Principles, Logics, and Implementations of high-level programming languages

Montréal, Canada
September 17–22, 2000

ICFP  International Conference on Functional Programming
PPDP  2nd International Conference on Principles and Practice of Declarative Programming
Haskell Workshop
HLCL  4th International Workshop on High-Level Concurrent Languages
HOOTS 4th International Workshop on Higher Order Operational Techniques in Semantics
RULE  1st International Workshop on Rule-Based Programming
Scheme Workshop on Scheme and Functional Programming
SAIG  Semantics, Applications and Implementation of Program Generation
TIC  3rd International Workshop on Types in Compilation

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ICFP Program
Monday September 18

8:45–9:45 Invited Speaker: The Functional Guts of the Kleisli Query System, Limsoon Wong (Kent Ridge Digital Labs)
Chair: Philip Wadler

9:45–10:15 Break

10:15–11:15 Session I
Chair: Shriram Krishnamurthi
10:15–10:45 Regular Expression Types for XML, Haruo Hosoya, Jérome Vouillon, Benjamin Pierce (University of Pennsylvania)
10:45–11:15 The Influence of Browsers on Evaluators, Christian Queinnec (Université Paris 6)

11:30–12:30 Session II
Chair: Andrew Wright
11:30–12:00 Static Enforcement of Security with Types, Christian Skalka, Scott Smith (The Johns Hopkins University)
12:00–12:30 Information Flow Inference For Free, François Pottier, Sylvain Conchon (INRIA)
12:30–14:00 Lunch

14:00–15:30 Session III
Chair: Greg Morrisett
14:00–14:30 Type-Safe Cast (Functional pearl), Stephanie Weirich (Cornell University)
14:30–15:00 Typed Compilation of Inclusive Subtyping, Karl Crary (Carnegie Mellon University)
15:00–15:30 Fully Reflexive Intensional Type Analysis, Valery Trifonov, Bratin Saha, Zhong Shao (Yale
University)

15:30–16:00 Break

16:00–17:30 Session IV
Chair: Atsushi Ohori
16:00–16:30 More Types for Nested Data Parallel Programming, Manuel Chakravarty (University of New South Wales), Gabriele Keller (University of Technology, Sydney)
16:30–17:00 FranTk – A declarative GUI language for Haskell, Meurig Sage (University of Glasgow)
17:00–17:30 Functional Programming in C++, Yannis Smaragdakis, Brian McNamara (Georgia Institute of Technology)

17:30–17:45 Program chair’s report, plus a teaser
Breadth-First Numbering: Lessons from a Small Exercise in Algorithm Design (I), (Functional pearl), Chris Okasaki (Columbia University)
19:00–20:30 Reception celebrating the 10th anniversary of the Journal of Functional Programming hosted by ICFP and Cambridge University Press

ICFP Program
Tuesday September 19

Chair: Xavier Leroy

9:45–10:15 Break

10:15–11:15 Session V
Chair: Richard Bird
10:15–10:45 Breadth-First Numbering: Lessons from a Small Exercise in Algorithm Design (II) (Functional pearl), Chris Okasaki (Columbia University)
10:45–11:15 Calculating Linear Time Algorithms for Solving Maximum Weightsum Problems, Isao Sasano, Zhenjiang Hu, Masato Takeichi (University of Tokyo), Mizuho Ogawa (NTT)

11:30–12:30 Session VI
Chair: Susan Eisenbach
11:30–12:00 Cheap Eagerness: Speculative evaluation in a Lazy Functional Language, Karl-Filip Faxen (KTH, Stockholm)
12:00–12:30 An Operational Semantics for Parallel Lazy Evaluation, Clem Baker-Finch (University of Canberra), David King (Motorola Labs), Phil Trinder (Heriot-Watt University)
12:30–14:00 Lunch

