CHAO LI

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WORK EXPERIENCE

Assistant Professor *May 2019 - Present*
School of Computing and Information Technology
Beijing Jiaotong University

EDUCATION

University of Pittsburgh, US *August 2014 - April 2019*
PhD in Information Science with a concentration in Telecommunications
School of Computing and Information
Advisor: Prof. Balaji Palanisamy

Imperial College London, UK *2012 - 2013*
MSc in Communication and Signal Processing

University of Edinburgh, UK *2010 - 2012*
BEng in Electronics and Electrical Engineering
Second part of the 3+2 Project
First Class Honours

Dalian University of Technology, CN *2007 - 2010*
BEng in Electronics and Electrical Engineering
First part of the 3+2 Project

RESEARCH INTEREST

Blockchain, data privacy, privacy-preserving machine learning
I am interested in data privacy and security in general. The major theme of my research is to address privacy and security challenges through rigorous techniques such as blockchain and differential privacy.

PUBLICATIONS

[**SRDS'20**] **Chao Li**, Balaji Palanisamy, Runhua Xu, Jian Wang and Jiqiang Liu. "NF-Crowd: Nearly-free Blockchain-based Crowdsourcing." Proc. of 39th IEEE International Symposium on Reliable Distributed Systems, Shanghai, China.

[**ICWS'20**] **Chao Li** and Balaji Palanisamy. "EventWarden: A Decentralized Event-driven Proxy Service for Outsourcing Arbitrary Transactions in Ethereum-like Blockchains." Proc. of 27rd IEEE International Conference on Web Services, Beijing, China.

[**ICBC'20**] **Chao Li** and Balaji Palanisamy. "Comparison of Decentralization in DPoS and PoW Blockchains." Proc. of 2020 International Conference on Blockchain, Honolulu, Hawaii, USA.

[**CIC'19**] Balaji Palanisamy and **Chao Li**. "Self-emerging Data Infrastructures." Proc. of 5th IEEE International Conference on Collaboration and Internet Computing, Los Angeles, California, USA.

[**ICDCS'19**] Runhua Xu, James BD Joshi, and **Chao Li**. "CryptoNN: Training Neural Networks

over Encrypted Data." Proc. of 39th IEEE International Conference on Distributed Computing Systems, Dallas, Texas, USA.

[**WebSci'19**] **Chao Li** and Balaji Palanisamy. "Incentivized Blockchain-based Social Media Platforms: A Case Study of Steemit." Proc. of 11th ACM International Web Science Conference, Boston, MA, USA.

[**BlockDM'19**] **Chao Li**, Balaji Palanisamy and Runhua Xu. "Scalable and Privacy-preserving Design of On/Off-chain Smart Contracts." Proc. of 1st International Workshop on Blockchain and Data Management, in Conjunction with ICDE 2019.

[**CC**] **Chao Li** and Balaji Palanisamy. "Reversible spatio-temporal perturbation for protecting location privacy." Elsevier Computer Communications 135, 16-27, 2019.

[**IoTJ**] **Chao Li** and Balaji Palanisamy. "Privacy in Internet of Things: from Principles to Technologies." IEEE Internet of Things Journal 6 (1), 488-505, 2018.

[**HiPC'18**] **Chao Li** and Balaji Palanisamy. "Decentralized Privacy-preserving Timed Execution in Blockchain-based Smart Contract Platforms." Proc. of 25th IEEE International Conference on High Performance Computing, Data, and Analytics, Bengaluru, India.

[**SRDS'18**] **Chao Li** and Balaji Palanisamy. "Decentralized release of self-emerging data using smart contracts." Proc. of 37th IEEE International Symposium on Reliable Distributed Systems, Salvador, Brazil.

[**C&S**] Lei Jin, **Chao Li**, Balaji Palanisamy and James Joshi. "k-Trustee: Location injection attack-resilient anonymization for location privacy." Elsevier Computers & Security 78, 212-230.

[**BigData Congress'18**][**received best paper**] **Chao Li**, Balaji Palanisamy and Prashant Krishnamurthy. "Reversible Data Perturbation Techniques for Multi-level Privacy-preserving Data Publication." Proc. of 7th International Congress on Big Data, Seattle, USA.

