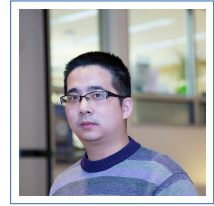


Xin Xia

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Research Interests

Software Analytics, Mining Software Repositories, Empirical Software Engineering

Education

2009.9–2014.6 **PhD**, *College of Computer Science and Technology, Zhejiang University.*

Supervisor: Prof. Xiaohu Yang and Prof. Jianling Sun

2005.9–2009.7 **Bachelor**, *College of Software Engineering, Zhejiang University.*

Work Experience

2020.1 – Present **ARC DECRA Fellow, Lecturer**, *Monash University, Australia.*

2018.2– 2019.12 **Lecturer**, *Monash University, Australia.*

2016.10–2017.10 **Research Fellow**, *University of British Columbia, Canada.*

Supervisor: Prof. Gail Murphy and Prof. Reid Holmes

2014.11–2016.10 **Research Assistant Professor**, *Zhejiang University, China.*

2014.03–2015.09 **Research Assistant**, *Singapore Management University, Singapore.*

Supervisor: Prof. David Lo

Achievements and Honours

2020 **Google Scholar Citation: 2,678; H-index: 29; i10-index: 75 (Feb 16, 2020)**

2019 **Top 2 rising software engineering (SE) researchers in the world, and top 5 most active early career software engineering researchers** in the world according to the analysis of the publications of software engineering scholars during the last decade. Source: D. Karanatsiou, Y. Li, E. Arvanitou, N. Misirlis, W. Eric Wong, "A bibliometric assessment of software engineering scholars and institutions (2010–2017)", *Journal of Systems and Software*, Vol.147, pp.246-261, 2019.

2019 **Australian Research Council (ARC) Discovery Early Career Researcher Award (DECRA) Fellow**

2019 **ACM SIGSOFT Distinguished Paper Award**, 34rd IEEE/ACM International Conference on Automated Software Engineering (ASE 2019), November 2019

2019 **Best Tool Demo Paper Award**, 27th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2019), August 2019

- 2019 **Distinguished Reviewer Award**, Journal of Empirical Software Engineering, January, 2019 (five out of more than 450 reviewers)
- 2018 **ACM SIGSOFT Distinguished Paper Award**, 33rd IEEE/ACM International Conference on Automated Software Engineering (ASE 2018), September 2018
- 2018 **ACM SIGSOFT Distinguished Paper Award**, 26th International Conference on Program Comprehension (ICPC 2018), May 2018
- 2018 **FOSS Impact Paper Award**, 15th ACM/IEEE International Conference on Mining Software Repositories (MSR 2018), May 2018
- 2017 **Nominated for Distinguished Paper Award**, 33rd IEEE International Conference on Software Maintenance and Evolution (ICSME 2017), September 2017 (Two Papers)
- 2016 **TSE Featured Paper**, IEEE Transactions on Software Engineering, October 2016 Issue
- 2016 **Nominated for Best Paper Award**, 32nd IEEE International Conference on Software Maintenance and Evolution (ICSME), October 2016
- 2016 **Nominated for Best Paper Award**, 13th ACM/IEEE International Conference on Mining Software Repositories (MSR), May 2016
- 2014 **Best Student Paper Award**, 19th International Conference on Engineering of Complex Computer Systems (ICECCS 2014), August 2014
- 2014 **Most Promising Idea Award**, 22nd International Conference on Program Comprehension (ICPC 2014), May 2014

Fundings

- 2020-2022 ARC DECRA Fellow: An Intelligent Programmer's Assistant Using Data Mining, sole-PI, 413,000 AUD
- 2020-2022 ARC Discovery Project: ValDefFixApp: Values-oriented Defect Fixing for Mobile Software Applications. CI: 390,000 AUD
 - 2020 Alibaba AIR Project: Code Search, sole-PI: 101,000 AUD
 - 2019 Bangsun technology Ltd: Gift funding, sole-PI: 20,000 AUD
 - 2019 HyperChain Ltd: Gift funding, sole-PI: 30,000 AUD
- 2017-2019 National Natural Science Foundation of China: "Characterizing, Predicting and Repairing Reopen Bugs", sole-PI: 200,000 RMB (40K AUD)
 - 2017 Alibaba Group: "Clone Detection". Co-PI: 500,000 RMB (100K AUD)
 - 2017 Alibaba Group: "Defect Prediction and Localiation". Co-PI: 600,000 RMB (120K AUD)
- 2015 Fundamental Research Funds for the Central Universities: "Practical Code Search", sole-PI 2015-2016: 100,000 RMB (20K AUD)

Courses

- 2018–2019 FIT3170 – Software Engineering Practice
- 2019 FIT2101 – Software Engineering Process and Management

Professional Service

- 2019–2021 **Steering Committee Member** – SANER

2019–2022 **Steering Committee Member** – MSR

2021

- 1 Program Committee Member – **ICSE 2021**
- 2 Workshop co-Chair – SANER 2021

2020

- 1 Award Committee Member – SIGSOFT Outstanding Doctoral Dissertation Award, and MSR 2010 Most Influential Paper Award Committee
- 2 New Ideas Track co-Chair – ICSME 2020
- 3 Journal-first Track co-Chair – ASE 2020
- 4 Student Competition co-Chair – MobileSoft 2020
- 5 Publicity co-Chair – Promise 2020
- 6 Organization co-Chair – First International Workshop on Knowledge Graph for Software Engineering (KG4SE) (Co-located with ICSE 2020)
- 7 Program Committee Member – **ICSE 2020, ESEC/FSE 2020, ASE 2020, ISSRE 2020, SANER 2020, ICPC 2020, PROMISE 2020**
- 8 Guest Editor – Empirical Software Engineering (Special issue on Recommendation Systems for Software Engineering)

2019

- 1 Local Chair – SANER 2019
- 2 Program Committee Member – **ICSE 2019, ASE 2019, ICSME 2019, MSR 2019, SANER 2019, ISSRE 2019, ICPC 2019, QRS 2019, ICSR 2019, COMPSAC 2019, ISSSTA 2019 Tool Demo**
- 3 Guest Editor – Empirical Software Engineering (Special issue on Intelligent Software Engineering), Journal of Systems and Software (Special issue on Intelligent Software Engineering), Science China Information Science (Special issue on Big Data-Driven Intelligent Software Development for Onsite Programming), Automated Software Engineering (Special Issue on Automated Software Engineering for Mobile Applications)
- 4 Board of Distinguished Reviewers – ACM Transactions on Software Engineering and Methodology (TOSEM)

