

## Michelle Goodstein

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### CONTACT INFORMATION

Computer Science Department  
Carnegie Mellon University  
5000 Forbes Ave  
Pittsburgh, PA 15213 USA

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*Homepage:* <http://www.cs.cmu.edu/~mgoodste>

### RESEARCH INTERESTS

Algorithms and tools for monitoring parallel programs for errors and security risks, including relaxed ordering models of execution, focusing on the log-based architecture (LBA) project as a platform for testing.

### EDUCATION

**Carnegie Mellon University**, Pittsburgh, Pennsylvania USA

Ph.D. Student, Computer Science

- Advisor: Todd Mowry
- PhD Expected: May 2012

**Carnegie Mellon University**, Pittsburgh, Pennsylvania USA

Masters, Computer Science, May 2008

**University of Washington**, Seattle, WA USA

B.S., Computer Science, June 2005

Magna Cum Laude with College Honors in Computer Science  
Major Grade Point Average: 3.90

B.S., Mathematics, June 2005

Magna Cum Laude  
Major Grade Point Average: 3.94

Cumulative Grade Point Average: 3.93

### PUBLICATIONS

**Goodstein, M.** and Vassilevska, V. 2007. A Two Player Game To Combat Web Spam. Carnegie Mellon University Technical Report, CMU-CS-07-134.

### CONFERENCE POSTER

Ramanathan, A.\*, **Goodstein, M.\***, Sedgewick, R., and Durand, D. 2007. Models of Network Evolution. In 4th Annual RECOMB Satellite on Regulatory Genomics.

\*First two authors contributed equally.

### RESEARCH EXPERIENCE

*Intel Research Pittsburgh/CMU Summer Fellowship*  
Working with: Phil Gibbons

June 2008-August 2008

*Graduate Student*

Advised by: Todd Mowry

**January 2008-present**

- Monitoring parallel programs for errors and security risks
- Developing new models for program execution that relax sequential consistency
- Applying these models to the Log-Based Architecture (LBA) group at CMU and Intel

- Extending current lifeguard algorithms to work within these models

*Graduate Student*

**August 2005-December 2007**

Advised by: Manuel Blum

- Investigating applications of theoretical computer science, mechanism design, semantic examination of page contents and games with a purpose as tools to fight spam
- Focus on both theoretical guarantees and empirically testing systems
- Researching theoretical guarantees about how much a spammer can artificially inflate their ranking in search results

*Undergraduate Research*

**September 2004-June 2005**

Advised by: Anna Karlin

- Researched the use of spectral techniques to improve collaborative filtering recommendations and web search results
- Extended and simplified previously published algorithms to apply in more general cases
- Empirically tested the quality of results returned by the algorithms

ACADEMIC  
EXPERIENCE

**Carnegie Mellon University**, Pittsburgh, Pennsylvania USA

*Graduate Student*

**August, 2005 - present**

Graduate research and coursework.

*Teaching Assistant*

**January, 2007 - May, 2007**

Led weekly recitation section, managed course website, graded student homework, and held weekly office hours.

**University of Washington**, Seattle, Washington USA

*Student Lab Assistant*

**March 2004 - June 2005**

Assisted students in Introduction to Digital Design with their labs weekly, helped prepare assignments and proof assignments, and assisted with laboratory upkeep.

SELECTED HONORS  
AND AWARDS

Clare Booth Luce Graduate Fellowship Recipient, 2005-2007

Outstanding Graduating B.S. in Mathematics Award (Standard Major), 2005

University of Washington 2001-2002 Sophomore Medalist

Highest academic achievement among sophomores, awarded to one individual per year

Phi Beta Kappa, 2003

EMPLOYMENT

*Engineering Intern*

**May 2006-August 2006**

Google

Kirkland, WA

*Engineering Intern*

**June 2005-August 2005**

Google

Kirkland, WA

COMPUTER SKILLS

Proficient in Java, C/C++, AJAX programming, DHTML and DOM programming, Windows.

Experience with Linux/Unix, Verilog