Edward Z. Yang

206 Rosse Ln 105
Stanford, CA 94305
ezyang@cs.stanford.edu

Education

- 2012-now — **Stanford University**, PhD student
- 2008-2012 — **Massachusetts Institute of Technology**, Bachelors of Science in Computer Science. GPA 5.0/5.0
- 2010-2011 — **Cambridge University**, took the Part IB Computer Science Tripos and History and Philosophy of Science Tripos as part of the Cambridge-MIT Exchange.

Research Experience

- PhD Student, **Stanford University**. 2012—now (advised by David Mazières and John Mitchell). See publications for more details.

- Intern, **Microsoft Research Cambridge** (w. Simon Peyton-Jones). Summer 2014. Initial implementation work for Backpack, which is now the subject of my thesis.

- Undergraduate Advanced Project, **Massachusetts Institute of Technology** (advised by Adam Chlipala). Built an interactive educational system for teaching first-order logic, viewable at http://logitext.mit.edu/

- Collaborator, **Microsoft Research Cambridge** (w. Simon Peyton-Jones and Simon Marlow). Spring 2011. Worked on GHC's code generator, implementing data flow analyses for inlining expressions.

- Intern, **Galois, Inc.** Summer 2010. Wrote bindings for ABC in Haskell, worked on symbolic interpretation and equivalence testing of cryptographic algorithms in Cryptol.

Work Experience

- Intern, **Streambase.** Summer 2012. Worked on query table backend based on persistent data structures from Clojure.

- Intern, **Jane Street**. Summer 2011. Worked on performance improvements to Jane Street's async library (fixed an asymptotic performance bug) and implemented the Paxos protocol in OCaml.

- Intern, **Ksplice**. Winter 2010. Worked on internal Amazon EC2 infrastructure.

- Intern, **ITA Software**. Summer 2009. Developed and ran performance experiments.

- Intern, **OmniTI**. Summer 2008. Worked on a web input fuzzer, automated penetration tester and web crawler.

Publications

- Edward Z. Yang, Giovanni Campagna, Omer Agacan, 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.

- Stefan Heule, Deian Stefan, Edward Z. Yang, John C. Mitchell, Alejandro Russo. **IFC Inside: Retrofitting Languages with Dynamic Information Flow Control**. In *Proceedings of 4th International Conference on Principles of Security and Trust*. April 2015.

- Deian Stefan, Edward Z. Yang, Petr Marchenko, Alejandro Russo, Dave Herman, Brad Karp, and David Mazières. **Protecting Users by Confining JavaScript with COWL.** In *Proceedings of 11th Symposium on Operating Systems Design and Implementation.* October 2014.

- Edward Z. Yang, David Mazières. **Space Limits for Haskell.** In *Proceedings of the 35th annual ACM SIGPLAN conference on Programming Language Design and Implementation (PLDI 2014)*. June 2014.

- Deian Stefan, Pablo Buiras, Edward Z. Yang, Amit Levy, David Terei, Alejandro Russo and David Mazières. **Eliminating Cache-Based Timing Attacks with Instruction-Based Scheduling**. In *Proceedings of the 18th European Symposium on Research in Computer Security (ESORICS 2013)*. September 2013.

- Erik D. Demaine, Pavel Panchekha, David Wilson, Edward Z. Yang. **Blame Trees**. In *Proceedings of the 12th International Symposium on Algorithms and Data Structures (WADS 2013)*. August 2013.

- Edward Z. Yang, Deian Stefan, John Mitchell, David Mazières, Petr Marchenko, Brad Karp. **Toward Principled Browser Security**. In *Proceedings of The 14th Workshop on Hot Topics in Operating Systems (HotOS XIV), USENIX 2013*. May 2013.

Awards

National Defense Science and Engineering Graduate Fellowship (2013)

Service

- Program Chair for Haskell Implementor's Workshop 2016, colocated with ICFP 2016.

- Program Committee for Haskell Implementor's Workshop 2013, colocated with ICFP 2013.

Teaching

- Sole lecturer, "CS242: Concepts in Programming Languages". Fall 2015, 2016 (future).

- Co-lecturer with Deian Stefan, "CS242: Concepts in Programming Languages", undergraduate class at Stanford. Fall 2013, Fall 2014.

- Teaching Assistant, "6.037: Structure and Interpretation of Computer Programs" (previously known as "Zombie 6.001"), one-month class at MIT. Winter 2010.

Other

- I maintain a technical blog at http://blog.ezyang.com/ where I frequently discuss topics related to my research interests.