JIANG Lingxiao

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Education

PhD, University of California, Davis, United States of America, 2009
in Computer Science

Master of Science, Peking University, China, 2003
in Applied Mathematics

Bachelor of Science, Peking University, China, 2000
in Information Science

Academic Appointments

Professor of Computer Science, School of Computing and Information Systems, SMU, Jan 2024 - Present

Associate Professor of Computer Science, School of Computing and Information Systems, SMU, Apr 2021 - Present

Associate Professor of Information Systems, School of Computing and Information Systems, SMU, Jan 2018 - Mar 2021

Assistant Professor of Information Systems, School of Computing and Information Systems, SMU, Jan 2010 - Dec 2017

Lecturer of Information Systems, School of Computing and Information Systems, SMU, Nov 2009 - Dec 2009

Academic Administrative Positions

Co-Director, Centre for Research for Intelligent Software Engineering (RISE), Centre for Research for Intelligent Software Engineering, SMU, Apr 2023 - Present

Deputy Director, Research Lab for Intelligent Software Engineering, Centre for Research for Intelligent Software Engineering, SMU, Apr 2022 - Mar 2023

Director, Research Lab for Intelligent Software Engineering, Centre for Research for Intelligent Software Engineering, SMU, Apr 2021 - Mar 2022

Deputy Director, Research Lab for Intelligent Software Engineering, Centre for Research for Intelligent Software Engineering, SMU, Apr 2020 - Mar 2021

Member (School of Information Systems), University Tribunal, Office of the President, SMU, Jul 2019 - Jun 2022

Other Positions and Affiliations

Test Strategist, Nvidia Corporation, United States of America, Jan 2009

Intern, Center for Software Excellence, Microsoft, United States of America, Jan 2007

Intern, Lawrence Livermore National Laboratory, United States of America, Jan 2005 - Jan 2006

Awards and Honors

Test-of-Time Award , IEEE International Symposium on Software Reliability Engineering (ISSRE), 2022

Lee Kong Chian Fellow, SMU, 2021

Distinguished Paper Award, IEEE/ACM ICSE New Idea and Emerging Results, 2018

Impact Paper Award, ACM SIGSOFT, 2018

The Computer Science Best Dissertation Award, UC Davis, 2010

LEE Foundation Fellow for Research Excellence, SMU, 2010

The Honorable Mention for Zuhair A. Munir Best Dissertation Award, UC Davis, 2010

Best Computer Science Graduate Student Researcher, UC Davis, 2008

Professional Memberships

Member, Institute of Electrical and Electronics Engineers (IEEE), IEEE Computer Society, 2010

Member, Association for Computing Machinery (ACM), ACM Special Interest Group on Software Engineering (SIGSOFT), ACM Special Interest Group on Programming Languages (SIGPLAN), 2005

Artistic and Professional Performances

FastKLEE: faster symbolic execution via reducing redundant bound checking of type-safe pointers, available at https://github.com/haoxintu/FastKLEE, 01 Jan 2022

iTiger: an automatic issue title generation tool, available at https://github.com/soarsmu/iTiger, 01 Jan 2022

MANDO-GURU series: vulnerability detection for smart contract source code and bytecode via heterogeneous graph deep graph learning, available at https://github.com/MANDO-Project, 01 Jan 2022

RecipeGen++: an automated trigger action programs generator, available at https://github.com/imamnurby/RecipeGen, 01 Jan 2022

UIPDroid: Unrooted Dynamic Monitor of Android App UIs for Fine-Grained Permission Control, available at https://github.com/pangdingzhang/Anti-Beholder, 01 Jan 2022

InferCode: A deep code learning tool that maps any code snippet into vector embedding, available at https://github.com/bdqnghi/infercode, 01 Jan 2021

SmartEmbed: A tool for clone and bug detection in smart contracts through structural code embedding, available at https://github.com/beyondacm/SmartEmbed, 01 Jan 2019

LibraryGuru: An API recommendation engine for Android developers, available at http://libraryguru.info, 01 Jan 2017

ReDex: A scalable change-encoding based tool for detecting code refactorings, available at http://www.comp.nus.edu.sg/~specmine/redex/, 01 Jan 2014

Comprehensive Evaluation of Association Measures for Fault Localization, available at http://www.mysmu.edu/phdis2009/lucia.2009/Dataset.htm, 01 Jan 2010

EqMiner: A Random-Testing Based Tool for Finding Functionally Equivalent Code Fragments, available at https://github.com/skyhover/dyclone, 01 Jan 2009

DECKARD: A Tree-Based Scalable Code Clone and Clone-Related Bug Detection Tool, available at https://github.com/skyhover/Deckard, 01 Jan 2006

RESEARCH

Research Interests

Program Analysis, Automated Testing and Debugging
Software Reliability, Software Security and Privacy
Similarity Measurement, Code Search and Synthesis
Deep Learning of Code, Software Mining, Data Mining

Publications

Journal Articles [Refereed]

Experimental comparison of features, analyses, and classifiers for Android malware detection, by SHAR, Lwin Khin; DEMISSIE, Biniam Fisseha; CECCATO, Mariano; YAN, Naing Tun; LO, David; JIANG, Lingxiao; BIENERT, Christoph. (2023). *Empirical Software Engineering, 28* (6), 1-39. https://doi.org/10.1007/s10664-023-10375-y (Published)

Duplicate bug report detection: How far are we?, by ZHANG, Ting; HAN, DongGyun; VINAYAKARAO, Venkatesh; IRSAN, Ivana Clairine; XU, Bowen; THUNG, Ferdian; LO, David; JIANG, Lingxiao. (2023). *ACM Transactions on Software Engineering and Methodology, 32* (4), 1-32. https://doi.org/10.1145/3576042 (Published)

Detecting C plus plus Compiler Front-End Bugs via Grammar Mutation and Differential Testing, by TU, Haoxin; JIANG, He; ZHOU, Zhide; TANG, Yixuan; REN, Zhilei; QIAO, Lei; JIANG, Lingxiao. (2023). *IEEE Transactions on Reliability, 72* (1), 1-15. https://doi.org/10.1109/TR.2022.3171220 (Advance Online)

AndroEvolve: automated Android API update with data flow analysis and variable denormalization, by HARYONO, Stefanus A.; THUNG, Ferdian; LO, David; JIANG, Lingxiao; LAWALL, Julia; KANG, Hong Jin; SERRANO, Lucas; MULLER, Gilles. (2022). *Empirical Software Engineering, 27* (3), 1-35. https://doi.org/10.1007/s10664-021-10096-0 (Published)

