

Yuzhe Tang

• Mailing address: 5991 Bay Hill Circle, Jamesville, NY 13078, USA
• Email: ytang100@syr.edu • Phone: (315) 412-7628 • Web: tristartom.github.io

Academic Appointments

2022 - Now Associate Professor, Department of EECS, Syracuse University
2014 - 2022 Assistant Professor, Department of EECS, Syracuse University

Education

Ph.D. *Georgia Institute of Technology* (Atlanta, GA USA), 2009-2014
Computer Science
M.Sc. *Fudan University* (Shanghai, China), 2006-2009
Computer Science and Engineering
B.Sc. *Fudan University* (Shanghai, China), 2002-2006
Computer Science and Engineering

Research Areas

- Security analysis and vulnerability discovery: [USENIX Security 24], [CCS 21]
- Provable/formal security and economics of security: [EEE S&P 25]
- Security-oriented measurement and cyber-crime: [Euro S&P 23], [IMC 21], [NDSS 21]
- Workload-aware system optimization: [TSE 23]/[FSE 21], [Middleware 20], [ICDE 19], [TPDS 13]
- Secure data storage and replication: [Middleware 21], [ACSAC 14], [EDBT 14], [ICDCS 08]
- Research mission
 - Understand, enable and verify the systems security and application security of digital infrastructures under evolving threats, in high-impact or emerging application domains, including decentralized systems (like blockchains and smart contracts), software supply-chain, emerging web infrastructures, finance technology, etc.

Research Highlights

- Leading researcher on “mempool security” (mempool is a permissionless shared cache used in open distributed-system designs)
 - Relevant research results:
 - First attack designs on mempools: [CCS 21]
 - First mempool fuzzer for design-flaw discovery: [USENIX Security 24]
 - First provable-secure designs of mempools: [EEE S&P 25]
 - Mempool misuses for first topology measurement of Ethereum networks: [IMC 21]
 - Severe bugs discovered and confirmed by Ethereum Foundation
 - Funded by three competitive Ethereum Foundation awards: [award 22], [award 23], [award 24]
 - Security patches adopted in Geth v1.11.4 [release notes].
- Established researcher on “blockchain systems security” with expertise broadly in:
 - “blockchain denial of service” [NDSS 21], “financial security of smart contracts” [Euro S&P 23], “blockchain cost modeling” ([FSE 21], [Middleware 20], [ICDE 19]), “upgradable smart contracts” [WWW 24], “fuzzing blockchain clients” [USENIX Security 24], “wallet security” [WWW 25]
 - Research and education efforts funded by two NSF awards on blockchains: [NSF 22], [NSF 21]
 - iBatch [FSE 21] influences account-abstraction design (ERC-4337) on Ethereum.

Research Funds

- Total amount: 2.2 million USD
- My share: 2.1 million USD
 - 1.5 million USD from NSF

2025-2026 Formal modelling and generic fuzzer for mempool exploit discovery
Yuzhe Tang (Single PI), \$66,000 (100%)
Ethereum Foundation (Ecosystem Support Program)

