

JIAN ZHANG

Nanyang Technological University
50 Nanyang Avenue, Singapore 639798

Oct 2023
Email: jian_zhang@ntu.edu.sg

RESEARCH INTERESTS My research interests focus on improving software development and maintenance via deep learning, especially I enjoy extending NLP techniques with the characteristics of source code for automated program comprehension, bug detection and so on.

EDUCATION **PhD Degree** 2016/09-2022/06
Beihang University, Computer Science and Technology
Thesis: Intelligent Source Code Maintenance based on Neural Networks
Supervisor: Xudong Liu

Bachelor Degree 2012/09-2016/06
Beihang University, Computer Science and Technology

PUBLICATIONS (* for corresponding author)

ICSE'24 Li Tianlin, Yue Cao, **Jian Zhang***, Shiqian Zhao, Yihao Huang, Aishan Liu, Qing Guo, Yang Liu. RUNNER: Responsible UNfair NEuron Repair for Enhancing Deep Neural Network Fairness. *46th International Conference on Software Engineering, ICSE 2024*.

ASE'23 Kai Huang, Xiangxin Meng, **Jian Zhang***, Yang Liu, Wenjie Wang, Shuhao Li, Yuqing Zhang*. An Empirical Study on Fine-tuning Large Language Models of Code for Automated Program Repair. *38th IEEE/ACM International Conference on Automated Software Engineering, ASE 2023*. **ACM Distinguished Paper Award**

ASE'23 **Jian Zhang**, Shangqing Liu, Xu Wang, Li Tianlin, Yang Liu. Learning to Locate and Describe Vulnerabilities. *38th IEEE/ACM International Conference on Automated Software Engineering, ASE 2023*.

ISSTA'23 **Jian Zhang**, Xu Wang, Hongyu Zhang, Hailong Sun, Xudong Liu, Chunming Hu, Yang Liu. "[Detecting Condition-related Bugs with Control Flow Graph Neural Network](#)". *32nd ACM SIGSOFT International Symposium on Software Testing and Analysis, ISSTA 2023*.

ASE'20 **Jian Zhang**, Xu Wang, Hongyu Zhang, Hailong Sun, Yanjun Pu, Xudong Liu. "[Learning to Handle Exceptions](#)". *35th IEEE/ACM International Conference on Automated Software Engineering, ASE 2020*.
(Acceptance rate: 93/414=22.5%)

ICSE'20 **Jian Zhang**, Xu Wang, Hongyu Zhang, Hailong Sun, Xudong Liu. "[Retrieval-based neural source code summarization](#)". *42nd International Conference on Software Engineering, ICSE 2020*.
(Acceptance rate: 129/617=20.5%)

ICSE'19 **Jian Zhang**, Xu Wang, Hongyu Zhang, Hailong Sun, Kaixuan Wang, Xudong Liu. "[A novel neural source code representation based on abstract](#)

[syntax tree](#)". 41st International Conference on Software Engineering, ICSE 2019.

(Acceptance rate: 109/529=21%)

IJCNN'19 Mengjiao Bao, Jianxin Li, **Jian Zhang**, Hao Peng, Xudong Liu. "[Learning Semantic Coherence for Machine Generated Spam Text Detection](#)".

International Joint Conference on Neural Networks, IJCNN 2019

ICSE'18 **Jian Zhang**, Hailong Sun, Yanfei Tian, Xudong Liu. "[Semantically enhanced tag recommendation for software CQAs via deep learning](#)". 40th International Conference on Software Engineering, ICSE 2018 (Poster Track)

BIGDATA'21 **Jian Zhang**, Xiangxin Meng, Hailong Sun, Xu Wang, Xudong Liu. "[Data-driven intelligent collaboration of software developers](#)". *Big Data Research*, 2021, 7(1) (In Chinese)

PROJECTS

2016/07-2019/06

- Intelligent Collaboration of Developers based on Correlation Analysis
 - Supported by National Key Research and Development Program of China, No.2016YFB1000804.
 - Contributions: 1) Serve as a Tech Lead of one team about 15 developers; 2) Design the architecture of the whole system (about 50000+ lines of code); 3) Build the knowledge graph of developers with more than 43 million nodes.

2020/01-2022/06

- Data-driven Intelligent Source Code Development and Maintenance
 - Supported by National Natural Science Foundation of China
 - Contributions: 1) Work on the problems of source code representation and comment generation; 2) Write technical reports and papers.

HONORS AND AWARDS

- Distinguished Doctoral Graduation Dissertation, Beihang Univ. 2023
- Outstanding Graduate Student, Beihang University 2022
- Outstanding Research Paper Award, Beihang University 2020
- **National Scholarship for PhD**, Ministry of Education of P.R.China 2019
- Merit Student Award, Beihang University 2019
- Merit Student Award, Beihang University 2018
- Merit Student Award, Beihang University 2017
- Grand Prize of Big Data and Computing Intelligence Competition, China Computer Federation 2017
- **1st Prize (1/415)** of Big Data and Computing Intelligence Competition Problem 3, China Computer Federation 2017
- 2nd Prize (3/589) of Big Data and Computing Intelligence Competition Problem 4, China Computer Federation 2017
- Outstanding Undergraduate Award, Beihang University 2016
- National Encouragement Scholarship, Ministry of Education of P.R.China 2015

SERVICE**PC/Reviewer:**

International Symposium on Dependable Computing (PRDC 2023)
Journal of Systems and Software (JSS), 2020

External Reviewer:

- Conferences: ICSE 2024, Asia CCS 2024, ASE 2023, FSE 2023, WWW 2023, ICML 2021, MSR 2021, ICSE 2021, ASE 2020, MSR 2020
- Journals: TSE 2023, JSS 2019