

# Yiming Zhang

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## RESEARCH CAREER

**Postdoc Tsinghua University, China, 2022-Now**  
Institute of Network Sciences and Cyberspace at Tsinghua University  
- *With Prof. Haixin Duan*

## EDUCATION

**Ph.D. Tsinghua University, China, 2017-2022**  
Ph.D. in Department of Computer Science and Technology  
- *Thesis: Vulnerability Analysis and Measurement Study of Authentication Mechanisms in the Mobile Communication Network Evolution*  
- *Advisor: Prof. Haixin Duan*

**B.S. Tsinghua University, China, 2013-2017**  
B.S. in Department of Physics  
Major in Fundamental Science of Mathematics and Physics; Rank: 9/56  
Minor in Computer Science and Technology

## RESEARCH INTEREST

**Internet Infrastructure Security; Cellular Communication System Security; Measurement Study; Data Driven Security**

## PUBLICATIONS

### Conference Papers

10. Mingxuan Liu, **Yiming Zhang**, Baojun Liu, Haixin Duan. *Exploring the Characteristics and Security Risks of Emerging Emoji Domain Names*. In European Symposium on Research in Computer Security (**ESORICS**), 2022.
9. **Yiming Zhang**, Mingxuan Liu, Mingming Zhang, Chaoyi Lu, Haixin Duan. *Ethics in Security Research: Visions, Reality, and Paths Forward*. In Proceedings of the 1st International Workshop on Ethics in Computer Security (**EthiCS**), 2022.
8. Shiyue Nie, **Yiming Zhang**, Tao Wan, Haixin Duan, Song Li. *Measuring the Deployment of 5G Security Enhancement*. In Proceedings of the 15th ACM Conference on Security and Privacy in Wireless and Mobile Networks (**WiSec**), 2022.
7. Mingxuan Liu, **Yiming Zhang**, Baojun Liu, Zhou Li, Haixin Duan, and Donghong Sun. *Detecting and Characterizing SMS Spearphishing Attacks*. In Annual Computer Security Applications Conference (**ACSAC**), 2021.

6. **Yiming Zhang**, Baojun Liu, Chaoyi Lu, Zhou Li, Haixin Duan, Jiachen Li, and Zaifeng Zhang. *Rusted Anchors: A National Client-Side View of Hidden Root CAs in the Web PKI Ecosystem*. In Proceedings of the 2021 ACM SIGSAC Conference on Computer and Communications Security (**CCS**), 2021.
5. Hui Gao, **Yiming Zhang**, Tao Wan, Jia Zhang, and Haixin Duan. *On Evaluating Delegated Digital Signing of Broadcasting Messages in 5G*. In 2021 IEEE Global Communications Conference (**GLOBECOM**), 2021.
4. Chaoyi Lu, Baojun Liu, **Yiming Zhang**, Zhou Li, Fenglu Zhang, Haixin Duan, Ying Liu, Joann Qionga Chen, Jinjin Liang, Zaifeng Zhang, Shuang Hao, and Min Yang. *From WHOIS to WHOWAS: A Large-Scale Measurement Study of Domain Registration Privacy under the GDPR*. In Proceedings of the 28th Annual Network and Distributed System Security Symposium (**NDSS**), 2021.
3. **Yiming Zhang**, Baojun Liu, Chaoyi Lu, Zhou Li, Haixin Duan, Shuang Hao, Mingxuan Liu, Ying Liu, Dong Wang and Qiang Li. *Lies in the Air: Characterizing Fake-base-station Spam Ecosystem in China*. In Proceedings of the 2020 ACM SIGSAC Conference on Computer and Communications Security (**CCS**), 2020.
2. Zihan Zhang, Mingxuan Liu, Chao Zhang, **Yiming Zhang**, Zhou Li, Qi Li, Haixin Duan, and Donghong Sun. *Argot: Generating Adversarial Readable Chinese Texts*. In Proceedings of the Twenty-Ninth International Joint Conference on Artificial Intelligence (**IJCAI**), 2020.
1. Baojun Liu, Zhou Li, Peiyuan Zong, Chaoyi Lu, Haixin Duan, Ying Liu, Sumayah Alrwais, Xiaofeng Wang, Shuang Hao, Yaoqi Jia, **Yiming Zhang**, Kai Chen and Zaifeng Zhang. *TrafficStop: Detecting and Measuring Illicit Traffic Monetization Through Large-scale DNS Analysis*. In 2019 IEEE European Symposium on Security and Privacy (**EuroS&P**), 2019.