2023-2024	Towards Closing the Loop on Ethereum Network DoS Insecurity by Applied Formal Methods Yuzhe Tang (Single PI), \$58,239 (100%) Ethereum Foundation (Academic grant)
2022-2025	CNS Core: Small: One Size doesn't Fit All: Workload-Aware Cost Optimization for Decentralized Applications on Blockchains Yuzhe Tang (Single PI), \$498,624 + \$18,794 (CloudBank funds), my share: 100% National Science Foundation (NSF)
2022-2023	DoS-secure transaction propagation on Ethereum: Exploit generation and attack detection Yuzhe Tang (Single PI), \$84,392 (100%) Ethereum Foundation (Academic grant)
2021-2024	Collaborative Research: SaTC: EDU: Developing Instructional Laboratories for Blockchain Security Applications Yuzhe Tang (PI), Jing Lei, Farzana Rahman, Hongmei Chi. Total: \$399,995 + \$32,000 (REU supplemental), my share: \$356,000 (86%) National Science Foundation (NSF)
2018-2022	SaTC: Small: External Obliviousness in Trusted Execution Environments Yuzhe Tang (Single PI), \$496,999 + \$16,000 (100%) National Science Foundation (NSF)
2019-2020	Planning IUCRC Syracuse University: Center for High-Assurance Secure Systems and IoT (CHASSI) Shiu-Kai Chin (PI), Yuzhe Tang (Co-PI), \$15,000 National Science Foundation (NSF)
2018-2020	SGX-based Key-Management Applications in the Cloud Yuzhe Tang (Single PI), \$9,996 (100%) Intel Gift
2017-2018	Cryptographic Engineering on Modern Trusted Platforms Yuzhe Tang (PI), Wenliang Du (Co-PI) Total: \$300,000, my share: \$20,000 (66%) National Security Agency (NSA)
2017-2017	Secure Multi-Party Databases by Oblivious Query Translation and Execution Yuzhe Tang (PI), \$13,200 (100%) Air Force Research Lab Visiting Faculty Research Program
2015-2016	Optimizing Privacy-Preserving Analytics in Information Networks Yuzhe Tang (PI), \$69,861 (100%) Cyber Research Institute (CRI)
<i>Bug bounty awards</i>	Bug bounty from Ethereum Foundation \$12,000 (2021), \$2000 (2022) Bug bounty from OpenEthereum/Parity \$8,000 (2021)
<i>Internal Grants</i>	
2021-2023	Workload-Adaptive Designs for Cost-Effective Decentralized Applications on Blockchains Yuzhe Tang (Single PI), \$21,000 CUSE Grant (Syracuse University Internal Grant)
2018-2020	On-Campus Blockchain Applications for Education and Beyond Wenliang Du (PI), Yuzhe Tang (Co-PI), \$30,000 CUSE Grant (Syracuse University Internal Grant)
2018-2020	Efficient Algorithms for Secure, Large-Scale Graph Mining Yuzhe Tang (PI), Sucheta Soundarajan (Co-PI), \$30,000 CUSE Grant (Syracuse University Internal Grant)

Publications

- Underline indicates students advised by Dr. Yuzhe Tang

S&P 25	Asymmetric Mempool DoS Security: Formal Definitions and Provable Secure Designs <u>Wanning Ding</u> , Yuzhe Tang, <u>Yibo Wang</u> IEEE Security and Privacy, 2025
WWW 25	SigScope: Detecting and Understanding Off-Chain Message Signing-related Vulnerabilities in Decentralized Applications Sajad Meisami, Hugo Dabadie, Song Li, Yuzhe Tang, Yue Duan The Web Conference, 2025
Security 24	Understanding Ethereum Mempool Security under Asymmetric DoS by Symbolized Stateful Fuzzing <u>Yibo Wang</u> , Yuzhe Tang, <u>Kai Li</u> , <u>Wanning Ding</u> , <u>Zhihua Yang</u> USENIX Security 2024

