
PLDI 2007 Program

Sunday

8:30am-12:30pm

Tutorial Session I

Using FindBugs for Research

David Hovemeyer (York College of Pennsylvania)

William Pugh (University of Maryland)

X10: Concurrent Programming for Modern Architectures

Vijay Saraswat (IBM TJ Watson Research Center)

Vivek Sarkar (IBM TJ Watson Research Center)

Nathaniel Nystron (IBM TJ Watson Research Center)

12:30pm-1:30pm

Break

1:30pm-5:30pm

Tutorial Session II

Hands on Phoenix -- A Framework for Program Analysis and Transformation

Jim Hogg (Microsoft)

Kang Su Gattin (Microsoft)

Andy Ayers (Microsoft)

Using Pin for Compiler and Computer Architecture Research and Education

Kim Hazelwood (University of Virginia)

Dan Connors (University of Colorado)

David Kaeli (Northeastern University)

Vijay Janapa Reddi (Harvard University)

6:00pm-7:30pm

Turing Award Lecture

8:00pm-10:00pm

PLDI Reception and Student Poster Session, in honor of Fran Allen

PLDI 2007 Program

Monday

8:00am-9:35am

Welcoming Remarks, *Jeanne Ferrante and Kathryn S. McKinley*

Errors Detected & Corrected, *Guy Steele*

Exterminator: Automatically Correcting Memory Errors with High Probability

Gene Novark, Emery Berger and Benjamin Zorn

CheckFence: Checking Consistency of Concurrent Data Types on Relaxed Memory Models

Sebastian Burckhardt, Rajeev Alur and Milo M. K. Martin

Automatically Classifying Benign and Harmful Data Races Using Replay Analysis

Satish Narayanasamy, Zhenghao Wang, Jordan Tigani, Andrew Edwards and Brad Calder

Sound and Precise Analysis of Web Applications for Injection Vulnerabilities

Gary Wassermann and Zhendong Su

9:35am-10:00am

Break

10:00am-11:20am

Compiled Correctly, *Neal Glew*

Fault-tolerant Typed Assembly Language

Frances Perry, Lester Mackey, George A. Reis, Jay Ligatti, David I. August and David Walker

A Certified Type-Preserving Compiler from Lambda Calculus to Assembly Language

Adam Chlipala

Certified Self-Modifying Code

Hongxu Cai, Zhong Shao and Alexander Vaynberg

Enforcing Isolation and Ordering in STM

Tatiana Shpeisman, Vijay Menon, Ali-Reza Adl-Tabatabai, Steven Balensiefer, Dan Grossman, Richard L. Hudson, Kate Moore and Bratin Saha

11:30am-12:30pm

Keynote: *Chuck Moore, AMD*

12:30pm-1:30pm

Lunch provided

PLDI Program Chair report, *Kathryn S. McKinley*

Best paper award

SIGPLAN Business Meeting

1:30pm-3:10pm

Programs Analyzed, *Michael Hicks*

Valgrind: A Framework for Heavyweight Dynamic Binary Instrumentation

Nicholas Nethercote and Julian Seward

Improved Error Reporting for Software that Uses Black Box Components

Jungwoo Ha, Chris Rossbach, Indrajit Roy, Jason Davis, Hany Ramadan, David Chen and Emmett Witchel

Thin Slicing

Manu Sridharan, Stephen Fink and Rastislav Bodik

Static Specification Inference Using Predicate Mining

Murali Krishna Ramanathan, Ananth Grama and Suresh Jagannathan

Automatic Inference of Optimizer Flow Functions from Semantic Meanings

Erika Rice Scherpelz, Sorin Lerner and Craig Chambers

3:10pm-3:45pm

Break

3:45pm-5:45pm

Languages Designed, *Uli Kremer*

Automatic Inversion Generates Divide-and-Conquer Parallel Programs

Kazutaka Morita, Akimasa Morihata, Kiminori Matsuzaki, Zhenjiang Hu and Masato Takeichi

EXO+CHI: Architecture and Programming Environment for Heterogeneous Multi-core Systems

Perry Wang, Jamison Collins, Rich Hankins, Gautham Chinya, Xinmin Tian, Hong Jiang and Hong Wang

Sketching Stencils

Armando Solar-Lezama, Gilad Arnold, Liviu Tancau, Rastislav Bodik, Vijay Saraswat and Sanjit Seshia

Mace : Language Support for Building Distributed Systems

Charles Killian, James Anderson, Ryan Braud, Ranjit Jhala and Amin Vahdat

Combining Events and Threads for Scalable Network Services --- Implementation and evaluation of monadic, application-level concurrency primitives

