Xin Xia

ARC DECRA Fellow, Lecturer (Assistant Professor)

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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: 2,742; H-index: 29; i10-index: 76 (March 3, 2020)
- 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.
- 2020 Best Reviewer Award, Journal of Systems and Software (JSS), February, 2020
- 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
 - 2020 Huawei Project: JIT Bug Localization, sole-PI: 135,000 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

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, ISSTA 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 (62)(* refers to the corresponding author) 2020 (3)

- TSE 2020 Meng Yan, Xin Xia*, Yuanrui Fan, Ahmed E. Hassan, David Lo, Shanping Li. "Just-In-Time Defect Identification and Localization: A Two-Phase Framework". IEEE Transactions on Software Engineering (TSE), 20 pages. Accepted. (CCF A Journal)
- TSE 2020 Qiang He, Bo Li, Feifei Chen, John Grundy, **Xin Xia**, Yun Yang. "Diversified Third-Party Library Prediction for Mobile App Development". IEEE Transactions on Software Engineering (TSE), 16 pages. Accepted. (**CCF A Journal**)
- 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)(CCF A Journal)
- 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)(**CCF B Journal**)
 - 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) (**CCF B Journal**)
- 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)(CCF B Journal)
- 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)(**CCF B Journal**)
- 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) (**CCF B Journal**)
- 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**)
- 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)

 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 (66) (* refers to the corresponding author) 2020 (8)
- 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)**
 - ICPC 2020 Jianhang Shuai, Ling Xu, Chao Liu, Meng Yan, **Xin Xia**, Yan Lei. "Improving Code Search with Co-Attentive Representation Learning". ICPC 2020: Acceped as a Full Paper. **(CCF B Conference)**
 - ICPC 2020 Fang Liu, Ge Li, Bolin Wei, **Xin Xia**, Zhiyi Fu, Zhi Jin. "A Self-Attentional Neural Architecture for Code Completion with Multi-Task Learning". ICPC 2020: Acceped as a Full Paper. **(CCF B Conference)**
 - ICPC 2020 Jianjun He, Ling Xu, Meng Yan, **Xin Xia**, Yan Lei. "Duplicate Bug Report Detection Using Dual-Channel Convolutional Neural Networks". ICPC 2020: Acceped as a Full Paper. **(CCF B Conference)**
- ASIACCS 2020 Tingmin Wu, Rongjunchen 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.
- Internetware 2019 Qingye Wang, Bowen Xu, **Xin Xia**, Ting Wang, Shanping Li. "Duplicate Pull Request Detection: When Time Matters". Internetware 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-Proneness 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
- Internetware 2017 Wenyuan Xu, Xiaobing Sun, **Xin Xia**, Xiang Chen: Scalable Relevant Project Recommendation on GitHub. Internetware 2017: 9:1-9:10

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 - 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
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 - 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 2014 (6)
 - 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

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- 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 Liang Cai, Haoye Wang, Qiao Huang, **Xin Xia**, Zhenchang Xing, David Lo. "BIKER: 2019 A Tool for Bi-Information Source Based API Method Recommendation".ESEC/FSE 2019: 1075-1079. **(Best Tool Demo Award)**
- ESEC/FSE-Tool Liang Cai, Haoye Wang, Bowen Xu, Qiao Huang, **Xin Xia**, David Lo, Zhenchang 2019 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

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- 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.
- Internetware 2017 Huan Yu, **Xin Xia**, Xiaoqiong Zhao, Weiwei Qiu: Combining Collaborative Filtering and Topic Modeling for More Accurate Android Mobile App Library Recommendation. Internetware 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

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- 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 2014 (5)
- 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

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- 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". QSIC 2013: 200-203

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PAISI-Workshop Xin Xia, Xiaohu Yang, Chao Wu, Shanping Li, Linfeng Bao. "Information Credibility on Twitter in Emergency Situation". PAISI 2012: 45-59

PAKDD-Workshop 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

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PIKM@CIKM- Xin Xia, Xiaohu Yang, Shanping Li, Chao Wu, Linlin Zhou. "RW.KNN: a proposed Workshop random walk KNN algorithm for multi-label classification". PIKM@CIKM 2011: 87-90 2011

ICTAI-Short 2011 Bo Zhou, Manna Wu, **Xin Xia**, Chao Wu. "Ranking in Co-effecting Multi-object/Link Types Networks". ICTAI 2011: 519-522