Marie Vasek

Lecturer in Information Security
Department of Computer Science
University College London
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Experience

University College London, Lecturer in Information Security, 2019–Present.

University of New Mexico, Assistant Professor of Computer Science, 2017–2019.

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: Dr. Franklyn Turbak

Research Interests

Security Economics, Cybercrime Measurement, Digital Currencies

Refereed Journal Articles

1. A. Fuller, **M. Vasek**, E. Mariconti, and S. Johnson. Understanding and preventing the advertisement and sale of illicit drugs to young people through social media: A multidisciplinary scoping review. In *Drug and Alcohol Review*, 43(1):56-74, 2024.

2. JT Hamrick, F. Rouhi, A. Mukherjee, A. Feder, N. Gandal, T. Moore, and **M. Vasek**. An Examination of the Cryptocurrency Pump-and-Dump Ecosystem. In *Information Processing & Management*, 58(4), 102506, July 2021.

3. N. Gandal, JT Hamrick, T. Moore, and **M. Vasek**. The Rise and Fall of Cryptocurrency Coins and Tokens. In *Decisions in Economics and Finance*, June 2021.

4. **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

5. M. Ordekian, G. Atondo Siu, A. Hutchings, and **M. Vasek**. Investigating Wrench Attacks: Physical Attacks Targeting Cryptocurrency Users. In *Advances in Financial Technologies*, September 2024.

6. K. Beadle and **M. Vasek**. Peer Surveillance in Online Communities. In *7th Workshop on Inclusive Privacy and Security*, July 2023.

7. M. Ordekian, I. Becker, and **M. Vasek**. Shaping Cryptocurrency Gatekeepers with a Regulatory "Trial and Error". In *4th Workshop on the Coordination of Decentralized Finance*, May 2023.

8. S. Agarwal, G. Atondo Siu, M. Ordekian, A. Hutchings, E. Mariconti, and **M. Vasek**. DeFi Deception – Uncovering the prevalence of rugpulls in cryptocurrency projects. In *Financial Cryptography and Data Security*, May 2023.

9. G. Atondo Siu, A. Hutchings, **M. Vasek**, and T. Moore. "Invest in crypto!": An analysis of investment scam advertisements found in Bitcointalk. In *Symposium on Electronic Crime Research (eCrime)*, November 2022.

10. A. Eusebi, **M. Vasek**, E. Cockbain, and E. Mariconti. The Ethics of Going Deep: Machine Learning for Sensitive Security Domains. In *1st Workshop on Ethics in Computer Security*, June 2022.

11. S. Agarwal and **M. Vasek**. Investigating the concentration of High Yield Investment Programs in the United Kingdom. In *4th Workshop on Attackers and Cyber-Crime Operations*, June 2022.

12. JT Hamrick, F. Rouhi, A. Mukherjee, **M. Vasek**, T. Moore, and N. Gandal. Analyzing Target-Based Cryptocurrency Pump and Dump Schemes. In *Proceedings of the 2021 ACM CCS Workshop on Decentralized Finance and Security*, November 2021.

13. A. Morin, **M. Vasek**, and T. Moore. Detecting Text Reuse in Cryptocurrency Whitepapers. In *IEEE International Conference on Blockchain and Cryptocurrency*, May 2021.

14. JT Hamrick, F. Rouhi, A. Mukherjee, A. Feder, N. Gandal, T. Moore, and **M. Vasek**. The Economics of Cryptocurrency Pump and Dump Schemes. In *Workshop on the Economics of Information Security*, June 2019.

15. R. Anderson, C. Barton, R. Böhme, R. Clayton, C. Gañán, T. Grasso, M. Levi, T. Moore, and **M. Vasek**. Measuring the Changing Cost of Cybercrime. In *Workshop on the Economics of Information Security*, June 2019.

16. 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.

17. **M. Vasek** and T. Moore. Analyzing the Bitcoin Ponzi Scheme Ecosystem. In *Workshop on Bitcoin and Blockchain Research*, March 2018.

18. **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.

19. **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.

20. **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.

21. **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.

22. **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.

23. 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.

24. **M. Vasek** and T. Moore. Empirical Analysis of Factors Affecting Malware URL Detection. In *8th APWG eCrime Researchers Summit (eCrime)*, September 2013.

