

Volume 46, Number 12
December 2011

*A Monthly Publication of the ACM Special Interest Group
on Programming Languages*

SIGPLAN

notices

Proceedings of the 2011 ACM SIGPLAN
Haskell Symposium (Haskell'11)



Association for
Computing Machinery

Advancing Computing as a Science & Profession

September 22, 2011
Tokyo, Japan

Conf. 11



Association for
Computing Machinery

Advancing Computing as a Science & Profession



Haskell'11

Proceedings of the 2011 ACM SIGPLAN

Haskell Symposium

Sponsored by:

ACM SIGPLAN

Table of Contents

Haskell Symposium 2011 Organization	vi
--	----

Session 1: Monads

Session Chair: Graham Hutton (*University of Nottingham*)

- **Extending Monads with Pattern Matching** 1
Tomas Petricek (*University of Cambridge*), Alan Mycroft (*University of Cambridge*),
Don Syme (*Microsoft Research Cambridge*)
- **Bringing Back Monad Comprehensions** 13
George Giorgidze, Torsten Grust, Nils Schweinsberg, Jeroen Weijers (*Eberhard Karls Universität Tübingen*)

Session 2: Libraries

Session Chair: Ralf Hinze (*Oxford University*)

- **Termination Combinators Forever** 23
Maximilian Bolingbroke (*University of Cambridge*),
Simon Peyton Jones, Dimitrios Vytiniotis (*Microsoft Research Cambridge*)
- **Hobbits for Haskell:**
A Library for Higher-Order Encodings in Functional Programming Languages 35
Edwin Westbrook (*Rice University*), Nicolas Frisby (*University of Kansas*), Paul Brauner (*Rice University*)
- **A Library Writer's Guide to Shortcut Fusion** 47
Thomas Harper (*University of Oxford*)

Session 3: Parallelism

Session Chair: Sam Lindley (*University of Edinburgh*)

- **Efficient Parallel Stencil Convolution in Haskell** 59
Ben Lippmeier, Gabriele Keller (*University of New South Wales*)
- **A Monad for Deterministic Parallelism** 71
Simon Marlow (*Microsoft Research Ltd.*), Ryan Newton (*Intel*), Simon Peyton Jones (*Microsoft Research Ltd.*)
- **Prettier Concurrency: Purely Functional Concurrent Revisions** 83
Daan Leijen, Sebastian Burckhardt, Manuel Fahndrich (*Microsoft Research*)

Session 4: Embedded Languages

Session Chair: Neil Mitchell (*Standard Chartered*)

- **Flexible Dynamic Information Flow Control in Haskell** 95
Deian Stefan (*Stanford University*), Alejandro Russo (*Chalmers University of Technology*),
John C. Mitchell, David Mazières (*Stanford University*)
- **Embedded Parser Generators** 107
Jonas Duregård, Patrik Jansson (*Chalmers University of Technology and University of Gothenburg*)
- **Towards Haskell in the Cloud** 118
Jeff Epstein (*University of Cambridge*), Andrew P. Black (*Portland State University*),
Simon Peyton-Jones (*Microsoft Research, Cambridge*)

Author Index	130
---------------------------	-----