
Sid Stamm

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Curriculum Vitae

I am interested in researching and practicing computer security and privacy, specifically the privacy of information as it relates to social engineering or phishing and deceptive web technologies. Peoples' trust for online entities is often unwarranted, and I am searching for a way to ensure that people can trust their computer for use on the Internet without worrying about whether or not they trust remote entities. The best solution to these problems may simplifying the use of security software or making the software autonomous. Specific focuses of my interests manifest as research and study in cryptographic protocols, phishing and avoidance, web security problems, malware and detection, computer forensics, and electronic identity.

Education

- **Ph.D. Computer Science**, (Expected, January 2009)
Advisor: Markus Jakobsson (www.markus-jakobsson.com)
Thesis: Anticipating and Hardening the Web Against Socio-Technical Security Attacks
Department of Computer Science
Indiana University
- **M.S. Computer Science, May 2005**
Concentration in Programming Languages and Computer Security
Department of Computer Science
Indiana University
- **B.S. Computer Science, May 2003** (*Magna Cum Laude*)
Minor in Language and Literature
Thesis: Atypical Classroom Techniques for Computer Science Education
Rose Hulman Institute of Technology

Publications

- **“Practice and Prevention of Home-Router Mid-Stream Injection Attacks”**, Steven A. Myers and Sid Stamm. In the 2008 APWG eCrime Researcher’s Summit. October 15–16, 2008. Atlanta, GA, USA.
- **“HTTP Fences: Immigration Control for Web Pages”**, Sid Stamm. Indiana University Computer Science Technical Report TR669. July 2008.
- Contributing author, multiple sections in **“Crimeware: Understanding New Attacks and Defenses”** Markus Jakobsson (Editor), Zulfikar Ramzan (Editor). Paperback, 608 pages. Addison-Wesley Professional, April 28 2008. ISBN: 0321501950.

- **“Drive-By Pharming”** Sid Stamm, Zulfikar Ramzan and Markus Jakobsson. In the 9th International Conference on Information and Communications Security, December 12–15 2007. <http://www.cs.indiana.edu/cgi-bin/techreports/TRNNN.cgi?trnum=TR641>
- **“Implementing Trusted Terminals with a TPM and SITDRM”** Sid Stamm, Nicholas Paul Sheppard, Reihaneh Safavi-Naini. In the First International Workshop on Run-Time Enforcement for Mobile and Distributed Systems (REM’07).
- **“Fighting Unicode-Obfuscated Spam”** Changwei Liu and Sid Stamm. In the Proceedings of the 2007 APWG eCrime Researcher’s Summit. October 2007.
- **“Web Camouflage: Protecting Your Clients from Browser Sniffing Attacks.”** Markus Jakobsson and Sid Stamm. To appear in the IEEE Security and Privacy Magazine.
- **“Javascript Breaks Free.”** Markus Jakobsson, Zulfikar Ramzan, and Sid Stamm. W2SP: Web 2.0 Security Workshop, held in conjunction with the 2007 IEEE Symposium on Security and Privacy (Oakland’07). May 24, 2007.
- **“Combating Click Fraud via Premium Clicks.”** Ari Juels, Sid Stamm, and Markus Jakobsson. To appear in the proceedings of the 16th USENIX Security Symposium, August 6-10 2007.
- Contributing author, multiple sections in **“Phishing and Countermeasures: Understanding the Increasing Problem of Identity Theft.”** Markus Jakobsson (Editor), Steven Myers (Editor). Hardcover, 739 pages. Wiley, December 2006. ISBN: 0-471-78245-9.
- **“Invasive Browser Sniffing and Countermeasures.”** Markus Jakobsson and Sid Stamm. Proceedings of the 15th Annual World Wide Web Conference (WWW2006).
- **“Privacy Preserving Polls using Playing Cards.”** Sid Stamm and Markus Jakobsson. Cryptology ePrint Archive, report 2005/444. 2005.
- **“Privacy on the Internet.”** Sid Stamm, Kay Connelly, Katie Moor, Tom Jagatic, Ashraf Khalil, Yong Liu. Proceedings of WWW @ 10 Conference (www@10 ’04). September 2004.
- **“Java Engagement for Teacher Training: An Experience Report.”** Raja Sooriamurthi, Arijit Sengupta, Suzanne Menzel, Katie Moor, Sid Stamm, and Katy Börner. Proceedings of the Frontiers in Education (FIE ’04), October 2004.
- **“Mixed Nuts: Atypical Classroom Techniques for Computer Science Courses.”** Sid Stamm. ACM Crossroads issue 10.4, Summer 2004.

Invited Talks

- **Phishing and Pharming (and the Future)**
21 May 2008: AusCERT 2008 Information Security Conference. Gold Coast, QLD, Australia.
16 October 2007: Communications Fraud Control Association Training Event. Miami, FL.
- **Premium Clicks and Mobile Devices**
14 September 2007: AdFraud Workshop at Stanford University.
- **Drive-By Pharming and other WebSec Bumpers**
28 June 2007: Tech Talk at Google, Inc.
12 July 2007: Talk to Security Group at PARC.