2018

- 1 Local Chair – ICECCS 2018
- 2 Program Committee Member– ICSME 2018, ICPC 2018, MSR 2018, ISSRE 2018, APSEC 2018, SAC 2018 (SE Track), COMPSAC 2018, SETTA 2018, GREEN 2018 at ICSE 2018

2017

- 1 Program Committee Member – ICSME 2017, ICPC 2017, MSR 2017, PROMISE 2017, ICSE 2017 (NIER Track), ASE 2017 (Tool Demo Track), SAC 2017 (SE Track), SATE 2017

2016

- 1 Publicity co-Chair – ASE 2016
- 2 Program Committee Member – ICPC 2016 (Short Paper Track), SANER 2016 (ERA Track), SATE 2016

2015

- 1 Organization co-Chair – Fourth International Workshop on Software Mining (SoftMine 2015) (Co-located with ASE 2015)
- 2 Program Committee Member – SCAM 2015

Book Chapter (1)

- 2019 **Xin Xia**, David Lo. “Feature Generation and Engineering for Software Analytics”. Feature engineering for machine learning and data analytics. CRC Press, 2018. 335-358.

Tutorial (1)

- 2016 Latifa Guerrouj, Olga Baysal, Foutse Khomh, **Xin Xia**. “Software Analytics: Challenges and Opportunities”. ASE 2016: Tutorial

Refereed Journal Papers (60)(* refers to the corresponding author)

2020 (1)

- TSE 2020 Zhipeng Gao, Lingxiao Jiang, **Xin Xia***, David Lo, John Grundy. “Checking Smart Contracts with Structural Code Embedding”. IEEE Transactions on Software Engineering (TSE), 18 pages. (CCF A Journal)

2019 (25)

- TSE 2019 Zhiyuan Wan, **Xin Xia***, David Lo, Gail Murphy. “How does Machine Learning Change Software Development Practices?” IEEE Transactions on Software Engineering (TSE), 14 pages. Accepted. (CCF A Journal)
- TSE 2019 Zhongxin Liu, **Xin Xia***, David Lo, Zhenchang Xing, Ahmed E. Hassan, Shanping Li. “Which Variables Should I Log?” IEEE Transactions on Software Engineering (TSE), 20 pages. Accepted. (CCF A Journal)
- TSE 2019 Yuanrui Fan, **Xin Xia***, Daniel Alencar da Costa, David Lo, Ahmed E. Hassan, Shanping Li. “The Impact of Mislabeled Changes by SZZ on Just-in-Time Defect Prediction”. IEEE Transactions on Software Engineering (TSE), 26 pages. Accepted. (CCF A Journal)
- TSE 2019 Lingfeng Bao, **Xin Xia***, David Lo, Gail Murphy. “A Large Scale Study of Long-Time Contributor Prediction for GitHub Projects”. IEEE Transactions on Software Engineering (TSE), 22 pages. Accepted. (CCF A Journal)
- TSE 2019 Zhiyuan Wan, **Xin Xia***, Ahmed E. Hassan. “What Do Programmers Discuss about Blockchain? A Case Study on the Use of Balanced LDA and the Reference Architecture of a Domain to Capture Online Discussions about Blockchain Platforms across Stack Exchange Communities”. IEEE Transactions on Software Engineering (TSE), 19 pages. Accepted. (CCF A Journal)
- TSE 2019 Giovanni Viviani, Michalis Famelis, **Xin Xia**, Calahan Janik-Jones, Gail C. Murphy. “Locating Latent Design Information in Developer Discussions: A Study on Pull Requests”. IEEE Transactions on Software Engineering (TSE), 13 pages. Accepted. (CCF A Journal)
- TSE 2019 Rubing Huang, Weifeng Sun, Yinyin Xu, Haibo Chen, Dave Towey, **Xin Xia**. “A Survey on Adaptive Random Testing”. IEEE Transactions on Software Engineering (TSE), 32 pages. Accepted. (CCF A Journal)

