# Eric L Seidel

Software Engineer
279 E 44 St 10M
New York, NY 10017, USA

+1 (225) 276–2830
eric@seidel.io
http://eric.seidel.io


## 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 (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 (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*
- **Cactus Computational Toolkit** — New York, NY
  *Developer* — *Feb. 2010 — May 2011*

- **Undergraduate Petascale Research Internship** — New York, NY
  *Undergraduate Researcher* — *May 2010 — May 2011*
- **Louisiana State University** — Baton Rouge, LA
  *Undergraduate Researcher* — *May 2010 — Aug. 2010*
- **Apple Inc.** — Baton Rouge, LA
  *Genius* — *Feb. 2008 — July 2009*

## Publications


- 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
- E. L. Seidel (2012). "Metadata Management in Scientific Computing". In: *Journal of Computational Science Education* 3.2, pp. 26–33
- W. L. Khoo, E. L. Seidel, and Z. Zhu (2012). "Designing a Virtual Environment to Evaluate Multimodal Sensors for Assisting the Visually Impaired". In: *Proceedings of the 13th international conference on Computers Helping People with Special Needs - Volume Part II*. ed. by D. Hutchison, T. Kanade, J. Kittler, J. M. Kleinberg, F. Mattern, J. C. Mitchell, M. Naor, O. Nierstrasz, C. Pandu Rangan, B. Steffen, M. Sudan, D. Terzopoulos, D. Tygar, M. Y. Vardi, G. Weikum, K. Miesenberger, A. Karshmer, P. Penaz, and W. Zagler. Vol. 7383. ICCHP'12. Linz, Austria: Springer Berlin Heidelberg. Chap. 84, pp. 573–580
- G. Allen, T. Goodale, F. Loffler, D. Rideout, E. Schnetter, and E. L. Seidel (2010). "Component specification in the Cactus Framework: The Cactus Configuration Language". In: *2010 11th IEEE/ACM International Conference on Grid Computing (GRID)*. Brussels, Belgium: IEEE, pp. 359–368
- E. L. Seidel, G. Allen, S. Brandt, F. Löffler, and E. Schnetter (2010). "Simplifying complex software assembly: the component retrieval language and implementation". In: *the 2010 TeraGrid Conference*. TG '10. Pittsburgh, Pennsylvania: ACM Press, pp. 1–8