

Zhangxiang Hu

University of Oregon
Computer and Information Science
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Education

In Ph.D. program

University of Oregon, Eugene, OR
Advisor: Prof. Chris Wilson, Prof. Jun Li
GPA 3.96/4.0

M.S., Computer Science

Oregon State University, Corvallis, OR
Advisor: Prof. Mike Rosulek
GPA 3.67/4.0
Thesis: Random Access Machine in Multi-party Computation

B.E., Computer Science

North China University of Technology, China

Research and Teaching

Graduate Research Assistant, University of Oregon, 2019-now
Graduate Teaching Assistant, University of Oregon, 2016-2019
Graduate Research Assistant, Oregon State University, 2013-2015

Research Area: Cryptography and Network Security, with a specific focus on secure computation, zero-knowledge proof, IoT secure communication, and blockchain.

Publications:

1. Toward a Resilient Key Exchange Protocol for IoT;
Zhangxiang Hu, Jun Li, Sam Mergendahl, Christopher Wilson; CODYSPPY 2022
2. Layered Network Protocols for Secure Communications in the Internet of Things
Zhangxiang Hu; Area exam, University of Oregon CIS archive 2020
3. Efficient Zero-Knowledge Proofs of Non-Algebraic Statements with Sublinear Amortized Cost;
Zhangxiang Hu, Payman Mohassel, Mike Rosulek; CRYPTO 2015.
4. How to Efficiently Evaluate RAM Programs with Malicious Security;
Arash Afshar, Zhangxiang Hu, Payman Mohassel, Mike Rosulek; Eurocrypt 2015.

Unpublished work:

- A Taxonomy of the Encryption Capabilities of the Internet of Things ([under peer review](#))
- Efficient privacy-preserving blockchain for IoT ([in progress](#))
- Zero-knowledge based authentication for IoT-enabled devices ([in progress](#))
- Abstraction of cut-and-choose technique for malicious secure MPC
- Homomorphic UC commitments from Oblivious Linear Function Evaluation
- Improved blind seer system with constant communication rounds

Teaching: Fluency with Information Technology, Data Structures, Algorithms, Database processing.

Working Experience

1. Sole instructor for class Fluency with Information Technology 2019
University of Oregon, Oregon USA
2. Sole instructor for class Fluency with Information Technology 2018
University of Oregon, Oregon USA
3. Software development and Network support. 2009-2011
Jiangxi Copper Co., Jiangxi China
4. Worked on Suirui new product of RaySMCU and database maintenance 2006
Intern at Suirui Co., Beijing China
5. Security analysis and protocol development for Hisense security gateway system 2005
Intern at Hisense, Beijing China

Awards

1. Ripple Graduate Fellowship ([2021-2022](#))
2. Ripple Graduate Fellowship ([2020-2021](#))
3. Phillip Seeley Graduate Fellowship ([2020](#))
4. Best Teaching Assistant award ([2018-2019](#))
5. Thesis is supported by National Science Foundation ([2013 - 2015](#))
6. Student Travel Grant winner for Crypto 2015 conference ([June 2015](#))

Reviewer for Journals

IEEE Transactions on Dependable and Secure Computing

References:

- Dr. Chris Wilson
Associate Professor at University of Oregon
Email: cwilson@cs.uoregon.edu
- Dr. Jun Li
Professor at University of Oregon
Email: lijun@cs.uoregon.edu
- Dr. Mike Rosulek
Associate Professor at Oregon State University
Email: rosulekm@eecs.oregonstate.edu