14:00–15:30 Session VII
Chair: Eugenio Moggi
14:00–14:30 Recursive Monadic Bindings, Levent Erk"{o}k, John Launchbury (Oregon Graduate Institute)
14:30–15:00 Deriving Backtracking Monad Transformers (Functional pearl), Ralf Hinze (Universit"{a}t Bonn)
15:00–15:30 Intersection Types and Computational Effects, Rowan Davies, Frank Pfenning (Carnegie Mellon University)

15:30–16:00 Break

16:00–17:30 Session VIII
Chair: Ralf Hinze
16:00–16:30 Syntaxic Accidents in Program Analysis: On the Impact of the CPS Transformation, Olivier Danvy, Daniel Damian (BRICS, University of Aarhus)
16:30–17:00 Recursive Types for Dummies (Functional pearl), Vladimir Gapeyev, Michael Levin, Benjamin Pierce (University of Pennsylvania)
17:00–17:30 The Duality of Computation, Pierre-Louis Curien (CNRS and Universit"{e} Paris 7), Hugo Herbelin (INRIA)

17:30–18:00 Programming Contest Award Presentations
Chair: Greg Morrisett

ICFP Program
Wednesday September 20

8:45–9:45 Invited Speaker: Combining Functional Programming and Hardware Verification, Carl Seger (Intel)
Chair: Andrew Wright

9:45–10:15 Break

10:15–11:15 Session IX
Chair: Xavier Leroy
10:15–10:45 Understanding Memory Allocation of Scheme Programs, Manuel Serrano (University of Nice), Hans-J Boehm (Hewlett-Packard)
10:45–11:15 Non-stop Haskell, Tony Field, Andy Cheadle (Imperial College), Simon Marlow, Simon Peyton-Jones (Microsoft Research), Lyndon While (University of Western Australia)

11:30–12:30 Session X
Chair: Philip Wadler
11:30–12:00 QuickCheck, A Lightweight Tool for Random Testing of Haskell Programs, Koen Claessen, John Hughes (Chalmers University of Technology)
12:00–12:30 Composing contracts: an adventure
in financial engineering (Functional pearl), Simon Peyton-Jones (Microsoft Research), Jean-Marc Eber (LexiFi Technologies), Julian Seward (Glasgow University)

12:30–14:00 Lunch
19:00–22:00 PLI Conference Banquet at the Marché Bonsecours

PPDP Program
Wednesday September 20

12:30–14:00 Lunch
14:20–14:30 Opening
14:30–15:30 Invited Speaker: From Logic to Stochastic Processes, Prakash Panangaden (McGill University)
Chair: Maurizio Gabrìelli
15:30–16:00 Break
16:00–18:00 Session I
Chair: Frank Pfenning
16:00–16:30 A Parallel Implementation for Optimal Lambda-Calculus Reduction, Marco Pedicini (Consiglio Nazionale delle Ricerche), Francesco Quaglia (Università di Roma)
16:30–17:00 Logical Relations, Data Abstraction, and Structured Fibrations, John Power (University of Edinburgh), Edmund Robinson (Queen Mary & Westfield College)
17:00–17:30 Operational Semantics and Extensionality, Simona Ronchi Della Rocca (Università di Torino)
17:30–18:00 A High Performance Erlang System, Erik Johansson, Mikael Pettersson, Konstantinos Sagonas (Uppsala University)
19:00–22:00 PLI Conference Banquet at the Marché Bonsecours

