
Sean L. Mooney

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Education

Iowa State University

Ames, IA

Ph.D., Computer Science

August 2008 - Current

- **Major Professor:** Hridesh Rajan
- **GPA 3.52** on 4.0 scale. **Academic credits: 28. Research credits: 24.**
- **Selected Coursework:** Design and Analysis of Algorithms, Formal Methods in Software Engineering, Implementation of Database Systems, Principles and Practice of Compiling, Programming Languages, Theory of Computation.

Clarke College

Dubuque, IA

B.S., Computer Science and Mathematics

August 2004 - May 2008

- **GPA: 3.9** on 4.0 scale. Magna cum laude

Publications and Presentations

Mehdi Bagherzadeh, Hridesh Rajan, Gary T. Leavens and **Sean Mooney**. **Translucid Contracts: Expressive Specification and Modular Verification for Aspect-Oriented Interfaces.** *AOSD '11: 10th International Conference on Aspect-Oriented Software Development*, March 2011.

Sean L. Mooney, Hridesh Rajan, Steven M. Kautz, Wayne Rowcliffe: **Almost free concurrency! (using GOF patterns).** *Poster presentation at SPLASH '10: 25th Annual ACM SIGPLAN Conference on Object-Oriented Programming, Systems, Languages, and Applications, in SPLASH/OOPSLA Companion 2010.*

Yuheng Long, **Sean L. Mooney**, Tyler Sondag, and Hridesh Rajan. **Implicit Invocation Meets Safe, Implicit Concurrency.** *GPCE '10: 9th International Conference on Generative Programming and Component Engineering*, October 2010.

Teaching Experience

Iowa State University

Ames, IA

Teaching Assistant

August 2008 - August 2009

Fall 2008, Com S 309 Software Development Practices

Professor: Simanta Mitra

Duties: Managed small student development groups over the course of a semester long project, graded group reports.

Fall 2008, Com S 342 Principles of Programming Languages

Professor: Ting Zhang

Duties: Taught weekly recitation section which emphasized points from the previous lectures and expanded on language concepts for Python and Haskell, graded homework.

Spring 2009, Com S 342 Principles of Programming Languages

Professor: Hridesh Rajan

Duties: Taught weekly recitation section which emphasized points from the previous lectures and expanded on Scheme language concepts, graded homework.

Languages

Primary: Java, C#, Python. **Secondary:** Haskell, Scala, PHP, Visual Basic.NET, C++.

Related Work Experience

Iowa State University

Ames, IA

Research Assistant

August 2009 - Current

- Implemented JastAdd based compiler for Ptolemy extensions to Java language.
- Implemented JastAdd based compiler for Panini extensions to Java language.
- Investigated library based implementations of design patterns to make concurrency simpler.

Iowa State University

Ames, IA

Teaching Assistant

May 2009-August 2009

- Supported JavaServerPages based graduate student application management webserver
- Activities included: writing, designing, testing new JSP frontend pages and backend validation logic; extending MySql database for new requirements

John Deere Dubuque Works

Dubuque, IA

Programming Intern

May 2007 - August 2008

- Wrote utilities to automate Noise, Vibration, Harshness group engineering activities.
- Designed/Implemented whole body vibration calculator for release to dealers.
- Wrote utilities to automate Machine Evaluation group virtual reality machine review set-up.
- Implemented realistic sound and transmission model for motor grader simulation.

Selected Awards and Honors

Undergraduate

Upsilon Pi Epsilon, March 2006

Dean's List, all four years.

Professional Services

External Reviewer: 9th International Conference on Generative Programming and Component Engineering (GPCE '10).

Student Volunteer: Systems, Programming, Languages, and Applications: Software for Humanity, 2010 (SPLASH '10).