[**Big Data'17**] Balaji Palanisamy, **Chao Li** and Prashant Krishnamurthy, "Group Privacy-aware Disclosure of Association Graph Data." Proc. of 5th IEEE International Conference on Big Data, Boston, USA.

[**Cloud'17**] **Chao Li** and Balaji Palanisamy, "Emerge: Self-emerging Data Release using Cloud Data Storage." Proc. of 10th IEEE International Conference on Cloud Computing, Honolulu, USA.

[**BigData Congress'17**][**received best paper**] **Chao Li**, Balaji Palanisamy and James Joshi, "Differentially Private Trajectory Analysis for Points-of-Interest Recommendation." Proc. of 6th IEEE International Congress on Big Data, Honolulu, USA.

[**ICDCS'17**] **Chao Li** and Balaji Palanisamy, "Timed-release of Self-emerging Data using Distributed Hash Tables." Proc. of 37th IEEE International Conference on Distributed Computing Systems, Atlanta, USA.

[**ICDCS'17**][**demo**] **Chao Li**, Balaji Palanisamy, Aravind A. Kalaivanan and Sriram Raghunathan, "ReverseCloak: A Reversible Multi-level Location Privacy Protection System." Proc. of 37th IEEE International Conference on Distributed Computing Systems, Atlanta, USA.

[**ICDCS'17**][**poster**] Balaji Palanisamy, **Chao Li** and Prashant Krishnamurthy, "Group Differential

Privacy-preserving Disclosure of Multi-level Association Graphs." Proc. of 37th IEEE International Conference on Distributed Computing Systems, Atlanta, USA.

[ICWS'16] Chao Li, Balaji Palanisamy and James Joshi, "SocialMix: Supporting Privacy-aware Trusted Social Networking Services." Proc. of 23rd IEEE International Conference on Web Services, San Francisco, USA.

[NSS'15] Chao Li and Balaji Palanisamy, "De-anonymizable Location Cloaking for Privacy-controlled Mobile Systems." Proc. of 9th International Conference on Network and System Security, New York, USA.

[CIKM'15] Chao Li and Balaji Palanisamy, "ReverseCloak: Protecting Multi-level Location Privacy over Road Networks." Proc. of 24th ACM International Conference on Information and Knowledge Management, Melbourne, Australia.

TEACHING EXPERIENCE

Teaching assistant

Network Security (Instructor: Prof. Prashant Krishnamurthy)	*Spring 2017*
Computer Security (Instructor: Prof. Balaji Palanisamy)	*Fall 2016*
Intro to Wireless Networks (Instructor: Prof. David Tipper)	*Summer 2016, Spring 2015*
Computer Networking (Instructor: Usman Anjum)	*Spring 2016*
Network Performance (Instructor: Prof. David Tipper)	*Fall 2015, Fall 2014*

Guest lecturer

Financial data security (Instructor: Prof. Wenjia Niu).	*Fall 2019*
Cloud computing (Instructor: Prof. Balaji Palanisamy).	*Spring 2018*
Information security and privacy (Instructor: Prof. Balaji Palanisamy).	*Spring 2018*

Research assistant

NSF project 'Cyber Training: CDL: Security-Assured Data Science Workforce Development in Pennsylvania', PI: Prof. Balaji Palanisamy. *2017-2019*

COURSES

Blockchain	*Fall 2020*
Financial Data Security	*Fall 2020*

PROFESSIONAL SERVICES

Journal reviews

ACM Transactions on Privacy and Security (TOPS)
IEEE Transactions on Services Computing (TSC)
IEEE Transactions on Dependable and Secure Computing (TDSC)
Journal of Network and Computer Applications
International Journal of Cooperative Information Systems

Conference Program Committees

SERVICES 2020
ICBC 2020

Conference reviews

ICIOT 2019

Journal external reviews
TOIT, TSAS, TMC

Conference external reviewsews
IEEE ICDCS 2017, 2019
WWW 2019
IEEE Big Data 2016, 2017
ACM CIKM 2015, 2016, 2017, 2018
ACM CODASPY 2015, 2017
IEEE CloudCom 2015

Conference volunteers
IEEE ICDCS 2017
IEEE IRI 2016, 2017
IEEE CIC 2016