WWW 24	Characterizing Ethereum Upgradable Smart Contracts and Their Security Implications Xiaofan Li, Jin Yang , Jiaqi Chen , Yuzhe Tang, Xing Gao The Web Conference, 2024
WWW 24s	Towards Understanding Crypto-Asset Risks on Ethereum Caused by Key Leakage on the Internet Yuxuan Zhou , Jiaqi Chen , Yibo Wang , Yuzhe Tang, Guofei Gu The Web Conference, 2024 (Short paper)
Euro S&P 23	Understanding the Security Risks of Decentralized Exchanges by Uncovering Unfair Trades in the Wild Jiaqi Chen , Yibo Wang , Yuxuan Zhou , Wanning Ding , Yuzhe Tang, XiaoFeng Wang, Kai Li 8th IEEE European Symposium on Security and Privacy, 2023
TC 23	BlockExplorer: Exploring Blockchain Big Data via Parallel Processing Shipeng Li, Jingwei Li, Yuxing Tang, Xiapu Luo, Zheyuan He, Zihao Li, Xi Cheng, Yang Bai, Ting Chen, Yuzhe Tang, Zhe Liu, Xiao-song Zhang IEEE Transactions on Computers
EthiCS 23	Ethical Challenges in Blockchain Measurement Research Yuzhe Tang, Kai Li , Yibo Wang , Jiaqi Chen The 2nd International Workshop on Ethics in Computer Security (EthiCS 2023), Co-located with NDSS 2023
TSE 23	Towards Saving Blockchain Fees via Secure and Cost-Effective Batching of Smart-Contract Invocations Yibo Wang , Kai Li , Jiaqi Chen , Yuzhe Tang, Qi Zhang , Xiapu Luo, Ting Chen TSE (IEEE Transactions on Software Engineering)
ConsensusDay 22	Towards the Comprehensive Understanding of Ethereum Mempool DoS Security Yibo Wang , Kai Li , Yuzhe Tang Consensus Day 22, Co-located with CCS 2022
CCS 22p	Enabling Cost-Effective Blockchain Applications via Workload-Adaptive Transaction Execution Yibo Wang , Yuzhe Tang ACM Conference on Computer and Communications Security (CCS) 2022, Poster
CCS 21	<i>DETER: Denial of Ethereum's Txpool-based services</i> Kai Li , Yibo Wang , Yuzhe Tang ACM Conference on Computer and Communications Security (CCS) 2021
IMC 21	<i>TopoShot: Uncovering Ethereum's Network Topology Leveraging Replacement Transactions</i> Kai Li , Yuzhe Tang, Jiaqi Chen , Yibo Wang , Xianghong Liu ACM Internet Measurement Conference (IMC) 2021 Acceptance rate=28%
NDSS 21	<i>As Strong As Its Weakest Link: How to Break Blockchain DApps at RPC Service</i> Kai Li , Jiaqi Chen , Xianghong Liu , Yuzhe Tang, XiaoFeng Wang, Xiapu Luo The Network and Distributed System Security Symposium (NDSS) 2021 Acceptance rate=15.2%
FSE 21	<i>iBatch: Saving Ethereum Fees via Secure and Cost-Effective Batching of Smart-Contract Invocations</i> Yibo Wang , Qi Zhang , Kai Li , Yuzhe Tang, Jiaqi Chen , Xiapu Luo, Ting Chen ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE) 2021 Acceptance rate=24.5%
Middleware 21i	<i>Authenticated Key-Value Stores with Hardware Enclaves</i> Kai Li , Yuzhe Tang, Qi Zhang, Jianliang Xu, Ju Chen ACM/IFIP Middleware 2021 (Industrial track)
ToNSE 21	<i>VFChain: Enabling Verifiable and Auditable Federated Learning via Blockchain Systems</i> Zhe Peng, Jianliang Xu, Xiaowen Chu, Shang Gao, Yuan Yao, Rong Gu, Yuzhe Tang IEEE Transactions on Network Science and Engineering (ToNSE) 2021
Middleware 20	<i>Cost-Effective Data Feeds to Blockchains via Workload-Adaptive Data Replication</i> Kai Li , Yuzhe Tang, Jiaqi Chen , Zhehu Yuan , Cheng Xu , Jianliang Xu ACM/IFIP Middleware conference 2020 Acceptance rate=25.2%
SERIAL 20	<i>Scalable Log Auditing on Private Blockchains via Lightweight Log-Fork Prevention</i> Yuzhe Tang, Kai Li , Yibo Wang , Sencer Burak Somuncuoglu Workshop on Scalable and Resilient Infrastructures for Distributed Ledgers 2020, co-located with ACM/IFIP Middleware conference 2020
ICDE 19	<i>GEM²-Tree: A Gas-Efficient Structure for Authenticated Range Queries in Blockchain</i> Ce Zhang, Cheng Xu, Jianliang Xu, Yuzhe Tang, Byron Choi IEEE 36th International Conference on Data Engineering (ICDE) 2020 Acceptance rate=26.8%
SecureCom19	<i>Secure Consistency Verification for Untrusted Cloud Storage by Public Blockchains</i> Kai Li , Yuzhe Tang, Beom Heyn Kim, Jianliang Xu SecureComm 2019