Checking Smart Contracts With Structural Code Embedding, by GAO, Zhipeng; JIANG, Lingxiao; XIA, Xin; LO, David; GRUNDY, John. (2021). *IEEE Transactions on Software Engineering, 47* (12), 2874-2891. https://doi.org/10.1109/TSE.2020.2971482 (Published)

On the generalizability of Neural Program Models with respect to semantic-preserving program transformations, by RABIN, Md Rafiqul Islam; BUI, Nghi D. Q.; WANG, Ke; YU, Yijun; JIANG, Lingxiao; ALIPOUR, Mohammad Amin. (2021). *Information and Software Technology, 135* 1-13. https://doi.org/10.1016/j.infsof.2021.106552 (Published)

API recommendation for event-driven Android application development, by YUAN, Weizhao; NGUYEN, Hoang H.; JIANG, Lingxiao; CHEN, Yuting; ZHAO, Jianjun; YU, Haibo. (2019). *Information and Software Technology, 107* 30-47. https://doi.org/10.1016/j.infsof.2018.10.010 (Published)

CLCMiner: Detecting Cross-Language Clones without Intermediates, by CHENG, Xiao; PENG, Zhiming; JIANG, Lingxiao; ZHONG, Hao; YU, Haibo; ZHAO, Jianjun. (2017). *IEICE Transactions on Information and Systems, E100D* (2), 273-284. https://doi.org/10.1587/transinf.2016EDP7334 (Published)

AutoQuery: automatic construction of dependency queries for code search, by WANG, Shaowei; LO, David; JIANG, Lingxiao. (2016). *Automated Software Engineering, 23* (3), 393-425. http://doi.org/10.1007/s10515-014-0170-2 (Published)

Diversity maximization speedup for localizing faults in single-fault and multi-fault programs, by XIA, Xin; GONG, Liang; LE, Tien-Duy B.; LO, David; JIANG, Lingxiao; ZHANG, Hongyu. (2016). *Automated Software Engineering, 23* (1), 43-75. http://doi.org/10.1007/s10515-014-0165-z (Published)

To what extent could we detect field defects? An extended empirical study of false negatives in static bug-finding tools, by THUNG, Ferdian; LUCIA; LO, David; JIANG, Lingxiao; RAHMAN, Foyzur; DEVANBU, Premkumar. (2015). *Automated Software Engineering, 22* (4), 561-602. http://doi.org/10.1007/s10515-014-0169-8 (Published)

Extended comprehensive study of association measures for fault localization, by LUCIA; LO, David; JIANG, Lingxiao; THUNG, Ferdian; BUDI, Aditya. (2014). *Journal of Software: Evolution and Process, 26* (2), 172-219. http://doi.org/10.1002/smr.1616 (Published)

Book Chapters

Scalable parallelization of specification mining using distributed computing, by WANG, Shaowei; LO, David; JIANG, Lingxiao; MAOZ, Shahar; BUDI, Aditya. (2015). In C. Bird; T. Menzie; T. Zimmermann (Ed.), *The art and science of analyzing software data* (pp. 623-648) Amsterdam: Elsevier. http://doi.org/10.1016/B978-0-12-411519-4.00021-5 (Published)

Conference Proceedings

Interpreting CodeBERT for Semantic Code Clone Detection, by Shamsa Abid; Xuemeng Cai; Lingxiao Jiang. (2023.0). *30th Asia-Pacific Software Engineering Conference (APSEC),* Grand Walkerhill Seoul, South Korea: (Accepted)

KRover: A symbolic execution engine for dynamic kernel analysis, by PITIGALA ARACHCHILLAGE, Pansilu; DING, Xuhua; QIU, Haiqing; TU, Haoxin; HONG, Jiaqi; JIANG, Lingxiao. (2023.0). *Proceedings of the 2023 ACM SIGSAC Conference on Computer and Communications Security,* (pp. 2009-2023) US: ACM. https://doi.org/10.1145/3576915.3623198 (Published)

ArduinoProg: Towards automating Arduino programming, by BANI YUSUF, Imam Nur; ABDUL JAMAL, Diyanah; JIANG, Lingxiao. (2023.0). *2023 38th IEEE/ACM International Conference on Automated Software Engineering: Luxembourg, September 11-15: Proceedings,* (pp. 2030-2033) Piscataway, NJ: IEEE. https://doi.org/10.1109/ASE56229.2023.00055 (Published)

Fine-grained in-context permission classification for Android apps using control-flow graph embedding, by MALVIYA, Vikas K.; TUN, Yan Naing; LEOW, Chee Wei; XYNYN, Ailys Tee; SHAR, Lwin Khin; JIANG, Lingxiao. (2023.0). *2023 38th IEEE/ACM International Conference on Automated Software Engineering: Luxembourg, September 11-15: Proceedings,* (pp. 1225-1237) Piscataway, NJ: IEEE. https://doi.org/10.1109/ASE56229.2023.00056 (Published)

Beyond "Protected" and "Private": An Empirical Security Analysis of Custom Function Modifiers in Smart Contracts, by Yuzhou Fang; Daoyuan Wu; Xiao Yi; Shuai Wang; Yufan Chen; Mengjie Chen; Yang Liu; Lingxiao Jiang. (2023.0). *Proceedings of the 32nd ACM SIGSOFT International Symposium on Software Testing and Analysis (ISSTA),* (pp. 1157-1168) Seattle, WA, USA: ACM. (Accepted)

MANDO-HGT: Heterogeneous graph transformers for smart contract vulnerability detection
, by NGUYEN, Hoang H.; NGUYEN, Nhat-Minh; XIE, Chunyao; AHMADI, Zahra; KUDENDO, Daniel; DOAN, Thanh-Nam; JIANG, Lingxiao. (2023.0). *Proceedings of the 20th IEEE/ACM International Conference on Mining Software Repositories, Melbourne, Australia, 2023 May 15-16,* (pp. 334-346) New York: IEEE. https://doi.org/10.1109/MSR59073.2023.00052 (Published)

Automating Arduino programming: From hardware setups to sample source code generation, by YUSUF, Imam Nur Bani; ABDUL JAMAL, Diyanah; JIANG, Lingxiao. (2023.0). *Proceedings of the 20th International Conference on Mining Software Repositories MSR 2023: Melbourne, May 15-16,* Piscataway, NJ: IEEE. (Published)

BlockScope: Detecting and investigating propagated vulnerabilities in forked blockchain projects, by YI, Xiao; FANG, Yuzhou; WU, Daoyuan; JIANG, Lingxiao. (2023.0). *Network and Distributed System Security Symposium (NDSS) 2023: San Diego, February 27 - March 3,* (pp. 1-16) San Diego: Internet Society. https://doi.org/10.14722/ndss.2023.24222 (Published)