- TSE 2019 Weiqin Zou, David Lo, Pavneet Singh Kochhar, Xuan-Bach Dinh Le, **Xin Xia**, Yang Feng, Zhenyu Chen, Baowen Xu. "Smart Contract Development: Challenges and Opportunities". IEEE Transactions on Software Engineering (TSE), 20 pages. Accepted. (**CCF A Journal**)
- TSE 2019 Lingfeng Bao, Zhenchang Xing, **Xin Xia***, David Lo. "VT-Revolution: Interactive Programming Video Tutorial Authoring and Watching System". IEEE Transactions on Software Engineering (TSE) 45(8), 823-838. (**CCF A Journal**).
- TSE 2019 Meng Yan, **Xin Xia***, Emad Shihab, David Lo, Jianwei Yin, Xiaohu Yang. "Automating Change-Level Self-Admitted Technical Debt Determination". IEEE Transactions on Software Engineering (TSE) 45(12): 1211-1229 (2019)
- TOSEM 2019 Xiaoxue Ren, Zhenchang Xing, **Xin Xia***, David Lo, Xinyu Wang, John Grundy. "Neural Network Based Detection of Self-admitted Technical Debt: From Performance to Explainability". In ACM Transactions on Software Engineering and Methodology (TOSEM) 28(3): 15 (2019). (**CCF A Journal**)
- EMSE 2019 Li Li, Jun Gao, Tegawende F. Bissyande, Lei Ma, **Xin Xia**, Jacques Klein. "CDA: Characterising Deprecated Android APIs". Empirical Software Engineering (EMSE). Accepted. (**CCF B Journal**)
- EMSE 2019 Junxiao Han, Emad Shihab, Zhiyuan Wan, Shuihuang Deng, **Xin Xia**. "What do Programmers Discuss about Deep Learning Frameworks". Empirical Software Engineering (EMSE). Accepted. (**CCF B Journal**)
- EMSE 2019 Zhiyuan Wan, David Lo, **Xin Xia***, Liang Cai. "Practical and Effective Sandboxing for Linux Containers". Empirical Software Engineering (EMSE) 24(6): 4034-4070 (2019). (**CCF B Journal**)
- EMSE 2019 Xing Hu, Ge Li, **Xin Xia**, David Lo, Zhi Jin. "Deep Code Comment Generation with Hybrid Lexical and Syntactical Information". Empirical Software Engineering (EMSE). Accepted. (**CCF B Journal**)
- EMSE 2019 Meng Yan, **Xin Xia***, David Lo, Ahmed E. Hassan, Shanping Li. "Characterizing and Identifying Reverted Commits". Empirical Software Engineering (EMSE) 24(4): 2171-2208 (2019). (**CCF B Journal**)
- EMSE 2019 Qiao Huang, **Xin Xia***, David Lo. "Revisiting supervised and unsupervised models for effort-aware just-in-time defect prediction". Empirical Software Engineering 24(5): 2823-2862 (2019)(**CCF B Journal**)
- JSEP 2019 Chao Ni, Xiang Chen, **Xin Xia**, Qing Gu, Yingquan Zhao. "Multi-task Defect Prediction". In Journal of Software: Evolution and Process (JSEP Journal) 31(12) (2019). (**CCF B Journal**)
- IST 2019 Tianchi Zhou, Xiaobing Sun, **Xin Xia**, Bin Li, Xiang Chen. "Improving Defect Prediction with Deep Forest". In Information and Software Technology (IST Journal) 114: 204-216 (2019). (**CCF B Journal**)
- IST 2019 Qingye Wang, **Xin Xia***, David Lo, Shanping Li. "Why Is My Code Change Abandoned?" In Information and Software Technology (IST Journal) 110: 108-120 (2019). (**CCF B Journal**)
- IST 2019 Chao Liu, Dan Yang, **Xin Xia**, Meng Yan, Xiaohong Zhang. "A two-phase transfer learning model for cross-project defect prediction". Information and Software Technology 107: 125-136 (2019)

- JSS 2019 Jing Jiang, David Lo, Jiateng Zheng, **Xin Xia**, Yun Yang, Li Zhang. "Who Should Make Decision on this Pull Request? Analyzing Time-Decaying Relationships and File Similarities for Integrator Prediction". *Journal of Systems and Software (JSS)* 154: 196-210 (2019). (**CCF B Journal**)
- AUSE 2019 Zhongxin Liu, **Xin Xia***, David Lo, John Grundy. "Automatic, Highly Accurate App Permission Recommendation". In *Automated Software Engineering Journal (ASE Journal)*. 26(2): 241-274 (2019). (**CCF B Journal**)
- SCIS 2019 Jiajun Jiang, Yingfei Xiong, **Xin Xia**. "A manual inspection of Defects4J bugs and its implications for automatic program repair". In *SCIENCE CHINA Information Sciences (SCIS)* 62(10): 200102:1-200102:16 (2019). (**CCF B Journal**)
- SCIS 2019 Meng Yan, **Xin Xia***, Xiaohong Zhang, Ling Xu, Dan Yang, Shanping Li: Software quality assessment model: a systematic mapping study. In *SCIENCE CHINA Information Sciences (SCIS)* 62(9): 191101:1-191101:18 (2019). (**CCF B Journal**)
2018 (11)
- TSE 2018 Zhiyuan Wan, **Xin Xia***, Ahmed E. Hassan, David Lo, Jianwei Yin, Xiaohu Yang. "Perceptions, Expectations, and Challenges in Defect Prediction". *IEEE Transactions on Software Engineering (TSE)*, 26 pages. Accepted. (**CCF A Journal**)
- TSE 2018 Qiao Huang, **Xin Xia***, David Lo, Gail Murphy. "Automating Intention Mining". *IEEE Transactions on Software Engineering (TSE)*, 22 pages. Accepted. (**CCF A Journal**)
- TSE 2018 Weiqin Zou, David Lo, Zhenyu Chen, **Xin Xia***, Yang Feng, Baowen Xu. "How Practitioners Perceive Automated Bug Report Management Techniques". *IEEE Transactions on Software Engineering (TSE)*, 28 pages. Accepted. (**CCF A Journal**)
- TSE 2018 Yuanrui Fan, **Xin Xia***, David Lo, Ahmed E. Hassan. "Chaff from the Wheat: Characterizing and Determining Valid Bug Reports". *IEEE Transactions on Software Engineering (TSE)*, 30 pages. Accepted. (**CCF A Journal**)
- TSE 2018 **Xin Xia**, Lingfeng Bao, David Lo, Zhenchang Xing, Ahmed E. Hassan, Shanping Li. "Measuring Program Comprehension: A Large-Scale Field Study with Professionals". *IEEE Transactions on Software Engineering (TSE)*: 44(10): 951-976 (2018) (**CCF A Journal**)
- EMSE 2018 Yuanrui Fan, **Xin Xia***, David Lo, Shanping Li. "Early Prediction of Merged Code Changes to Prioritize Reviewing Tasks". *Empirical Software Engineering (EMSE)* 23(6): 3346-3393 (2018). (**CCF B Journal**)
- EMSE 2018 Qiao Huang, Emad Shihab, **Xin Xia***, David Lo, Shanping Li. "Identifying self-admitted technical debt in open source projects using text mining". *Empirical Software Engineering* 23(1): 418-451 (2018)
- EMSE 2018 Bowen Xu, Zhenchang Xing, **Xin Xia***, David Lo, Shanping Li. "Domain-specific cross-language relevant question retrieval". *Empirical Software Engineering* 23(2): 1084-1122 (2018)
- EMSE 2018 Lingfeng Bao, Zhenchang Xing, **Xin Xia**, David Lo, Ahmed E. Hassan: Inference of development activities from interaction with uninstrumented applications. *Empirical Software Engineering* 23(3): 1313-1351 (2018)
- EMSE 2018 Yun Zhang, David Lo, **Xin Xia***, Giuseppe Scanniello, Tien-Duy B. Le, Jianling Sun. "Fusing multi-abstraction vector space models for concern localization". *Empirical Software Engineering* 23(4): 2279-2322 (2018)

