

Associate Professor Zhang, Tao

School of Computer Science and Engineering, Faculty of Innovation Engineering
Macau University of Science and Technology

Office : A321

Tel. : +853-8897 3009

E-mail : tazhang@must.edu.mo



Academic Qualification

Ph.D., University of Seoul, South Korea, 2013

M.E., Northeastern University, Shenyang, China, 2008

B.Sc., Northeastern University, Shenyang, China, 2005

Teaching Area

Undergraduate Courses:

SE250 Software Engineering

SE251 Software Engineering Practices

SE252 Software Project Management

Research Area

Mining Software Repositories, AI for Software Engineering, Mobile App Security

Appointments

Sept. 2019 to present: Associate Professor, Faculty of Information Technology, Macau University of Science and Technology

Dec. 2016 to Aug. 2019: Associate Professor, College of Computer Science and Technology, Harbin Engineering University

Feb. 2016 to Dec. 2016: Assistant Professor, School of Computer Science and Technology, Nanjing University of Posts and Telecommunications

Nov. 2014 to Nov. 2015: Postdoctoral Fellow, Department of Computing, Hong Kong Polytechnic University

Mar. 2014 to Aug. 2014: Postdoctoral Fellow, Faculty of Computer Science and Information Technology, University of Malaya

Mar. 2013 to Feb. 2014: Research Professor, Department of Computer Science, University of Seoul, South Korea

Personal Website

<https://cszhangtao.github.io/>

Selected Publications (More in My Homepage)

International Journal Papers (*means the corresponding author)

1. Yao Li, Dawei Yuan, Tao Zhang*, Haipeng Cai, David Lo, Cuiyun Gao, Xiapu Luo, and He Jiang, "Meta-Learning for Multi-Family Android Malware Classification", ACM Transactions on Software Engineering and Methodology (TOSEM),
2. Dawei Yuan, Xiao Peng, Zijie Chen, Tao Zhang*, and Ruijia Lei, "Code Context-Based Reviewer Recommendation", Frontiers of Computer Science (FCS), Vol. 19, No. 1, Article 191202, January 2025. (CCF-B)
3. Xiaohui Wang, Tao Zhang*, Youshuai Tan, Weiyi Shang, and Yao Li, "How to Effectively Mine App Reviews Concerning Software Ecosystem? A Survey of Review Characteristics", Journal of Systems and Software (JSS), Vol. 213, Article
4. Yao Li, Zhi Xiong, Tao Zhang*, Qinkun Zhang, Ming Fan, and Lei Xue, "Ensemble Framework Combining Family Information for Android Malware Detection", The Computer Journal, Vol. 66, No. 11, pp. 2721-2740, November 2023.
5. Yao Li, Tao Zhang*, Xiapu Luo, Haipeng Cai, Sen Fang, and Dawei Yuan, "Do Pretrained Language Models Indeed Understand Software Engineering Tasks?", IEEE Transactions on Software Engineering (TSE), Vol. 49, No. 10, pp. 4639-
6. Youshuai Tan, Jinfu Chen, Weiyi Shang, Tao Zhang*, Sen Fang, Xiapu Luo, Zijie Chen, and Shuhao Qi, "STRE: An Automated Approach to Suggesting App Developers When to Stop Reading Reviews", IEEE Transactions on Software Engineering (TSE), Vol. 49, No. 8, pp. 4135-4151, August 2023. (CCF-A, Top-tier Journal)
7. Dawei Yuan, Xiaohui Wang, Yao Li, and Tao Zhang*, "Optimizing Smart Contract Vulnerability Detection via Multi-Modality Code and Entropy Embedding", Journal of Systems and Software (JSS), Vol. 202, Article 111699, August 2023.
8. Dawei Yuan, Sen Fang, Tao Zhang*, Zhou Xu, and Xiapu Luo, "Java Code Clone Detection by Exploiting Semantic and Syntax Information from Intermediate Code-Based Graph", IEEE Transactions on Reliability (TR), Vol. 72, No. 2, pp. 511-
9. Jianwei Zeng, Yutong He, Tao Zhang*, Zhou Xu, and Qiang Han, "CLG-Trans: Contrastive Learning for Code Summarization via Graph Attention-Based Transformer", Science of Computer Programming (SCP), Vol. 226, Article
10. Sen Fang, Tao Zhang*, Youshuai Tan, Zhou Xu, Zhixin Yuan, and Lingze Meng, "PRHAN: Automated Pull Request Description Generation Based on Hybrid Attention Network", Journal of Systems and Software (JSS), Vol. 185, Article
11. Tao Zhang, Jiachi Chen, Xian Zhan, Xiapu Luo, David Lo, and He Jiang, "Where2Change: Change Request Localization for App Reviews", IEEE Transactions on Software Engineering (TSE), Vol. 47, No. 11, pp. 2590-2616,
12. Kunsong Zhao, Zhou Xu, Tao Zhang*, Yutian Tang, and Meng Yan, "Simplified Deep Forest Model Based Just-in-Time Defect Prediction for Android Mobile Apps", IEEE Transactions on Reliability (TR), Vol. 70, No. 2, pp. 848-859, June 2021.
13. Sen Fang, Youshuai Tan, Tao Zhang*, Zhou Xu, and Hui Liu, "Effective Prediction of Bug-Fixing Priority via Weighted Graph Convolutional Networks", IEEE Transactions on Reliability (TR), Vol. 70, No. 2, pp. 563-574, June 2021. (JCR Q1)