DronLomaly: Runtime detection of anomalous drone behaviors via log analysis and deep learning, by

SHAR, Lwin Khin; MINN, Wei; TA, Nguyen Binh Duong; FAN, Jiani; JIANG, Lingxiao; LIM, Wai Kiat Daniel. (2022.0). *2022 29th Asia-Pacific Software Engineering Conference (APSEC): Virtual, December 6-9: Proceedings,* (pp. 119-128) Piscataway, NJ: IEEE. https://doi.org/10.1109/APSEC57359.2022.00024 (Published)

An empirical study of blockchain system vulnerabilities: modules, types, and patterns, by YI, Xiao; WU, Daoyuan; JIANG, Lingxiao; FANG, Yuzhou; ZHANG, Kehuan; ZHANG, Wei. (2022.0). *Proceedings of the 30th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering, Singapore, 2022 November 14-18,* (pp. 709-721) New York: Association for Computing Machinery. https://doi.org/10.1145/3540250.3549105 (Published)

RecipeGen++: An automated trigger action programs generator, by YUSUF, Imam Nur Bani; ABDUL JAMAL, Diyanah; JIANG, Lingxiao; LO, David. (2022.0). *ESEC/FSE 2022: Proceedings of the 30th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering, Singapore, November 14-18,* (pp. 1672-1676) New York: ACM. http://doi.org/10.1145/3540250.3558913 (Published)

MANDO-GURU: vulnerability detection for smart contract source code by heterogeneous graph embeddings, by NGUYEN, Hoang H.; NGUYEN, Nhat-Minh; DOAN, Hong-Phuc; AHMADI, Zahrai; DOAN, Thanh-Nam; JIANG, Lingxiao. (2022.0). *Proceedings of the 30th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering, Singapore, 2022 November 14-18,* (pp. 1736-1740) New York: Association for Computing Machinery. https://doi.org/10.1145/3540250.3558927 (Published)

FastKLEE: faster symbolic execution via reducing redundant bound checking of type-safe pointers, by TU, Haoxin; JIANG, Lingxiao; DING, Xuhua; JIANG, He. (2022.0). *Proceedings of the 30th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering, Singapore, 2022 November 14 - 18,* Singapore: Association for Computing Machinery. https://doi.org/10.1145/3540250.3558919 (Published)

iTiger: An automatic issue title generation tool, by ZHANG, Ting; IRSAN, Ivana Clairine; THUNG, Ferdian; HAN, DongGyun; LO, David; JIANG, Lingxiao. (2022.0). *Proceedings of the 30th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering, ESEC/FSE 2022, Singapore, Singapore, November 14-18, 2022,* (pp. 1637-1641) Singapore: ACM. http://doi.org/10.1145/3540250.3558934 (Published)

RemGen: remanufacturing a random program generator for compiler testing, by TU, Haoxin; JIANG, He; LI, Xiaochen; ZHOU, Zhide; JIANG, Lingxiao. (2022.0). *Proceedings of the 33rd IEEE International Symposium on Software Reliability Engineering, Charlotte, USA, 2022 October 31 - November 3,* (pp. 529-540) Charlotte, North Carolina, USA: IEEE. https://doi.org/10.1109/ISSRE55969.2022.00057 (Published)

Accurate generation of trigger-action programs with domain-adapted sequence-to-sequence learning, by YUSUF, Imam Nur Bani; JIANG, Lingxiao; LO, David. (2022.0). *Proceedings of the 30th IEEE/ACM International Conference on Program Comprehension, ICPC 2022, Virtual Event, May 16-17, 2022,* (pp. 99-110) Virtual Event: ACM. https://doi.org/10.1145/3524610.3527922 (Published)

Right to know, right to refuse: Towards UI perception-based automated fine-grained permission controls for Android apps, by MALVIYA, Vikas Kumar; LEOW, Chee Wei; KASTHURI, Ashok; TUN, Yan Naing; SHAR, Lwin Khin; JIANG, Lingxiao. (2022.0). *Proceedings of the 37th IEEE/ACM International Conference on Automated Software Engineering (ASE), Ann Arbor, Michigan, 2022 October 10-14,* (pp. 1-6) Ann Arbor, Michigan: ACM. https://doi.org/10.1145/3551349.3559556 (Published)

MANDO: Multi-level heterogeneous graph embeddings for fine-grained detection of smart contract vulnerabilities, by NGUYEN, Hoang H.; NGUYEN, Nhat-Minh; XIE, Chunyao; AHMADI, Zahra; KUDENKO, Daniel; DOAN, Thanh-Nam; JIANG, Lingxiao.. (2022.0). *Proceedings of the 9th IEEE International Conference on Data Science and Advanced Analytics*

, Virtual Event: IEEE. http://doi.org/10.48550/arXiv.2208.13252 (Accepted)

AUTOPRTITLE: A tool for automatic pull request title generation, by IRSAN, Ivana Clairine; ZHANG, Ting; THUNG, Ferdian; LO, David; JIANG, Lingxiao. (2022.0). *2022 IEEE International Conference on Software Maintenance and Evolution (ICSME): Limassol, Cyprus, October 2-7: Proceedings,* (pp. 454-458) Piscataway, NJ: IEEE. https://doi.org/10.1109/ICSME55016.2022.00058 (Published)

Automatic pull request title generation, by ZHANG, Ting; IRSAN, Ivana Clairine; THUNG, Ferdian; HAN, DongGyun; LO, David; JIANG, Lingxiao. (2022.0). *2022 IEEE International Conference on Software Maintenance and Evolution: Limassol, Cyprus, October 2-7: Proceedings,* (pp. 71-81) Piscataway, NJ: IEEE. https://doi.org/10.1109/ICSME55016.2022.00015 (Published)

UIPDroid: Unrooted dynamic monitor of Android app UIs for fine-grained permission control, by DUAN, Mulin; JIANG, Lingxiao; SHAR, Lwin Khin; GAO, Debin. (2022.0). *Proceedings of the 44th International Conference on Software Engineering, Pittsburgh, USA, 2022 May 21-29,* (pp. 227-231) Pittsburgh: IEEE. http://doi.org/10.1109/ICSE-Companion55297.2022.9793833 (Published)

On the effectiveness of pretrained models for API learning, by HADI, Mohammad Abdul; YUSUF, Imam Nur Bani; THUNG, Ferdian; LUONG, Kien Gia; JIANG, Lingxiao; FARD, Fatemeh H.; LO, David. (2022.0). *Proceedings of the 30th IEEE/ACM International Conference on Program Comprehension, Pittsburgh, USA, 2022 May 16-17,* (pp. 309-320) Washington, DC: IEEE Computer Society. https://doi.org/10.1145/3524610.3527886 (Published)

