# Junpeng Zha

*PhD in NJU*

*Department of Computer Science and Technology*
*Nanjing University*
*163 Xianlin Road Nanjing, Jiangsu 210023, China*
*+86-135-8481-4731*
*jpzha@smail.nju.edu.cn*

*Formal Method, verification, reliability*

## Research Statement

My research interests are in the area of formal methods, programming language and building high-confident software. Building high-confident software has been focused by all over the world, because of the widely use of computer system. And formal verification is based on rigorous mathematical theories and methods and can provide a strong guarantee for the correctness of software. My current work is about OS kernel and compiler verification, and certifying low-level assembly code.

## Education

2019-present **Doctoral's Candidate**, *Computer Science*,Nanjing University

- Advisor : Prof. Xinyu Feng
- Research : Compiler Verification and Weak Memory Consistency

2016-2019 **Master's Degree**, *Computer Science*, University of Science and Technology of China

- Thesis title : "Formal Verification of SPARCv8 Assembly Code".
- Advisor : Prof. Xinyu Feng
- Research : High-Confidence Software, Formal Verification
- Rank : 1/93 GPA : 4.00/4.30

2012-2016 **Bachelor's Degree**, *Software Engineering*, Shandong University at Weihai

- Rank : 2/103 GPA : 91.68/100

## Publications

[1] **Junpeng Zha**, Hongjin Liang, and Xinyu Feng. Verifying Optimizations of Concurrent Programs in the Promising Semantics. *In Proc. 43rd ACM SIGPLAN Conference on Programming Language Design and Implementation* **(PLDI'22)**, San Diego, California, USA, June 2022.

[2] **Junpeng Zha**, Xinyu Feng, and Lei Qiao. Modular Verification of SPARCv8 Code. *Journal of Computer Science and Technology (Special Section on Software System 2020)*, Nov 2020, 35(6): 1382-1405.

[3] Hanru Jiang, Hongjin Liang, Siyang Xiao, **Junpeng Zha**, Xinyu Feng. Towards Certified Separate Compilation for Concurrent Programs. *In Proc. 40th ACM SIGPLAN Conference on Programming Language Design and Implementation* **(PLDI'19)**, Phoenix, Arizona, USA, June 2019. *(one of six 2019 PLDI distinguished paper)*

[4] **Junpeng Zha**, Xinyu Feng, and Lei Qiao. Modular Verification of SPARCv8 Code. *16th Asian Symposium on Programming Languages and Systems* **(APLAS'18)**, Wellington, New Zealand, pages 245-263, December 2018.

## Selected Honors and Awards

2021.06 **Outstanding communist**, Nanjing University

2016.06 **Excellent Undergraduate of Shandong University**, 2016

2015.12 **Bronze Medal**, *The $40^{th}$ ACM-ICPC Asia Regional Context*, EC-Final 2015

2015.05 **First Prize**, *The 6th "Lanqiao Cup" National Software and Information Technology Professional Competition*, Shandong 2015

2014.12 **Bronze Medal**, *The $39^{th}$ ACM-ICPC Asia Regional Context*, Shanghai 2014

2014.12 **First Prize**, *The Scholarship for Excellent Student in Shandong University at Weihai*, Shandong 2014

2014.10 **First Prize**, *China Undergraduate Mathematical Contest in Modeling*, Shandong 2014

2014.05 **Second Prize**, *The 5th "Lanqiao Cup" National Software and Information Technology Professional Competition*, Shandong 2014

2013.12 **Outstanding Student of Shandong University at Weihai**, 2013

2013.11 **National Scholarship**, 2013

## Language

2016.12 **College English Test-6**, 457 scores

2013.06 **College English Test-4**, 510 scores

## Interesting

soccer, basketball

## Self Evaluation

I am now a PhD student in Nanjing University and working as a research assistant in the Department of Computer Science and Technology. My major is computer science and research area is about software security and reliability. I am now working on the verification of the correctness of concurrency-aware compilation.