PPDP Program
Thursday September 21

8:30–9:30 Invited Speaker: Concurrent Constraint Programming and Linear Logic, François Fages (INRIA Rocquencourt)
Chair: Franck van Breugel
9:35–10:35 Session II
Chair: Andrew Gordon
9:35–10:05 A Framework for the Recursive Definition of Data Structures, Jean-Louis Giavitto (Université de Paris-Sud)
10:05–10:35 Declarative Event-Oriented Programming, Conal Elliott (Microsoft Research)
10:35–11:00 Break
11:00–12:30 Session III
Chair: Michael Hanus
11:00–11:30 Linear Logic Programming with Ordered Contexts, Jeff Polakow (Carnegie Mellon University)
11:30–12:00 Proof Construction and Non-Commutativity: a Cluster Calculus, Claudia Faggian
(stitut de Mathématiques de Luminy)
12:00–12:30 A Bottom-up Semantics for LO, Marco Bozzano, Giorgio Delzanno, Maurizio Martelli
(Università di Genova)
12:30–14:00 Lunch
14:00–15:30 Session IV
Chair: Radha Cousot
14:00–14:30 Enhanced Sharing Analysis Technique: A Comprehensive Evaluation, Roberto Bagaria, Enea Zaffanella (University of Parma), Patricia M. Hill (University of Leeds)
14:30–15:00 A Characterization of Symmetric Semantics by Domain Complementation, Roberto Giacobazzi, Isabella Mastroeni (Università di Verona)
15:00–15:30 Concurrent Constraint Programming: Towards Probabilistic Abstract Interpretation, Alessandra Di Pierro (Università di Pisa), Herbert Wiklicky (Imperial College)
15:30–16:00 Break
16:00–17:00 Session V
Chair: Claude Kirchner
16:00–16:30 A Model for Comparing the Space Usage of Lazy Evaluators, Adam Bakewell, Colin Runciman
(University of York)
16:30–17:00 Higher Order Unification via λσ-Style of Explicit Substitution, Mauricio Ayala-Rincon
(University de Brasilia), Fairouz Kanaardine (Heriot-Watt University)

PPDP Program
Friday September 22

(University of California, Berkeley)
Chair: Greg Morrisett
9:35–10:35 Session VI
Chair: Gopalak Nadathur
9:35–10:05 Justifying Proofs using Memo Tables, Abhik Roychoudhury, C.R. Ramakrishnan, I.V. Ramakrishnan (SUNY Stony Brook)
10:05–10:35 Semantic Analysis of Pointer Abusing, Allocation and Disposal in Hoare Logic, Cristiano Calcagno (Queen Mary & Westfield College and University of Genova), Samir Iordiaq, Peter W. O’Hearn (Queen Mary & Westfield College)

10:35–11:00 Break

11:00–12:30 Session VII
Chair: François Fages
11:00–11:30 Type-based Nondeterminism Checking in Functional Logic Programs, Michael Hamis, Frank Steiner (Christian-Albrechts-Universität Kiel)
11:30–12:00 A Precise Type Analysis of Logic Programs, Lunjun Lu (The Oakland University)
12:00–12:30 Efficient Abstract Interpretation using Component-Wise Homomorphism, Jörg Köller, Markus Mohren (RWTH Aachen)

12:30–14:00 Lunch

14:00–15:30 Session VIII
Chair: Amy Felty
14:00–14:30 Extending Constraint Logic Programming with Open Functions, Nikolay Pelov, Maurice Brumnooghe (K.U. Leuven)
14:30–15:00 Efficient Memory Management in a Single Stack Prolog Machine, Xining Li (Lakehead University)
15:00–15:30 Continuations for Parallel Logic Programming, Enea Todoran (Technical University of Cluj-Napoca), Nikolaos S. Papaspyrou (National Technical University of Athens)

15:30–16:00 Break

16:00–17:30 Session IX
Chair: Patricia M. Hill
16:00–16:30 Solving Coverability Problems of Petri Nets by Partial Deduction, Michael Leuschel, Helko Lehmann (University of Southampton)
16:30–17:00 Symmetric Monoidal Sketches, Martin Hyland (University of Cambridge), John Power (University of Edinburgh)
17:00–17:30 Modular Resetting of Synchronous Data-flow Programs, Gregoire Hamon, Marc Pouzet (Laboratoire d’informatique de Paris 6)

17:30–17:40 Closing

General Chair: Martin Odersky, EPFL Lausanne
Program Chair: Philip Wadler, Bell Labs, Lucent Technologies
Local Host: Marc Feeley, Université de Montréal
Publicity Chair: Konstantin Läufer, Loyola University Chicago