MLCatchUp: Automated update of deprecated machine-learning APIs in Python, by HARYONO, Stefanus A.; THUNG, Ferdian; LO, David; LAWALL, Julia; JIANG, Lingxiao. (2021.0). *IEEE International Conference on Software Maintenance and Evolution (ICSME),* Virtual Event, Luxembourg: IEEE. https://doi.org/10.1109/ICSME52107.2021.00061 (Published)

Characterization and automatic updates of deprecated machine-learning API usages, by HARYONO, Stefanus A.; THUNG, Ferdian; LO, David; LAWALL, Julia; JIANG, Lingxiao. (2021.0). *37th IEEE International Conference on Software Maintenance and Evolution (ICSME 2021),* Virtual Event, Luxembourg: IEEE. http://doi.org/10.1109/ICSME52107.2021.00019 (Published)

Self-supervised contrastive learning for code retrieval and summarization via semantic-preserving transformations, by NGHI, D. Q. Bui; Yijun Yu; Lingxiao Jiang. (2021.0). *Proceedings of the 44th International ACM SIGIR Conference on Research and Development in Information Retrieval, Virtual Conference, July 11–15,* (pp. 1-11) Virtual Event, Canada: ACM. (Published)

AndroEvolve: Automated update for Android deprecated-API usages, by HARYONO, Stefanus A.; THUNG, Ferdian; LO, David; JIANG, Lingxiao; LAWALL, Julia; KANG, Hong Jin; SERRANO, Lucas; MULLER, Gilles. (2021.0). *2021 IEEE/ACM 43rd International Conference on Software Engineering (ICSE): May 25-28, Madrid, Virtual: Proceedings,* (pp. 1-4) Piscataway, NJ: IEEE. https://doi.org/10.1109/ICSE-Companion52605.2021.00021 (Published)

InferCode: Self-supervised learning of code representations by predicting subtrees, by NGHI, Bui D. Q.; YU, Yijun; JIANG, Lingxiao. (2021.0). *2021 43rd International Conference on Software Engineering (ICSE): Virtual, May 25-28: Proceedings,* (pp. 1186-1197) Piscataway, NJ: IEEE. https://doi.org/10.1109/ICSE43902.2021.00109 (Published)

TreeCaps: Tree-based capsule networks for source code processing, by BUI, Nghi D. Q.; YU, Yijun; JIANG, Lingxiao. (2021.0). *Proceedings of the 35th AAAI Conference on Artificial Intelligence, Virtual Conference, February 2-9,* (pp. 1-9) Virtual Conference: AAAI. https://www.aaai.org/AAAI21Papers/AAAI-9746.BuiNDQ.pdf (Published)

SmartFuzz: An automated smart fuzzing approach for testing SmartThings apps, by SHAR, Lwin Khin; TA, Nguyen Binh Duong; JIANG, Lingxiao; LO, David; WEI, Minn; YEO, Kiah Yong Glenn; KIM, Eugene. (2020.0). *2020 27th Asia-Pacific Software Engineering Conference (APSEC): December 1-4, Singapore: Proceedings,* (pp. 365-374) Piscataway, NJ: IEEE. https://doi.org/10.1109/APSEC51365.2020.00045 (Published)

Sentiment analysis for software engineering: How far can pre-trained transformer models go?, by ZHANG, Ting; XU, Bowen; THUNG, Ferdian; HARYONO, Stefanus Agus; LO, David; JIANG, Lingxiao. (2020.0). *2020 36th IEEE International Conference on Software Maintenance and Evolution (ICSME): Sep 27 - Oct 3, Adelaide, Australia: Proceedings,* (pp. 70-80) Piscataway, NJ: IEEE. https://doi.org/10.1109/ICSME46990.2020.00017 (Published)

CrossASR: Efficient differential testing of automatic speech recognition via text-to-speech, by ASYROFI, Muhammad Hilmi; THUNG, Ferdian; LO, David; JIANG, Lingxiao. (2020.0). *2020 36th IEEE International Conference on Software Maintenance and Evolution (ICSME): 27 Sep - 3 Oct, Adelaide, Australia: Proceedings,* (pp. 640-650) Piscataway, NJ: IEEE. https://doi.org/10.1109/ICSME46990.2020.00066 (Published)

Automatic Android deprecated-API usage update by learning from single updated example, by HARYONO, Stefanus A.; THUNG, Ferdian; KANG, Hong Jin; SERRANO, Lucas; MULLER, Gilles; LAWALL, Julia; LO, David;

JIANG, Lingxiao. (2020.0). *ICPC '20: Proceedings of the 28th IEEE/ACM International Conference on Program Comprehension: 13-15 July, Seoul,* (pp. 401-405) New York: ACM. https://doi.org/10.1145/3387904.3389285 (Published)

SPINFER: Inferring semantic patches for the Linux kernel, by SERRANO, Lucas; NGUYEN, Van-Anh; THUNG, Ferdian; JIANG, Lingxiao; LO, David; LAWALL, Julia; MULLER, Gilles. (2020.0). *Proceedings of the USENIX Annual Technical Conference (USENIX ATC 2020): July 15-17, Virtual,* (pp. 1-14) Boston: USENIX Association. https://www.usenix.org/conference/atc20/presentation/serrano (Published)

Are the code snippets what we are searching for? A benchmark and an empirical study on code search with natural-language queries, by YAN, Shuhan; YU, Hang; CHEN, Yuting; SHEN, Beijun; JIANG, Lingxiao.. (2020.0). *2020 IEEE 27th International Conference on Software Analysis, Evolution and Reengineering (SANER): Ontario, Canada, February 18-21: Proceedings,* (pp. 344-354) Piscataway, NJ: IEEE. https://doi.org/10.1109/SANER48275.2020.9054840 (Published)

AUSearch: Accurate API usage search in Github repositories with type resolution, by ASYROFI, Muhammad Hilmi; THUNG, Ferdian; LO, David; JIANG, Lingxiao. (2020.0). *2020 27th IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER): 18-21 February, Ontario, Canada: Proceedings,* (pp. 637-641) Piscataway, NJ: IEEE. https://doi.org/10.1109/SANER48275.2020.9054809 (Published)

Automated deprecated-API usage update for Android apps: How far are we?, by THUNG, Ferdian; HARYONO, Stefanus Agus; SERRANO, Lucas; MULLER, Gilles; LAWALL, Julia; LO, David; JIANG, Lingxiao. (2020.0). *2020 27th IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER): 18-21 February, Ontario, Canada: Proceedings,* (pp. 602-611) Piscataway, NJ: IEEE. https://doi.org/10.1109/SANER48275.2020.9054860 (Published)

