

# Yaoqi JIA

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## CONTACT INFORMATION

COM1-03-27, 13 Computing Drive  
Department of Computer Science  
National University of Singapore

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WWW: [www.comp.nus.edu.sg/~jiayaoqi](http://www.comp.nus.edu.sg/~jiayaoqi)

## RESEARCH INTERESTS

Distributed System Security; Network Security; Web Security & Privacy.  
My present focus is on decentralizing the web in a secure/scalable/incentivized/privacy-preserving manner. During my Ph.D., I have proposed solutions to secure the web infrastructure, i.e., addressing privacy/consensus issues in web overlays using cryptographic/hardware primitives and discovering new attack vectors in web browsers, respectively.

## SKILLS

C/C++, Java, Python, JavaScript and PHP. Using Vim on Linux & Mac OS.

## EDUCATION

**National University of Singapore**, Singapore

Ph.D. Candidate, Computer Science, August 2012 - July 2017

- CAP: 4.59 / 5.0 (Highest Distinction)
- Advisor: [Zhenkai Liang](#) & [Prateek Saxena](#)

**Huazhong University of Science & Technology**, China

B.E., Computer Science, August 2008 - July 2012

- Grade: 90 / 100 (Rank: 1 / 93)

## PROFESSIONAL EXPERIENCE

*Blockchain Architect & Co-founder*  
Zilliqa Research, Singapore.

October, 2017 - Present

*Research Fellow*  
National University of Singapore, Singapore.

August, 2017 - October, 2017

*Research Assistant*  
National University of Singapore, Singapore.

August, 2016 - July, 2017

*Research Internship*  
Anquan Capital, Singapore.

June, 2016 - September, 2016

## PUBLICATIONS: PEER-REVIEWED CONFERENCES & JOURNALS

The “Web/Local” Boundary Is Fuzzy: A Security Study of Chrome’s Process-based Sandboxing  
**Yaoqi Jia**, Zheng Leong Chua, Hong Hu, Shuo Chen, Prateek Saxena and Zhenkai Liang.  
In the 23rd ACM Conference on Computer and Communications Security (CCS 2016)

OBLIVP2P: An Oblivious Peer-to-Peer Content Sharing System  
**Yaoqi Jia**, Tarik Moataz, Shruti Tople and Prateek Saxena.  
In the 25th USENIX Security Symposium (Usenix Security 2016)

Anonymity in Peer-assisted CDNs: Inference Attacks and Mitigation  
**Yaoqi Jia**, Guangdong Bai, Prateek Saxena and Zhenkai Liang.  
In the 16th Privacy Enhancing Technologies Symposium (PETS 2016)

Toward Exposing Timing-based Probing Attacks in Web Applications  
Jian Mao, Yue Chen, Futian Shi, **Yaoqi Jia** and Zhenkai Liang.  
In the 11th International Conference on Wireless Algorithms, Systems, & Applications (WASA 2016)

Man-In-The-Browser-Cache: Persisting HTTPS Attacks via Browser Cache Poisoning  
**Yaoqi Jia**, Yue Chen, Xinshu Dong, Prateek Saxena, Jian Mao, Zhenkai Liang.  
In Journal of Computers & Security, 2015

Web-to-Application Injection Attacks on Android: Characterization and Detection  
Behnaz Hassanshahi, **Yaoqi Jia**, Roland Yap, Prateek Saxena and Zhenkai Liang.  
In the 20th European Symposium on Research in Computer Security (ESORICS 2015)

I Know Where You've Been: Geo-Inference Attacks via the Browser Cache (**Best Paper Award**)  
**Yaoqi Jia**, Xinshu Dong, Zhenkai Liang, Prateek Saxena.  
In Journal of IEEE Internet Computing, 2015  
In Web 2.0 Security and Privacy 2014(W2SP 2014)

You Can't Be Me: Enabling Trusted Paths & User Sub-Origins in Web Browsers  
Enrico Budio, **Yaoqi Jia**, Xinshu Dong, Prateek Saxena and Zhenkai Liang.  
In the 17th International Symposium on Research in Attacks, Intrusions and Defenses(RAID 2014)

DroidVault: A Trusted Data Vault for Android Devices (**Best Paper Award**)  
Xiaolei Li, Hong Hu, Guangdong Bai, **Yaoqi Jia**, Zhenkai Liang and Prateek Saxena.  
In the 19th International Conference on Engineering of Complex Computer Systems (ICECCS 2014)

TECHNICAL  
REPORTS

Robust Synchronous P2P Primitives Using SGX Enclaves  
**Yaoqi Jia**, Shruti Tople, Tarik Moataz, Deli Gong, Prateek Saxena and Zhenkai Liang.  
In ePrint Archive.