- FCS 2018 Yun Zhang, David Lo, **Xin Xia***, Jianling Sun. "Combined classifier for cross-project defect prediction: an extended empirical study". *Frontiers of Computer Science* 12(2): 280-296 (2018)
- SCIS 2018 Xiaobing Sun, Wenyuan Xu, **Xin Xia**, Xiang Chen, Bin Li. "Personalized Project Recommendation on GitHub". In *SCIENCE CHINA Information Sciences (SCIS)* 61(5): 050106:1-050106:14 (2018). (**CCF B Journal**)
- 2017 (11)
- TSE 2017 **Xin Xia**, David Lo, Ying Ding, Jafar M. Al-Kofahi, Tien N. Nguyen, Xinyu Wang. "Improving Automated Bug Triaging with Specialized Topic Model". *IEEE Transactions on Software Engineering (TSE)*, 43(3): 272-297 (2017) (**CCF A Journal**)
- EMSE 2017 **Xin Xia**, Lingfeng Bao, David Lo, Pavneet Singh Kochhar, Ahmed E. Hassan, Zhenchang Xing. "What Do Developers Search For on the Web?". *Empirical Software Engineering (EMSE)*. 22(6): 3149-3185 (2017) (**CCF B Journal**)
- EMSE 2017 Jing Jiang, David Lo, Jia-Huan He, **Xin Xia**, Pavneet Singh Kochhar, Li Zhang. "Why and how developers fork what from whom in GitHub". *Empirical Software Engineering (EMSE)* 22(1): 547-578 (2017) (**CCF B Journal**)
- EMSE 2017 Lingfeng Bao, Jing Li, Zhenchang Xing, Xinyu Wang, **Xin Xia**, Bo Zhou. "Extracting and analyzing time-series HCI data from screen-captured task videos". *Empirical Software Engineering (EMSE)* 22(1): 134-174 (2017) (**CCF B Journal**)
- AUSE 2017 **Xin Xia**, David Lo. "An effective change recommendation approach for supplementary bug fixes". *Automated Software Engineering* 24(2): 455-498 (2017) (**CCF B Journal**)
- JSS 2017 Xiaobing Sun, Hui Yang, **Xin Xia**, Bin Li. "Enhancing Developer Recommendation with Supplementary Information via Mining Historical Commits". *Journal of Systems and Software (JSS)*. 134: 355-368 (2017). (**CCF B Journal**)
- IST 2017 Xinli Yang, David Lo, Li Li, **Xin Xia***, Tegawende F. Bissyande, Jacques Klein. "Comprehending Malicious Android Apps By Mining Topic-Specific Data Flow Signatures". *Information & Software Technology*. 90: 27-39 (2017) (**CCF B Journal**)
- IST 2017 Xinli Yang, David Lo, **Xin Xia***, Jianling Sun. "TLEL: A two-layer ensemble learning approach for just-in-time defect prediction". *Information & Software Technology* 87: 206-220 (2017) (**CCF B Journal**)
- SCIS 2017 Lingfeng Bao, David Lo, **Xin Xia***, Shanping Li. "Automated Android App Permission Recommendation". *SCIENCE CHINA Information Sciences (SCIS)*. 60(9): 092110:1-092110:17 (2017) (**CCF B Journal**)
- JCST 2017 Xinli Yang, David Lo, **Xin Xia***, Qiao Huang, Jianling Sun. "High Impact Bug Report Detection with Imbalanced Learning Strategies". *Journal of Computer Science and Technology (JCST)* 32(1): 181-198 (2017) (**CCF B Journal**)
- 2016 (5)
- TSE 2016 **Xin Xia**, David Lo, Sinno Jialin Pan, Nachiappan Nagappan, Xinyu Wang. "HYDRA: Massively Compositional Model for Cross-Project Defect Prediction". *IEEE Transactions on Software Engineering (TSE)*, 42(10): 977-998 (2016) (**TSE Featured Paper of the October 2016 Issue, CCF A Journal**)
- TR 2016 **Xin Xia**, David Lo, Emad Shihab, Xinyu Wang. "Automated Bug Report Field Reassignment and Refinement Prediction". *IEEE Transactions on Reliability*, 65(3) 1094-1113 (2016)

- TR 2016 **Xin Xia**, David Lo, Xinyu Wang, Xiaohu Yang. "Collective Personalized Change Classification With Multiobjective Search". *IEEE Transactions on Reliability*, 65(4): 1810-1829 (2016)
- AUSE 2016 **Xin Xia**, Liang Gong, Tien-Duy B. Le, David Lo, Lingxiao Jiang, Hongyu Zhang. "Diversity maximization speedup for localizing faults in single-fault and multi-fault programs". *Automated Software Engineering* 23(1): 43-75 (2016) (**CCF B Journal**)
- JCST 2016 Xinli Yang, David Lo, **Xin Xia***, Zhi-Yuan Wan, Jian-Ling Sun. "What Security Questions Do Developers Ask? A Large-Scale Study of Stack Overflow Posts". *Journal of Computer Science and Technology (JCST)* 31(5): 910-924 (2016) (**CCF B Journal**)
- 2015 (6)
- EMSE 2015 Yuan Tian, David Lo, **Xin Xia**, Chengnian Sun. "Automated prediction of bug report priority using multi-factor analysis". *Empirical Software Engineering (EMSE)* 20(5): 1354-1383 (2015) (**CCF B Journal**)
- AUSE 2015 **Xin Xia**, David Lo, Emad Shihab, Xinyu Wang, Bo Zhou. "Automatic, high accuracy prediction of reopened bugs". *Automated Software Engineering* 22(1): 75-109 (2015) (**CCF B Journal**)
- IST 2015 **Xin Xia**, David Lo, Emad Shihab, Xinyu Wang, Xiaohu Yang. "ELBlocker: Predicting blocking bugs with ensemble imbalance learning". *Information & Software Technology* 61: 93-106 (2015) (**CCF B Journal**)
- JSEP 2015 **Xin Xia**, David Lo, Xinyu Wang, Bo Zhou. "Dual analysis for recommending developers to resolve bugs". *Journal of Software: Evolution and Process* 27(3): 195-220 (2015) (**CCF B Journal**)
- JCST 2015 Xinyu Wang, **Xin Xia***, David Lo. "TagCombine: Recommending Tags to Contents in Software Information Sites". *Journal of Computer Science and Technology (JCST)* 30(5): 1017-1035 (2015) (**CCF B Journal**)
- JCST 2015 Yun Zhang, David Lo, **Xin Xia***, Jianling Sun. "Multi-Factor Duplicate Question Detection in Stack Overflow". *Journal of Computer Science and Technology (JCST)* 30(5): 981-997 (2015) (**CCF B Journal**)
- 2014 (1)
- IEICE 2014 **Xin Xia**, Xiaozhen Zhou, David Lo, Xiaoqiong Zhao, Ye Wang. "An Empirical Study of Bugs in Software Build System". *IEICE Transactions* 97-D(7): 1769-1780 (2014)