AutoFocus: Interpreting attention-based neural networks by code perturbation, by BUI, Nghi Duy Quoc; YU, Yijun; JIANG, Lingxiao. (2019.0). *Proceedings of the 34th IEEE/ACM International Conference on Automated Software Engineering (ASE), California, 2019 November 11-15,* (pp. 1-4) California, United States: (Published)

Towards generating transformation rules without examples for android API replacement, by THUNG, Ferdian; KANG, Hong Jin; JIANG, Lingxiao; LO, David. (2019.0). *2019 35th IEEE International Conference on Software Maintenance and Evolution (ICSME): Cleveland, OH, September 30 - October 4: Proceedings,* (pp. 213-217) Piscataway, NJ: IEEE. https://doi.org/10.1109/ICSME.2019.00032 (Published)

SmartEmbed: A tool for clone and bug detection in smart contracts through structural code embedding, by GAO, Zhipeng; JAYASUNDARA, Vinoj; JIANG, Lingxiao; XIA, Xin; LO, David; GRUNDY, John. (2019.0). *Proceedings of the 35th IEEE International Conference on Software Maintenance and Evolution (ICSME): September 30 - October 4, Cleveland, USA,* (pp. 1-4) Piscataway, NJ: IEEE. (Published)

SAR: Learning cross-language API mappings with little knowledge, by BUI, Nghi Duy Quoc; YU, Yijun; JIANG, Lingxiao. (2019.0). *Proceedings of the 27th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering: ESEC/FSE '19, Tallinn, Estonia, 2019 August 26-30,* (pp. -1) Tallinn, Estonia: ACM. https://doi.org/10.1145/3338906.3338924 (Published)

Semantic patches for Java program transformation (artifact), by KANG, Hong Jin; THUNG, Ferdian; LAWALL, Julia; MULLER, Gilles; JIANG, Lingxiao; LO, David. (2019.0). *Proceedings of the 33rd European Conference on Object-Oriented Programming (ECOOP 2019): London, July 15-19,* Dagstuhl: Dagstuhl Publishing. https://doi.org/10.4230/DARTS.3.2.1 (Published)

Bilateral dependency neural networks for cross-language algorithm classification, by BUI, Nghi D. Q.; YU, Yijun; JIANG, Lingxiao. (2019.0). *26th IEEE International Conference on Software Analysis, Evolution and Reengineering: SANER 2019: Hangzhou, China, February 24-27: Proceedings,* (pp. 422-433) Piscataway, NJ: IEEE. https://doi.org/10.1109/SANER.2019.8667995 (Published)

Ten years of hunting for similar code for fun and profit (Keynote), by GLONDU, Stephane; JIANG, Lingxiao; SU, Zhendong. (2018.0). *ESEC/FSE 2018: Proceedings of the 26th ACM Joint Meeting on European Software Engineering Conference and Symposium on the Foundations of Software Engineering: Lake Buena Vista, FL, November 4-9,* (pp. 2-2) New York: ACM. https://doi.org/10.1145/3236024.3280856 (Published)

Hierarchical learning of cross-language mappings through distributed vector representations for code, by BUI, Nghi D. Q.; JIANG, Lingxiao. (2018.0). *ICSE-NIER '18: Proceedings of the 40th International Conference on Software Engineering: New Ideas and Emerging Results: Gothenburg, Sweden, May 30 - June 3,* (pp. 33-36) New York: ACM. https://doi.org/10.1145/3183399.3183427 (Published)

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Real-time trip information service for a large taxi fleet, by BALAN, Rajesh Krishna; KHOA, Nguyen Xuan; JIANG, Lingxiao. (2011.0). *MobiSys '11: Proceedings of the 9th International Conference on Mobile Systems, Applications and Services: Bethesda, MD, June 28 - July 1,* (pp. 99-112) New York: ACM. https://doi.org/10.1145/1999995.2000006 (Published)

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Scalable detection of semantic clones, by GABEL, Mark; JIANG, Lingxiao; SU, Zhendong. (2008.0). *ICSE '08: Proceedings of the 30th International Conference on Software Engineering: Leipzig, Germany, 10-18 May,* (pp. 321-330) New York: ACM. http://doi.org/10.1145/1368088.1368132 (Published)

Context-aware statistical debugging: From bug predictors to faulty control flow paths, by JIANG, Lingxiao; SU, Zhendong. (2007.0). *ASE '07: Proceedings of the 22nd ACM/IEEE International Conference on Automated Software Engineering: Atlanta, Georgia, 5-9 November,* (pp. 184-193) New York: ACM. http://doi.org/10.1145/1321631.1321660 (Published)

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Osprey: A practical type system for validating dimensional unit correctness of C programs, by JIANG, Lingxiao; SU, Zhendong. (2006.0). *ICSE '06: Proceedings of the 28th International Conference on Software Engineering: Shanghai, China, 20-28 May,* (pp. 262-271) New York: ACM.

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Conference Papers

TreeCaps: Tree-Structured Capsule Networks for program source code processing, by JAYASUNDARA, Vinoj; BUI, Nghi Duy Quoc; JIANG, Lingxiao; LO, David. (2019.0). *Workshop on Machine Learning for Systems at the Conference on Neural Information Processing Systems 33rd NeurIPS 2019, December 8-14,* Vancouver. (Published)

Papers Submitted for Review

Journal Articles [Refereed]

Performance Evaluation of NewSQL Databases in a Distributed Architecture, by MEGARGEL, Alan; JIANG Lingxiao. (2024). *IEEE Access,* (Submitted)

Research Grants

Singapore Management University

The Science of Certified AI Systems, Academic Research Fund (AcRF) Tier 3, Ministry of Education (MOE) , PI (Project Level): SUN Jun , Co-PI (Project Level): David LO, JIANG Lingxiao, 2021, S$9,340,776

Trust to Train and Train to Trust: Agent Training Programs for Safety-Critical Environments, AI Singapore Research Programme, AI Singapore , PI (Project Level): Pradeep Reddy VARAKANTHAM , Co-PI (Project Level): Akshat KUMAR, Arunesh SINHA, David LO, 2021, S$6,086,963.76

ADrone: Auditing Drone Behaviours for Accountability of Criminal/Malicious Activities, NSoE MSS-CS Research Programme, National Satellite of Excellence - Mobile Systems Security and Cloud Security , PI (Project Level): SHAR Lwin Khin , Co-PI (Project Level): Don TA, JIANG Lingxiao, 2021, S$594,220

Making Big Code Active: From Billions of Code Tokens to Automation, International Research Collaboration Grant, Singapore Data Science Consortium , PI (Project Level): David LO , Co-PI (Project Level): JIANG Lingxiao, 2020, S$631,344

