Peter Snyder

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University of Illinois at Chicago
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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 2017

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

Publications

Peter Snyder and Chris Kanich. "One Thing Leads To Another: Credential Based Privilege Escalation." (ACM Conference on Data and Application Security and Privacy (CODASPY), 2015).

Peter Snyder and Chris Kanich. "Cloudsweeper: Enabling Data-Centric Document Management for Secure Cloud Archives." (Greater Chicago Area Systems Research Workshop (GCASR), 2014).

Peter Snyder and Chris Kanich. "Cloudsweeper: Enabling Data-Centric Document Management for Secure Cloud Archives." *In Proceedings of the ACM Cloud Computing Security Workshop* (2013).

Research

Cloudsweeper **http://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.

Mining in Mailboxes: Credentials Worms In The Email Domain
Measured the viability of an email credential worm by searching for passwords in a small set of seed email accounts, testing if those passwords give access to new accounts, and then repeating the attack. Simulated this attack using a university's email archives.

Machine Learning for 8-Bit NES Song Writing **https://github.com/snyderp/nes-machine-learning**
Automatically generated new Nintendo chip-style songs using a collection corpus of classic NES sound tracks and a song synthesizer based on hidden Markov models and a Bayesian network.

Related Activities

IGERT Fellow **2013 - 2015**
Electronic Security and Privacy IGERT Fellow

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

President **2013 - 2014**
UIC Computer Science Graduate Student Association

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