Program Committee:
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Craig Chambers, University of Washington
Charles Consol, IRISA
Susan Eisenbach, Imperial College
Fergus Henderson, University of Melbourne
Ralf Hinze, Universität Bonn
Shriram Krishnamurthi, Rice University
Xavier Leroy, INRIA & Trusted Logic
Eugenio Moggi, Università di Genova
Greg Morrisett, Cornell University
Atsushi Okhr, JAIST
Catuscia Palamidessi, Pennsylvania State University
Andrew Wright, Inter-Trust

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Frank Pfenning, Carnegie Mellon University

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Andrea Asperti, Università di Bologna
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Danny De Schreye, K.U. Leuven
Saumya Debray, University of Arizona
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Michael Maher, Griffith University
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Christine Paulin, LRI-Université Paris Sud
Paul Tarau, University of North Texas
German Vidal, Universitat Politècnica de Valencia

Sponsorship

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PLI 2000 Workshops

Workshop Chair: Amy Felty, University of Ottawa

Haskell Program

Sunday September 17

8:30–10:00 Session I
Chair: Graham Hutton
8:30–9:00 Lambada, Haskell as a Better Java, Erik Meijer (Universiteit Utrecht), Sighjörn Finne (Microsoft Research)
9:00–9:30 Writing High-Performance Server Applications in Haskell, Case Study: A Haskell Web Server, Simon Marlow (Microsoft Research)
9:30–10:00 Haskell Server Pages: Functional Programming and the Battle for the Middle Tier, Erik Meijer, Danny van Velzen (Universiteit Utrecht)

10:00–10:30 Break

10:30–12:30 Session II
Chair: Andy Gill
10:30–11:00 An Overview of Edison, Chris Okasaki (Columbia University)
11:00–11:30 Combinator Parsers: From Toys to Tools, Doaitse Swierstra (Universiteit Utrecht)
11:30–12:00 Typed Logical Variables in Haskell, Koen Claessen, Peter Ljunglof (Chalmers University of Technology)
12:00–12:30 10-minute slots

12:30–14:00 Lunch

14:20–14:30 Opening

14:30–15:20 Invited Speaker: An Overview of Functional Nets, Martin Odersky (EPFL Lausanne)

15:20–16:00 Asynchronous Exceptions in Haskell, Simon Marlow, Simon Peyton-Jones (Microsoft Research), Andrew Moran (Oregon Graduate Institute)

16:00–16:30 Break

16:30–17:20 Invited Speaker: A Distributed Programming Language for Building Security Infrastructures, Trevor Jim (AT&T Labs)

17:20–18:00 A Distributed Calculus with Local Areas of Communication, Tom Chothia, Ian Stark (University of Edinburgh)

18:00–18:10 Closing

Haskell Workshop Committee

Chair: Graham Hutton, University of Nottingham
Program Committee:
Richard Bird, Oxford University
Andy Gill, Oregon Graduate Institute
Ralf Hinz, Universität Bonn
Paul Hudak, Yale University
Erik Meijer, Universiteit Utrecht
Chris Okasaki, Columbia University
Tim Sheard, Oregon Graduate Institute

HLCL Program

Wednesday September 20

12:30–14:00 Lunch

14:20–14:30 Opening

14:30–15:20 Invited Speaker: An Overview of Functional Nets, Martin Odersky (EPFL Lausanne)

15:20–16:00 Asynchronous Exceptions in Haskell, Simon Marlow, Simon Peyton-Jones (Microsoft Research), Andrew Moran (Oregon Graduate Institute)

16:00–16:30 Break

16:30–17:20 Invited Speaker: A Distributed Programming Language for Building Security Infrastructures, Trevor Jim (AT&T Labs)

17:20–18:00 A Distributed Calculus with Local Areas of Communication, Tom Chothia, Ian Stark (University of Edinburgh)