Refereed Conference Full Papers (63) (* refers to the corresponding author)

- 2020 (5)
- UbiComp 2020 Zhiyuan Wan, Lingfeng Bao, Debin Gao, Eran Toch, **Xin Xia**, Tamir Mendel, David Lo. "AppMoD: Helping Older Adults Manage Mobile Security with Online Social Help". *UbiComp 2020. IMWUT* 3(4): 154:1-154:22 (2019). (**CCF A Conference**)
- ICSE 2020 Xiaoxue Ren, Zhenchang Xing, Jiamou Sun, **Xin Xia***, Jianling Sun. "Demystify Official API Usage Directives with Crowdsourced API Misuse Scenarios, Erroneous Code Examples and Patches". *ICSE 2020: Accepted as a Full paper.* (**CCF A Conference**)

- ICSE-SEIS 2020 Jiakun Liu, Qiao Huang, **Xin Xia***, Emad Shihab, David Lo, Shanping Li. "Is Using Deep Learning Frameworks Free? Characterizing Technical Debt in Deep Learning Frameworks". ICSE 2020: SEIS Track. Accepted as a SEIS Track Full Paper. **(CCF A Conference)**
- SANER 2020 Wenhan Wang, Ge Li, Bo Ma, **Xin Xia**, Zhi Jin. "Detecting Code Clones with Graph Neural Network and Flow-Augmented Abstract Syntax Tree". SANER 2020: Accepted as a Full paper. **(CCF B Conference)**
- ASIACCS 2020 Tingmin Wu, Rongjun Chen Zhang, Wanlun Ma, Sheng Wen, **Xin Xia**, Cecile Paris, Surya Nepal, Yang Xiang. "What risk? I don't understand. An Empirical Study on Users' Understanding of the Terms Used in Security Texts". ASIACCS 2020: Accepted as a Full Paper.
- 2019 (11)
- NeurIPS 2019 Bolin Wei, Ge Li, **Xin Xia**, Zhiyi Fu, Zhi Jin. "Code Generation as a Dual Task of Code Summarization". NeurIPS 2019: : 6559-6569. **(CCF A Conference)**
- ASE 2019 Zhongxin Liu, **Xin Xia***, Christoph Treude, David Lo, Shanping Li. "Automatic Generation of Pull Request Descriptions". ASE 2019: 176-188. **(CCF A Conference, ACM SIGSOFT Distinguished Paper Award)**
- ASE 2019 Xiaoxue Ren, Zhenchang Xing, **Xin Xia***, Guoqiang Li, Jianling Sun. "Discovering, Explaining and Summarizing Controversial Discussions in Community Q&A Sites". ASE 2019: 151-162. **(CCF A Conference)**
- ASE 2019 Cuiyun Gao, Jichuan Zeng, **Xin Xia**, David Lo, Michael R. Lyu, Irwin King. "Automating App Review Response Generation". ASE 2019: 163-175. **(CCF A Conference)**
- ICSE 2019 **Xin Xia**, Zhiyuan Wan, Pavneet Singh Kochhar, David Lo. "How Practitioners Perceive Coding Proficiency". ICSE 2019: 924-935. **(CCF A Conference)**
- ICSE 2019 Xuan Bach D. Le, Lingfeng Bao, David Lo, **Xin Xia***, Shanping Li, Corina Pasareanu. "On Reliability of Patch Correctness Assessment". ICSE 2019: 524-535. **(CCF A Conference)**
- ICSE 2019 Dehai Zhao, Zhenchang Xing, Chunyang Chen, **Xin Xia***, Guoqiang Li. "ActionNet: Vision-based Workflow Action Recognition From Programming Screencasts". ICSE 2019: 350-361. **(CCF A Conference)**
- ICSE-SEIP 2019 Pavneet Singh Kochhar, **Xin Xia***, David Lo, Shanping Li. "Practitioners' Views on Good Software Testing Practices". ICSE 2019 (SEIP): 61-70. **(CCF A Conference)**.
- ICSME 2019 Luis Cruz, Rui Abreu, John Grundy, Li Li, **Xin Xia**. "Do Energy-oriented Changes Hinder Maintainability?" ICSME 2019: 29-40. **(CCF B Conference)**
- QRS 2019 Weiqin Zou, Weiqiang Zhang, **Xin Xia**, Reid Holmes, Zhenyu Chen. "Branch Use in Practice—A Large-Scale Empirical Study of 2,923 Projects on GitHub". QRS 2019: 306-317.
- Internetwork 2019 Qingye Wang, Bowen Xu, **Xin Xia**, Ting Wang, Shanping Li. "Duplicate Pull Request Detection: When Time Matters". Internetwork 2019: Article 8, 1–10.
- 2018 (8)
- ASE 2018 Zhongxin Liu, **Xin Xia***, Ahmed E. Hassan, David Lo, Zhenchang Xing, Xinyu Wang. "Neural-Machine-Translation-Based Commit Message Generation: How Far Are We?" ASE 2018: 373-384. **(CCF A Conference, ACM SIGSOFT Distinguished Paper Award)**