14. Sen Fang, Youshuai Tan, Tao Zhang*, and Yepang Liu, "Self-Attention Networks for Code Search", Information and Software Technology (IST), Vol. 134, Article 106542, June 2021. (CCF-B)
15. Youshuai Tan, Sijie Xu, Zhaowei Wang, Tao Zhang*, Zhou Xu, and Xiapu Luo, "Bug Severity Prediction Using Question-and-Answer Pairs from Stack Overflow", Journal of Systems and Software (JSS), Vol. 165, Article 110567, July 2021.
16. Tao Zhang, Haoming Li, Zhou Xu, Jian Liu, Rubing Huang, and Yiran Shen, "Labeling Issue Reports in Mobile Apps", IET Software, Vol. 13, No. 6, pp. 528-542, December 2019. (CCF-B)
17. Zhou Xu, Shuai Pang, Tao Zhang*, Xiapu Luo, Jin Liu, Yutian Tang, Xiao Yu, and Lei Xue, "Cross Project Defect Prediction via Balanced Distribution Adaptation Based Transfer Learning", Journal of Computer Science and Technology
18. Tao Zhang, Jiachi Chen, Geunseok Yang, Byungjeong Lee, and Xiapu Luo, "Towards More Accurate Severity Prediction and Fixer Recommendation of Software Bugs", Journal of Systems and Software (JSS), Vol. 117, pp. 166-184, 2019.
19. Tao Zhang, He Jiang, Xiapu Luo, and Alvin T.S. Chan, "A Literature Review of Research in Bug Resolution: Tasks, Challenges, and Future Directions", The Computer Journal, Vol. 59, No. 5, pp. 741-773, May 2016. (CCF-B)

International Conference Papers (*means the corresponding author)

1. Haoran Yang, Yu Nong, Tao Zhang, Xiapu Luo, and Haipeng Cai, "Learning to Detect and Localize Multilingual Bugs", Proc. of the ACM on Software Engineering (PACMSE), Issue FSE 2024, Jul. 15-19, 2024, Accepted. (CCF-A, Top-tier)
2. Sen Fang, Tao Zhang*, Youshuai Tan, He Jiang, Xin Xia, and Xiaobing Sun, "RepresentThemAll: A Universal Learning Representation of Bug Reports", in Proc. of the 45th International Conference on Software Engineering (ICSE'23), May 14-20, 2023.
3. Yucen Shi, Ying Yin, Zhengkui Wang, David Lo, Tao Zhang, Xin Xia, Yuhai Zhao, and Bowen Xu, "How to Better Utilize Code Graphs in Semantic Code Search", in Proc. of the 30th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE'22), Nov. 14-18, 2022, pp. 722-733. (CCF-A, Top-tier)
4. Liu Wang, Haoyu Wang, Xiapu Luo, Tao Zhang, Shangguang Wang, and Xuanzhe Liu, "Demystifying "Removed Reviews" in iOS App Store", in Proc. of the 30th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE'22), Industry Track, Nov. 14-18, 2022, pp. 1489-1499. (CCF-A, Top-tier)
5. He Ye, Matias Martinez, Xiapu Luo, Tao Zhang, and Martin Monperrus, "SelfAPR: Selfsupervised Program Repair with Test Execution Diagnostics", in Proc. of the 37th IEEE/ACM International Conference on Automated Software Engineering (ASE'22), Oct. 10-14, 2022, Article 92, pp. 1-13. (CCF-A, Top-tier Conference)
6. Tao Zhang, Jiachi Chen, He Jiang, Xiapu Luo, and Xin Xia, "Bug Report Enrichment with Application of Automated Fixer Recommendation", in Proc. of the 25th IEEE International Conference on Program Comprehension (ICPC'17), May 2017.
7. He Jiang, Jingxuan Zhang, Zhilei Ren, and Tao Zhang, "An Unsupervised Approach for Discovering Relevant Tutorial Fragments for APIs", in Proc. of the 39th International Conference on Software Engineering (ICSE'17), 2017, pp. 38-48. (CCF-A, Top-tier)

Academic Activities (Selected)

Associate Editor: IEEE Transactions on Software Engineering (TSE), Journal of Systems and Software (JSS)

Guest Editor: Empirical Software Engineering (EMSE 2023), Science of Computer Programming (SCP 2023), Journal of

General Chair: SANER 2023

Program Co-Chair: Internetwork 2024, DSA 2021

Local Organizing Co-Chair: QRS 2020

Organizing Committee Co-Chair: IBF 2019-2021 (co-located with SANER 2019-2020)

Track Co-Chair: Software Engineering Track at ACM SAC 2017-2022

Publicity Chair/Co-Chair: IJCAI 2023, SANER 2019, QRS 2019

TPC Member: ISSTA 2025, ICSE 2025, FSE 2024, ASE 2023, ESEC/FSE 2023, APSEC 2023, Internetwork 2023, MSR 2022-2023, ISSRE 2021-2023, ICSME 2020-2022, QRS 2020-2023, ISEC 2020-2021, NSS 2018 & 2020-2022, SANER

Professional Society Membership

ACM/IEEE/CCF Senior Member