

# Adam Waksman

---

(914) 374 3499 <waksman@cs.columbia.edu>

## Education

*Columbia University - Graduate School of Engineering and Applied Science, New York, NY*

- Ph.D. in computer science, expected May 2014
- M.Phil. in computer science, May 2013
- M.S. in computer science, May 2011; GPA: 4.17/4.33

*Columbia University – Columbia College, New York, NY*

- Bachelor of Arts, May 2009; Overall GPA: 3.80/4.33, *Magna Cum Laude*
- Majors: Computer Science (GPA: 4.00), Mathematics (GPA: 3.86)
- GRE Math (800/800), Subject GRE Computer Science (850/910)
- Dean's List (2006 – 2009)
- Theodore R. Bashkow Outstanding Research Award
- Computer Science Department Academic Excellence Award

*Byram Hills High School, Armonk, NY*

- Graduated June 2005; *Cum Laude*; SAT: 1600/1600

## Conference Publications

- *On the Feasibility of Online Malware Detection With Performance Counters*. John Demme, **Adam Waksman**, Matthew Maycock, Jared Schmitz and Simha Sethumadhavan. In *Proceedings of the International Symposium of Computer Architecture*, Tel Aviv, Israel, 2013.
- *Side-Channel Vulnerability Factor: A Metric for Measuring Information Leakage*. John Demme, Robert Martin, **Adam Waksman** and Simha Sethumadhavan. In *Proceedings of the International Symposium of Computer Architecture*, Portland, Oregon, 2012.
- *Silencing Hardware Backdoors*. **Adam Waksman** and Simha Sethumadhavan. In *Proceedings of the IEEE Symposium on Security and Privacy*, Oakland, California, 2011.
- *Tamper Evident Microprocessors*. **Adam Waksman** and Simha Sethumadhavan. In *Proceedings of the IEEE Symposium on Security and Privacy*, Oakland, California, 2010.

## Journal Publications

- *A Quantitative, Experimental Approach to Measuring Side-Channel Security*. John Demme, Robert Martin, **Adam Waksman** and Simha Sethumadhavan. *IEEE Micro Top Picks*. June 2013.

- *Practical, Lightweight Secure Inclusion of Third-Party Intellectual Property.* **Adam Waksman**, Julianna Eum and Simha Sethumadhavan. *IEEE Design & Test*, April 2013.
- *Interactions between L1 cell adhesion molecule and ezrin support traction-force generation and can be regulated by tyrosine phosphorylation.* Sakurai T, Gil OG, Whittard JD, Gazdciu M, Joseph T, Wu J, **Waksman A**, Benson DL, Salton SR, Felsenfeld DP. *Journal of Neuroscience Research* 2008; 86: 2602-2614.

### **Professional Experience**

*Epickk*, New York, NY (October 2012 - Present)

- CTO and Founder

*Columbia University*, New York, NY (June 2009 - Present)

- Ph.D. Student Researcher on Fellowship (via NDSEG: 2011 – Present)

*Facebook*, Palo Alto, CA (June 2011 – August 2011)

- Software Engineering Intern

*National Security Agency*, Fort Meade, MD (May 2008 – August 2008)

- Applied Research Mathematician

*Columbia University*, New York, NY (May 2006 – September 2006)

- Astrophysics Research Assistant

### **Additional Research Experience**

*Columbia University*, New York, NY (September 2008 – February 2009)

- Researched the properties of binomial coefficients.
- Led to undergraduate thesis.

*Columbia University*, New York, NY (May 2007 – August 2007)

- Analyzed the complexity of Quasi-Monte Carlo methods for a class of integrals.

*Fishberg Dept. of Neuroscience*, Mount Sinai, New York, NY (May 2003 - May 2005)

- Tested protein binding interactions in vitro with the goal of gaining a better understanding of the correlation between certain alleles and axon interactions.

### **Theses**

*Doctoral Thesis, Columbia University* (To be defended May 2014)

- Advised by Professor Simha Sethumadhavan
- Building Trustworthy Hardware with Untrusted Resources

*Undergraduate Thesis, Columbia University* (February 2009)

- Advised by Professor Jonathan Gross

- Discovered and proved an original theorem about the properties of binomial coefficients (relevant to combinatorial theory)

### **Teaching/Mentoring Experience**

*Teaching Assistant, Columbia University, Department of Computer Science*

- Computer Hardware Design (September 2011 – December 2011)
- Prepared and delivered lectures
- Built tools for students using SystemVerilog

*Teaching Assistant, Columbia University, Department of Computer Science*

- Computer Hardware Design (September 2012 – December 2012)
- Prepared and delivered lectures

*Teaching Assistant, Columbia University, Department of Computer Science*

- Computer Hardware Design (September 2010 – December 2010)
- Prepared and delivered lectures
- Set up a Synopsys design environment and built verification tools for the students