- ASE 2018 Qiao Huang, **Xin Xia***, Zhenchang Xing, David Lo, Xinyu Wang. API Method Recommendation without Worrying About the Task-API Knowledge Gap. ASE 2018: 293-304 (**CCF A Conference**)
- IJCAI 2018 Xing Hu, Ge Li, **Xin Xia**, David Lo, Shuai Lu, Zhi Jin. "Summarizing Source Code with Transferred API Knowledge". IJCAI 2018: 2269-2275. (**CCF A Conference**)
- ICPC 2018 Yun Zhang, David Lo, **Xin Xia***, Jing Jiang, Jianling Sun. "Recommending Frequently Encountered Bugs". ICPC 2018: 120-131. (**CCF B Conference**)
- ICPC 2018 Xing Hu, Ge Li, **Xin Xia**, David Lo, Zhi Jin. "Deep Code Comment Generation". ICPC 2018: 200-210. (**CCF B Conference, ACM SIGSOFT Distinguished Paper Award**)
- MSR 2018 Li Li, Jun Gao, Tegawende F. Bissyande, Lei Ma, **Xin Xia**, Jacques Klein. "Characterising Deprecated Android APIs". MSR 2018: 254-264. (**FOSS Impact Paper Award**)
- COMPSAC 2018 Chao Liu, Dan Yang, **Xin Xia**, Meng Yan, Xiaohong Zhang. "Cross-Project Change-Prone Prediction". COMPSAC 2018: 64-73. Accepted as a Full Paper
- APSEC 2018 Qiuyuan Chen, Lingfeng Bao, Li Li, **Xin Xia**, Liang Cai. "Categorizing and Predicting Invalid Vulnerabilities on Common Vulnerabilities and Exposures". APSEC 2018: 345-354. Accepted as a Full Paper
- [2017 \(12\)](#)
- ASE 2017 Bowen Xu, Zhenchang Xing, **Xin Xia***, David Lo. "AnswerBot - Automated Generation of Answer Summary to Developers' Technical Questions". ASE 2017: 706-716 (**CCF A Conference**)
- ICSME 2017 **Xin Xia**, David Lo, Lingfeng Bao, Abhishek Sharma, Shanping Li. "Personality and Project Success: Insights from a Large-Scale Study with Professionals". ICSME 2017: 318-328. (**Nominated for Best Paper Award, CCF B Conference**)
- ICSME 2017 Qiao Huang, **Xin Xia***, David Lo. "Supervised vs Unsupervised Models: A Holistic Look at Effort-Aware Just-in-Time Defect Prediction". ICSME 2017: 529-533. (**Nominated for Best Paper Award, CCF B Conference**)
- ESEM 2017 Meng Yan, Yicheng Fang, David Lo, **Xin Xia***, Xiaohong Zhang. "File-Level Defect Prediction: Unsupervised vs. Supervised Models". ESEM 2017: 344-353. (**CCF B Conference**)
- ISSRE 2017 Qiao Huang, David Lo, **Xin Xia***, Qingye Wang, Shanping Li. "Which Packages Would be Affected by This Bug Report?". ISSRE 2017: 124-135 (**CCF B Conference**)
- ICPC 2017 Tao Zhang, Jiachi Chen, Xiapu Luo, He Jiang, **Xin Xia**. "Bug Report Enrichment with Application of Automated Fixer Recommendation". ICPC 2017: 230-240 (**CCF B Conference**)
- SANER 2017 Yun Zhang, David Lo, Pavneet Singh Kochhar, **Xin Xia**, Quanlai Li, Jianling Sun. "Detecting similar repositories on GitHub". SANER 2017: 13-23 (**CCF B Conference**)
- MSR 2017 Lingfeng Bao, Zhenchang Xing, **Xin Xia***, David Lo, Shanping Li. "Who Will Leave the Company? A Large-Scale Industry Study of Developer Turnover by Mining Monthly Work Report". MSR 2017: 170-181 ()
- MSR 2017 Zhiyuan Wan, David Lo, **Xin Xia***, Liang Cai. "Bug Characteristics in Blockchain Systems: A Large-Scale Empirical Study". MSR 2017: 413-424
- ICST 2017 Zhiyuan Wan, David Lo, **Xin Xia***, Liang Cai, Shanping Li. "Mining Sandboxes for Linux Containers". ICST 2017: 92-102

- SATE 2017 Meng Yan, **Xin Xia**, Xiaohong Zhang, Ling Xu, Dan Yang: A Systematic Mapping Study of Quality Assessment Models for Software Products. SATE 2017: 63-71
- Internetwork 2017 Wenyuan Xu, Xiaobing Sun, **Xin Xia**, Xiang Chen: Scalable Relevant Project Recommendation on GitHub. Internetwork 2017: 9:1-9:10
- [2016 \(11\)](#)
- ASE 2016 Bowen Xu, Deheng Ye, Zhenchang Xing, **Xin Xia***, Guibin Chen, Shanping Li. "Predicting semantically linkable knowledge in developer online forums via convolutional neural network". ASE 2016: 51-62 (**CCF A Conference**)
- ISSTA 2016 Pavneet Singh Kochhar, **Xin Xia***, David Lo, Shanping Li. "Practitioners' expectations on automated fault localization". ISSTA 2016: 165-176 (**CCF A Conference**)
- ICSME 2016 **Xin Xia**, Lingfeng Bao, David Lo, Shanping Li. "'Automated Debugging Considered Harmful' Considered Harmful – A User Study Revisiting the Usefulness of Spectra-Based Fault Localization Techniques with Professionals using Real Bugs from Large Systems". ICSME 2016: 267-278 (**CCF B Conference**)
- ICSME 2016 Yun Zhang, David Lo, **Xin Xia***, Tien-Duy B. Le, Giuseppe Scanniello, Jianling Sun. "Inferring Links between Concerns and Methods with Multi-Abstraction Vector Space Model". ICSME 2016: 110-121 (**Nominated for Best Paper Award, CCF B Conference**)
- ISSRE 2016 Xinli Yang, David Lo, **Xin Xia***, Lingfeng Bao, Jianling Sun. "Combining Word Embedding with Information Retrieval to Recommend Similar Bug Reports". ISSRE 2016: 127-137 (**CCF B Conference**)
- ESEM 2016 **Xin Xia**, Emad Shihab, Yasutaka Kamei, David Lo, Xinyu Wang. "Predicting Crashing Releases of Mobile Applications". ESEM 2016: 29:1-29:10 (**CCF B Conference**)
- MSR 2016 Lingfeng Bao, David Lo, **Xin Xia***, Xinyu Wang, Cong Tian. "How android app developers manage power consumption?: an empirical study by mining power management commits". MSR 2016: 37-48
- MSR 2016 Bowen Xu, Zhenchang Xing, **Xin Xia***, David Lo, Qingye Wang, Shanping Li. "Domain-specific cross-language relevant question retrieval". MSR 2016: 413-424 (**Nominated for Best Paper Award**)
- COMPSAC 2016 **Xin Xia**, David Lo, Denzil Correa, Ashish Sureka, Emad Shihab. "It Takes Two to Tango: Deleted Stack Overflow Question Prediction with Text and Meta Features". COMPSAC 2016: 73-82
- COMPSAC 2016 Xinli Yang, David Lo, **Xin Xia***, Jianling Sun. "Condensing Class Diagrams With Minimal Manual Labeling Cost". COMPSAC 2016: 22-31
- SATE 2016 Lingfeng Bao, David Lo, **Xin Xia**, Shanping Li: What Permissions Should This Android App Request? SATE 2016: 36-41
- [2015 \(7\)](#)
- ICSME 2015 **Xin Xia**, David Lo, Xinyu Wang, Xiaohu Yang. "Who should review this change?: Putting text and file location analyses together for more accurate recommendations". ICSME 2015: 261-270 (**CCF B Conference**)
- ISSRE 2015 **Xin Xia**, David Lo, Pavneet Singh Kochhar, Zhenchang Xing, Xinyu Wang, Shanping Li. "Experience report: An industrial experience report on test outsourcing practices". ISSRE 2015: 370-380 (**CCF B Conference**)
- SANER 2015 **Xin Xia**, David Lo, Shane McIntosh, Emad Shihab, Ahmed E. Hassan. "Cross-project build co-change prediction". SANER 2015: 311-320 (**CCF B Conference**)