Uncovering Vulnerabilities in Machine Learning Frameworks via Software Composition Analysis and Directed Grammar-Based Fuzzing, NSoE TSS Grant Call, National Satellite of Excellence - Trustworthy Software Systems , PI (Project Level): David LO , Co-PI (Project Level): JIANG Lingxiao, 2020, S$550,000

Making Software Development Language-Agnostic Through Cross-Language Mapping and Migration, The Royal Society - International Exchanges, The Royal Society , Co-PI (Project Level): JIANG Lingxiao, 2020, S$21,484.34

Research Programme on Computational Law, Smart Systems Strategic Research Programme, Industry Alignment Fund – Pre-Positioning (IAF-PP) Funding Initiative, Info-communications Media Development Authority of Singapore (IMDA) , PI (Project Level): WONG Meng Weng , Co-PI (Project Level): GOH Yihan, SC, LAU Kwan Ho, LIM How Khang, Jerrold SOH, 2019, S$15,189,082

DeepSense: Deep Media Sensing for Software API Recommendation, Academic Research Fund (AcRF) Tier 2, Ministry of Education (MOE) , PI (Project Level): David LO , Co-PI (Project Level): JIANG Lingxiao, 2019, S$723,960

A Novel Hybrid Kernel Symbolic Execution Framework For Malware Analysis, NSoE TSS Grant Call, National Satellite of Excellence - Trustworthy Software Systems , PI (Project Level): DING XuHua , Co-PI (Project Level): JIANG Lingxiao, 2019, S$715,000

AutoPrivacyModel: Automated Feature Modelling for Identifying Illegitimate Uses of Privacy-Sensitive Data in Mobile Applications, NSoE MSS-CS Research Programme, National Satellite of Excellence - Mobile Systems Security and Cloud Security , PI (Project Level): JIANG Lingxiao , Co-PI (Project Level): David LO, SHAR Lwin Khin, DING XuHua, Debin GAO, 2019, S$700,403

Automatic Inference of Software Transformation Rules for Automatically Back and Forward Porting Legacy Infrastructure Software (Itrans), NRF-ANR Joint Grant Call, National Research Foundation (NRF) , PI (Project Level): David LO , Co-PI (Project Level): JIANG Lingxiao, 2016, S$428,137.2

Secure Mobile Centre - Technologies and Solutions for Securing Mobile Computing, National Cybersecurity R&D (NCR) Programme, National Research Foundation (NRF) , PI (Programme Level): Robert H DENG , PI (Project Level): DING XuHua, Debin GAO, JIANG Lingxiao, LI Yingjiu, David LO, PANG Hwee Hwa, 2014, S$6,415,200

Improving Clone Detection for Systems Software, Merlion Programme, Republique Francaise, Institut Fran�ais de Singapour , PI (Project Level): David LO , Co-PI (Project Level): JIANG Lingxiao, 2012, S$24,300

A-Things: Anomaly Analysis of the Internet of Things Applications, SMU Internal Grant, Ministry of Education (MOE) Tier 1 , PI (Project Level): SHAR Lwin Khin , Co-PI (Project Level): David LO, JIANG Lingxiao, 2020, S$99,057

Testing and Verification of Artificial Intelligence Systems, SMU Internal Grant, Ministry of Education (MOE) Tier 1 , PI (Project Level): David LO , Co-PI (Project Level): JIANG Lingxiao, SUN Jun, 2019, S$468,035

Semantic-Directed Deep Code Encoding for Smart Contract Debugging, SMU Internal Grant, Ministry of Education (MOE) Tier 1 , PI (Project Level): JIANG Lingxiao , Co-PI (Project Level): David LO, 2017, S$149,370

Software Reuse Insights for IT Businesses through Software Library Recommendation, SMU Internal Grant, Ministry of Education (MOE) Tier 1 , PI (Project Level): David LO , Co-PI (Project Level): JIANG Lingxiao, 2016, S$109,584

Other Institutions

Customizing and Optimizing C to Rust Transformation Rules based on Code Learning, Huawei Grant, Huawei Technologies (Ireland) Co., Ltd PI (Project Level): JIANG Lingxiao, 2022, SGD387,400

Making Software Development Language-Agnostic through Cross-Language Mapping and Migration, International Exchanges, The Royal Society PI (Project Level): JIANG Lingxiao, WANG Meng, Co-PI (Project Level): David LO, BUI DUY QUOC NGHI, Steven Ramsay, 2020, GBP12,000

Behavioral Modeling, Analysis, and Testing of Android Applications, LiveLabs, LiveLabs, SIS, SMU PI (Project Level): JIANG Lingxiao, 2016

Mobile Application Similarity and Programming Pattern Study, Internal Research Centre, Internal Research Centre, SIS, SMU PI (Project Level): JIANG Lingxiao, 2015

vSCA: Scalable Code Analysis via Vector Abstraction and Concretization, MOE AcRF Tier 1, National University of Singapore PI (Project Level): David LO, KHOO Siau-Cheng, Co-PI (Project Level): JIANG Lingxiao, 2014, SGD130,000

Software Code Similarity Detection and Analysis, DAAD (German Academic Exchange Service), DAAD (German Academic Exchange Service) PI (Project Level): JIANG Lingxiao, 2014, EUR2,000

Software Mining and Analysis, Internal Research Centre, Internal Research Centre, SIS, SMU PI (Project Level): JIANG Lingxiao, 2013

Modeling Group Learning Phenomena and Effects in Open-Source Software Developments, Internal Research Centre, Internal Research Centre, SIS, SMU PI (Project Level): David LO, Co-PI (Project Level): JIANG Lingxiao, 2013

Automated Bug Fixing Assistant, Internal Research Centre, Internal Research Centre, SIS, SMU PI (Project Level): David LO, Co-PI (Project Level): JIANG Lingxiao, 2013

Software Mining and Analysis, Internal Research Centre, Internal Research Centre, SIS, SMU PI (Project Level): JIANG Lingxiao, 2012

Semantic-Aware Mining of Software Clones, LEE Foundation, LEE Foundation, SMU PI (Project Level): JIANG Lingxiao, 2010, SGD10,000

Software Mining and Analysis, Internal Research Centre, Internal Research Centre, SIS, SMU PI (Project Level): JIANG Lingxiao, 2010

TEACHING

Teaching Areas

Enterprise Solution Development, Enterprise Integration, IS Application Project, Object Oriented Application Development, Software Engineering, Program Analysis, Data Mining, Information Security

Courses Taught

<u>Singapore Management University</u>

Undergraduate Programmes :

Enterprise Integration

Enterprise Solution Development

Postgraduate Professional Programmes :

