

Ömer Sinan Ağacan, CV

Personal info

I'm a software developer with 3 years of compiler development and 4 years of Haskell experience.

Github: <https://github.com/osa1>

Blog: <http://osa1.net>

Education

- TOBB University of Economics and Technology - Ankara, Turkey.
BSc in Computer Engineering. 2009 - 2014.
- Indiana University - Bloomington, Indiana, USA.
Masters in Computer Science. 2015 - 2016.

Experience

- **Microsoft Research, Cambridge. Research Intern. 2016 Summer:**
I worked with Simon Peyton Jones on various GHC projects. Two of the bigger projects are: designing and implementing a new intermediate language for GHC (to replace Core), and implementing a new representation for sum types. The latter is merged to GHC and will be available to users with `-XUnboxedSums` flag in GHC 8.2.
- **Indiana University, Master of Science in Computer Science. 2015 - 2016:**
I started as a PhD student, but switched to masters after realizing that I don't want to stay in academia and I enjoy programming more than writing papers. I worked with programming languages team as a research assistant for two years, and I was involved in two published and a couple of unpublished papers. I'll be officially graduated by the end of 2016, with 4.0 GPA. My research was about optimizing Haskell programs via various high-level program transformations.
- **Runtime Verification. 2014, 4 months:**
I worked on [K Framework](#) as a software engineer. I maintained `ktest`, a testing framework specifically crafted for K Framework's needs, and worked on the implementation of a new intermediate language.
- **Google Summer of Code for Haskell. 2014, 3 months:**
I implemented GHC's profiling features (cost-centres, emulated call stacks) for GHCJS, a JavaScript backend for GHC.

- **Soostone - 2014, 3 months:**
I worked as Haskell software engineer.
- **Formal Systems Laboratory, University of Illinois at Urbana-Champaign. 2013, 3.5-month internship:**
I worked on [K Framework](#), a rewrite-based executable semantics framework for programming languages, type systems and formal analysis tools. I was advised by Prof. Grigore Rosu.
- **Ozyegin University, Istanbul, Turkey. 2013, 3.5-month internship:**
Under supervision of Prof. Baris Aktemur: Developed an interpreter for a statically typed multi-staged programming language with subtyping, row polymorphism and type inference. Performed extensive literature reading. Implemented in OCaml.
- **OBSS, Istanbul, Turkey. 2012, 3.5-month internship:**
Developed a simple static analysis tool for GrayMound, a Java framework based on J2EE and an Eclipse plugin.
- **TUBITAK (The Scientific and Technological Research Council of Turkey), Kocaeli, Turkey. 2010, 4-week internship:**
Developed the web front-end for PiSi, the package manager of Pardus (a GNU/Linux distribution).

Open Source Contributions

- GHC: I'm a part of [The Glasgow Haskell Team](#). I'm regularly fixing bugs, implementing features, and doing maintenance on the code base.
- GHCJS: I worked on GHCJS during Google Summer of Code 2014. I implemented GHC's profiling features for GHCJS.
- K Framework: During my internship at Formal Systems Laboratory, in addition to fixing bugs and doing maintenance work, I designed and implemented ktest tool. ktest is a program specifically designed for testing K definitions.
- More: I have a long history of open-source contributions. Please see my Github account for more.

Publications

- Ryan R. Newton, Ömer S. Ağacan, Sam Tobin-Hochstadt, Peter Fogg. Parallel Type-checking with Haskell using Saturating LVars and Stream Generators. In the 21st

annual ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming. March 2016.

- Edward Z. Yang, Giovanni Campagna, Ömer S. Ağacan, Ahmed El-Hassany, Abhishek Kulkarni, Ryan Newton. Efficient communication and Collection with Compact Normal Forms. In Proceedings of the 20th ACM SIGPLAN International Conference on Functional Programming. September 2015.
- Michael D. Adams and Ömer S. Ağacan. Indentation-sensitive parsing for Parsec. In Proceedings of the 2014 ACM SIGPLAN Symposium on Haskell, Haskell '14, pages 121–132. ACM, New York, NY, USA, September 2014. ISBN 978-1-4503-3041-1. doi: 10.1145/2633357.2633369.

Talks

- [Rebooting Supercompilation for Haskell. Haskell Implementors Workshop 2015.](#)