18:00–18:10 Closing

HLCL Workshop Committee

Co-Chairs:
John Reppy, Bell Labs
Peter Sewell, University of Cambridge

Program Committee:
Cedric Fournet, Microsoft Research
Alan Jeffrey, DePaul University
Trevor Jim, AT&T Labs
Naoki Kobayashi, University of Tokyo
Uwe Nestmann, Aalborg University
Alea Riccardi, Bell Labs
Gert Smolka, Universität des Saarlandes
HOOTS Program
Friday September 22


10:45–11:15 Break

11:15–12:45 Session I
11:15–11:45 Syntactic Type Soundness for the Region Calculus, Simon Helsen, Peter Thiemann (Universität Fredburg)
11:45–12:15 A New Criterion for Safe Program Transformations, Yasuhiro Minamide (University of Tsukuba and Japan Science & Technology Corporation)
12:15–12:45 Efficient Substitution in Hoare Logic Expressions, Andrew Appel, Kedar Swadi, Roberto Virga (Princeton University)

12:45–14:30 Lunch

14:30–15:30 Invited Speaker: Weak Bisimulations by Decreasing Diagrams, Cédric Fournet (Microsoft Research)

15:30–16:00 Break

16:00–17:00 Session II
16:00–16:30 First-Order Semantics for Higher-Order Processes, Michael Baldamus (University of Karlsruhe)
16:30–17:00 Linear Lambda Calculus with Recursion, Gavin Bierman (Warwick University), Andrew Pitts, Claudio Russo (Cambridge University)

HOOTS Workshop Committee

Chair: Alan Jeffrey, DePaul University
Program Committee:
Andrew Gordon, Microsoft Research
Robert Harper, Carnegie Mellon University
Andrew Pitts, Cambridge University
Julian Rathke, Sussex University
David Sands, Chalmers University
Davide Sangiorgi, INRIA Sophia Antipolis
Carolyn Talcott, Stanford University

RULE Program
Tuesday September 19

10:00–10:10 Opening

10:10–11:00 Session I
10:10–10:35 From Syntactic Theories to Interpreters: A specification language and its compilation, Yong Xiao, Zena Ariola (University of Oregon)
Michel Mauny (INRIA-Rocquencourt and New York University)
10:35–11:00 An Approach to the Integration of Overlapping Rules in Standard ML, Riccardo Pucella (Cornell University)

11:00–11:30 Break

11:30–12:45 Session II
11:30–11:55 Static Analysis Technique for Equational Logic Programs, Rakesh Verma (University of Houston)
11:55–12:20 Rewriting with Layout, Mark van den Brand, Jurgen Vinju (CWI)
12:20–12:45 On Rule Based Approach to Construction of Logical Transformers, Jaroslav Kachniarz (Soft Computer Consultants), Andrzej Szaas (Warsaw University)

12:45–14:00 Lunch

14:00–15:15 Session III
14:00–14:25 A Lambda-Calculus with Letrec, Case, Constructors and Non-Determinism, Manfred Schmidt-Schauss, Michael Huber (Goethe Universität)
14:25–14:50 The Light Lexicographic Path Ordering, Adam Cichon, Jean-Yves Marion (LORIA & INRIA Nancy)
14:50–15:15 Axioms for Rewriting Theory, Marc Aiguier, Diane Bahrami, Catherine Dubois (Université d’Evry)

15:15–15:45 Break

15:45–17:00 Session IV
15:45–16:10 Toward Rule-Based Visual Programming of Generic Visual Systems, Mark Minas (Universität Erlangen-Nürnberg), Berthold Hoffmann (Universität Bremen)
16:10–16:35 Partial-Order Relational Programming, Juan Carlos Nieves, Mauricio Osorio (Universidad de las Americas), Fernando Zacarias, Eleazar Oropesa (Benemerita Universidad Autonoma de Puebla)
16:35–17:00 The Concurrent Language Aldor/J, Matthew Huntbach (Queens Mary and Westfield College)

17:00–18:00 General Discussion

18:00–19:00 Demos
ASF+SDF, ELAN etc.

