

# Qingying Hao

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<b>EDUCATION</b>	<b>University of Illinois-Champaign</b> , Urbana, IL	Aug 2019-Present
	<i>Ph.D. in Computer Science</i> Advisor: Dr.Gang Wang	
	<b>Virginia Tech</b> , Blacksburg, VA	Aug 2018-Aug 2019
	<i>Ph.D. in Computer Science</i> Advisor: Dr.Gang Wang	
	<b>Johns Hopkins University</b> , Baltimore, MD	Aug 2015-Dec 2016
	<i>M.S. in Information Security</i>	
	<b>University of Washington Seattle</b> , Seattle, WA	Aug 2011-Jun 2015
	<i>B.S. in Information Science</i>	

## PUBLICATIONS

- 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.
- 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.
- 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.
- 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.
- Ping Hao, Zhou Zheng, **Qingying Hao**, Yuqing Yu. “Research and Application of Intelligent Electronic Risk Monitoring Model” *Journal of Zhejiang University of Technology*, March 2018.

## RESEARCH EXPERIENCE

<b>Research Assistant, UIUC</b>	Dec 19-Now
<ul style="list-style-type: none"><li>• Evaluate the robustness of various image based hash algorithms in adversarial attack settings</li><li>• Launch attacks on various image hash algorithms in controlled experiments and real-world image retrieval systems. Explore the use of image based hash algorithms in security literature and commercial image retrieval systems</li></ul>	
<b>Research Assistant, Virginia Tech</b>	Oct 18-Nov 19
<ul style="list-style-type: none"><li>• Built a real-time bots detection system in complement with traditional rule-based methods to catch mutating bots using real-world users’ clickstream data</li><li>• Implemented frequency feature encoding methods on data items for knowledge transferrable and data privacy-preserving</li><li>• Developed a data synthesis method with limited data for bots detection in unknown spaces</li><li>• Explored effects of adversarial samples and transfer learning on bots detection</li></ul>	

**Information Security Lab, Chinese Academy of Sciences** June 17-May 18

- Implemented a public lattice-based cryptography algorithm for online data privacy using number theory libraries
- Researched on improving the current cryptography algorithm for more efficient encryption/ decryption and accelerated computations

**Information Security Institute, Johns Hopkins University** Jun 16-Oct 16

- Identified new phishing indicators that would impact users' cognition in distinguishing spear phishing emails from legitimate ones
- Built a Webmail server, collected users' email logs through several web proxies and conducted user study
- Implemented a data analysis framework to understand users' behaviors

**PROJECT** **Windows Security logs Visualization** Oct 16-Dec 16

- Created a dashboard showing time-series based security alerts based on Windows system logs using predefined security rules
- Used Tableau for alerts and logs distribution visualization

**Turnip: Special Dietary Food Search Engine Website** Jan 15-Jun 15

- Built a food search engine website around the UW campus for people who have special dietary needs; and created wireframes, high-fidelity prototypes for the website

**WORK EXPERIENCE** **Risk Analysis Intern, Gongyue Information and Technology Co. Ltd, Zhejiang** Jan 17-May 17

- Designed time-series based business risk monitoring and assessment model for local enterprises which would generate multi-leveled alerts
- Collected, processed, analyzed and presented enterprises' business risk data evaluation results

**TA EXPERIENCE** CS 4254: Network Architecture Programming Fall 2018  
CS 1114: Introduction to Software Design Spring 2019

**AWARDS** Dean's List awarded by University of Washington Seattle (2012/2013/2014/2015)