

QINGYING HAO

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RESEARCH INTERESTS

Security and Privacy; Machine Learning; Data-driven Security

EDUCATION

University of Illinois Urbana Champaign, Champaign, IL	2019 - Now
Virginia Tech, Blacksburg, VA	2018 - 2019
Ph.D. in Computer Science Advisor: Gang Wang	
Jonhs Hopkins University, Homewood, MD	2015 - 2017
M.S. in Information Security	
University of Washington Seattle, Seattle, WA	2011 - 2015
B.S. in Information Science	

PUBLICATIONS

- [WWW 2024] Ying Yuan, **Qingying Hao**, Mauro Conti, Giovanni Apruzzese, Gang Wang. “Are Adversarial Phishing Webpages a Threat in Reality?”. In Proceeding of *The ACM Web Conference (WWW)*, Singapore, May 2024.
- [Usenix Sec. 2023] Xiaojun Xu, **Qingying Hao**, Zhuolin Yang, Bo Li, David Liebovitz, Gang Wang, Carl Gunter. “How to Cover up Anomalous Accesses to Electronic Health Records”. In Proceeding of *The 32nd USENIX Security Symposium (USENIX Security)*, Anaheim, CA, August 2023.
- [CCS 2021] **Qingying Hao**, Licheng Luo, Steve TK Jan, Gang Wang. “It’s Not What It Looks Like: Manipulating Perceptual Hashing based Applications”. In Proceeding of *The ACM Conference on Computer and Communications Security (CCS)*, Seoul, South Korea, November 2021.
- [Usenix Sec. 2021] Limin Yang, Wenbo Guo, **Qingying Hao**, Arridhana Ciptadi, Ali Ahmadzadeh, Xinyu Xing, Gang Wang. “CADE: Detecting and Explaining Concept Drift Samples for Security Applications”. In Proceedings of *The 30th USENIX Security Symposium (USENIX Security)*, Vancouver, BC, Canada, August 2021.
- [IEEE SP 2020] Steve T.K. Jan, **Qingying Hao**, Tianrui Hu, Jiameng Pu, Gang Wang, and Bimal Viswanath. “Throwing Darts in the Dark? Detecting Bots with Limited Data using Neural Data Augmentation”. In Proceedings of *The 41st IEEE Symposium on Security and Privacy (IEEE SP)*, San Francisco, CA, May 2020.
- [IDSC 2019] Ya Xiao, **Qingying Hao**, Danfeng Yao. “Neural Cryptanalysis: Metrics, Methodology, and Applications in CPS Ciphers”. In Proceedings of *The IEEE Conference on Dependable and Secure Computing (IDSC)*, Hangzhou, China, November 2019.
- [CAC 2017] Yuqing Yu, **Qingying Hao**, Ping Hao. “The Research and Application of Enterprises’ Dynamic Risk Monitoring and Assessment Model Based on Related Time Series”. In Proceedings of *The Chinese Automation Congress Intelligent Manufacturing International Conference (CAC)*, Jinan, China, October 2017.

AWARDS AND HONORS

- CCS 2021 Student Travel Grant (iMentor)
- UW Dean’s List 2011 - 2015

EXPERIENCE

eBay - Research Consultant October 2023 - Present

- eBay-UIUC collaboration research on time-shift anomalous transaction detection.

Information Security Lab, Chinese Academy of Sciences - Research Assistant

June 2017 - May 2018

- Researched on improving a public lattice-based cryptography algorithm for efficient crypto computations.

Gongyue Information and Technology - Risk Analysis Intern

January 17 - May 17

- Designed and developed a time-series based risk monitoring and alert generation model for local dyeing enterprises.

PATENTS

- Bimal Viswanath, Arik Hadass, Sonal Oswal, Jiameng Pu, Tianrui Hu, Gang Wang, Steve Jan, **Qingying Hao**. “ A Method to Detect Web Bots with Limited Data Using Neural Network”. Filed by VTIP. IP Disclosure: 02/04/2020. # VTIP 20-061.

TALKS

- Use Machine Learning Techniques to Subvert Perceptual Hashing Based Application. *ZheJiang University Machine Learning Security Seminar*, Hangzhou, China, March 2022.
- Adversarial Attacks Against Perceptual Hashing. *ISG Research Seminars*, UK, Virtual, January 2022.
- “It’s Not What It Looks Like: Manipulating Perceptual Hashing based Applications”. The *ACM Conference on Computer and Communications Security (CCS)*, Seoul, South Korea, November 2021.

PROFESSIONAL SERVICE

Journal Reviewer

- [TDSC] IEEE Transactions on Dependable and Secure Computing 2022

CODE AND DATASET RELEASE

- “It’s Not What It Looks Like: Manipulating Perceptual Hashing based Applications”.
<https://github.com/gyNancy/phash>
- “CADE: Contrastive Autoencoder for Drifting detection and Explanation”.
<https://github.com/whyisyoung/CADE>

TEACHING

- Teaching Assistant CS 498: Internet of Things. UIUC (online) Spring 2022
- Teaching Assistant CS 1114: Introduction to Software Design. Virginia Tech Srping 2019
- Teaching Assistant CS 4254: Network Architecture Programming. Virginia Tech Fall 2018