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HEATHER MILLER

Citizenship	USA
Research Interests	Programming language design and implementation for distributed programming. I'm interested in using type systems to facilitate the design of new, functional distributed systems.
Education	<p><i>EPFL, Lausanne, Switzerland</i> 2009 – Ph.D. in Computer Science Advisor: Martin Odersky 2011 –</p> <p><i>University of Miami, Coral Gables, FL</i> 2006 – 2009 BSEE in Electrical Engineering, Audio Engineering, <i>with honors</i>, May 2009</p> <p><i>Cooper Union for the Advancement of Science and Art, New York, NY</i> 2004 – 2006</p>
Service	<p><i>Committees</i>: Scala 2014 (co-chair), Scala 2013 (co-chair)</p> <p><i>Reviewer</i> for: ECOOP 2013</p>
Publications	<p>Functional Programming For All! Scaling a MOOC for Students And Professionals Alike ICSE 2014 Heather Miller, Philipp Haller, Lukas Rytz, Martin Odersky <i>ACM SIGSOFT International Conference on Software Engineering</i></p> <p>RAY: Integrating Rx and Async for Direct-Style Reactive Streams REM 2013 Philipp Haller, Heather Miller <i>Workshop on Reactivity, Events and Modularity</i></p> <p>Instant Pickles: Generating Object-Oriented Pickler Combinators for Fast and Extensible Serialization OOPSLA 2013 Heather Miller, Philipp Haller, Eugene Burmako, Martin Odersky <i>ACM SIGPLAN Conference on Object Oriented Programming, Systems, Languages and Applications</i></p> <p>FlowPools: A Lock-Free Deterministic Concurrent Dataflow Abstraction LCPC 2012 Aleksandar Prokopec, Heather Miller, Tobias Schlatter, Philipp Haller, Martin Odersky <i>International Workshop on Languages and Compilers for Parallel Computing</i></p>

Tools and Frameworks for Big Learning in Scala: Leveraging the Language for High Productivity and Performance

BigLearn 2011

Heather Miller, Philipp Haller, Martin Odersky
NIPS Workshop on Parallel and Large-Scale Machine Learning

Parallelizing Machine Learning – Functionally: A Framework and Abstractions for Parallel Graph Processing

Scala 2011

Philipp Haller, Heather Miller
Scala Workshop

Awards

US National Science Foundation Graduate Research Fellowship	2011 – 2014
EPFL Outstanding Teaching Award	2012
EPFL Computer Science Fellowship	2009 – 2010
Most Outstanding Audio Engineering Student, University of Miami	2009
Most Outstanding Eta Kappa Nu Student, University of Miami	2009
Information Technology Scholarship, University of Miami	2006 – 2009
John Farina Family Scholarship, University of Miami	2006 – 2009
Eta Kappa Nu	2008
Tau Beta Pi	2008
SMART US Department of Defense Scholarship Alternate	2007
Cooper Union Full Tuition Scholarship	2004 – 2006

Teaching Experience

Lead Teaching Assistant , <i>Functional Programming Principles in Scala</i> Popular Coursera MOOC on functional programming in Scala, with >100,000 participants to date	2012 – 2014
Instructor , <i>Scala as a Research Tool</i> ECOOP Tutorial	2013
Lead Teaching Assistant , <i>Programming Principles</i> EPFL Undergraduate course on functional and logic programming	2012
Teaching Assistant , <i>Programming Principles</i> EPFL Undergraduate course on functional and logic programming	2011

Open Source

Selected Talks

Academese to English: Scala's Type System, Dependent Types and What It Means To You New York, NY, USA. March 1, 2014	<i>NEScala 2014</i>
Instant Pickles: Generating Object-Oriented Pickler Combinators for Fast and Extensible Serialization Indianapolis, IN, USA. October 30, 2013	<i>OOPSLA 2013</i>

**PL Abstractions for Distributed Programming:
Pickle Your Spores!**

Bloomington, IN, USA. October 25, 2013

Indiana University (invited)

Spores: Distributable Functions in Scala

St. Louis, MO, USA. September 19, 2013

Strange Loop 2013

Open Issues in Dataflow Programming

Montpellier, France. July 1, 2013

LaME 2013 (invited)

Scala as a Research Tool

Montpellier, France. July 1, 2013

ECOOP 2013 Tutorial

**On Pickles & Spores: Improving Scala's Support
for Distributed Programming**

New York, NY, USA. June 12, 2013

ScalaDays 2013

Futures & Promises in Scala 2.10

Philadelphia, PA, USA. April 2, 2013

PhillyETE 2013 (invited)