- **Invasive Browser Sniffing and Countermeasures**
 9 May 2006: ISI Seminar at Queensland University of Technology.
 22 February 2006: Crypt Seminar at University of Wollongong.
 30 August 2006: The Security Seminar in CERIAS at Purdue University.
- **Visualizing Secure Protocols.**
 April 2005: ACM Computer Security/Privacy Lecture Series, University of Minnesota.
- **What's new in Java 1.5.**
 September 2004: Java Engagement for Teacher Training (JETT '04), Indiana University.
- **The Fine Art of Rememorable Teaching.**
 October 2003: Java Engagement for Teacher Training (JETT '03), Indiana University.

Academic Positions, Teaching & Assistantships

- **Spring 2008 – Teaching Assistant** *C212: Programming in Java*
 Indiana University, Department of Computer Science.
 Supervised by Suzanne Menzel and Amr Sabry.
 CS2 course taught to CS majors.
- **Fall 2007 – Research Assistant** *“Distributed Phishing Attacks”*
 Indiana University, School of Informatics. Research directed by Markus Jakobsson.
 Studied and projected the affect of distributed phishing attacks.
- **Spring 2007 – Research Assistant** *“Trawler Phishing”*
 Indiana University, School of Informatics. Research directed by Steven A. Myers.
 Modified a home router to inject attack code into web pages it forwards.
- **Feb-June 2006 – Visiting Researcher** *“SITDRM with Trusted Computing”*
 University of Wollongong, Smart Internet Technology CRC.
 Research directed by Rei Safavi-Naini.
- **Fall 2005 – Teaching Assistant** *“B548: Information Technology Essentials for Lawyers.”*
 Indiana University, School of Law and School of Informatics. Instructed by Fred Cate and Markus Jakobsson. Helped develop some of the curriculum.
- **Spring 2005 – Research Assistant** *“Language Support for Morton Order Matrices.”*
 Indiana University, Department of Computer Science. Research directed by David Wise.
- **Summer 2004 – Instructor** *“A201: Introduction to Programming with Java”*
 Indiana University, Department of Computer Science.
 Developed and taught my own curriculum.
- **Fall 2003 to Fall 2004 – Teaching Assistant** *Multiple Introductory CS classes*
 Indiana University, Department of Computer Science.
 Supervised by Suzanne Menzel and Adrian German.
 Courses taught to CS majors and non-majors.

Industry/Consultancy Experience

- **May 2008 – present: Google, Inc. (Mountain View, CA)**
Android/Security Intern
Worked on project to automate QA testing and begin discovery of Android application malware
- **May 2007 – July 2007: Google, Inc. (Mountain View, CA)**
Engineering/Application Security Intern
Worked on internal security projects including malware tracing
Performed security reviews on applications before release
- **October 2005 – present: Thomas A. Berry & Associates (Bloomington, IN)**
Expert consultant for litigation
Provided technical computer security expertise for prosecution counsel during litigation (Case is ongoing)
- **June – August 2002: User Technology Associates (Arlington, VA)**
Intern
Developed Financial Analysis tool for division managers
Increased Performance and operability of Intranet website
Traced and identified originator of harassing website emails
- **June – August 2001: SOAR Solutions (Glen Ellyn, IL)**
Developer
Migrated Client Management System to new database
Combined products with HomeGain, Inc
- **June – August 2000: ScoreCast, Inc. (Wayzata, MN)**
Intern
Optimized product to reduce cost by 50%
Developed information tracking system for use in tech-support phone calls

Research/Development Projects

- **Translating Proxy** (<http://www.cs.indiana.edu/~sstamm/#projects>)
Created a server-side proxy that injects randomness into URLs served by a web server. This helps protect against the Browser Recon attack (see below).
- **Beer Ad Doppleganger** (<http://www.indiana.edu/~phishing/verybigad>)
Created a copy of a popular “viral video” website to illustrate how malware could easily be deployed through signed Java applets. Measured and tracked socio-viral spread of website as people forwarded the URL to friends. (Formerly verybigad.com).
- **Browser Recon** (<http://www.browser-recon.info/>)
With a CSS trick, detects and records browser history, including identification of online banking behavior. Developed with Tom Jagatic and Markus Jakobsson. 2005.
- **Digger Magoo’s Fossil Hunt**
Awarded “Best Interactive Conversation” in IDEAS 2005
A fossil “hunt” exhibit that is being prototyped at WonderLab in Bloomington, Indiana. Fossil Hunt consists of the FlashFidgets software and some Flash media content.

- **Flash Fidgets!**

A Phidgets / Flash 5.0 Interface. This displays flash movies and lets them interact with Phidget devices. (Includes a USB/HID driver for the Phidgets). 2004.

Honors and Awards

- **Rose-Hulman Presidential Scholarship** (1999-2003)
- **Doc Criss Best Senior Thesis/Project award** (2003)
- **Nominated Member, Upsilon Pi Epsilon**, Honorary Computer Science Fraternity
- **Nominated Member, Pi Mu Epsilon**, Honorary Mathematics Fraternity
- **Nominated Member, Iota Nu Phi**, Honorary Informatics Fraternity