

ANDREAS PITSILLIDIS

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EDUCATION

- **University of California, San Diego (UCSD)**
Ph.D. student in Computer Science and Engineering Sep 2007 – Present
M.Sc. in Computer Science and Engineering, GPA 3.9/4.0 Fall 2010
- **University of Cyprus (UCY)**
B.Sc. in Computer Science, GPA 8.6/10.0 Sep 2003 – Jun 2007

RESEARCH INTERESTS

- Botnets, Spam, Account Hijacking, Phishing, CAPTCHAs, DNS Abuse, Computer Security, Algorithms

ACADEMIC RESEARCH EXPERIENCE

- **Systems and Networking Group, UCSD** Jun 2008 – Present
Research in computer security, under guidance of Stefan Savage and Geoff Voelker.
- **Databases Group, UCY** Sep 2006 – Jun 2007
Thesis on top-k queries and query processing in relation to moving objects, under guidance of George Samaras.

PUBLICATIONS

- **Taster's Choice: A Comparative Analysis of Spam Feeds.** A. Pitsillidis, C. Kanich, G. M. Voelker, K. Levchenko, and S. Savage, Proceedings of the ACM Internet Measurement Conference (IMC), Boston, MA, November 2012.
- **Browser Exploits as a Service: The Monetization of Driveby Downloads.** C. Grier, L. Ballard, J. Caballero, N. Chachra, C. J. Dietrich, K. Levchenko, P. Mavrommatis, D. McCoy, A. Nappa, A. Pitsillidis, N. Provos, Z. Rafique, M. A. Rajab, C. Rossow, K. Thomas, V. Paxson, S. Savage, and G. M. Voelker, Proceedings of the ACM Conference on Computer and Communications Security (CCS), Raleigh, NC, October 2012.
- **PharmaLeaks: Understanding the Business of Online Pharmaceutical Affiliate Programs** D. McCoy, A. Pitsillidis, G. Jordan, N. Weaver, C. Kreibich, B. Krebs, G. M. Voelker, S. Savage, and K. Levchenko, Proceedings of the USENIX Security Symposium, Bellevue, WA, August 2012.
- **Click Trajectories: End-to-End Analysis of the Spam Value Chain.** K. Levchenko, A. Pitsillidis, N. Chachra, B. Enright, M. Felegyhazi, C. Grier, T. Halvorson, C. Kanich, C. Kreibich, H. Liu, D. McCoy, N. Weaver, V. Paxson, G. M. Voelker, and S. Savage, Proceedings of the IEEE Symposium and Security and Privacy (S&P), Oakland, CA, May 2011.
- **How to tell an Airport from a Home: Techniques and Applications.** A. Pitsillidis, Y. Xie, F. Yu, M. Abadi, G. M. Voelker, S. Savage. Proceedings of the 9th ACM Workshop on Hot Topics in Networks (HotNets), Monterey, CA, October 2010.
- **Botnet Judo: Fighting Spam with Itself.** A. Pitsillidis, K. Levchenko, C. Kreibich, C. Kanich, G. M. Voelker, V. Paxson, N. Weaver and S. Savage. Proceedings of the Network and Distributed System Security Symposium (NDSS), San Diego, CA, February 2010.

WORK EXPERIENCE

- **Google, Zurich, Switzerland** Jun 2012 – Sep 2012
 - Summer internship, Mentor: Angelica Moscicki
My main focus was next-generation CAPTCHAs. I worked on the research, design and implementation of different prototypes, with the goal of improving existing solutions. This work has continued towards a potential future deployment. Additionally, I worked on extending the functionality of one of the systems currently in use for abuse detection across various Google websites.
- **Google, Mountain View, CA, USA** Jun 2011 – Sep 2011
 - Summer internship, Mentor: Alon Altman
Worked on the design and implementation of a research project focused on Gmail account hijacking. After the internship, the work was split in two separate projects. In summer 2012, a production pipeline was deployed on an experimental basis, as a result of our prior findings. A patent application is also currently under evaluation, on the same work. The second project is also currently active, and I had the opportunity to make small contributions to it during my follow-up internship in summer 2012. In February 2013, an academic research paper based on this work was written jointly by Google and UCSD, and is currently in submission.

- **Microsoft Research, Mountain View, CA, USA** Oct 2009 – Jun 2010
 - Part-time position (in parallel with full-time Ph.D. student position at UCSD)

By profiling the usage and patterns of IP address ranges, I worked on developing a system that identifies the qualitative context about a location's relationship with the user. Our work allowed inferring rough location categories such as residences, workplaces and travel venues. It also allowed us to publish a research paper with our findings. A patent on this work was also filed and approved by the USPTO.
- **Microsoft Research, Mountain View, CA, USA** Jul 2009 – Sep 2009
 - Summer internship, Mentor: Yinglian Xie

Worked on enhancing HostTracker; a system developed previously, for improving Internet accountability by leveraging application-level identifiers. My goals included improving coverage and accuracy by adding support for multiple datasets, adding support for incremental computation and reducing processing overhead. I also built a working prototype in Dryad/DryadLINQ.
- **University of Cyprus, Nicosia, Cyprus** Jun 2005 – Sep 2006
 - Worked on the design and development of project DITIS (<http://www.ditis.ucy.ac.cy/>) for desktop systems. I was also the coordinator and one of the developers of the team that worked on porting the project to mobile devices running Windows Mobile.

PATENTS

- **Automatic Identification of Travel and Non-Travel Network Addresses.** F. Yu, Y. Xie, M. Abadi, S. Savage, G.M. Voelker, A. Pitsillidis, April 2012, US 2012/0102169 A1.

TECHNICAL SKILLS

- **Excellent:** Java, C, SQL
- **Intermediate:** Python, C#, C++, Apache Pig, JavaScript, Regular Expressions, L^AT_EX
- **Basic:** XAML, Bash, R, Visual Basic .NET

OTHER DEVELOPMENT

- Developed an application on the Windows Phone 7.5/8 platform, for a popular web-based service. The development is based on C#, XAML, and the .NET framework. In addition to the client component, a server component was developed in Python and deployed on Amazon EC2 for handling push notifications. This component utilizes a number of different tools and technologies: Amazon DynamoDB, Apache HTTP Server, Postfix, SSL. The application has been consistently ranked within the 200 best-rated apps, and within the top-10 downloaded apps in its category.

SYSTEM ADMINISTRATION

- Throughout my studies at UCSD, I was part of the team responsible for basic system administration tasks for our research group. My responsibilities included the configuration and maintenance of multiple PostgreSQL servers, the recommendation and purchase of new hardware, and basic health-monitoring of multiple systems using a custom-built solution. I was also personally responsible for deploying and administering a 40-node Hadoop (HDFS/MapReduce) cluster.

TEACHING EXPERIENCE

- Operating Systems (Graduate Level), Teaching Assistant, UCSD Winter 2013
- Data Structures and Algorithms, Grader, UCY Fall 2006

HONORS AND AWARDS

- Traditional Fulbright Scholarship for graduate studies in the USA Aug 2007
- Award of Excellence in the Department of Computer Science, UCY Jun 2007

LANGUAGES

- Excellent knowledge of English, Greek (native)

MILITARY SERVICE

- Cyprus National Guard, Rank: Second Lieutenant Jun 2001 – Aug 2003