ZEYU (DING) DING

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EDUCATION

PhD, Computer Science and Engineering
Pennsylvania State University

📅 05/2022 (expected)   📍 State College, PA

- Advisor: Daniel Kifer, Danfeng Zhang   GPA: 3.97/4.0
- Research area: differential privacy and software security

MS, Computer Science
SUNY Binghamton

📅 08/2017   📍 Binghamton, NY

- Advisor: Lijun Yin   GPA: 4.0/4.0
- Research area: facial expression recognition

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PhD, Mathematics
SUNY Binghamton

📅 12/2015   📍 Binghamton, NY

- Advisor: Adrian Vasiu   GPA: 4.0/4.0
- Research area: algebraic number theory

BS, Mathematics
Zhejiang University

📅 06/2006   📍 Hangzhou, China

- Chu Kochen Honors College   Top 3%, GPA: 3.86/4.0

SELECTED PUBLICATIONS

- 📄 [PVLDB'19] Free Gap Information from the Differentially Private Sparse Vector and Noisy Max Mechanisms. with Yuxin Wang, Danfeng Zhang and Daniel Kifer

- 📄 [PLDI'19] Proving Differential Privacy with Shadow Execution. with Yuxin Wang, Daniel Kifer and Danfeng Zhang

- 📄 [CCS'18] Detecting Violations of Differential Privacy. with Yuxin Wang, Guanhong Wang, Danfeng Zhang and Daniel Kifer **Outstanding Paper Award**

SELECTED PROJECTS

ShadowDP
- A language tool for formally verifying differentially private programs, consisting of a type system, a code transformation engine and a solver (Z3), based on our [PLDI'19] paper

StatDP
- An automated tool for detecting differential privacy violations via sampling and statistical hypothesis testing, based on our [CSS'18] paper

Linear Algebra Testing Center
- An open-source online testing system (WeBWork) for administrating quizzes and screening tests for the Linear Algebra class (Math304) of the Dept. of Mathematics, SUNY Binghamton

EXPERIENCE

Research Assistant
Pennsylvania State University

📅 08/2017 – present   📍 State College, PA

- Specializes in **differential privacy** and its interactions with software security, formal methods, statistical inference, numerical optimization and machine learning

Teaching Assistant
SUNY Binghamton

📅 01/2017 – 05/2017   📍 Binghamton, NY

- Led lab sessions and graded tests/homework for the Data Structures and Algorithms class (CS240) of the Dept. of Computer Science

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Adjunct Lecturer
SUNY Binghamton

📅 08/2012 – 08/2016   📍 Binghamton, NY

- Independently taught the following courses in the Dept. of Mathematics: Calculus I, II and III, Linear Algebra, Discrete Mathematics, Number Systems and Differential Equations
- Received excellent teaching evaluations

HONORS & AWARDS

Graduate Student Research Award
Pennsylvania State University

📅 05/2019   📍 State College, PA

Outstanding Paper Award
ACM SIGSAC Conference on Computer and Communications Security 2018 (CCS '18)

📅 10/2018   📍 Toronto, Canada

Best Thesis Award
Zhejiang University

📅 06/2006   📍 Hangzhou, China

First-Class Academic Excellence Scholarship
Zhejiang University

📅 06/2004   📍 Hangzhou, China

SKILLS

Programming Languages
Confident: C, C++, Python, LaTeX
Familiar: Java, Matlab, Haskell, Scheme, JavaScript/HTML/CSS