Peng Li and Steve Zdancewic

Reliable and Efficient Programming Abstractions for Wireless Sensor Networks

Nupur Kothari, Ramakrishna Gummadi, Todd Millstein and Ramesh Govindan

6:00pm-7:00pm

Report of future directions workshop, *David Padua*

Memories of Ken Kennedy

PLDI 2007 Program

Tuesday

8:00am-9:35am

Executed Concurrently, *Tim Harris*

Optimistic Parallelization using the Galois System

Milind Kulkarni, Keshav Pingali, Bruce Walter, Ganesh Ramanarayanan, Kavita Bala and Paul Chew

Behavior-oriented Parallelization

Chen Ding, Xipeng Shen, Kirk Kelsey, Chris Tice, Ruke Huang and Chengliang Zhang

Effective Automatic Parallelization of Stencil Computations

Sriram Krishnamoorthy, Muthu Baskaran, Uday Bondhugula, J Ramanujam, Atanas Rountev and P Sadayappan

A Race and Transaction-Aware Runtime for Java

Tayfun Elmas, Serdar Tasiran and Shaz Qadeer

9:35am-10:00am

Break

10:00am-11:20am

Pointers Analyzed, *Erez Petrank*

Shape Analysis with Inductive Recursion Synthesis

Bolei Guo, Neil Vachharajani and David I. August

Thread-Modular Shape Analysis

Alexey Gotsman, Josh Berdine, Byron Cook and Mooly Sagiv

Making Context-sensitive Points-to Analysis with Heap Cloning Practical For The Real World

Chris Lattner, Andrew Lenharth and Vikram Adve

The Ant and the Grasshopper: Fast and Accurate Pointer Analysis for Millions of Lines of Code

Ben Hardekopf and Calvin Lin

11:30am-12:30pm

Keynote: David Culler, Berkley, and Deborah Estrin, UCLA

12:30pm-1:30pm

Lunch provided

1:30pm-3:10pm

Programs Analyzed, *Kathleen Fisher*

Path Invariants

Dirk Beyer, Thomas A. Henzinger, Rupak Majumdar and Andrey Rybalchenko

Ditto: Automatic Incrementalization of Data Structure Invariant Checks (in Java)

Ajeet Shankar and Rastislav Bodik

Proving thread termination

Byron Cook, Andreas Podelski and Andrey Rybalchenko

Regularly Annotated Set Constraints

John Kodumal and Alex Aiken

Efficient Static Analysis of XML Paths and Types

Pierre Geneves, Nabil Layaida and Alan Schmitt

3:10pm-3:45pm

Break

3:45pm-5:45pm

Executed Efficiently, *Kim Hazelwood*

The ExoVM System for Automatic VM and Application Reduction

Ben L. Titzer, Joshua Auerbach, David F. Bacon and Jens Palsberg

Offline Compression for On-Chip RAM

Nathan Cooperider and John Regehr

Online Optimization driven by Hardware Performance Monitoring

Florian Schneider, Mathias Payer and Thomas Gross

UCC: Update-conscious Compilation for Energy Efficiency in Wireless Sensor Networks

Weijia Li, Youtao Zhang, Jun Yang and Jiang Zheng

Profile-Driven Energy Reduction in Network-on-Chips

Feihui Li, Guangyu Chen, Mahmut Kandemir and Ibrahim Kolcu

Parameterized Tiled Loops for Free

Lakshminarayanan Renganarayanan, DaeGon Kim, Sanjay Rajopadhye and Michelle Strout

8:00pm-10:00pm

ACM Student Research Competition Final Presentations

PLDI 2007 Program

Wednesday

8:00am-9:35am

Errors Detected, *Hans Boehm*

Towards Locating Execution Omission Errors

Xiangyu Zhang, Sriraman Tallam, Neelam Gupta and Rajiv Gupta

Searching for Type-Error Messages

Benjamin Lerner, Matthew Flower, Dan Grossman and Craig Chambers

Static Error Detection Using Semantic Inconsistency Inference

Isil Dillig, Thomas Dillig and Alex Aiken

Iterative Context Bounding for Systematic Testing of Multithreaded Programs

Madanlal Musuvathi and Shaz Qadeer

9:35am-10:00am

Break

10:00am-11:20am

Memory Managed, *Maria Jump*

GCExplorer: A Semi-Automated Search Procedure for Provably Correct Concurrent Collectors

Martin Vechev, Eran Yahav, David Bacon and Noam Rinetzky

A General Framework for Certifying Garbage Collectors and Their Mutators

Andrew McCreight, Zhong Shao, Chunxiao Lin and Long Li

Practical Memory Leak Detection using Guarded Value-Flow Analysis

Sigmund Cherem, Lonnie Princehouse and Radu Rugina

11:30am-12:30pm

Keynote: *Avi Wigderson, Princeton*