RULE Workshop Committee

Co-chairs:
Nachum Dershowitz, Tel-Aviv University
Claude Kirchner, LORIA & INRIA Nancy
Program Committee:
Egon Boerger, Università di Pisa
Mark van den Brand, CWI
Ilario Cervesato, Naval Research Lab
Alain Colmerauer, Université de Marseille
Jean-Yves Marion, LORIA & INRIA Nancy
José Meseguer, SRI International

Scheme Program
Sunday September 17

9:00–10:10 Session I
Chair: Daniel P. Friedman
9:00–9:35 Gold: a link-time optimizer for Scheme, Dominique Boucher (Locus Dialogue, Inc.)
9:35–10:10 SILK: a playful blend of Scheme and Java, Kenneth R. Anderson (BBN Technologies), Timothey J. Hickey (Brandeis University), Peter Norvig (NASA Ames Research Center)

10:15–10:45 Break

10:45–11:45 Session II
Chair: Marc Feeley
10:45–11:05 Implementing Metcast, Oleg Kiselyov (Naval Postgraduate School, Monterey)
11:05–11:25 Numerical Partial Differential Equations, Bradley J. Lucier, (Purdue University)
11:25–11:45 SGDL/Scheme: A High-Level Algorithmic Scheme Implementation for Projective Solid Modeling Programming, Jean-Francois Rotge (Université de Montréal)

12:00–13:30 Lunch

13:30–15:15 Session III
Chair: Kent Dyvig
13:30–14:05 BIT: A Very Compact Scheme System for Embedded Applications, Danny Dubé (Université de Montréal)
14:05–14:40 Automatic Generation of Compact Programs, Mario Latendresse (Rice University)
14:40–15:15 Writing Macros in CPS, Erik Hilsdale, Daniel P. Friedman (Indiana University)

15:15–15:45 Break

15:45–16:45 Session IV
Chair: Manuel Serrano
15:45–16:05 An Implementation of Transparent Migration on Standard Scheme, Eijiro Sumii (University of Tokyo)
16:05–16:25 Implementing Continuations with Threads, Marc Feeley (Université de Montréal)
16:25–16:45 Component Support for PLT Scheme, Paul A. Steckler (Rice University)

16:50–18:00 Session V
Chair: Matthias Felleisen
Open Discussion: SRFI process, pre-SRFI presentations, the IEEE standard, etc.

Scheme Workshop Committee

Chair: Matthias Felleisen, Rice University
Program Committee:
Kent Dyvig, Indiana University
Marc Feeley, Université de Montréal
Daniel P. Friedman, Indiana University
Manuel Serrano, Université de Nice
Olin Shivers, Massachusetts Institute of Technology

SAIG Program
Wednesday September 20

8:30–9:15 Invited Speaker: Implementing Closed Domain-Specific Languages, Richard Kieburz (Oregon Graduate Institute)
9:15–9:40 Compiling Embedded Languages, Conal Elliott, Sighjorn Finne (Microsoft Research), Oege de Moor (Oxford University)
9:40–10:05 Lightweight and Generative Components II: Binary-Level Components, Samuel Kamin, Miranda Callahan, Lars Clausen (University of Illinois at Urbana-Champaign)

10:05–10:25 Break

10:25–11:10 Invited Speaker: Refinements and Automatic Development of Software, Don Batory (University of Texas at Austin)
11:10–11:35 Fragmental Specialization, Simon Helsen, Peter Thiemann (Universität Freiburg)
11:35–12:00 A New Termination Condition for Specialization, Litong Song, Yoshitaka Futamura (Waseda University)

12:00–13:20 Lunch

14:05–14:30 Multi-Stage Imperative Languages: A Conservative Extension Result, Cristiano Calcagno, Eugenio Moggi (Università di Genova)
14:30–14:55 Specification and Correctness of Lambda Lifting, Adam Fischbach, John Hannan (Penn State University)

15:05–15:50 Invited Speaker: Specialization of System Programs: Lessons and Perspectives, Gilles Muller (IRISA)
15:50–16:15 On Jones-Optimal Specialization for
**Strongly Typed Languages**, Henning Makholm (University of Copenhagen)

