

PEIXUAN HE

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EDUCATION

University of Science and Technology of China, Hefei, China
Master in Electronic Engineering and Information Science.

June 2017 - Present
GPA: 85/100

University of Science and Technology of China, Hefei, China
Bachelor in Information Security.

July 2013 - June 2017
GPA: 3.41/4.3

RESEARCH INTERESTS

- Security in Emerging Networking (especially in ICN), IoT Security, Cloud Security
- Secure Protocol Design and Analysis

PUBLICATIONS

Qiudong Xia, **Peixuan He**, Kaiping Xue, Jiangping Han, David S.L. Wei, Hao Yue, Jin Qin. “TSLS: Time Sensitive, Lightweight and Secure Access Control for Information Centric Networking”. In *Proc. of 2019 Global Communications Conference (GLOBECOM)*.

Kaiping Xue (Supervisor), **Peixuan He**, Xiang Zhang, Qiudong Xia, David S.L. Wei, Hao Yue, Feng Wu. “A Secure, Efficient and Accountable Edge-based Access Control Framework for Information Centric Networks”. *IEEE/ACM Transactions on Networking*, vol. 27, no. 3, pp. 1220-1233, 2019.

Peixuan He, Kaiping Xue, Jie Xu, Qiudong Xia, Jianqing Liu, Hao Yue. “Attribute-based Accountable Access Control for Multimedia Content with In-network Caching”. In *Proc. of 2019 IEEE International Conference on Multimedia and Expo (ICME)*.

Peixuan He, Yinxin Wan, Qiudong Xia, Shaohua Li, Jianan Hong, Kaiping Xue. “LASA: Lightweight, Auditable and Secure Access Control in ICN with the Limitation of Access Times”. In *Proc. of 2018 International Conference on Communications (ICC)*.

PROJECTS

The Secure Verification Code Based on Adversarial Examples and Transparent Watermark
Supervisor: Weiming Zhang *September 2016 - June 2017*

- Generated thousands of secure verification code pictures which were unable for GoogleNet to identify by using adversarial example technology.
- Embedded these verification code pictures with number watermarks to increase more noises for machine identification.
- Designed an application to generate the secure verification code efficiently with lower rate of machine identification.

Secure Access Control for IoT in Sharing Economy Environment

Supervisor: Kaiping Xue

June 2017 - July 2018

- Utilized one-time signature algorithm to achieve secure access control and accountability in sharing economy environment.

Secure and Efficient Access control in Cloud Computing

Supervisor: Kaiping Xue

June 2017 - present

- Proposed two schemes for multiple attribute authorities which maintain the universal set of attributes together, one of which used the (t, n) secret sharing technology and the other achieved AA auditability.

- Designed an efficient encryption outsourcing method in fog-cloud architecture.

Investigation on Secure Framework of Information Centric Networking

Supervisor: Kaiping Xue

June 2017 - present

- Proposed a two-layer secure access control framework to make the system more robust with several security features.
- Designed a highly efficient verification protocol to greatly reduce the overhead in the system.
- Unforgeable service credentials were designed to make it possible to achieve accountability in ICN.

SELECTED HONORS

- **Outstanding Student Award** of USTC (top 30%, departmental, three consecutive years)
- **First Prize** in 10th National College Student Information Security Contest (top 5%, national, 2017)

TECHNICAL STRENGTHS

Programming	C/C++, MATLAB, HTML	Simulation	ndnSIM
Software & Tools	MS Office, Latex, Origin	Software Library	PBC, GMP, OpenSSL

VOLUNTEER & PROFESSIONAL EXPERIENCE

Teaching Assistant

- Computer Network *USTC, September 2018 - January 2019*
- Network Security Protocol *USTC, February 2018 - July 2018*
- C Programming language *USTC, September 2016 - January 2017*

Reviewer

- IEEE Access
- IEEE Communication Magazine
- IEEE Global Communications Conference 2019