ICFP 2009 Final Program

Monday, August 31, 2009
Invited Talk (Chair: Andrew Tolmach)
9:00 Organizing Functional Code for Parallel Execution; or, fold and fold Considered Slightly Harmful
Guy L. Steele, Jr.; Sun Microsystems
10:00 Break
Session 1 (Chair: Shun-Cheng Mu)
10:25 Functional Pearl: La Tour D’Hanoï
Ralf Hinze; University of Oxford
10:50 Purely Functional Lazy Non-deterministic Programming
Sebastian Fischer1, Oleg Kiselyov2, Chung-chih Shan3; 1Christian-Albrechts University, 2FNMOC, 3Rutgers University
11:15 Break
Session 2 (Chair: Koen Claessen)
11:40 Safe Functional Reactive Programming through Dependent Types
Neil Sculthorpe and Henrik Nilsson; University of Nottingham
12:05 Commutative Arrows and Their Optimization
Hai Liu, Eric Cheng, Paul Hudak; Yale University
12:30 Lunch break
Session 3 (Chair: Manuel Chakravarty)
14:00 A Functional I/O System or, Fun for Freshman Kids
Matthias Felleisen1, Robert Bruce Findler2, Matthew Flatt1; 1Northeastern University, 2Northwestern University, 3University of Utah
Ryan R. Newton1 and Teresa Ko2; 1MIT, 2UCLA
14:45 Runtime Support for Multicore Haskell
Simon Marlow, Simon Peyton Jones, Satnam Singh; Microsoft Research
15:10 Break
Session 4 (Chair: Amin Alsabti)
15:35 Effective Interactive Proofs for Higher-Order Imperative Programs
Adam Chlipala, Gregory Malecha, Greg Morrisett, Avraham Shinnar, Ryan Wisnesky; Harvard University
16:00 Experience Report: sel4: Formally Verifying a Microkernel
Guy L. Steele, Jr.; Sun Microsystems
16:20 Biorthogonality, Step-Indexing and Compiler Correctness
Nick Benton1 and Chung-Kil Hur2; 1Microsoft Research, 2University of Cambridge
16:45 Break
Session 5 (Chair: Stephanie Weirich)
17:10 Scribe: Closing the Book on Ad Hoc Documentation Tools
Matthew Flatt1, Eli Barzilay2, Robert Bruce Findler3; 1Univ. of Utah, 2Northwestern University, 3Northwestern University
17:35 PC Chair’s Report
Andrew Tolmach; Portland State University
17:55 Close

Tuesday, September 1, 2009
Invited Talk (Chair: Graham Hutton)
9:00 Lambda, the Ultimate TA: Using a Proof Assistant to Teach Programming Language Foundations
Benjamin C. Pierce; University of Pennsylvania
10:00 Break
Session 6 (Chair: Xavier Leroy)
10:25 A Universe of Binding and Computation
Daniel Licata and Robert Harper; Carnegie Mellon University
10:50 Non-Parametric Parametricity
Georg Neis, Derek Dreyer, Andreas Rossberg; MPI-SWS
11:15 Break
Session 7 (Chair: Bobby Fischer)
11:40 Finding Race Conditions in Erlang with QuickCheck and PULSE
Koen Claessen1, Michel Païka1, Nicholas Smallbone1, John Hughes2, Hans Stenvlund2, Thomas Arts2, Ulf Wiger3; 1Chalmers University of Technology, 2Chalmers University of Technology and Qualcomm AB, 3Erlang Training and Consulting
12:05 Partial Memoization of Concurrency and Communication
Lukasz Saarek, KC Sivaranakrishnan, Suresh Jagannathan; Purdue University
12:30 Lunch break
Session 8 (Chair: Conor McBride)
14:00 Free Theorems Involving Type Constructor Classes
Janis Voightlander; Technische Universität Dresden
Cart J. Sangsom; Starling Software
14:45 Beautiful Differentiation
Conal M. Elliott; LambdaPix
15:10 Break
Session 9 (Chair: Jon Hook)
15:35 Oxenstored: An Efficient Hierarchical and Transactional Database using Functional Programming with Reference Cell Comparison
Thomas Gazagnaire and Vincent Hanquez; Citrix Systems
16:00 Experience Report: Using Objective Caml to Develop Safety-Critical Embedded Tools in a Certification Framework
Bruno Pagano1, Olivier Andrieu1, Thomas Monost1, Benjamin Canov2, Emmanuel Chailloux3, Philippe Wang3, Pascal Manoury4, Jean-Louis Loéou4; 1Retoré Technologies, 2LIPIps - PPS, 3UPMC, 4LIPIps - PPS, 5Prover Technology S.A
16:20 Identifying Query Incompatibilities with Evolving XML Schemas
Pierre Genest1, Nabil Layaïda1, Vincent Quinet2; 1CNRS, 2INRIA
16:45 Break
Session 10 (Chair: Mark Jones)
17:30 Report on the Twelfth ICFP Programming Contest
Andy Gill; University of Kansas
17:55 Close

