Peter Snyder

Department of Computer Science
University of Illinois at Chicago
Chicago, IL 60607
psnyde2@uic.edu

Research Interests

Computer Security, Privacy, and Cryptography

Education

Ph.D. Computer Science **2012 - Present**
University of Illinois at Chicago, Chicago, IL
Expected graduation date: Spring 2018

B.A. Political Science **2002 - 2006**
Lawrence University, Appleton, WI

Publications

Peter Snyder, Laura Watiker, Cynthia Taylor, and Chris Kanich. "CDF: Predictably Secure Web Documents." *In Proceedings of the 2017 IEEE Workshop on Technology and Consumer Protection* (ConPro, 2017).

Peter Snyder, Lara Ansari, Cynthia Taylor, and Chris Kanich. "Browser feature usage on the modern web." *In Proceedings of the 2016 ACM Internet Measurement Conference*, pp. 97–110 (IMC, 2016).

Peter Snyder and Chris Kanich. "No Please, After You: Detecting Fraud in Affiliate Marketing Networks." *In Workshop on the Economics of Information Security* (WEIS, 2015).

Jason W Clark, Peter Snyder, Damon McCoy, and Chris Kanich. "I Saw Images I Didn't Even Know I Had: Understanding User Perceptions of Cloud Storage Privacy." *In Proceedings of the 33rd ACM Conference on Human Factors in Computing Systems*, pp. 1641–1644 (CHI, 2015).

Peter Snyder. "Yaos Garbled Circuits: Recent Directions and Implementations." (2014).

Peter Snyder and Chris Kanich. "CloudSweeper: Enabling Data-Centric Document Management for Secure Cloud Archives." *In Proceedings of the 2013 ACM workshop on Cloud computing security workshop* (CCSW, 2013).

Research

Measuring the Amount and Costs of Browser Complexity
The modern web has seen an explosion in the number of browser features implemented and available to web developers. This research measures the increased complexity imposed by these new features, the usefulness of this added complexity to users and web authors, and the cost these new features entail to user privacy and security.

CRISP: Abstractions for Security Guarantees in Interactive Web Applications
Web users currently have few guarantees about the security properties of websites they visit, and the frequency and sophistication of attacks on web servers means that a site that is benign one day can become malicious the next, all invisibly to the client. This project investigates new web systems that prioritize client security and code predictability at minimal cost to web author expressivity.

Cloudsweeper **https://cloudsweeper.cs.uic.edu**
Developed tool to measure and mitigate the frequency of plaintext password sharing in Gmail archives. The public tool allows users to redact or encrypt-in-place found passwords. The site has had over 2,500 users and has secured over 38,000 messages.

Related Activities

Lead Instructor **2017**
CS 342: Software Design https://www.cs.uic.edu/ psnyder/cs342-summer2017/

IGERT Fellow **2013 - 2017**
Electronic Security and Privacy IGERT Fellow

Security Advisor **2015 - 2017**
Advisor for web and mobile application security for citizen reporting group TIMBY.org

External Reviewer **2017**
Reviewed papers for USENIX Security, 2017

President **2013 - 2014, 2015 - 2016**
UIC Computer Science Graduate Student Association

Founder **2015 - 2016**
UIC Cryptography and Privacy Reading Group

Invited Talk **2015**
Department of Information Engineering at the Chinese University of Hong Kong
No Please, After You: Detecting Fraud in Affiliate Marketing Networks

External Reviewer **2015**
Reviewed papers for IEEE Symposium on Security and Privacy 2016

External Reviewer **2015**
Reviewed papers for ACM Conference on Computer and Communications Security 2016

External Reviewer **2014**
Reviewed 3 papers for IEEE Symposium on Security and Privacy 2015

Invited Talk **2014**
No Secrets: Journalism in the Age of Surveillance
Surveillance Defense: Practical Steps for Security and Privacy

Invited Talk **2013**
University of Illinois at Chicago Security Lunch
Presented Dyer, Kevin P., et al. "Protocol misidentification made easy with format-transforming encryption."

Invited Talk **2013**
University of Illinois at Chicago Security Lunch
Presented AlFardan, Nadhem J., and Kenneth G. Paterson. "Lucky Thirteen: Breaking the TLS and DTLS Record Protocols."

Invited Talk **2013**
University of Illinois at Chicago Advanced Programming Seminar Series
Mirthful Mashups: Building Scaleable Web Applications

1st Place **2013**
Symantec Cyber Challenge Competition, a capture the flag style security competition. Competed in Symantec's national competition.

External Reviewer **2013**
Reviewed 2 papers for Network and Distributed System Security Symposium (NDSS)

Invited Talk **2012**
University of Illinois at Chicago Advanced Programming Seminar Series
Modern Web Development: From Angle Brackets to WebSockets