- SecureCom19 *Authenticated LSM Trees with Minimal Trust*
Yuzhe Tang, [Ju Chen](#), [Kai Li](#)
SecureComm 2019 (Short paper)
- CISSE 19 *Hands-on Labs for Secure Programming on Modern Trusted Platforms*
Yuzhe Tang, Wenliang Du
The Colloquium For Information Systems Security Education, 2019
- ASONAM 19p *Computing Node Clustering Coefficients Securely*
K. Areekijserree, Yuzhe Tang, Sucheta Soundarajan
IEEE ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM), 2019, Poster
- SecureCom18 *Secure and Efficient Multi-Party Directory Publication for Privacy-Preserving Data Sharing*
[K. Areekijserree](#), [Ju Chen](#), Yuzhe Tang, Shuang Wang, Arun Iyengar and B. Palanisamy
SecureComm 2018, Acceptance rate=30.6%
- Cloud 18 *ChainFS: Blockchain-Secured Cloud Storage*
[Qiwu Zou](#), Yuzhe Tang, [Ju Chen](#), [Kai Li](#), Charles Kamoua, Kevin Kwiat, Laurent Njilla
IEEE Cloud 2018, Acceptance rate=20%
- Cloud 18 *Pinchao Liu, Liting Hu, Hailu Xu, Zhiyuan Shi, Jason Liu, Qingyang Wang, Jai Dayal and Yuzhe Tang*
A Toolset for Detecting Containerized Application's Dependencies in CaaS Clouds
IEEE Cloud 2018, Acceptance rate=20%
- Cloud 18 *Hailu Xu, Liting Hu, Pinchao Liu, Yao Xiao, Wentao Wang, Jai Dayal, Qingyang Wang and Yuzhe Tang*
Oases: An Online Scalable Spam Detection System for Social Networks
IEEE Cloud 2018, Acceptance rate=20%
- FC 18w *Lightweight Blockchain Logging for Data-Intensive Applications*
Yuzhe Tang, [Zihao Xing](#), [Cheng Xu](#), [Ju Chen](#), Jianliang Xu
The Workshop of Trusted Smart Contract at the International Conference of Financial Cryptography 2018
- TVT 18 *Non-interactive Identity-based Underwater data transmission with Anonymity and Zero-knowledge*
Changsheng Wan, Vir V Phoha, Yuzhe Tang, Aiqun Hu
IEEE Transactions on Vehicular Technology 2017
- CIC 17 *PADS: Privacy-preserving Auction Design for Allocating Dynamically Priced Cloud Resources*
Jinlai Xu, Balaji Palanisamy, Yuzhe Tang, SD Madhu Kumar
IEEE CIC 2017
- SOSP 17w *Strongly Secure and Efficient Data Shuffle on Hardware Enclaves*
[Ju Chen](#), Yuzhe Tang, Hao Zhou
The Workshop of Systems Software for Trusted Execution (SysTEX) at ACM SOSP 2017
- ICDCS 17p *Towards Secure Public Directory for Privacy-Preserving Data Sharing*
[Amin Fallahi](#), Xi Liu, Yuzhe Tang, Shuang Wang, Rui Zhang
IEEE International Conference on Distributed Computing Systems, Poster
- ICDCS 17w *Social-Aware Decentralization for Efficient and Secure Multi-Party Computation*
Yuzhe Tang, Sucheta Soundarajan
The Workshop of Big-Data Privacy and Security at IEEE International Conference on Distributed Computing Systems
- BMC 16 *Secure Multi-pArty Computation Grid LOGistic REgression (SMAC-GLORE)*
[Haoyi Shi](#), Chao Jiang, Wenrui Dai, Xiaoqian Jiang, Yuzhe Tang, Lucila Ohno-Machado and Shuang Wang
BMC Medical Informatics and Decision Making [[open access](#)]
- SecDev 16 *Towards Building Practical And Secure Multi-Party Databases*
Yuzhe Tang, [Wenqing Zhuang](#)
IEEE Cyber-security Development Conference 2016 (Abstract)
- BioInfo 16** *HEALER: Homomorphic computation of ExAct Logistic rEgRession for secure rare disease variants analysis in GWAS*
Shuang Wang, Y. Zhang, W. Dai, K. Lauter, M. Kim, Yuzhe Tang, X. Jiang
Oxford Journals Bioinformatics, doi: 10.1093/bioinformatics/btv563
- BMC 15 *Privacy-preserving GWAS analysis on federated genomic datasets*
[Scott D Constable](#), Yuzhe Tang, Shuang Wang, Xiaoqian Jiang, Steve Chapin
BMC Medical Informatics and Decision Making 2015, [[open access](#)]
- TKDE 15** *Privacy-Preserving Multi-Keyword Search in Information Networks*
Yuzhe Tang, Ling Liu
IEEE Transaction of Knowledge and Data Engineering 27(9): 2424-2437 (2015)
- CCGrid 15 *Deferred Lightweight Indexing for Log-Structured Key-Value Stores*
Yuzhe Tang, Arun Iyengar, Wei Tan, Liana Fong, Ling Liu, Balaji Palanisamy
IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing 2015: 11-20
Best Paper Award
- HPBDC 15 *KTV Tree: Interactive Top-K Aggregation on Large Dataset in Cloud*
Yuzhe Tang, Ling Liu, Junichi Tatemura, Hakan Hacigumus

