

SIXUAN DANG

Department of Computer Science
Duke University
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AREA OF INTEREST

Static Analysis, Side-channels, Security & Privacy, Information Flow, Programming Languages

EDUCATION

Duke University 2023 - present
Ph.D. in Computer Science
Department of Computer Science
Advisor: Danfeng Zhang

Penn State University (Moved) 2022 - 2023
Ph.D. in Computer Science and Engineering
Department of Computer Science and Engineering
Advisor: Danfeng Zhang

University of Electronic Science and Technology of China 2019 - 2022
M.S. in Software Engineering
School of Computer Science and Engineering
Thesis: Research on Personal Credit Incentives in Sharing Economy

University of Electronic Science and Technology of China 2015 - 2019
B.Eng. in Software Engineering
School of Information and Software Engineering
Thesis: Research on Document Template Generation Software based on Natural Language Processing

PUBLICATIONS

AGORA: Trust Less and Open More in Verification for Confidential Computing 2025
H. Chen, Q. Zhou, S. Yang, **S. Dang**, X. Han, D. Zhang, F. Zhang, X. Wang
International Conference on Object-Oriented Programming Systems, Languages, and Application (OOPSLA 2025)

Poster: AGORA: Trust Less and Open More in Verification for Confidential Computing 2025
H. Chen, Q. Zhou, S. Yang, **S. Dang**, X. Han, F. Zhang, D. Zhang, X. Wang
Network and Distributed System Security (NDSS) Symposium 2025

CtChecker: a Precise, Sound and Efficient Static Analysis for Constant-Time Programming 2024
Q. Zhou, **S. Dang**, D. Zhang
European Conference on Object-Oriented Programming (ECOOP 2024)

A Behavior-Aware Scheme for Personalized Credit Computing 2022
S. Dang, S. Cao
IEEE International Conference on Computer Supported Cooperative Work in Design (CSCWD 2022)

Dynamic Incentive Mechanism Design for Regulation-Aware Systems 2021
S. Dang, S. Cao, J. Li, X. Zhang
International Journal of Intelligent Systems
JCR: Q1
IF: 8.709

Regulation-as-a-Service: Model Checking for Decision-Making Behaviors in Price-Sensitive Service Systems
S. Dang, S. Cao
IEEE International Conference on Services Computing (SCC 2021)

2021
Code: [Github](#)

A Blockchain-based Access Control and Intrusion Detection Framework for Satellite Communication Systems
S. Cao, S. Dang, Y. Zhang, W. Wang, N. Cheng
Computer Communications

2021
JCR: Q2
IF: 3.167

An Electric Vehicle Charging Reservation Approach Based on Blockchain
S. Cao, S. Dang, X. Du, M. Guizani, X. Zhang, X. Huang
IEEE Global Communications Conference (Globecom 2020)

2020

PATENTS

| | |
|---|-----------------|
| Routing Node Selection Method and Apparatus for Cross-Blockchain Transaction S. Cao, Q. Zhang, G. Xiong, S. Dang, R. Chen, T. Chen, X. Zhang <i>China National Intellectual Property Administration (ZL202110942516.8)</i> | Granted 2021 |
| Insurance Compensation Apparatus and Method based on Hybrid Smart Contracts S. Cao, Q. Zhang, S. Dang, G. Xiong, H. Chen, J. Yang, S. Niu, Z. Yang <i>China National Intellectual Property Administration (ZL202110835114.8)</i> | Granted 2021 |
| An Incentive Mechanism Method for Decision-Making S. Cao, S. Dang, Q. Zhang, G. Xiong, J. Yang, H. Chen, S. Niu, Z. Yang <i>China National Intellectual Property Administration (ZL202110835181.X)</i> | Granted 2021 |

TEACHING ASSISTANT

| | |
|---|------------------|
| COMPSCI 250D: Computer Architecture | Duke 2024Fall |
| COMPSCI 390: Programming Language Concepts | Duke 2024Spring |
| Data Structure and Algorithm Design (Undergraduate Student) | UESTC 2020Spring |
| Network Programming and Blockchain (International Student) | UESTC 2020Spring |

PRESENTATIONS & TALKS

| | |
|---|----------------|
| CtChecker: a Precise, Sound and Efficient Static Analysis for Constant-Time Programming European Conference on Object-Oriented Programming (ECOOP 2024) | Sep 2024 |
| A Behavior-Aware Scheme for Personalized Credit Computing IEEE International Conference on Computer Supported Cooperative Work in Design (CSCWD 2022) | May 2022 |
| Regulation-as-a-Service: Model Checking for Decision-Making Behaviors in Price-Sensitive Service Systems IEEE International Conference on Services Computing (SCC 2021) | September 2021 |

Security for Blockchain-based Satellite Communication (Invited Talk)

Annual Symposium of Blockchain Storage and Trade Engineering Laboratory of Sichuan Province

December 2020

INTERNSHIP

Chengdu Huayp Co., Ltd

2019/03 - 2019/06

Software Engineer

- Understand basics of natural language processing
- Design and implement a legal document template generation system based on NLP

Chengdu Tianheng-uestc Co., Ltd

2018/06 - 2018/09

Full-stack Engineer

- Learn to employ Springboot to build website
- Design and implement the security module of the company's core product with Apache Shiro
- Design and implement a document consistency and correctness checking system

SI-TECH Information Technology Co.,Ltd

2017/06 - 2017/07

Full-stack Engineer

- Design and implement an online music streaming website with native Java servlet and jsp
- Design and implement a distance-based music recommendation system

AWARDS & HONORS

ACM SIGPLAN PAC Grant

2023

PLMW@PLDI 2023 Scholarship from ACM SIGPLAN

2023

Outstanding Graduate from Sichuan Province

2021

Outstanding Graduate from UESTC

2021

National Scholarship from Ministry of Education of China (ranked 4/13)

2021

The First Prize Scholarship from UESTC (ranked 1/256)

2021

The Third Prize Scholarship from UESTC

2019

REVIEWER

USENIX Security 2026, CCS 2025, USENIX Security 2025, Computer Communications, International Journal of Intelligent Systems

PROGRAMMING LANGUAGES AND TOOLS

C/C++, Java, Python, Go, JavaScript, HTML, SQL, LLVM, Linux, Git