

# Marie Vasek

Assistant Professor of Computer Science  
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## Experience

University of New Mexico, Assistant Professor, 2017–present.

## Education

Ph.D. Computer Science, The University of Tulsa, 2017.

Dissertation Title: “Measuring Bitcoin-based Cybercrime”

Supervisor: Prof. Tyler Moore

M.S. Computer Science, Southern Methodist University, 2015.

B.A. Computer Science, Wellesley College, 2012.

Thesis Title: “Representing Expressive Types in Blocks Programming Languages”

Supervisor: Prof. Franklyn Turbak

## Research Interests

Security Economics, Cybercrime Measurement, Digital Currencies

## Refereed Journal Articles

1. **M. Vasek**, J. Wadleigh, and T. Moore. Hacking is not Random: A Case-Control Study of Webserver-Compromise Risk. In *IEEE Transactions on Dependable and Secure Computing*, 13(2):206-219, 2016.

## Refereed Conference Papers

2. A. Feder, N. Gandal, JT Hamrick, T. Moore, and **M. Vasek**. The Rise and Fall of Cryptocurrencies. In *Workshop on the Economics of Information Security*, June 2018.
3. **M. Vasek** and T. Moore. Analyzing the Bitcoin Ponzi Scheme Ecosystem. In *Workshop on Bitcoin and Blockchain Research*, March 2018.
4. **M. Vasek**, M. Weeden, and T. Moore. Measuring the Impact of Sharing Abuse Data with Web Hosting Providers. In *ACM Workshop on Information Sharing and Collaborative Security*, pages 71–80. ACM, October 2016.
5. **M. Vasek**, J. Bonneau, R. Castellucci, C. Keith, and T. Moore. The Bitcoin Brain Drain: Examining the Use and Abuse of Bitcoin Brain Wallets. In *Financial Cryptography and Data Security*, volume 9603 of *Lecture Notes in Computer Science*, pages 609–618. Springer, February 2016.
6. **M. Vasek** and T. Moore. There’s No Free Lunch, Even Using Bitcoin: Tracking the Popularity and Profits of Virtual Currency Scams. In *Financial Cryptography and Data Security*, volume 8975 of *Lecture Notes in Computer Science*, pages 44–61. Springer, January 2015.

7. **M. Vasek** and T. Moore. Identifying Risk Factors for Webserver Compromise. In *Financial Cryptography and Data Security*, volume 8437 of *Lecture Notes in Computer Science*, pages 326–345. Springer, March 2014.
8. **M. Vasek**, M. Thornton, and T. Moore. Empirical Analysis of Denial-of-Service Attacks in the Bitcoin Ecosystem. In *1st Workshop on Bitcoin Research*, volume 8438 of *Lecture Notes in Computer Science*, pages 57–71. Springer, March 2014.
9. B. Johnson, A. Laska, J. Grossklags, **M. Vasek**, and T. Moore. Game-Theoretic Analysis of DDoS Attacks Against Bitcoin Mining Pools. In *1st Workshop on Bitcoin Research*, volume 8438 of *Lecture Notes in Computer Science*, pages 72–86. Springer, March 2014.
10. **M. Vasek** and T. Moore. Empirical Analysis of Factors Affecting Malware URL Detection. In *8th APWG eCrime Researchers Summit (eCrime)*, September 2013.
11. **M. Vasek** and T. Moore. Do Malware Reports Expedite Cleanup? An Experimental Study. In *5th USENIX Workshop on Cyber Security Experimentation and Test (CSET)*, August 2012.

## Other Papers

12. **M. Vasek**. Book Review: The Age of Cryptocurrency. In *Science*, June 2015.

## Externally Funded Research

1. Marie Vasek (PI) and Neil Gandal (PI): ‘Detecting Cryptocurrency Scams and Measuring Cryptocurrency Quality’. Tel Aviv University ICRC. Duration: December 2018 – December 2020. Award amount: \$106,990 (UNM portion \$55,000).

## Honors & Awards

Google Anita Borg Memorial Scholarship	2016
Frederick E. Terman Award for Departmental Service	2013
Computer Science Academic Excellence Award	2012
<i>Awarded to the top graduating computer science major as voted by the faculty</i>	
Departmental Honors in Computer Science	2012
Sigma Xi	2012

## Selected Presentations

- ”Analyzing the Bitcoin Ponzi scheme ecosystem”. Invited panelist at CRESSE conference, Crete, Greece. June 29, 2018.
- Panelist for FTC workshop on Decrypting Cryptocurrency Scams, Chicago, IL. June 25, 2018.
- “Measuring the Use and Abuse of Brain Wallets” with Ryan Castellucci. Presentation at BSides Las Vegas, Las Vegas, NV. July 25, 2017.
- “The Promises and Perils of Bitcoin”. Invited talk at Wellesley College, Wellesley, MA. March 13, 2015.
- “Hacking is not random: A case-control study of webserver-compromise risk”. Invited talk at University of Trento, Trento, Italy. December 2, 2014.

“Identifying Risk Factors for Webserver Compromise”. Invited talk at University of Cambridge, Cambridge, UK. November 19, 2014.

“Representing Expressive Types in Blocks Programming Languages”. Presentation at New England Programming Languages and Systems Symposium Series (NEPLS), Portland, ME. June 1, 2012.

## **Advising**

### **Ph.D. Students, as Primary Advisor**

Nick Leathe (Expected Graduation Spring 2022)

### **Ph.D. Students, as Committee Member**

Tony Espinoza (Fall 2018)

### **Undergraduate Research Students**

Simon Spangenberg

Farhang Rouhi

Daniel Miller

Jacob McCullough

Andrew Morin

Jessica Li

## **Teaching**

### **The University of New Mexico**

Data Organization in C: Fall 2018, Spring 2018

Introduction to Cybersecurity: Fall 2017

### **Southern Methodist University**

Fundamentals of Algorithms: Spring 2015 (adjunct professor)

## **Professional Activities**

### **Research Scientist**

StopBadware, 2013-present

### **Program Co-Chair**

Workshop on Attackers and Cyber-Crime Operations (2019)

### **Program Committee Member:**

Financial Cryptography and Data Security (2019)

Workshop on the Economics of Information Security (2018, 2019)

WWW Security and Privacy track (2017)

**Journal Reviewer:**

ACM Transactions on Privacy and Security

Computers & Security

Journal of Cybersecurity

**External Reviewer:**

International Conference On Information Systems (2018)

Workshop on Bitcoin Research (2017)

Financial Cryptography and Data Security (2016)

Usenix Security (2015)