*Student Mentor*

- Mentored Matthew Suozzo of Hunter High School in applied research (June 2010 – Present)
- Mentored Elena Feldman of Forest Hills High School in applied research (July 2010 – September 2010)

*Teaching Assistant, Columbia University, Department of Computer Science*

- Graph Theory (September 2008 – December 2008)

### **Conference Presentations**

- Presented on “Silencing Hardware Backdoors” at the AT&T CSAW Conference (2011) at NYU in New York, New York.
- Presented on “Silencing Hardware Backdoors” at the 32<sup>nd</sup> IEEE Symposium on Security and Privacy (SSP) 2011 in Oakland, California.
- Presented on “Tamper Evident Microprocessors” at the AT&T CSAW Conference (2010) at NYU in New York, New York.
- Presented on “Tamper Evident Microprocessors” at the 31<sup>st</sup> IEEE Symposium on Security and Privacy (SSP) 2010 in Oakland, California.

### **Best Paper Awards and Nominations**

- Best Paper Finalist at the AT&T CSAW Conference (2011) at NYU in New York, New York.

- Best Paper Finalist at the AT&T CSAW Conference (2010) at NYU in New York, New York.

### **Professional Services**

#### *Conference Program Committee Assistant*

- The IEEE Symposium on Performance Analysis of Systems and Software (ISPASS) 2012

#### *Conference Reviewer*

- ACM Conference on Computer and Communications Security (CCS) 2013
- The IEEE Symposium on Security and Privacy (SSP) 2013
- The International Conference on Computer-Aided Design (ICCAD) 2009

#### *Journal Reviewer*

- IEEE Transactions on Emerging Topics in Computing 2013
- ACM Transactions on Information and System Security (TISSEC) 2011

### **Conferences Attended**

- The 39<sup>th</sup> International Symposium on Computer Architecture (ISCA) 2012 in Portland, Oregon.
- DARPA Colloquium on Future Directions In Cyber Security 2011 in Arlington, Virginia.
- AT&T CSAW Conference 2011 at NYU in New York, New York.
- The 32<sup>nd</sup> IEEE Symposium on Security and Privacy (SSP) 2011 in Oakland, California.
- AT&T CSAW Conference 2010 at NYU in New York, New York.
- DARPA Colloquium on Future Directions In Cyber Security 2010 in Arlington, Virginia.
- The IEEE International Symposium on Performance Analysis of Systems and Software (ISPASS) 2010 in White Plains, New York, USA.
- The 31<sup>st</sup> IEEE Symposium on Security and Privacy (SSP) 2010 in Oakland, California.
- The 42<sup>nd</sup> International Symposium on Microarchitecture (Micro) 2009 in New York City, New York.
- The 36<sup>th</sup> International Symposium on Computer Architecture (ISCA) 2009 in Austin, Texas.

## **Research Fellowships**

- NDSEG Defense Research Fellowship (Awarded 2011 - 2014)
- NSF Graduate Research Fellowship Honorable Mention (2011)
- NSF Graduate Research Fellowship Honorable Mention (2010)

## **Technical Skills**

### *Software Engineering*

- Java, C, C++, Lisp, Python, Matlab, Bash, Pthreads, OpenMP

### *Web Development*

- ASP .NET, MVC, Javascript, Ajax, jQuery, C#, HTML, CSS3, CSHTML

### *Databases and Protocols*

- MySQL, Thrift, JSON, Linq

### *Operating Systems/Environments*

- Unix/Linux, Windows, Mac

### *Hardware Design*

- Verilog, PLI, SystemVerilog, Icharus, VCS, DVE, DC, ICC

### *Simulation and Instrumentation Tools*

- Pin, Zesto, Simics, Ruby, FeS2

## **Leadership and Competitive Experience**

### *The Gadfly, Columbia University's Philosophy Magazine, New York, NY*

- Co-founder (December 2006), Vice President (2007 - 2008)

### *Columbia Lions Varsity Track and Field*

- NCAA Division I (September 2005 – June 2006)

### *Byram Hills High School Varsity Cross Country/Track and Field (Fall 2001 – Spring 2005)*

- Six seasons as Captain (Fall 2003 – Spring 2005)
- New York All-State Athlete (Spring 2005)

### *Byram Hills High School Academic Team (Fall 2003 – Spring 2005)*

- Two-Year Captain (Fall 2003 – Spring 2005);
- Twice National Finalist (2004 and 2005)

### *Westchester County Math Team (Spring 2004 – Spring 2005)*

- Twice State Finalist (2004 and 2005)
- Twice Westchester County MVP (2004 and 2005)

## Contact Information

*Email:* [waksman@cs.columbia.edu](mailto:waksman@cs.columbia.edu)

*Website:* <http://www.cs.columbia.edu/~waksman>

*Phone:* 1-914-374-3499

*Mailing Address:*

Department of Computer Science

Columbia University

1214 Amsterdam Ave.

450 CSB,

New York NY 10027