#### Journal Articles

2. Mingxuan Liu, Zihan Zhang, **Yiming Zhang**, Chao Zhang, Zhou Li, Qi Li, Haixin Duan and Donghong Sun. *Automatic Generation of Adversarial Readable Chinese Texts*. In IEEE Transactions on Dependable and Secure Computing (**TDSC**), 2022.
1. Yu Wang, **Yiming Zhang**, Jia Zhang, Haixin Duan. *Study on Promotional Infections Hosting on Educational Websites*. In Journal on Communications, 2018.

#### Patents

1. **Yiming Zhang**, Baojun Liu, Chaoyi Lu, Haixin Duan, Jiachen Li and Wu Liu. *A Method and Appliance for Detecting the Security of Network Access*. Chinese patent 202111284859.6.

#### INVITED TALKS

- 2021 **Ethics in Cybersecurity and Network Measurement Research**.  
Institute of Computing Technology, Chinese Academy of Sciences, Beijing, China.
- 2020 **Lies in the Air: Characterizing Fake-base-station Spam Ecosystem in China**.  
Tsinghua University, Beijing, China.

## CONFERENCE ACTIVITY

### Conference Papers Presented<sup>1</sup>

- 2021 **Yiming Zhang**, Baojun Liu, Chaoyi Lu, Zhou Li, Haixin Duan, Jiachen Li, and Zaifeng Zhang. *Rusted Anchors: A National Client-Side View of Hidden Root CAs in the Web PKI Ecosystem*. In Proceedings of the 2021 ACM SIGSAC Conference on Computer and Communications Security (**CCS**), 2021.
- 2020 **Yiming Zhang**, Baojun Liu, Chaoyi Lu, Zhou Li, Haixin Duan, Shuang Hao, Mingxuan Liu, Ying Liu, Dong Wang and Qiang Li. *Lies in the Air: Characterizing Fake-base-station Spam Ecosystem in China*. In Proceedings of the 2020 ACM SIGSAC Conference on Computer and Communications Security (**CCS**), 2020.

### Invited Panelist

- 2021 **Ethical Considerations in Cyberspace Security Research**.  
International Forum for Security Research. Beijing, China.

## HONORS AND AWARDS

- 2022 Shuimu Tsinghua Scholar, Tsinghua University.
- 2022 Best Student Paper Award, EthiCS' 22 (Euro S&P Workshop).
- 2019 State Scholarship Fund, China Scholarship Council.
- 2019 First Prize in Next Generation Internet Technology Innovation Competition, CERNET.
- 2018 Tsinghua-Samsung Scholarship, Tsinghua University.
- 2018 Outstanding Student Cadre, Tsinghua University.
- 2016 National Scholarship, Ministry of Education, China.

## SERVICE

### Academic Conference External Review

NDSS 2020, 2022

DSN 2020

ESORICS 2018, 2019

ICICS 2019

## MEDIA

- 2022 **APNIC Blog**. Investigating hidden root certificates in the wild.
- 2021 **The Register**. Web trust dies in darkness: Hidden Certificate Authorities undermine public crypto infrastructure.
- 2021 **HelpNetSecurity**. Researchers shed light on hidden root CAs.

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<sup>1</sup>Oral presentation as the speaker

## **EXPERIENCE**

- 2019 Research Intern, Industrial Internet Security Research Center, Qihoo 360, Beijing, China.
- 2018 Research Intern, Technology Research Institute, QI-ANXIN, Beijing, China.
- 2017-20 Undergraduate Student Counselor, Tsinghua University.

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