Should Origins Share Processes in Browsers? The Dangers and Challenges Ahead  
**Yaoqi Jia**, Zheng Leong Chua, Hong Hu, Shuo Chen, Prateek Saxena, and Zhenkai Liang.  
School of Computing, National University of Singapore.

PUBLICATIONS:  
POSTERS

Persisting HTTPS Attacks via Browser Cache Poisoning  
**Yaoqi Jia**, Yue Chen, Xinshu Dong, Prateek Saxena, Jian Mao and Zhenkai Liang.  
In the 36th IEEE Symposium on Security and Privacy(S&P 2015)

An Efficient Solution for Detecting UI-Mimicking Android Applications  
Jian Mao, Hanjun Ma, **Yaoqi Jia**, Zhenkai Liang, Xuxian Jiang.  
In the 36th IEEE Symposium on Security and Privacy(S&P 2016)

Detecting Browser-Based Probing Attacks via Behavior Analysis  
Yue Chen, **Yaoqi Jia**, Jian Mao and Zhenkai Liang.  
In the 2015 Network and Distributed System Security Symposium(NDSS 2015)

Geo-Inference Attacks via the Browser Cache  
**Yaoqi Jia**, Xinshu Dong, Zhenkai Liang, Prateek Saxena.  
In the 35th IEEE Symposium on Security and Privacy(S&P 2014)

Detecting Unexpected Behaviors in HTML5 Mobile Apps using Difference in Execution Context  
Jian Mao, **Yaoqi Jia**, Xinshu Dong, Yue Chen, Ruilong Wang, Zhenkai Liang.  
In the 35th IEEE Symposium on Security and Privacy(S&P 2014)

HONORS AND  
AWARDS

- Dean's Graduate Research Excellence Award, 2017
- Second Place for Deep Learning Security Workshop in SGCSC, 2017
- Student Travel Grant for S&P 14, RAID 14, USENIX Security 16, PETS 16, CCS 16
- CVE-2014-7948 for Chrome, CVE-2015-5907 for Safari, 2015

- Chromium Security Reward (for bug 414026), 2015
- Best Paper Award in ICECCS, 2014
- Best Paper Award in W2SP, 2014
- NUS Research Scholarship, 2012 - 2016
- Excellent Graduate of HUST, 2012
- Google Excellence Scholarship, 2011
- National Scholarship, 2009, 2010
- Excellent Student of HUST, 2009, 2010

*Teaching Assistant*  
National University of Singapore, Singapore.

July, 2013 - December, 2014, 2016

PROFESSIONAL  
SERVICE

Student PC: IEEE Symposium on Security and Privacy (S&P)' 17  
Reviewer: IEEE Transactions on Information Forensics and Security (TIFS)  
External Reviewer: S&P'15, 16; CCS'15, 16; Usenix Security'15, 17; NDSS'15 - 17; WWW'15;  
AsiaCCS'14, 15; ICDCS'16, 17

SOCIAL  
EXPERIENCE

*Senior Director*  
[Graduate Students' Society](#), NUS, Singapore.  
*General Secretary*  
[Graduate Students' Society](#), NUS, Singapore.

September, 2012 - August, 2013

September, 2013 - August, 2014

REFERENCES

**Dr. Zhenkai Liang** (advisor)  
Associate Professor  
School of Computing  
National University of Singapore  
Email: liangzk@comp.nus.edu.sg

**Dr. Prateek Saxena** (co-advisor)  
Assistant Professor  
School of Computing  
National University of Singapore  
Email: prateeks@comp.nus.edu.sg

**Dr. Roland Yap** (collaborator)  
Associate Professor  
School of Computing  
National University of Singapore  
Email: ryap@comp.nus.edu.sg

**Dr. Min Suk Kang** (collaborator)  
Assistant Professor  
School of Computing  
National University of Singapore  
Email: kangms@comp.nus.edu.sg