HotCloud 15	IEEE International Conference of Distributed Computing Systems Workshops 2015: 136-141 <i>Privacy-Preserving Offloading of Mobile App to the Public Cloud</i> Yue Duan, Mu Zhang, Heng Yin, Yuzhe Tang USENIX Workshop on Hot Topics in Cloud Computing 2015 Acceptance rate=32.8%
TBC 15	<i>Secure Multi-party Computation on Grid Logistic Regression</i> Haoyi Shi, Shuang Wang, Wenrui Dai, Yuzhe Tang, Xiaoqian Jiang, LucilaOhno-Machado Annual Translational Bioinformatics Conference 2015
ACSAC 14	<i>Lightweight Authentication of Freshness in Outsourced Key-Value Stores</i> Yuzhe Tang, Ling Liu, Xin Hu, Jiyong Jang USENIX/ACM Annual Computer Security Applications Conference 2014: 176-185 Acceptance rate=19.9%
ICDCS 14	<i>e-PPI: Locator Service in Information Networks with Personalized Privacy Preservation</i> Yuzhe Tang, Ling Liu, Arun Iyengar IEEE International Conference of Distributed Computing Systems 2014: 186-197 Acceptance rate=13%
EDBT 14	<i>Diff-Index: Differentiated Index in Distributed Log-Structured Data Stores</i> Wei Tan, Sandeep Tata, Yuzhe Tang, Liana Fong International Conference on Extending Database Technology 2014: 700-711 Acceptance rate=20%
JDPD 14	<i>Anonymizing Continuous Queries with Delay-tolerant Mix-zones on Road Networks</i> Balaji Palanisamy, Ling Liu, Kisung Lee, Shicong Meng, Yuzhe Tang International Journal of Distributed and Parallel Databases 32(1): 91-118 (2014)
ICDE 14d	<i>Outsourcing multi-version key-value stores with verifiable data freshness</i> Yuzhe Tang, Ling Liu, Ting Wang, Xin Hu, Reiner Sailer, Peter Pietzuch IEEE International Conference on Data Engineering 2014: 1214-1217 (Demo paper)
TPDS 13	<i>Auto-pipelining for Data Stream Processing</i> Yuzhe Tang, Bugra Gedik IEEE Trans. Parallel Distrib. Syst. 24(12): 2344-2354 (2013)
Cloud 13	<i>Residency Aware Inter-VM Communication in Virtualized Cloud: Performance Measurement and Analysis</i> Qi Zhang, Ling Liu, Yi Ren, Kisung Lee, Yuzhe Tang, Xu Zhao, Yang Zhou IEEE International Conference on Cloud Computing 2013: 204-211
Cloud 13	<i>Efficient and Customizable Data Partitioning Framework for Distributed Big RDF Data Processing in the Cloud</i> Kisung Lee, Ling Liu, Yuzhe Tang, Qi Zhang, Yang Zhou IEEE International Conference on Cloud Computing 2013: 327-334
MSN 12	<i>Location Privacy with Road Network Mix-Zones</i> Balaji Palanisamy, Ling Liu, Kisung Lee, Shicong Meng, Yuzhe Tang IEEE International Conference on Mobile Ad-hoc and Sensor Networks 2012: 124-131
Cloud 12	<i>Reliable State Monitoring in Cloud Data Centers</i> Shicong Meng, Arun Iyengar, I. Rouvellou, Ling Liu, Kisung Lee, Balaji Palanisamy, Yuzhe Tang IEEE International Conference on Cloud Computing 2012: 951-958
CIKM 11	Best Paper Award <i>Privacy Preserving Indexing for eHealth Information Networks</i> Yuzhe Tang, Ting Wang, Ling Liu, Shicong Meng, Balaji Palanisamy Conference on Information and Knowledge Management 2011: 905-914 Acceptance rate=15% (Full paper)
TPDS 11	<i>A Lightweight Multi-dimensional Index for Complex Queries over DHTs</i> Yuzhe Tang, Jianliang Xu, Shuigeng Zhou, Wang-Chien Lee, Dingxiong Deng, Yue Wang IEEE Trans. Parallel Distrib. Syst. 22(12): 2046-2054 (2011)
TKDE 10	<i>LIGHT: A Query-Efficient yet Low-Maintenance Indexing Scheme over DHTs</i> Yuzhe Tang, Shuigeng Zhou, Jianliang Xu IEEE Transaction of Knowledge and Data Engineering 22(1): 59-75 (2010)
ICDCS 09	<i>m-LIGHT: Indexing Multi-Dimensional Data over DHTs</i> Yuzhe Tang, Jianliang Xu, Shuigeng Zhou, Wang-Chien Lee IEEE International Conference of Distributed Computing Systems 2009: 191-198 Acceptance rate=16%
ICDCS 08	<i>LHT: A Low-Maintenance Indexing Scheme over DHTs</i> Yuzhe Tang, Shuigeng Zhou IEEE International Conference of Distributed Computing Systems 2008: 141-151
Under review	<i>SigScope: Detecting and Understanding Off-Chain Message Signing-related Vulnerabilities in Decentralized Applications</i>
Under review	<i>Denial of Block-Building Services on Ethereum</i>
Under review	<i>Discover MEV Ahead-of-time with Static Smart-Contract Analysis</i>
Under review	<i>TELEX: Two-Level Learned Index for Rich Queries on Enclave-based Blockchain Systems</i>
Under review	<i>Explanation-Guided Strong Website Fingerprinting Defense with Low Overhead</i>

