

Gabriel M. Bender

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- INTERESTS Algorithm development, database systems, security, privacy.
- EDUCATION **Cornell University**, Ithaca, NY (August 2009 - Present)
- Currently a Ph.D. Candidate in Computer Science.
 - Advisor is Prof. Johannes Gehrke.
- The University of Chicago**, Chicago, IL (September 2005 - June 2009)
- B.S. in Mathematics with Honors; B.S. in Computer Science with Honors.
 - 3.69 / 4.0 GPA; Dean's List during all four academic years.
- HONORS Certificate of Achievement: Outstanding Contributions as a Teaching Assistant (May 2013)
- SIGMOD Best Paper Award for *Entangled Queries: Enabling Declarative Data-Driven Coordination* (June 2011)
- Competed in the ACM International Collegiate Programming Contest
- Ranked 4th of 131 teams in the Mid-Central Region (November 2008)
 - Ranked 8th of 114 teams in the Mid-Central Region (November 2007)
- PUBLICATIONS Gabriel Bender, Lucja Kot, Johannes Gehrke. *Explainable Security for Relational Databases*. To Appear in SIGMOD 2014.
- Gabriel Bender, Lucja Kot, Johannes Gehrke, Christoph Koch. *Fine-Grained Disclosure Control for App Ecosystems*. SIGMOD 2013.
- Nitin Gupta, Milos Nikolic, Sudip Roy, Gabriel Bender, Lucja Kot, Johannes Gehrke, Christoph Koch. *Entangled Transactions*. VLDB 2011.
- Nitin Gupta, Lucja Kot, Sudip Roy, Gabriel Bender, Johannes Gehrke, Christoph Koch. *Entangled Queries: Enabling Declarative Data-Driven Coordination*. SIGMOD 2011. **Best Paper Award Winner for SIGMOD 2011.**
- Xiaokui Xiao, Gabriel Bender, Michael Hay, Johannes Gehrke. *iReduct: Differential Privacy with Reduced Relative Errors*. SIGMOD 2011.
- EXPERIENCE **Cornell University**, Ithaca, NY (2009 - Present)
- Ph.D. Candidate, Dept. of Comp. Sci. (Prof. Johannes Gehrke, Advisor)
- Currently developing algorithms that improve the security of platforms which rely on permissions to restrict access to sensitive data by automatically identifying overprivileged principals who are granted access to more information than they use.
 - Developed, implemented, and evaluated algorithms for privacy-preserving data publishing based on Differential Privacy.
 - Developed algorithms to provide database-level support for coordination between actions performed by different end users.

Google, New York, NY (Summer 2013)

Project Intern, Google Docs (Nikhil Singhal, Host)

- Implemented features for Google Apps Script, a cloud-based scripting environment that provides programmatic access to services such as Docs and Gmail.

Google, Mountain View, CA (Summer 2012)

Project Intern, Privacy Team (Dr. Jessica Staddon, Host)

- Used techniques from Machine Learning, Natural Language Processing, and Information Retrieval to analyze large datasets.

Nanyang Technological University, Singapore, SG (Summer 2011)

Project Officer, Dept. of Comp. Eng. (Prof. Xiaokui Xiao, Supervisor)

- Developed a technique for analyzing a query's potential to reveal sensitive information about a dataset, with applications to privacy-preserving data publishing.

University of Chicago, Chicago, IL (November 2006 - December 2009, Part-Time)

Computer Vision Project Intern, Dept. of Comp. Sci. (Prof. Pedro Felzenszwalb, Supervisor)

- Designed, implemented, and tested algorithms for graph cut-based edge detection.
- Designed algorithms for shape classification using probabilistic grammars.

Brown University, Providence, RI (Summer 2008)

Cryptography Project Intern, Dept. of Comp. Sci. (Prof. Anna Lysyanskaya, Supervisor)

- Implemented a library of number-theoretic algorithms for secure electronic cash.

TEACHING

Cornell University, Ithaca, NY

- T.A. for CS 4320/4321, *Introduction to Database Systems and Practicum* (Fall 2012)
Certificate of Achievement for outstanding contributions as a Teaching Assistant.
- Head T.A. for CS 2800, *Discrete Structures* (Spring 2010)
- T.A. for CS 2110, *Data Structures and Functional Programming* (Fall 2009)
- Volunteer for *Expanding Youth Horizons* (2010, 2011, 2012)
Ran workshops that introduced middle-school girls to topics in computer science.

University of Chicago, Chicago, IL

- Tutor for Young Scholars Program component of VIGRE Program. (Summer 2009)
- Taught classes designed to introduce mathematically talented middle school students to advanced topics in mathematics.