

# Kevin Matulef

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## EDUCATION

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- Massachusetts Institute of Technology**, Cambridge, Massachusetts **2003 - Present**  
*Ph.D. Candidate in Applied Mathematics, degree expected June 2009*  
Advisor: Ronitt Rubinfeld  
Research Interests: Sublinear Time Algorithms, Learning, Complexity
- Cambridge University**, Cambridge, England **2002 - 2003**  
*Certificate of Advanced Study in Mathematics*  
Essay: "The Hidden Subgroup Problem as a Unifying Concept for Quantum Algorithms"
- Brown University**, Providence, Rhode Island **1998 - 2002**  
*Sc.B. in Mathematics-Computer Science*  
Grade Point Average: 4.0/4.0. Magna Cum Laude. Phi Beta Kappa.

## AWARDS

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- **National Science Foundation Graduate Fellowship** (2004-2007).
- **MIT-Akamai Presidential Fellowship** for first year of graduate study (2003-2004).
- **Gates Cambridge Scholarship** for graduate study at Cambridge University, awarded to approximately 40 students in the US and 100 worldwide (2002-2003).
- **Fulbright Scholarship** (declined, 2002-2003).
- **Susan Colver Rosenberger Prize in Computer Science**, given to 6 graduating seniors in computer science (2002).
- **David Howell Premium for Excellence in Mathematics**, given to 3 graduating seniors in mathematics (2002).

## PUBLICATIONS

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- "**Testing Halfspaces.**" K. Matulef, R. O'Donnell, R. Servedio, R. Rubinfeld. *20<sup>th</sup> Annual ACM-SIAM Symposium on Discrete Algorithms (SODA)*, 2009.
- "**Efficiently Testing Sparse GF(2) Polynomials.**" I. Diakonikolas, H. Lee, K. Matulef, R. Servedio, A. Wan. *35<sup>th</sup> International Colloquium on Automata, Languages and Programming (ICALP)*, 2008.
- "**Testing for Concise Representations.**" I. Diakonikolas, H. Lee, K. Matulef, K. Onak, R. Rubinfeld, R. Servedio, A. Wan. *48<sup>th</sup> Annual Symposium on Foundations of Computer Science (FOCS)*, 2007.
- "**Testing  $k$ -wise and Almost  $k$ -wise Independence.**" N. Alon, A. Andoni, T. Kaufman, K. Matulef, R. Rubinfeld, N. Xie. *39<sup>th</sup> ACM Symposium on Theory of Computing (STOC)*, 2007.

## RELATED EXPERIENCE

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- Government Communications Headquarters**, Cheltenham, England **Summer 2002**  
*Research Internship, Student Summer Program (SSP)*  
In cooperation with the US Department of Defense, applied mathematical methods to cryptologic problems. One of two students chosen from previous summer program (DSP) as a representative of the United States.

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| <b>National Security Agency</b> , Fort Meade, Maryland<br><i>Research Internship, Director's Summer Program (DSP)</i><br>Explored improvements to an algorithm in algebraic geometry using theoretical and empirical techniques. Briefed the director of the agency. | <b>Summer 2001</b> |
| <b>Microsoft Corporation</b> , Redmond, Washington<br><i>Software Design Engineer in Test</i><br>Developed tools and tests for the Common Language Runtime, a multi-language programming framework.  | <b>Summer 2000</b> |
| <b>Institute for Advanced Study</b> , Princeton, New Jersey<br>Undergraduate participant in the Institute for Advanced Study/Park City Mathematics Institute 2000 Summer Session on Computational Complexity.  | <b>Summer 2000</b> |

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## TEACHING EXPERIENCE

### Massachusetts Institute of Technology

Design and Analysis of Algorithms, *Teaching Assistant* (Fall 2008).  
Theory of Computation, *Teaching Assistant* (Fall 2004 and Fall 2005).  
Student Rating: 6.1/7.0. "TA gave well prepared recitations. He was clear and patient."

### Brown University

Introduction to Cryptography, *Teaching Assistant* (Spring 2002).  
Integrated Introduction to Computer Science, *Head Teaching Assistant* (Fall 2000 – Spring 2001), *Teaching Assistant* (Fall 1999 – Spring 2000).

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## INVITED TALKS (excluding conference presentations)

- **"Testing Halfspaces."** Information Theory and Applications Workshop, UCSD (Feb 2009). China Theory Week, ITCS, Tsinghua University (Sep 2008). Sublinear Algorithms Workshop, Schloss Dagstuhl, Germany (Aug 2008).
- **"Testing Properties of Boolean Functions."** University of Michigan Theory Seminar (Nov 2008).
- **"The Enemies Around Us."** Columbia University Edlab Seminar (Mar 2008).

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## PROFESSIONAL SERVICE

- External Reviewer for Symposium on Theory of Computing (STOC 2006, 2008), Conference on Computational Complexity (CCC 2008), and Foundations of Computer Science (FOCS 2005).
- Co-organizer of the MIT Theory of Computation Colloquium (2005-2006).
- Co-organizer of the MIT Simple Person's Applied Mathematics Seminar (2005-2006).

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## SOFTWARE

**Enemybook** is an application that I wrote to remedy the one-sided perspective of Facebook. It allows users to add and track "enemies" on their Facebook account, in the same manner in which they add and track friends. The program received a large amount of national and international press coverage.

Selected Press and Interviews:

- *"Posting Your Revenge."* Boston Globe, October 11, 2007.
- *"Keeping Friends Close and Enemies Online."* National Public Radio, Day to Day, October 11, 2007.
- *"The Dark Side of Social Networking."* National Public Radio, All Things Considered, November 23, 2007.
- *"Parody Sites Start Anti-Social Networking Trend."* Reuters, December 21, 2007.