25. **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

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

Externally Funded Research

1. Marie Vasek (PI): 'CRII: SATC: Identifying Fraud in the Cryptocurrency Ecosystem'. National Science Foundation. Duration: August 2019 - July 2021. Award amount: $174,576.

2. 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
Awarded to the top graduating computer science major as voted by the faculty	
Departmental Honors in Computer Science	2012
Sigma Xi	2012

Selected Presentations

"Shaping Cryptocurrency Gatekeepers with a Regulatory "Trial and Error"". Invited talk at Oxford Internet Policy & Politics Conference, Oxford, UK. January 21, 2023.

"Measuring Cryptocurrency Fraud". Invited talk at Cambridge University, Cambridge, UK. February 18, 2020.

"Cryptocurrencies and Cybercrime: Splintering the Value Chain". Invited Panelist at Microsoft Digital Crimes Consortium conference, Lisbon, PT, March 26, 2019.

"The Rise and Fall of Cryptocurrencies". Invited talk at Emory University, Atlanta, GA. October 19, 2018. Invited talk at the University of Innsbruck, Innsbruck, AT. November 8, 2018.

"Analyzing the Bitcoin Ponzi scheme ecosystem". Invited panelist at CRESSE conference, Crete, Greece. June 29, 2018.

Invited 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

Kyle Beadle (2022 - present, with Leonie Tanczer and Mark Warner)

Sharad Agarwal (2022 - present, with Steven Murdoch)

Marilyne Ordekian (2021 - present, with Ingolf Becker)

Ph.D. Students, as Secondary Advisor

Aliai Eusebi (2021 - present, with Enrico Mariconti and Ella Cockbain)

Ashly Fuller (2021 - present, with Shane Johnson and Enrico Mariconti)

Ph.D. Students, as Examiner

Nissy Sombatruang. "Economic drivers in security decisions", UCL Computer Science, 2020.

Antonio Espinoza. "The nature of ephemeral secrets in reverse engineering tasks", UNM Computer Science, 2019.

Undergraduate Research Students

Eileen Sprague (UCL), Harmony Yap (UCL), Simon Spangenberg (UNM), Farhang Rouhi (UNM), Daniel Miller (UNM), Jacob McCullough (UNM), Andrew Morin (UNM), Jessica Li (UNM), Ashley Mayle (UNM), Jamini Sahu (UNM)

Teaching

University College London

Computer Security I (COMP0054): Fall 2020, Fall 2021, Fall 2022

Research in Information Security (COMP0057): Spring 2020 (with Philipp Jovanovic), Spring 2021, Spring 2022 (with Lorenzo Cavallaro), Spring 2023 (with Lorenzo Cavallaro)

Cryptocurrencies (COMP0143): Fall 2021 (with Philipp Jovanovic), Fall 2022 (with Philipp Jovanovic)

Undergraduate Security (COMP0141): Spring 2020 (with Simon Parkin)

The University of New Mexico

Data Organization in C: Fall 2018, Spring 2018

Introduction to Cybersecurity: Spring 2019, Fall 2017

Southern Methodist University

Fundamentals of Algorithms: Spring 2015 (adjunct professor)

Professional Activities

Program Co-Chair

Dagstuhl Seminar on Security of Decentralized Financial Technologies (2022, cancelled 2021, cancelled 2020)

Security and Privacy on the Blockchain (2021)

Workshop on Attackers and Cyber-Crime Operations (2019, 2020)

Program Committee Member:

ACM Conference on Advances in Financial Technologies (2020, 2023, 2024)

Financial Cryptography and Data Security (2019, 2020, 2022, 2023)

Decentralized Finance and Security Workshop (2021, 2022, 2023)

IEEE Security & Privacy (2021)

Workshop on the Economics of Information Security (2018, 2019, 2020)

APWG eCrime Workshop (2020)

USENIX Workshop on Cyber Security Experimentation and Test (2020)

IEEE Security & Privacy on the Blockchain (2019, 2020)

Crypto Valley Blockchain Conference (2019)

WWW Security and Privacy track (2017)

Journal Reviewer:

Scientific Reports - Nature

ACM Transactions on Privacy and Security

Computers & Security

Journal of Cybersecurity

others

Relevant Industry Work

StopBadware *Co-Director* 2016-20, *Research Scientist* 2013-16, *Intern* 2011-12

Anti-Phishing Working Group *Intern* 2013-14