

Jiahui Lu

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Education

Georgia Institute of Technology (Georgia Tech)

Atlanta, Georgia, US

MS IN COMPUTER SCIENCE

Aug 2017 - Dec 2021

- Institute for Information Security & Privacy, College of Computing
- GPA 3.84/4.0

Shanghai Jiao Tong University (SJTU)

Shanghai, China

BSE IN COMPUTER SCIENCE

Sept 2013 - July 2017

- ACM Honored Program, Zhiyuan College
- GPA 3.77/4.3

Work Experience

Inspur USA Inc.

San Jose, California, US

SOFTWARE ENGINEER

Aug 2022 - Present

- Develop tools for command line interface (CLI) of database KaiwuDB
- Develop the time series database engine of multi-model KaiwuDB to support streaming data
- Design automatic query optimization algorithms for KaiwuDB to improve time efficiency

JD.com Silicon Valley R&D Center

Mountain View, California, US

RESEARCH SCIENTIST

Feb 2022 - Aug 2022

- Apply multi-party computation (MPC) frameworks to machine learning system for security and privacy

JD.com Silicon Valley R&D Center

Mountain View, California, US

RESEARCH INTERN

May 2021 - Aug 2021

- Implement a highly efficient protocol to generate distributed RSA key pairs for communication security

Research Experience

Institute for Information Security & Privacy, Georgia Tech

Atlanta, Georgia, US

GRADUATE RESEARCH ASSISTANT, ADVISED BY PROF. ALEXENDRA BOLDYREVA & PROF. VLAD KOLESNIKOV

Aug 2017 - Dec 2021

- Design a secure protocol for review Apps to support real-time authorized post and ensure user anonymity
- Redesign the algorithm of a MPC-in-the-head zero knowledge proof (ZKP) scheme to improve its computation speed

Security & Privacy group, Cornell Tech

New York City, New York, US

RESEARCH INTERN, ADVISED BY PROF. TOM RISTENPART

Aug 2016 - Dec 2016

- Develop a side-channel attack in full-text search systems
- Prove the security of symmetric encryption schemes as cryptographic commitments

Cornell University

Ithaca, New York, US

EXCHANGE STUDENT, ADVISED BY PROF. JOHN E. HOPCROFT

Jul. 2016 - Jun. 2016

- Analyze the functionality of neurons in different convolutional layers of a deep learning network

Publication

Efficient Generic Arithmetic for KKW - Practical Linear MPC-in-the-Head NIZK on Commodity Hardware without Trusted Setup

INTERNATIONAL SYMPOSIUM ON CYBER SECURITY CRYPTOLOGY AND MACHINE LEARNING - CSCML 2021

- Authors: David Heath, Vladimir Kolesnikov, Jiahui Lu
- Conference Talk

Message Franking via Committing Authenticated Encryption

ADVANCES IN CRYPTOLOGY - CRYPTO 2017

- Authors: Paul Grubbs, Jiahui Lu, Thomas Ristenpart

Side-Channel Attacks on Shared Search Indexes

IEEE SYMPOSIUM ON SECURITY AND PRIVACY - OAKLAND 2017

- Authors: Liang Wang, Paul Grubbs, Jiahui Lu, Vincent Bindschaedler, David Cash, Thomas Ristenpart

Anonymous Review Systems for (Un)linkable Settings

IN PROGRESS

- Authors: Jiahui Lu, Alexandra Boldyreva

Honors & Awards

3rd round, 2021 Google Code Jam

INDIVIDUAL

Online

May 2021

4th place, 2018 ACM-ICPC Southeast USA Regional Contest

TEAM BU SHI MEI GUO REN, GEORGIA TECH

- 1st in Kennesaw State University site

Kennesaw, Georgia, US

Nov 2018

9th place, 2018 ITA Tech Challenge

INDIVIDUAL

Chicago, Illinois, US

Oct 2018

2nd place, 2018 Mercer University Spring Programming competition

TEAM YELLOW JACKETS, GEORGIA TECH

- 1st in Division II

Macon, Georgia, US

Feb 2018

Extracurricular Activities

ACM programming team, Georgia Tech

COACH

- Team meeting lecturer
- College team representative in contests. Participated in
 - 2020 Mercer University Spring Programming competition (1st)
 - 2020 Southeast USA Regional Contest (1st)
 - 2021 ICPC North America Division Championships (3rd)

Atlanta, Georgia, US

Aug 2019 - Dec 2021

2020 Mercer University Spring Programming competition

STAFF & PROBLEM WRITER

Macon, Georgia, US

Feb 2020

ACM programming team, Georgia Tech

CONTESTANT

Atlanta, Georgia, US

Aug 2017 - Aug 2019