Capstone Project - Software and Cyber-Physical Systems

Software Mining and Analysis

Postgraduate Research Programmes :

Empirical Research Project 1

Empirical Research Project 2

Empirical Research Project 3

Empirical Research Project 4

Software Mining and Analysis

<u>Other Institutions</u>

Algorithms & data structures, C/C++/Java programming, digital signal processing, and image processing, Undergraduate, Peking University

Object-oriented programming, Undergraduate, University of California, Davis

THESES AND DISSERTATIONS

Theses and Dissertations Supervised

<u>Other Institutions</u>

Supervisor, "Unrooted Dynamic Monitor of Android App UIs for Fine-Grained Privacy Protection", Thesis by DUAN Mulin, Master of Science in Computing, Singapore Management University, 2021

Supervisor, "Novel Deep Learning Methods Combined with Static Analysis for Source Code Processing", Dissertation by BUI Duy Quoc Nghi, Singapore Management University, 2020

Supervisor, "Uncovering user-triggered privacy leaks in mobile applications and their utility in privacy protection", Thesis by Joo Keng Joseph CHAN, Master of Philosophy in Information Systems, Singapore Management University, 2016

Theses and Dissertations Assessed

<u>Singapore Management University</u>

Committee Member, "Overfitting in Automated Program Repair: Challenges and Solutions", Dissertation by LE DINH XUAN BACH, PhD in Information Systems, Singapore Management University, 2018

Committee Member, "Recommending APIs for Software Evolution", Dissertation by FERDIAN THUNG, PhD in Information Systems, Singapore Management University, 2018

Committee Member, "Fusion Based Approaches for Software Fault Localization and Specification Mining", Dissertation by LE BUI TIEN DUY, PhD in Information Systems, Singapore Management University, 2017

Committee Member, "Testing and Debugging: A Reality Check", Dissertation by PAVNEET SINGH KOCHHAR, PhD in Information Systems, Singapore Management University, 2017

Committee Member, "Mining Bug Repositories for Automatic Software Bug Management: From Bug Triaging to Patch Backporting", Dissertation by TIAN YUAN, PhD in Information Systems, Singapore Management University, 2017

Committee Member, "Multimodal Code Search", Dissertation by WANG SHAOWEI, PhD in Information Systems, Singapore Management University, 2015

Committee Member, "Ranking-based Approaches for Localizing Faults", Dissertation by LUCIA, PhD in Information Systems, Singapore Management University, 2014

<u>Other Institutions</u>

Committee Member, "DeepCause: Verifying Neural Networks with Abstraction Refinement", Thesis by NGUYEN Hua Gia Phuc, Master of Philosophy in Computer Science, Singapore Management University, 2022

Committee Member, "Investigating Imperative Code In F# Projects", Thesis by Gregory GAO Zhan, Master of Science in Computing, Singapore Management University, 2022

Committee Member, "A Novel Fuzzing Approach for Detecting Software Anomalies in UAVs", Thesis by Wei MINN, Bachelor of Science in Information Systems, Singapore Management University, 2022

Committee Member, "Analyzing Vulnerabilities in Deep Learning Libraries and Their Exploits", Thesis by Jonathan OOI Kwan Weng, Master of Science in Computing, Singapore Management University, 2021

Committee Member, "Endpoint Detection System for PUB Industrial Control System", Thesis by SIM Yuze, Master of Science in Computing, Singapore Management University, 2021

External Examiner, "Steps Towards Semantic Code Search", Dissertation by Kisub KIM, PhD in Computer Science, University of Luxembourg, 2021

Committee Member, "COVID-19 One Year On - Security and Privacy Review of Contact Tracing Mobile Apps", Thesis by Vincent ANG Wei Yang, Master of Science in Computing, Singapore Management University, 2021

Committee Member, "Statistical And Deep Learning Models For Software Engineering Corpora", Dissertation by HOANG Van Duc Thong, Singapore Management University, 2020

Committee Member, "Can We Make it Better? Assessing and Improving Quality of GitHub Repositories", Dissertation by Gede Artha Azriadi PRANA, PhD in Computer Science, Singapore Management University, 2017

Committee Member, "Exploiting Approximation, Caching and Specialization to Accelerate Vision Sensing Applications", Dissertation by HUYNH Nguyen Loc, PhD, Singapore Management University, 2014

Committee Member, "Multimodal Mobile Sensing Systems for Physiological and Psychological Assessment", Dissertation by HUYNH Nguyen Phan Sinh, PhD, Singapore Management University, 2014

Committee Member, "Using User Saliency for Effective OLED Display Power Management", Thesis by TAN Kiat Wee, Master of Philosophy in Information Systems, Singapore Management University, 2014

OTHER ACADEMIC AND PROFESSIONAL ACTIVITIES

Media Contributions and Citations

Securing smart contracts with AI and Machine Learning, Research Podcast, 01 Nov 2021
https://research.smu.edu.sg/researchsmu_podcast_securing-smart-contracts-with-AI-and-machine-learning

The intelligent gatekeeper of your private data, Research@SMU, 16 Nov 2020
https://research.smu.edu.sg/news/2020/nov/16/intelligent-gatekeeper-your-private-data

SMU researcher wins 2018 ACM SIGSOFT Impact Paper Award, Research@SMU, 01 Nov 2018
https://news.smu.edu.sg/news/2018/11/01/smu-researcher-wins-2018-acm-sigsoft-impact-paper-award

Building a Programmer's Toolbox, Asian Scientist Magazine, 05 May 2016
http://www.asianscientist.com/2016/05/features/jiang-lingxiao-smu-programming-coding-deckard-autoquery/

UNIVERSITY SERVICE

Singapore Management University

Task Force Member, •Graduate Learning Outcomes (GLOs) Measurement Co-ordinating Group -- Critical Thinking & Problem Solving subgroup, Nov 2020 - Apr 2021

Committee Member, University Tribunal, Jul 2019 - Present

members and chair, REC and SEC, Jun 2019 - Present

Develop Interview Guide for Interviewers, SCIS Undergraduate Admission Interviews, Jan 2019 - Present

Committee Member, SCIS Faculty Search Committee, Oct 2018 - Jun 2021

Committee Member, Library Advisory Committee, Jan 2012 - Jul 2017

EXTERNAL SERVICE – PROFESSIONAL

Member, Conference Program Committees, 46th International Conference on Software Engineering (ICSE) Research Track and Doctoral Symposium, ACM International Conference on the Foundations of Software Engineering (FSE) Research Track and Industry Track, 21st International Conference on Mining Software Repositories (MSR), 38th Annual AAAI Conference on Artificial Intelligence (AAAI), ACM SIGSOFT Impact Paper Award selection, 2024