16:15–16:25 Break

16:25–17:25 Panel presentations

**Pragmatic Aspects of Reusable Program Generators**, Norman Ramsey (Harvard University)

**Type-Based Useless-Code Elimination for Functional Programs**, Stefano Berardi, Mario Coppo, Ferruccio Damiani (Università di Torino), Paola Giannini (Università di Torino and Università del Piemonte Orientale)

**Code Generators for Automatic Tuning of Numerical Kernels: Experiences with FFTW**, Rich Vuduc, Jim Demmel (University of California, Berkeley)

**Generating Data Analysis Programs from Statistical Models**, Bernd Fischer, Johann Schumann, Thomas Pressburger (NASA Ames Research Center)

17:25–18:00 Panel Discussion

**SAIG Workshop Committee**

**Chair**: Walid Taha, Chalmers University of Technology

**Program Committee:**

Cliff Click, Sun Microsystems
Rowan Davies, Carnegie Mellon University
Julia Lawall, DIKU
Torben Mogensen, DIKU
Suresh Jagannathan, NEC Research
Tim Sheard, Oregon Graduate Institute

**TIC Program Thursday September 21**

9:00–10:30 Session I

**Chair**: Trevor Jim

9:00–9:30 **Scalable Certification for Typed Assembly Language**, Dan Grossman, Greg Morrisett (Cornell University)

9:30–10:00 **Space Issues in Compiling with Intersection and Union Types**, Allyn Dimock (Harvard University), Ian Westmacott (Boston University), Robert Muller (Boston College), Franklyn Turbak (Wellesley College), Joe Wells (Heriot-Watt University), Jeffrey Considine (Boston University)

10:00–10:30 **Sound and Complete Elimination of Singleton Kinds**, Karl Cray (Carnegie Mellon University)

10:30–11:00 Break

11:00–12:30 Session II

**Chair**: Franklyn Turbak

11:00–11:30 **A Type System for JVM Threads**, Gaetano Bigliardi, Cosimo Laneve (University of Bologna)

11:30–12:00 **Garbage Collection Based on Linear Type Systems**, Atsushi Igarashi, Naoki Kobayashi (University of Tokyo)

12:00–12:30 **Optimizing Message Sends in Object-Oriented Languages Through Type-Invariant Region Analysis**, Mark Lear (The Portland Group), Santosh Pande (University of Cincinnati)

12:30–14:00 Lunch

14:00–15:30 Session III

**Chair**: Andrew Kennedy

14:00–14:30 **Towards an Abstract Model of Java Dynamic Linking and Verification**, Sophia Drossopoulou (Imperial College)

14:30–15:00 **Safe and Flexible Dynamic Linking of Native Code**, Michael Hicks (University of Pennsylvania), Stephanie Weinrich (Cornell University), Karl Cray (Carnegie Mellon University)

15:00–15:30 **Sharing in Typed Module Assembly Language**, Dominic Duggan (Stevens Institute of Technology)

15:30–16:00 Break

16:00–17:30 Session IV

**Chair**: Dominic Duggan

16:00–16:30 **Alias Types for Recursive Data Structures**, David Walker, Greg Morrisett (Cornell University)

16:30–17:00 **Simple Usage Polymorphism**, Keith Wansbrough (Cambridge University), Simon Peyton Jones (Microsoft Research)

17:00–17:30 **Fully Reflective Intensional Type Analysis in Type Erasure Semantics**, Bratin Saha, Valery Trifonov, Zhong Shao (Yale University)

**TIC Workshop Committee**

**General Chair**: Karl Cray, Carnegie Mellon University

**Program Chair**: Robert Harper, Carnegie Mellon University

**Program Committee:**

Dominic Duggan, Stevens Institute of Technology
Trevor Jim, AT&T Labs
Andrew Kennedy, Microsoft Research
Atsushi Ohori, JAIST
Franklyn Turbak, Wellesley College