# Peter Snyder

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## RESEARCH INTERESTS

I research web security and privacy, including browser hardening techniques and measuring how the growth of the Web API has impacted user privacy and security. This research supports my work on building access control systems for browser functionality and tools for deploying web applications that provide stronger privacy and security guarantees for users.

## 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, Cynthia Taylor, and Chris Kanich. "Most Websites Dont Need to Vibrate: A CostBenefit Approach to Improving Browser Security." *In Proceedings of the 2017 ACM Conference on Computer and Communications Security* (CCS, 2017).

Peter Snyder, Periwinkle Doerfler, Chris Kanich, and Damon McCoy. "Fifteen Minutes of Unwanted Fame: Detecting and Characterizing Doxing." *In Proceedings of the 2017 Internet Measurement Conference* (IMC, 2017).

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* (IMC, 2016).

Peter Snyder and Chris Kanich. "Characterizing Fraud and Its Ramifications in Affiliate Marketing Networks." *Journal of Cybersecurity* (2016).

Peter Snyder, Chris Kanich, and Michael K Reiter. "The Effect of Repeated Login Prompts on Phishing Susceptibility." *In Proceedings of the Workshop on Learning from Authoritative Security Experiment Results* (LASER, 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* (CHI, 2015).

Peter Snyder. "Yao's Garbled Circuits: Recent Directions and Implementations." *In Written Critique and Presentation Exam (qualifier) Report* (2014).

Peter Snyder and Chris Kanich. "Cloudsweeper and Data-centric Security." *ACM SIGCAS Computers and Society* (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* (CCSW, 2013).

## Other Contributions

**Fingerprinting Protection Improvements in Brave Browser**            **https://github.com/brave/browser-laptop**
Improved the technique used to block fingerprinting related Web API methods to reduce the impact on non-fingerprinting related code, and expanded the set of blocked Web API methods to cover five more, previously allowed, methods used for fingerprinting users.

**Dataset of Web API Use in Alexa 10k**            **http://imdc.datcat.org/collection/1-0723-8**
Public dataset documenting what Web API features are used on popular websites, both in a default web browser configuration, and with advertising blocking, and tracking blocking, extensions installed.

**CDF: Abstractions for Security Guarantees in Interactive Web Applications**            **https://github.com/bitslab/cdf**
Built client and server-side tools for implementing CDF, a document format for building dynamic, interactive web applications that provide increased security and privacy guarantees for users of commodity web browsers.

**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

**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

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

**1st Place**            **2013**
Symantec Cyber Challenge Competition, a capture the flag style security competition.

## External Reviewer

**2017**  USENIX Security

**2016**  S&P, CCS

**2015**  CCS

**2013**  NDSS