ZIQIAO ZHOU

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RESEARCH INTERSTS

System security and privary problems, including cloud security, static analysis, and formal methods.

EDUCATION

The University of North Carolina, Chapel Hill, NC, USA Aug. 2014 - July. 2020
Ph.D. and M.S. in Computer Science advised by Michael Reiter
Thesis: Evaluating Information Leakage by Quantitative and Interpretable Measurements

Shanghai Jiao Tong University, Shanghai, China Sep. 2010 - Jun. 2014
B.Eng. in Information Security Engineering

EXPERIENCE

Microsoft Research June. 2021 - Current
Senior Researcher *Redmond, WA*
- System Security and Privacy Research

Google LLC Aug. 2020 - May. 2021
Software Engineer *Sunnyvale, CA*
- Platforms Security

University of North Carolina Aug. 2014 - July. 2020
Research assistant advised by Michael Reiter *Chapel Hill, NC, USA*
- Measuring and interpreting information leakage in hardware implementation.
- Quantifying information leakage in software using symbolic execution and model counting.
- Mitigating cache-based side channels.

Google LLC May 2019 - Aug. 2019
Software engineering intern advised by Michael Vrable *Sunnyvale, CA, USA*
· Enforcing booting security for multi-version softwares.

NEC Laboratories America Inc. May 2018 - Aug. 2018
Research intern advised by Junghwan Rhee *Princeton, NJ, USA*
- Research topic: A protocol-independent traffic anomaly detection in OT system.

Shanghai Jiao Tong University Jun. 2012 - Jun. 2014
Undergraduate research assistant advised by Pin Yi *Shanghai, China*
- Research topic: Context-aware localization systems.

SCIENTIFIC PUBLICATIONS

- **Z. Zhou** and M. K. Reiter. Interpretable Noninterference Measurement and its Application to Processor Designs. *36th SIGPLAN International Conference on Object Oriented Programming Systems Languages & Applications*, Nov., 2021.
- J. Rhee, L. Tang, Z. Chen, C. Kim, Z. Li, **Z. Zhou**,Protocol-independent anomaly detection. US Patent App., 16/535,521, Feb., 2020.

- **Z. Zhou**, Z. Qian, M. K. Reiter, and Y. Zhang. Static evaluation of noninterference using approximate model counting. *39th IEEE Symposium on Security and Privacy*, May, 2018 (acceptance rate 11.5% = 63/549) .
- **Z. Zhou**, M. K. Reiter, and Y. Zhang. A software approach to defeating side channels in last-level caches. *23rd ACM Conference on Computer and Communications Security*, Oct., 2016 (acceptance rate 16.5% = 137/831).
- Q. Zhang, Y. Yao, T. Zhu, **Z. Zhou**, W. Xu, P. Yi, S. Xiao. Dynamic Enhanced Field Division: An Advanced Localizing and Tracking Middleware. *the ACM Transactions on Sensor Networks*, Dec., 2018.
- Q. Zhang and W. Xu and Z. Huang and **Z. Zhou** and P. Yi and T. Zhu and S. Xiao Context-Centric Target Localization with Optimal Anchor Deployments. *5th International Green Computing Conference*, Nov., 2014 (acceptance rate 20.5% = 39/190).
- Q. Zhang, **Z. Zhou**, W. Xu, J. Qi, C. Guo, P. Yi, T. Zhu, and S. Xiao. Fingerprint-free tracking with dynamic enhanced field division. *34th IEEE Conference on Computer Communications*, Apr., 2015 (acceptance rate 20.5% = 39/190).
- P. Yi, M. Yu, **Z. Zhou**, W. Xu, Q. Zhang, T. Zhu. A three-dimensional wireless indoor localization system. *Journal of Electrical and Computer Engineering*, Jan., 2014.
- **Z. Zhou**, M. Xie, T. Zhu, W. Xu, P. Yi, Z. Huang, Q. Zhang, and S. Xiao. EEP2P: An energy-efficient and economy-efficient P2P network protocol. *5th International Green Computing Conference*, Nov., 2014 (acceptance rate 19.3% = 316/1,640).

POSTERS & TALK

- **Interpretable Noninterference Measurement and its Application to Processor Designs.** Talk, *2nd Annual Workshop of the Side Channel Academic Programme*, Online, Sep., 2020.
- **Static evaluation of noninterference in the RISCV CPU using approximate model counting.** Poster, *1st Annual Workshop of the Side Channel Academic Programme*, Hillsboro, OR, USA, Jun., 2019.
- **Static evaluation of noninterference using approximate model counting.** Talk, *IEEE Symposium on Security and Privacy (S&P)*, San Francisco, CA, USA, May, 2018.
- **Software Approach to Defeating Side Channels in Last-Level Caches.** Talk, *ACM Conference on Computer and Communications Security (CCS)*, Vienna, Austria, Oct., 2016.
- **CacheBar : A Software Approach to Defeating Side Channels in Last-Level Caches.** Poster, *Cloud Security Horizons (CSH) Summit*, New York, USA, Mar., 2016.

HONORS & AWARDS

- **Shanghai Jiao Tong University Scholarship**, 2013.
- **Tencent Innovation Scholarship**, 2012.
- **Shanghai Jiao Tong University Scholarship**, 2011.
- **First Prize in Student Computer Robotics Competition, Hubei, China**, 2008.

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