Under review	<i>Smart Contract Vulnerability Detection Empowered by LLM: Can It Really Work?</i>
Under review	<i>Uncovering Grand Crypto-Asset Thefts on Ethereum</i>
Under review	<i>Interpretable Defense against Structural Adversarial Attacks on Android Malware Detection</i>
Under review	<i>AEEP: Automated Enclave EVM Partition</i>
Under review	<i>Efficiently Hardening SGX Enclaves against Side Channels via Dynamic Program Partitioning</i>
Under review	<i>Towards Decentralized Auditing of Transparency Logs by Lightweight Fork Prevention on Blockchains</i>

Patents

2015	Adaptive Auto-pipelining in Stream Processing Applications Bugra Gedik, Scott A. Schneider, Yuzhe Tang, Kun-lung Wu US patent granted (US9098350B2)
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Teaching

CSE643	Computer Security (2024). [website].
CIS/FIN629	Blockchain Foundations and Applications (2022/2021/2020/2019/2018). [website] [lectures] [BADD labs]
CSE384	Systems and Network Programming (2023/2022/2019/2018/2017). [website]
CIS628/428	Introduction to Applied Cryptography (2019). [website], [lecture notes]
CIS655	Advanced Computer Architecture (2016/2015/2014). [website]
CIS700	Research seminar on Cyber-security and Privacy (2015/2016/2017). [website]

Advising

Ph.D. students (1st-author papers)

- Yibo Wang (2020-2025):
 - Direction: Semantic fuzzing of decentralized systems
 - Papers: **Security'24, FSE'21/TSE'23, CCS'22 (poster)**
 - Internship: Georgia Tech, CertiK
 - Award: Ethereum Foundation bug bounty
- Jiaqi Chen (2020-2026):
 - Direction: Economic security in smart contracts
 - Papers: **Euro S&P'23, WWW'24 (short)**
 - Internship: CertiK
- Yuxuan Zhou (2021-):
 - Direction: Systems security in open-source software supply chains
 - Papers: **WWW'24 (short)**
- Wanning Ding (2022-):
 - Direction: Economic security in blockchain systems
 - Papers: **S&P'25**
 - Award: Ethereum Fellowship'22
- Zhihua Yang (2023-):
 - Direction: Security and performance issues in layer-two blockchains
 - Award: Flashbots bug bounty
- Jin Yang (2023-):
- Shouzhi Fang (2024-):
- Xianghong Liu (on leave)

