

# Jinsheng Ba

Personal Website | [GitHub](#) | [Google Scholar](#)

ETH Zürich

Email: [jinsheng.ba@inf.ethz.ch](mailto:jinsheng.ba@inf.ethz.ch)

## WORK EXPERIENCE

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### ETH Zürich

Postdoctoral Researcher  
Mentor: Zhendong Su

Sep 2024 – Now  
Zurich, Switzerland

### Huawei

Security Engineer

Jul 2017 – Dec 2019  
Beijing, China

## EDUCATION

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### National University of Singapore

Ph.D. in Computer Science  
Advisor: Manuel Rigger

Jan 2020 – Aug 2024  
Singapore

### Shandong University

B.Eng. in Computer Science

Sep 2013 – Jun 2017  
Shandong, China

## SELECTED PUBLICATIONS

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### Keep It Simple: Testing Databases via Differential Query Plans

*Jinsheng Ba, Manuel Rigger*

Proceeding of ACM Management of Data, 2024  
<https://github.com/sqlancer/sqlancer/issues/918>

SIGMOD'24

### Finding Performance Issues in Database Systems Through the Lens of Cardinality Estimation

*Jinsheng Ba, Manuel Rigger*

The 46th International Conference on Software Engineering, 2024  
<https://github.com/sqlancer/sqlancer/issues/822>

ICSE'24

### Testing Database Engines via Query Plan Guidance

*Jinsheng Ba, Manuel Rigger*

The 45th International Conference on Software Engineering, 2023  
<https://github.com/sqlancer/sqlancer/issues/641>

ICSE'23

**ACM SIGSOFT Distinguished Paper Award**

### Efficient Greybox Fuzzing to Detect Memory Errors

*Jinsheng Ba, Gregory J Duck, and Abhik Roychoudhury*

The 37th IEEE/ACM International Conference on Automated Software Engineering, 2022  
<https://github.com/bajinsheng/ReZZan>

ASE'22

**ACM SIGSOFT Distinguished Paper Award**

### Stateful Greybox Fuzzing

*Jinsheng Ba, Marcel Böhme, Zahra Mirzamomen, Abhik Roychoudhury*

The 31st USENIX Security Symposium, 2022  
<https://github.com/bajinsheng/SGFuzz>

SEC'22

## TEACHING EXPERIENCE

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- Head Teaching Assistant for 252-2600-05L Software Engineering Seminar (24-25 Sem 1, ETH Zurich)
- Teaching Assistant for 252-0210-00L Compiler Design (24-25 Sem 1, ETH Zurich)
- Teaching Assistant for BT2102 Data Management and Visualisation (22-23 Sem 2, NUS)
- Teaching Assistant for BT2102 Data Management and Visualisation (22-23 Sem 1, NUS)
- Teaching Assistant for CS2040 Data Structures and Algorithms (22-23 Sem 1, NUS)

## SERVICES

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- Program Committee for TKDE'24.
- Program Committee for DBTEST'24 Workshop co-located with SIGMOD'24.
- Program Committee for FSE'23 Artifact Evaluation.
- Program Committee for DEBT'23 Workshop co-located with ISSTA'23.
- Program Committee for PLDI'23 Artifact Evaluation.
- Student Volunteer for FSE'22.

## AWARDS

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- Singapore Open Research Award Winner. (Nov 2024, Singapore)
- Dean's Graduate Research Excellence Award. (Aug 2023, NUS)
- ACM SIGSOFT Distinguished Paper Award. 10 out of 797 submissions 1.2% (Feb 2023, ICSE)
- Research Achievement Award. (Jan 2023, NUS)
- ACM SIGSOFT Distinguished Paper Award. (Oct 2022, ASE)
- Outstanding Graduate of Shandong Province. (Jun 2017, China)
- Outstanding Undergraduate Research Assistant. (Dec 2016, SDU)
- Outstanding Leader of Association in Shandong Province, the only one in SDU (Sep 2016, China)
- First Prize Scholarship of Shandong University. (Sep 2016, SDU)
- Second Prize for Microsoft Imagine Cup Contest (Jun 2015, Microsoft)

## TALKS

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- Invited talk to LSD Lab at UC Santa Cruz: Testing Database Engines via Query Plans. (Oct 2024)
- Invited talk at Ting Su's group of East China Normal University: Stateful Greybox Fuzzing. (July 2023)
- 45th International Conference on Software Engineering: Testing Database Engines via Query Plan Guidance. (May 2023)
- Open day at School of Computing, National University of Singapore: Testing Database Engines via Query Plan Guidance. (Feb 2023)
- Seminar at Tsinghua University: Testing Database Engines via Query Plan Guidance. (Dec 2022)
- Seminar at TiDB company: Testing Database Engines via Query Plan Guidance. (Nov 2022)
- Security workshop at School of Computing, National University of Singapore: Efficient Greybox Fuzzing to Detect Memory Errors (Nov 2022)
- Software engineering workshop at School of Computing, National University of Singapore: Testing Database Engines via Query Plan Guidance. (Nov 2022)
- 37th IEEE/ACM International Conference on Automated Software Engineering: Efficient Greybox Fuzzing to Detect Memory Errors. (Oct 2022)
- 31st USENIX Security Symposium: Stateful Greybox Fuzzing. (Aug 2022)
- Mayday workshop at School of Computing, National University of Singapore: Stateful Greybox Fuzzing. (May 2022)