Kyle Headley

PhD Student

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Education

MS (Computer Science)	University of Colorado Boulder	2017
BS (Computer Science)	University of Maryland	2015
BA (Philosophy)	University of Maryland	2015

Publications

The Random Access Zipper: Simple, Purely-Functional Sequences
Kyle Headley, Matthew A. Hammer.
Trends in Functional Programming (**TFP 2016**).
College Park, Maryland. June 2016.

Incremental Computation with Names
Matthew A. Hammer, Joshua Dunfield, Kyle Headley, Nicholas Labich, Jeffrey S. Foster, and Michael Hicks.
Object-Oriented Programming, Systems, Languages, and Applications (**OOPSLA 2015**).
Pittsburgh, USA. October 2015.
(Acceptance Rate: 25%)

Service

Student Volunteer Co-Captain (PLDI), Spring 2018

Student Volunteer (POPL), January 2018

Student Volunteer (PLDI), June 2017

Faculty Candidate Evaluation (CU Boulder), student group, Spring 2016

Talks

Speed and Simplicity for Incremental Sequence Computation
Incremental Computation Workshop (**PLDI 2017**)
Barcelona, Spain. June 2017

The Random Access Zipper: Simple, Purely-Functional Sequences
Trends in Functional Programming (**TFP 2016**)
College Park, Maryland. June 2016.

Correct-by-Construction Interactive Software
Off the Beaten Track (**OBT 2016**)
St. Petersburg, Florida. January 2016

Sparse Adapton
Student Research Competition, 3rd Round, Undergraduate (**ICFP 2015**)
Vancouver, Canada. September 2015

Student Internships

Mozilla, Servo web browser (June 2016–September 2016)
Graduate Research Intern

Interest

I have been interested in, and have had the fortune to work with incremental computing for a few years. I enjoy experimenting with the alternate program structures that result from evaluating an incremental subset of a program. I am also interested in program verification from a type-theory perspective. I look forward to the future with the plan of incorporating a novel type system into my work to avoid potential cache collisions. Finally, I enjoy making creative use of language features available to me, currently those of the Rust language, which is novel itself.

Last updated: January 17, 2018