Undergraduate students (REU)

- Teddy Dumitru, Jack Willis, Eniola Mosaku, Nicholas Sweet, Lucy DeSalvi

Alumni

- Dr. Kai Li (Ph.D., 2018-2022), Tenure-track Assistant Professor in CS dept. at San Diego State Univ.
 - 1st-author papers (during Ph.D.): *CCS'21, IMC'21, NDSS'21, Middleware'20*
 - Internships: IBM Research '20, Amazon '21
 - Award: NortonLife Ph.D. fellowship finalist '22
- M.Sc.: Vinutha Karanth (Microsoft), Sencer Burak Somuncuoglu (Chainalysis), Kang Lou, Qi Zhang (CertiK), Katchaguy Areekijseree (PhD at Syracuse Univ.), Hari Krishna Gajarla (Bloomberg)
- B.Sc. (including REU): Zhehu Yuan (Ph.D. at NYU), Qiwu Zou (Cornell Univ.), Congcong Xie (NYU, then Oracle), Adam Piekarski, Jeong Bin Oh (A database startup), Sharell Scott (Google)
- Visiting scholar: Cheng Xu (Postdoc at Simon Fraser Univ.)

Professional Services

Program committee chair	BlockDM 21/20/19 (The International Workshop of Blockchain and Data Management, co-located with ICDE) GLSD 20/18 (Great Lake Security Day) WWW 24 (Security Area Chair at The Web Conference)
Program committee	IEEE S&P 25 (IEEE Security and Privacy) ACM CCS 25 (ACM Computer and Communications Security) NDSS 25/24 (Network and Distributed System Security Symposium) IEEE Euro S&P 25/24/23 (IEEE European Symposium on Security and Privacy) ACSAC 24/23 (Annual Computer Security Applications Conference (ACSAC)) WWW 24/21/20 (The Web Conference) RAID 24 (International Symposium on Research in Attack, Intrusions and Defenses) IEEE ICDCS 23/20/17/15 (IEEE International Conference on Distributed Computing Systems) ICCCN 23 (The 32nd International Conference on Computer Communications and Networks) MetaCom 23 (IEEE International Conference on Metaverse Computing, Networking and Applications) IEEE DSC 23/22 (6th/5th IEEE Conference on Dependable and Secure Computing)) SecureComm 22 (EAI International Conference on Security and Privacy in Communication Networks) EthiCS 22 (The 1st International Workshop on Ethics in Computer Security) ICICS 22/21 (The 23rd/24th International Conference on Information and Communications Security) IEEE MASS 22 (The 19th IEEE International Conference on Mobile Ad-Hoc and Smart Systems) IPDPS 18 (32nd IEEE International Parallel and Distributed Processing) EuroSys 18 (shadow) (The European Conference on Computer Systems) IEEE Cloud 15 (IEEE 8th International Conference on Cloud Computing) PAIS 16/15 (th/8th International Workshop on Privacy and Anonymity in the Information Society)
Journal	TDSC 22 (IEEE Transactions on Dependable and Secure Computing) TIFS 22 (IEEE Transactions on Information Forensics and Security) TKDE 22/17/16/15 (IEEE Transactions on Knowledge and Data Engineering) TPDS 22 (IEEE Transactions on Transactions on Parallel and Distributed Systems) ToIT 22 (ACM Transactions on Internet Technology) BCRA 22 (BlockChain: Research and Applications) TNSE 22/21 (IEEE Transactions on Network Science and Engineering) TCC 22 (IEEE Transactions on Cloud Computing) JPDC 22 (Journal of Parallel and Distributed Computing) COSE 22 (Computers and Security COSE) ACM TOCS 17 (ACM Transactions on Computer Systems) ACM ToIT 21 (ACM Transactions on Internet Technology) IEEE TSC 21/17/16/15 (IEEE Transactions on Services Computing) IEEE TCC 21/15 (IEEE Transactions on Cloud Computing) JBFT 20 (Journal of Banking and Financial Technology) IEEE Computer Magazine 17 TWeb 15 (ACM Transactions on the Web) IEEE TCSVT 14 (IEEE Transactions on Circuits and Systems for Video Technology)
Panelist	NSF panel 16, 20 (twice), 21, 23, 24
Campus services	EECS ABET Assessment and Accreditation committee EECS Faculty Search Committee, EECS ABET Assessment and Accreditation committee University academic integrity panel, MAE program review ECS research day poster judge, 22

