Andre Kuhlenschmidt

Contact Information

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Research Interests

My research focuses on techniques that improve both the process of producing software and the quality of the software produced. One such technique is gradual typing which allows access to the benefits of both static and dynamic typing; enabling developers to be more productive while writing robust and efficient software.

Skills

Skills Research in Programming language theory and implementation.

Languages Racket, C, Haskell, Java, Python, Coq, Agda, C++

Platforms Linux and Embedded ARM

Education

Indiana University, Bloomington, Indiana USA

Ph.D. Candidate, Computer Science, Ongoing
Advisor: Jeremy Siek

M.S., Computer Science, May 2016

Kelley School of Business, Indiana University, Bloomington, Indiana USA

B.S., Business, May 2010

Academic Experience

Indiana University, Bloomington, Indiana USA

Graduate Research Assistant to Jeremy Siek **January 2014 – Present**

Evaluating implementation techniques for programming languages that soundly mix static and dynamic typing (gradual typing) in the context of ahead-of-time compilation, and developing formal semantics for gradual programming languages and their implementation.

Teaching Assistant **January 2016 – Present**

Assisted in the instruction of courses teaching programming language principles, introduction to object-oriented programming, embedded programming, and operating systems. Responsibilities include teaching lab sections of 5-30 students, creating assignments, and grading.

Conference Papers

Efficient Gradual Typing. Andre Kuhlenschmidt, Deyaaeldeen Almahallawi, Jeremy G. Siek. Conference on Programming Language Design and Implementation. **(In Submission)**

Workshop Papers

A Systematic Performance Evaluation of Gradually Typed Functions and References. Andre Kuhlenschmidt, Deyaaeldeen Almahallawi, Jeremy G. Siek. In Scripts to Programs Workshop, STOP, 2016.

Towards Absolutely Efficient Gradual Typing Andre Kuhlenschmidt, Deyaaeldeen Almahallawi, and Jeremy G. Siek. In Scripts to Programs Workshop, STOP, 2015.

Open Source Projects

Grift **2014 – present**

An ahead-of-time compiler for comparing implementations of gradual typing.
`github.com/Gradual-Typing/Grift/`.