Eric L Seidel

Software Engineer
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Education

- **UC San Diego** — La Jolla, CA
  Ph.D. Computer Science — *2017*
  - Thesis: "Data-Driven Techniques for Type Error Diagnosis"
- **UC San Diego** — La Jolla, CA
  M.S. Computer Science — *2016*
- **The City College of New York** — New York, NY
  B.S. Computer Science — *2012*

Work Experience

- **Bloomberg LP** — New York, NY
  Software Engineer — *Aug. 2017 — Current*
- **UC San Diego** — La Jolla, CA
  Graduate Student Researcher — *Sep. 2012 — Aug. 2017*
  - Built tool to synthesize counter-examples to type errors.
    - Performs type-checking alongside execution, produces trace demonstrating how program gets stuck (E. L. Seidel, Jhala, and Weimer 2016).
    - `http://goto.ucsd.edu:8091`
  - Worked on refinement type-based verifier for Haskell.
    - Implemented efficient testing framework using refinement types to prune input search space (E. L. Seidel, Vazou, and Jhala 2015).
    - Verified memory safety and functional correctness of `Data.Text` library, discovered and fixed a memory bug in the process.
    - `https://github.com/ucsd-progsys/liquidhaskell`
- **Bloomberg LP** — New York, NY
  Software Engineering Intern — *Jun. 2016 — Aug. 2016*
  - Worked on Haskell libraries to communicate with existing software infrastructure.
- **Galois, Inc.** — Portland, OR
  Software Engineering Intern — *Sep. 2014 — Dec. 2014*
  - Worked on symbolic verifier for Ivory, an EDSL for programming embedded systems.
- **Fluidinfo Inc.** — New York, NY
  Software Developer — *May 2011 — Sep. 2012*

Publications

- E. L. Seidel, R. Jhala, and W. Weimer (2018). "Dynamic witnesses for static type errors (or, Ill-Typed Programs Usually Go Wrong)". In: *J. Funct. Programming* 28
- E. L. Seidel (2017). "Data-Driven Techniques for Type Error Diagnosis". PhD thesis. UC San Diego
- E. L. Seidel, H. Sibghat, K. Chaudhuri, W. Weimer, and R. Jhala (2017). "Learning to Blame: Localizing Novice Type Errors with Data-driven Diagnosis". In: *Proc. ACM Program. Lang.* 1.OOPSLA, 60:1–60:27
- E. L. Seidel, R. Jhala, and W. Weimer (2016). "Dynamic Witnesses for Static Type Errors (or, Ill-Typed Programs Usually Go Wrong)". In: *Proceedings of the 21st ACM SIGPLAN International Conference on Functional Programming*. ICFP 2016. Nara, Japan: ACM, pp. 228–242
- T. Elliott, L. Pike, S. Winwood, P. Hickey, J. Bielman, J. Sharp, E. Seidel, and J. Launchbury (2015). "Guilt free ivory". In: *Proceedings of the 8th ACM SIGPLAN Symposium on Haskell*. ACM, pp. 189–200
- E. L. Seidel, N. Vazou, and R. Jhala (2015). "Type Targeted Testing". In: *Programming Languages and Systems*. Springer Berlin Heidelberg, pp. 812–836
- N. Vazou, E. L. Seidel, and R. Jhala (2014). "Liquidhaskell: Experience with refinement types in the real world". In: *Proceedings of the 2014 ACM SIGPLAN symposium on Haskell*. ACM, pp. 39–51
- N. Vazou, E. L. Seidel, R. Jhala, D. Vytiniotis, and S. Peyton-Jones (2014). "Refinement types for haskell". In: *Proceedings of the 19th ACM SIGPLAN international conference on Functional programming*. ACM, pp. 269–282