- ICECCS 2015 Yun Zhang, David Lo, **Xin Xia***, Bowen Xu, Jianling Sun, Shanping Li. "Combining Software Metrics and Text Features for Vulnerable File Prediction". ICECCS 2015: 40-49
- COMPSAC 2015 Weiqin Zou, **Xin Xia**, Weiqiang Zhang, Zhenyu Chen, David Lo. "An Empirical Study of Bug Fixing Rate". COMPSAC 2015: 254-263
- QRS 2015 Xinli Yang, David Lo, **Xin Xia***, Yun Zhang, Jianling Sun. "Deep Learning for Just-in-Time Defect Prediction". QRS 2015: 17-26
- APSEC 2015 Bowen Xu, David Lo, **Xin Xia***, Ashish Sureka, Shanping Li. "EFSPredictor: Predicting Configuration Bugs with Ensemble Feature Selection". APSEC 2015: 206-213
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- ASE 2014 Lucia, David Lo, **Xin Xia**. "Fusion fault localizers". ASE 2014: 127-138 (**CCF A Conference**)
- SANER 2014 **Xin Xia**, Yang Feng, David Lo, Zhenyu Chen, Xinyu Wang. "Towards more accurate multi-label software behavior learning". CSMR-WCRE 2014: 134-143 (**CCF B Conference**)
- SANER 2014 **Xin Xia**, David Lo, Ming Wen, Emad Shihab, Bo Zhou. "An empirical study of bug report field reassignment". CSMR-WCRE 2014: 174-183 (**CCF B Conference**)
- ICPC 2014 Bo Zhou, **Xin Xia**, David Lo, Cong Tian, Xinyu Wang. "Towards more accurate content categorization of API discussions". ICPC 2014: 95-105 (**CCF B Conference**)
- ICECCS 2014 **Xin Xia**, David Lo, Xinyu Wang, Bo Zhou. "Automatic Defect Categorization Based on Fault Triggering Conditions". ICECCS 2014: 39-48 (**Best Student Paper Award**)
- COMPSAC 2014 **Xin Xia**, David Lo, Weiwei Qiu, Xingen Wang, Bo Zhou. "Automated Configuration Bug Report Prediction Using Text Mining". COMPSAC 2014: 107-116
2013 (3)
- SANER 2013 **Xin Xia**, David Lo, Xinyu Wang, Bo Zhou. "Accurate developer recommendation for bug resolution". WCRE 2013: 72-81 (**CCF B Conference**)
- ICECCS 2013 **Xin Xia**, David Lo, Feng Zhu, Xinyu Wang, Bo Zhou. "Software Internationalization and Localization: An Industrial Experience". ICECCS 2013: 222-231
- MSR 2013 **Xin Xia**, David Lo, Xinyu Wang, Bo Zhou. "Tag recommendation in software information sites". MSR 2013: 287-296

Refereed Conference Short & Workshop Papers (30)

2019 (5)

- ICSME-NIER 2019 Zhe Jin, Kong Yik Chee **Xin Xia**. "What Do Developers Discuss about Biometric APIs?" ICSME 2019: 348-352.
- ICSME-Tool 2019 Zhipeng Gao, Vinoj Jayasundara, Lingxiao Jiang, **Xin Xia**, David Lo, John Grundy. "SmartEmbed: A Tool for Clone and Bug Detection in Smart Contracts through Structural Code Embedding" ICSME 2019: 394-397.
- ESEC/FSE-Tool 2019 Liang Cai, Haoye Wang, Qiao Huang, **Xin Xia**, Zhenchang Xing, David Lo. "BIKER: A Tool for Bi-Information Source Based API Method Recommendation". ESEC/FSE 2019: 1075-1079. (**Best Tool Demo Award**)
- ESEC/FSE-Tool 2019 Liang Cai, Haoye Wang, Bowen Xu, Qiao Huang, **Xin Xia**, David Lo, Zhenchang Xing. "AnswerBot: An Answer Summary Generation Tool Based on Stack Overflow". ESEC/FSE 2019: 1134-1138.

