

Steve Sheng

CONTACT INFORMATION

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EDUCATION

Carnegie Mellon University, Pittsburgh, Pennsylvania

Ph.D. Engineering and Public Policy Dec 2009

- Research Focus: Computer security, information policy
- Dissertation: *A Policy Analysis of Phishing Countermeasures*
- Advisor: Prof. Lorrie Cranor

M.S. Engineering and Public Policy Dec 2006

University of Pennsylvania, Philadelphia, Pennsylvania

M.S. Computer and Information Science (GPA: 3.9/4.0) May 2002

B.S. Computer Science and Engineering, Magna Cum Laude May 2001

RESEARCH EXPERIENCE

Carnegie Mellon University, Pittsburgh, Pennsylvania

Ph.D. Research Associate Aug 2004 – Aug 2009

Supporting Trust Decisions

- Worked with an interdisciplinary team of researchers to develop tools and techniques for supporting trust decisions, in the context of anti-phishing.
- Led to breakthroughs in our understanding and prevention of semantic attacks, 8 papers published in referred conferences and journals, as well as commercialization of some of the tools and techniques.
- Developed an anti-phishing game that was named No.9 of the top 25 radical research projects by Network World in 2008. The product was commercialized by Wombat Securities, being used in the US State Department, US air force, Department of Energy, and translated into three languages.

Toolkit for Automated Privacy Policy Analysis

- Collaborated with one CMU colleague and 3 researchers from IBM.
- Created a software toolkit to collect and analyze machine readable privacy policies.
- Used the toolkit to survey 300 privacy policies of 50 US financial institutions posted online between 1999 and 2005 to determine the regulatory effect of GrammLeachBliley Act on information privacy.
- Written and published the paper in the Journal of Law and Policy for the Information Society.

Municipal Wireless Network for Pittsburgh

- Developed a strategy to spread broadband wireless Internet access throughout the city.
- Collaborated with 3 colleagues and managed a team of 20 students.
- Designed a wireless network and estimated its operating costs for 6 years, developed a regression model to predict revenues based on city demographics.
- Presented the recommendations to the City Council, published a paper at the 35th Telecommunications Research and Policy conference (Washington DC 2007).

WORK EXPERIENCE

Internet Corporation for Assigned Names and Numbers (ICANN)

Director, SSAC & RSSAC Advisories Development

May 2014 – Present

Senior Manager, Policy and Technical Advisories Development

October 2013 – May 2014

Senior Technical Analyst

Sep 2009 – October 2013

- Direct a team of staff to support ICANN's Security and Stability Advisory Committee (SSAC) and Root Server System Advisory Committee (RSSAC)
- Conduct technical research, draft concept papers in support of SSAC and RSSAC.
- Manage key research projects directly relevant to ICANN policy activities
- Advise ICANN policy development staff on emerging trends in technology and research related to the Domain Name System, and its impacts to ICANNs policy development.
- Engage with the technical, and research community in public forums to (i) share information regarding emerging technical trends related to DNS, (ii) provide information about and access to ICANNs multi-stakeholder consensus policy development to these communities.

REFERRED JOURNAL
AND CONFERENCE
PAPERS

Sheng, S., Holbrook, M., Kumaraguru, P., Downs, J. and Cranor, L. 2010. Who Falls for Phish? A Demographic Analysis of Phishing Susceptibility and Effectiveness of Interventions. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (Atlanta, Georgia, USA, April 22 - 27, 2010). CHI 2010.

Sheng, S., Kumaraguru, P., Acquisti, A., Cranor, L., and Hong, J. 2009. Improving phishing countermeasures: An analysis of expert interviews. In Proceedings of the fourth eCrime Researchers Summit (eCrime 2009), October 15-16, 2009, Tacoma, WA.

Sheng, S., Wardman, B., Warner, G., Cranor, L., Hong, J., and Zhang, C. An empirical analysis of phishing blacklists. In Proceedings of the 6th Conference in Email and Anti-Spam (Mountain view, CA, July 16 - 17 2009). CEAS 2009.

Sheng, S., Magnien, B., Kumaraguru, P., Acquisti, A., Cranor, L. F., Hong, J., and Nunge, E. 2007. Anti-Phishing Phil: the design and evaluation of a game that teaches people not to fall for phish. In Proceedings of the 3rd Symposium on Usable Privacy and Security (Pittsburgh, Pennsylvania, July 18 - 20, 2007). SOUPS '07, vol. 229. ACM, New York, NY, 88-99.

Sheng, S. and Cranor, L. 2006. An Evaluation of the Effectiveness of US Financial Privacy Legislation Through the Analysis of Privacy Policies. In *I/S: A Journal of Law and Policy for the Information Society*, Volume 2, Number 3, Fall 2006, pp. 943-979.

Downs, J., Holbrook, M., **Sheng, S.**, and Cranor, L. 2010. Who Falls for Phish? A Demographic Analysis of Phishing Susceptibility and Effectiveness of Interventions. In Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (Atlanta, Georgia, USA, April 22 - 27, 2010). CHI 2010.

