

Yao Li

Email	hnkfliyao@gmail.com
Web Page	lastland.github.io
GitHub	github.com/lastland

Research Interests

I am generally interested in improving programmers' productivity by providing tools for them to *conveniently* build *reliable* systems from the *programming language* level. I'm specifically interested in the following fields:

- More flexible and more convenient type system without compromising type safety.
- New paradigms that will benefit programming and debugging in domains such as parallel/concurrent programming.
- Meta-programming or multi-stage programming techniques.
- Compiler optimization techniques (especially optimizations for new programming paradigms).
- Verification/Analysis/Profiling techniques.

Education

2013-2016 (expected)	Master of Science in Engineering, Software Engineering, Shanghai Jiao Tong University
2009-2013	Bachelor of Science in Engineering, Software Engineering, Shanghai Jiao Tong University

Publication

- **ScalaHDL: Express and Test Hardware Designs in a Scala DSL**
by Yao Li, Antonio R. Lopes, Zhouyun Xu, Zhengwei Qi, and Haibing Guan,
on proceedings of the 32nd IEEE International Conference on Computer Design (ICCD), 2014

Projects

- **ScalaHDL: From High-Level Scala to Low-Level FPGA**
This is a joint research and development project between Morgan Stanley and our lab. I was the major designer of the language and the major developer in this project. I was also responsible for coordinating with other team members, including people from London and Shanghai.
We have published a paper on ICCD 2014. After that we have developed some new design philosophy and there's another paper describing the latest version under review.
- **Scala Forklift: Type-safe Data Migration Tool for Slick, Git and Beyond**
<https://github.com/lastland/scala-forklift>
In coordination with Jan Christopher Vogt (a major contributor to the Slick database library), I developed his proof-of-concept implementation into a production-ready tool. Together we have also developed the experimental git integration feature which makes it easier to work with git branches.

Honors & Awards

- China National Scholarship (*the scholarship with highest honor and reward*), 2014
- Outstanding Graduate of Shanghai Jiao Tong University, 2013
- China National Scholarship (*the scholarship with highest honor and reward*), 2012
- Most Popular Collegiate Innovation Projects of Shanghai Jiao Tong University, 2012
- 1st Prize in the 4th Intel Cup National Collegiate Software Innovation Contest in China, 2011
- 1st Prize in National Olympiad in Informatics in Provinces, 2008
- 1st Prize in National Olympiad in Informatics in Provinces, 2007

Experiences

July 2012 - Microsoft, Shanghai, China

Sep 2012 *Software Development Engineer Intern*

I worked in the infrastructure team led by Zhiliang Xu in the Commerce Department. I was responsible for investigating how Windows Azure could benefit our existing system, and helping transfer and migrate a project from Redmond to our team. I've also independently developed a web application which help users view their Azure storage more conveniently.

Sep 2013 - Shanghai Jiao Tong University, Shanghai, China

Jan 2014 *Teaching Assistant*

I acted as the teaching assistant of course Programming and Data Structures for undergraduate students.

Mar 2015 - Università della Svizzera italiana, Lugano, Switzerland

July 2015 *Research Assistant*

I worked with Prof. Walter Binder and his dynamic analysis group on profiling Java/Scala programs using dynamic analysis tools. We are still working on this topic and expecting some results to publish soon.

Tests

- TOEFL: 109
- GRE: 156(Verbal) + 168(Quantitative) + 3.5(Analytical Writing)