Systems Code***
Byron Cook (Microsoft Research)
Andreas Podelski, Andrey Rybalchenko (Max-Planck-Institut for Informatik)