Kumaraguru, P., **Sheng, S.**, Acquisti, A., Cranor, L., and Hong, J. 2009 Teaching Johnny not fall for phish. In *Transactions on Internet Technology*, 2009

Kumaraguru, P., **Sheng, S.**, Acquisti, A., Cranor, L., and Hong, J. 2008. Lessons from a real world evaluation of anti-phishing training. In Proceedings of the third eCrime Researchers Summit (eCrime 2008), October 15-16, 2008, Atlanta, GA

Cranor, L., Egelman, S., **Sheng, S.**, McDonald, A., and Chowdhury, A. 2008. P3P Deployment on Websites. In the Journal of Electronic Commerce Research and Applications (ECRA), December 2008.

Kumaraguru, P., **Sheng, S.**, Acquisti, A., Cranor, L., and Hong, J. 2007. Getting Users Pay Attention to Anti-Phishing Education: Evaluation of Retention and Transfer. In *Proceedings of 2007 eCrime Research Summit*, 4-5 October 2007, Pittsburgh, PA

TECHNICAL
REPORTS
(AS AUTHORS /
EDITORS)

ICANN Root Server System Advisory Committee (RSSAC). (2014) Advisory on Measurements of the Root Server System. Los Angeles, CA: ICANN.

ICANN Security and Stability Advisory Committee (SSAC). (2014) Maintaining the Security and

Stability of the IANA Functions Through the Stewardship Transition. Los Angeles, CA: ICANN.

SSAC. (2014) The IANA Functions Contract. Los Angeles, CA: ICANN.

SSAC. (2014) Overview and History of IANA Functions. Los Angeles, CA: ICANN.

SSAC. (2014) Comment Concerning JAS Phase One Report on Mitigating the Risk of DNS Namespace Collisions. Los Angeles, CA: ICANN.

SSAC. (2014) Advisory on DDoS Attacks Leveraging DNS Infrastructure. Los Angeles, CA: ICANN.

SSAC. (2014) Advisory on Search List Processing. Los Angeles, CA: ICANN.

SSAC. (2013) Advisory Concerning the Mitigation of Name Collision Risk. Los Angeles, CA: ICANN.

SSAC. (2013) Comment on ICANN's Initial Report from the Expert Working Group on gTLD Directory Services. Los Angeles, CA: ICANN.

SSAC. (2013) Comment on Examining the User Experience Implications of Active Variant TLDs Report. Los Angeles, CA: ICANN.

SSAC. (2013) Report on Domain Name Registration Data Validation. Los Angeles, CA: ICANN.

SSAC. (2013) Advisory on Internal Name Certificates. Los Angeles, CA: ICANN.

SSAC. (2012) Advisory on the Delegation of IDN Single Character Top-Level Domains. Los Angeles, CA: ICANN.

SSAC. (2012) Report on Dotless Domains. Los Angeles, CA: ICANN.

SSAC. (2011) Report on Domain Name WHOIS Terminology and Structure. Los Angeles, CA: ICANN.

SSAC. (2011) Report on Root Scaling. Los Angeles, CA: ICANN.

SSAC. (2010) Report on Invalid Top Level Domain Queries at the Root Level of the Domain Name System.

INTERNET
STANDARDS

L. Zhou, N. Kong, S. Shen, S. Sheng and A. Servin. Domain Name Registration Data Access Protocol Object Inventory Analysis. RFC 7485, RFC Editor, March 2015.

W. Kumari, O. Gudmundsson, P. Ebersman, and S. Sheng. "Captive-Portal identification in DHCP / RA", IETF Work in Progress (draft-wkumari-dhc-capport), 2014.

SELECTED ICANN
PAPERS

Internet Corporation for Assigned Names and Numbers (ICANN). (2015) Final Report from the Expert Working Group on Internationalized Registration Data. Los Angeles, CA: ICANN.

ICANN. (2014) A Study to Evaluate Available Solutions for the Submission and Display of Internationalized Contact Data. Los Angeles, CA: ICANN.

ICANN. (2012) Roadmap to a New Domain Name Registration Data Access Protocol (WHOIS). Marina Del Rey, CA: ICANN.

ICANN. (2012) A Study of Issues Related to the Management of IDN Variant TLDs (Integrated Issues Report). Marina Del Rey, CA: ICANN.

ICANN. (2012) Final Report of Internationalized Registration Data Working Group. Marina Del Rey, CA: ICANN.

ICANN. (2011) Discussion Paper on the Creation of non-binding Best Practices to Help Registrars and Registries address the Abusive Registration of Domain Names. Marina Del Rey, CA: ICANN.

ICANN. (2011) Report on Chinese Variants in Internationalized Top-Level Domains. Marina Del

Rey, CA: ICANN.

ICANN. (2010) Technical Evolution of the Whois Service. Marina Del Rey, CA: ICANN.

ICANN. (2010) Inventory of Whois Service Requirement Final Report

Andrew Newton, Dave Piscitello, Benedetto Fiorelli and Steve Sheng, A RESTful Web Service for Internet Names and Address Directory Services. USENIX ;login, October 2011, Volume 36.

DISSERTATION

Sheng, S. A Policy Analysis for Phishing Countermeasures, Ph.D. Thesis, Carnegie Mellon University, September 20, 2009.

REFERENCES

Available upon request.