- COMPSAC 2019 Junxiao Han, Shuiguang Deng, **Xin Xia**, Dongjing Wang and Jianwei Yin. "Characterization and Prediction of Popular Projects on GitHub". COMPSAC 2019: 21-26.
2018 (4)
- ESEC/FSE-Tool Lingfeng Bao, Zhenchang Xing, **Xin Xia**, David Lo. "VT-Revolution: Interactive
2018 Programming Tutorials Made Possible". ESEC/FSE 2018: 924-927.
- ICSE-Tool 2018 Zhongxin Liu, Qiao Huang, **Xin Xia**, Emad Shihab, David Lo and Shanping Li. "SATD Detector: A Text-Mining-Based Self-Admitted Technical Debt Detection Tool". ICSE 2018 (tool): 9-12 (**Tool Paper**)
- ICPC-NIER 2018 Giovanni Viviani, Calahan Janik-Jones, Michalis Famelis, **Xin Xia**, Gail C. Murphy. "What Design is Discussed by Developers?". ICPC 2018:328-331
- COMPSAC 2018 Xiaoxue Ren, Qiao Huang, **Xin Xia**, Zhenchang Xing, Lingfeng Bao, David Lo. "Characterizing Common and Domain-Specific Package Bugs: A Case Study on Ubuntu". COMPSAC 2018: 426-431
2017 (5)
- ESEC/FSE-Tool Bowen Xu, Zhenchang Xing, **Xin Xia**, David Lo, Xuan-Bach D. Le. "XSearch: A
2017 Domain-Specific Cross-Language Relevant Question Retrieval Tool". ESEC/FSE 2017: 1009-1013. (**Tool Paper**)
- ICSME-NIER 2017 Meng Yan, **Xin Xia**, Xiaohong Zhang, Dan Yang and Ling Xu. "Automating Aggregation for Software Quality Modeling". ICSME 2017: 529-533
- ICSE-Poster 2017 Meng Yan, Xiaohong Zhang, Chao Liu, Jie Zou, Ling Xu, **Xin Xia**. "Learning to Aggregate: An Automated Aggregation Method for Software Quality Model". ICSE Companion 2017: 268-270 (Poster)
- COMPSAC 2017 Meng Yan, Xiaohong Zhang, Ling Xu, Haibo Hu, Song Sun, **Xin Xia**. "Revisiting the Correlation between Alerts and Software Defects-A Case Study on MyFaces, Camel, and CXF". COMPSAC 2017: 103-108.
- Internetwork 2017 Huan Yu, **Xin Xia**, Xiaoqiong Zhao, Weiwei Qiu: Combining Collaborative Filtering and Topic Modeling for More Accurate Android Mobile App Library Recommendation. Internetwork 2017: 17:1-17:6
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- COMPSAC 2016 Xinli Yang, David Lo, Qiao Huang, **Xin Xia**, Jianling Sun. "Automated Identification of High Impact Bug Reports Leveraging Imbalanced Learning Strategies". COMPSAC 2016: 227-232
2015 (4)
- ASE-Tool 2015 Lingfeng Bao, Deheng Ye, Zhenchang Xing, **Xin Xia**, Xinyu Wang. "ActivitySpace: A Remembrance Framework to Support Interapplication Information Needs". ASE 2015: 864-869
- EASE-Short 2015 **Xin Xia**, David Lo, Jingfan Tang, Shanping Li. "Customer satisfaction feedback in an IT outsourcing company: a case study on the insigma Hengtian company". EASE 2015: 34:1-34:5
- COMPSAC 2015 Yun Zhang, David Lo, **Xin Xia**, Jianling Sun. "An Empirical Study of Classifier Combination for Cross-Project Defect Prediction". COMPSAC 2015: 264-269
- SAC-Poster 2015 Xiao Xuan, David Lo, **Xin Xia**, Yuan Tian. "Evaluating defect prediction approaches using a massive set of metrics: an empirical study". SAC 2015: 1644-1647

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- ICSE-Tool 2014 Xinyu Wang, David Lo, **Xin Xia**, Xingen Wang, Pavneet Singh Kochhar, Yuan Tian, Xiaohu Yang, Shanping Li, Jianling Sun, Bo Zhou. "BOAT: an experimental platform for researchers to comparatively and reproducibly evaluate bug localization techniques". ICSE Companion 2014: 572-575
- COMPSAC 2014 Bo Zhou, **Xin Xia**, David Lo, Xinyu Wang. "Build Predictor: More Accurate Missed Dependency Prediction in Build Configuration Files". COMPSAC 2014: 53-58
- ICPC-NIER 2014 **Xin Xia**, David Lo, Xingen Wang, Chenyi Zhang, Xinyu Wang. "Cross-language bug localization". ICPC 2014: 275-278 (**Most Promising Idea Award**)
- SAC-Poster 2014 **Xin Xia**, David Lo, Xinyu Wang, Bo Zhou. "Build system analysis with link prediction". SAC 2014: 1184-1186
- SAC-Poster 2014 Xiaoqiong Zhao, **Xin Xia**, Pavneet Singh Kochhar, David Lo, Shanping Li. "An empirical study of bugs in build process". SAC 2014: 1187-1189

2013 (2)

- CSMR-NIER 2013 **Xin Xia**, David Lo, Xinyu Wang, Xiaohu Yang, Shanping Li, Jianling Sun. "A Comparative Study of Supervised Learning Algorithms for Re-opened Bug Prediction". CSMR 2013: 331-334
- QRS-Short 2013 **Xin Xia**, Xiaozhen Zhou, David Lo, Xiaoqiong Zhao. "An Empirical Study of Bugs in Software Build Systems". QSI 2013: 200-203

2012 (2)

- PAISI-Workshop 2012 **Xin Xia**, Xiaohu Yang, Chao Wu, Shanping Li, Linfeng Bao. "Information Credibility on Twitter in Emergency Situation". PAISI 2012: 45-59
- PAKDD-Workshop 2012 **Xin Xia**, Xiaohu Yang, Shanping Li, Chao Wu. "Instance-Ranking: A New Perspective to Consider the Instance Dependency for Classification". PAKDD Workshops 2012: 112-123

2011 (2)

- PIKM@CIKM-Workshop 2011 **Xin Xia**, Xiaohu Yang, Shanping Li, Chao Wu, Linlin Zhou. "RW.KNN: a proposed random walk KNN algorithm for multi-label classification". PIKM@CIKM 2011: 87-90
- ICTAI-Short 2011 Bo Zhou, Manna Wu, **Xin Xia**, Chao Wu. "Ranking in Co-effecting Multi-object/Link Types Networks". ICTAI 2011: 519-522