Wednesday, September 2, 2009
Invited Talk (Chair: Lesan Aspnes)
9:00 Commutative Monads, Diagrams and Knots
Dan Piponi; Industrial Light & Magic
10:00 Break
Session 11 (Chair: Yale Neman)
10:25 Generic Programming with Fixed Points for Mutually Recursive Datatypes
Alexey Rodrigues Yakushev1, Stefan Holdersmann2, Andres Lüth2; 1Vector Fabrics B.V., 2Utrecht University
10:50 Attribute Grammars Fly First-Class: How to do Aspect Oriented Programming in Haskell
Marcos Viera1, S. Doaitse Swierstra2, Wouter S. Swierstra2; 1Universidade de la Republica, Montevideo, 2Utrecht University
11:15 Break
Session 12 (Chair: Norman Ramsey)
11:40 Parallel Concurrent ML
John Reynolds, Claudio V. Russo2, Yingqi Xiao1; 1University of Chicago, 2Microsoft Research
12:05 A Concurrent ML Library in Concurrent Haskell
Arik Chaudhuri; University of Maryland, College Park
12:30 Lunch break
Session 13 (Chair: Kathleen Fisher)
14:00 Awards and Memorials:
Most Influential ICFP’99 Paper Award (Phil Wadler)
In Memoriam Peter Landin
Oliver Danvy; University of Aarhus
SIGPLAN Programming Languages Achievement Award: Red-Black (Phil Wadler)
Pascal Quin and Julien Signoles; CEA LETI
14:45 Control-Flow Analysis of Function Calls and Returns by Abstract Interpretation
Jan Midtgård1 and Thomas P. Jensen2; 1Roskilde University, 2CNRS
15:10 Break
Session 14 (Chair: Phil Wadler)
15:35 Automatically RESTful Web Applications: Making Modular Serializable Continuations
Jay A. McCarthy; Brigham Young University
16:00 Experience Report: Osigen, a Web Programming Framework
Vincent Batz, Jérôme Vouillon, Boris Yakouskou; PPS - Université Paris Diderot (Paris 7), CNRS
16:20 Implementing First-Class Polymorphic Delimited Continuations by a Type-Directed Selective CPS-Transform
Tskar Rompf, Ingo Mamer, Martin Odersky; EPFL
16:45 Break
Session 15 (Chair: Dan Leijen)
17:05 A Theory of Typed Coercions and its Applications
Nikhil Swamy1, Michael Hicks2, Gavin M. Bierman1; 1Microsoft Research, 2University of Maryland, College Park
17:30 Complete and Decidable Type Inference for GADTs
Tom Schrijpers1, Simon Peyton Jones2, Martin Sulzmann3; 1Esterel Technologies, 2University of Nottingham, 3Chalmers University of Technology
17:55 Close