Industrial Experience/Certificate

2024	NSF I-Corps Regional Course
2022 - 2023	Avant fund adviser (Part-time), a blockchain investment firm (www.avant.fund)
05/2013-08/2013	Internship at IBM Research (T.J. Watson Lab) at Yorktown Heights, NY USA
05/2012-08/2012	Internship at IBM Research (T.J. Watson Lab) at Yorktown Heights, NY USA
05/2011-08/2011	Internship at IBM Research (T.J. Watson Lab) at Hawthorn, NY USA
05/2010-08/2010	Internship at NEC Labs America at Cupertino, CA USA
01/2009-06/2009	Internship at Microsoft Research Asia at Beijing, China
01/2006-04/2006	Internship at IBM Corp. at Shanghai, China

Honors and Awards

- Nanyang Technological University Blockchain Symposium Academic Excellence award, 2024
- Ethereum Foundation Academic Grant Awardee, 2022/2023/2025
- Air Force Research Lab (AFRL) Visiting Faculty Research Award, 2017
- Best paper award, 15th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing, 2015
- Chinese Government Award for Outstanding Self-financed Students Abroad, 2012
- Best paper award, 5th International Conference on Cloud Computing, 2012
- Outstanding Master Thesis of Shanghai, Shanghai Government, 2010
- Tung's Oriental Scholarship, Tung's Oriental, 2008
- HP Distinguished Chinese Student Scholarship, Hewlett-Packard, 2008
- ICDCS Student Travel Grant, TCDP (IEEE Computer Society), 2008
- Graduate Student Fellowship of Fudan University, 2007-2008 (2 times)
- Outstanding Graduated Student of Fudan University, 2006
- Excellence Award, Tencent Innovation Contest, 2006
- The Peoples Scholarship of Fudan University, 2002-2006 (4 times)
- Chinese Physics Olympiads, First Prize in Hunan Province, 2001

Invited Talks

Research talks

- Understanding Ethereum Mempool Security under Asymmetric DoS by Symbolized Stateful Fuzzing
 - Science of Blockchain Conference SBC '24, NTU Blockchain Symposium '24
- Understanding and Hardening Decentralized Systems Security in the Wild
 - Fudan Univ. '24, Zhejiang Univ. '24, ECNU '24, Tongji Univ. '24, Notre Dame '22 [\[link\]](#), NUS '22 [\[link\]](#), UK Security and Privacy seminar '22 [\[link\]](#), Ohio State University '21, University of Louisiana at Lafayette '21 [\[pdf\]](#), Consensus day '21
- Lightweight Data Authentication in Outsourced Key-Value Stores
 - Cornell University '17 [\[link\]](#), Xi'an Jiao Tong University '17, Fudan University '16), Louisiana State University '14
- Searching HIE with Differentiated Privacy Preservation
 - HealthTech '14, co-located with USENIX Security, San Diego, CA
- Scalable and secure cloud service in big data systems
 - University of Delaware '14, North Kentucky University '14, NEC Lab '14, IBM Research '14, Missouri University of Science and Technology

Panel

- Blockchain Database, VLDB '21 panel [\[link\]](#).

Public service

- Public lecture: "Get Your Head In The Clouds! Cloud Computing: Risks and Rewards"
 - TACNY Junior Cafe Scientifique, Museum of Science & Technology, Syracuse ('17)
 - NSBE (National Society of Black Engineers) Jr. Science Camp. hosting Grades 7 - 12 in Syracuse City School District ('17)
- Public lecture: "Blockchain: Applications, Security Promises and Internals"
 - CSIAC ('17), Syracuse University Alumni Event ('21)
- Serving a panel in "Research 101" hosted by the Society of Hispanic Professional Engineers (SHPE), Oct. 22