Workshop Organizer, Organization Committee, 35th IEEE International Symposium on Software Reliability Engineering (ISSRE) Workshops, 2023 - 2024

Co-Chair, Program Committee, ACM Student Research Competition (SRC) at ICSE 2023, 2023

Member, Conference Program Committees, 45th International Conference on Software Engineering (ICSE) Research Track, ICSE Workshops, ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE) Industry Track and Demo Track, 30th IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER), 39th International Conference on Software Maintenance and Evolution (ICSME), 10th IEEE/ACM International Conference on Mobile Software Engineering and Systems (MOBILESoft) Tool Demos Track, First International Workshop on Software Vulnerability Management (SVM) at ICSE, 17th International Workshop on Software Clones (IWSC), 14th Asia-Pacific Symposium on Internetware (Internetware), 30th Asia-Pacific Software Engineering Conference (APSEC) Research Track and Education Track, Thirty-Seventh AAAI Conference on Artificial Intelligence (AAAI), ACM Student Research Competition (SRC) Grand Finals, 2023

Reviewer Journal Article, IEEE Transactions on Software Engineering (TSE), ACM Transactions on Software Engineering and Methodology (TOSEM), ACM TOSEM Replicated Computational Results (RCR) Reports Track, Journal of Empirical Software Engineering (EMSE), Communications of the ACM (CACM), Journal of Systems and Software (JSS), Journal of Software: Evolution and Process (JSEP), IEEE Transactions on Dependable and Secure Computing (TDSC), Blockchain: Research and Applications (BCRA), Engineering Applications of Artificial Intelligence (EAAI), Information and Software Technology (IST), SCIENCE CHINA Information Sciences, Journal of Computer Science and Technology (JCST), 2023

Reviewer Grant Proposal, Maritime AI Grant Call, Singapore Maritime Institute, 2022

Editorial Review Board Member, Journal of Computer Science and Technology (JCST), 2022 - Present

Reviewer Journal Article, IEEE Transactions on Software Engineering (TSE), ACM Transactions on Software Engineering and Methodology (TOSEM), Journal of Empirical Software Engineering (EMSE), Journal of Systems and Software (JSS), Automated Software Engineering Journal (AUSE), Journal of Computer Science and Technology (JCST), Information and Software Technology (IST), IEEE Transactions on Dependable and Secure Computing (TDSC), IEEE Transactions on Reliability (TR), Journal of Software: Evolution and Process (JSEP), Future Generation Computer Systems (FGCS), Frontiers of Computer Science (FCS), IEEE Transactions on Knowledge and Data Engineering (TKDE), Transactions on Intelligent Systems and Technology (TIST), Transactions on Network Science and Engineering (TNSE), 2022

Member, Conference Program Committees, ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE) Research Track and Industry Track, 38th International Conference on Software Maintenance and Evolution (ICSME), 29th IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER), 29th Asia-Pacific Software Engineering Conference (APSEC), 16th International Workshop on Software Clones (IWSC), 13th Asia-Pacific Symposium on Internetware, 9th IEEE/ACM International Conference on Mobile Software Engineering and Systems (MOBILESoft) Tool Demos Track, International Conference on Model-Driven Engineering and Software Development (MODELSWARD) Special Session on Effective Modelling and Implementation of Quantities (EMIQ), 2022

Editor Associate Editor, Journal of Systems and Software (JSS), 2022 - Present

Reviewer Grant Proposal, National Science Center, Poland, 2021

Reviewer Journal Article, IEEE Transactions on Software Engineering (TSE), ACM Transactions on Software Engineering and Methodology (TOSEM), Journal of Empirical Software Engineering (EMSE), Journal of Systems and Software (JSS), Automated Software Engineering Journal (AUSE), Journal of Software: Evolution and Process (JSEP), IEEE Transactions on Dependable and Secure Computing (TDSC), IEEE Transactions on Computational Social Systems (TCSS), Journal of Computer Science and Technology (JCST), IEEE Transactions on Reliability (TR), Information and Software Technology (IST), Frontiers of Computer Science (FCS), IEEE Access, Scientific Programming, Computational Intelligence (COIN), Transactions on Big Data (TBD), Transactions on Intelligent Systems and Technology (TIST), IEEE Transactions on Emerging Topics in Computational Intelligence (TETCI), Journal of Security and Communication Networks (SCN), Transactions on Network Science and Engineering (TNSE), IEEE Systems Journal (ISJ), 2021

Member, Conference Program Committees, 43rd International Conference on Software Engineering (ICSE) Tool Demonstrations, ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE) Ideas, Visions and Reflections Track, 36th IEEE/ACM International Conference on Automated Software Engineering (ASE), 28th IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER), 37th International Conference on Software Maintenance and Evolution (ICSME), 18th International Conference on Mining Software Repositories (MSR), 15th International Workshop on Software Clones (IWSC), Asia-Pacific Symposium on Internetware, 14th Innovations in Software Engineering Conference (ISEC), 2021

Editorial Review Board Member, Automated Software Engineering Journal (AUSE), 2021 - Present

Member, Conference Program Committees, 42nd International Conference on Software Engineering (ICSE) Software Engineering In Practice (SEIP), 35th IEEE/ACM International Conference on Automated Software Engineering (ASE) Research Papers and Tool Demonstrations, 36th International Conference on Software Maintenance and Evolution (ICSME), 27th IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER) Tool Demo Track and Late Breaking Ideas Track, 17th International Conference on Mining Software Repositories (MSR), 28th IEEE/ACM International Conference on Program Comprehension (ICPC), 20th IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM), 13th Innovations in Software Engineering Conference (ISEC), 14th International Workshop on Software Clones (IWSC), National Software Application Conference (NASAC), 12th Asia-Pacific Symposium on Internetware, 27th Asia-Pacific Software Engineering Conference (APSEC), 7th International Workshop on Software Engineering Research and Industrial Practice, 2020

Co-Chair, Program Committee, 7th IEEE/ACM International Conference on Mobile Software Engineering and Systems (MOBILESoft) Tool Demo Track, 2020

Reviewer Journal Article, IEEE Transactions on Software Engineering (TSE), ACM Transactions on Software Engineering and Methodology (TOSEM), Journal of Empirical Software Engineering (EMSE), Journal of Systems and Software (JSS), Journal of Software: Evolution and Process (JSEP), IEEE Transactions on Dependable and Secure Computing (TDSC), IEEE Transactions on Computational Social Systems (TCSS), Journal of Computer Science and Technology (JCST), ACM Transactions on Privacy and Security (TOPS), IEEE Transactions on Reliability (TR), Software: Practice and Experience (SPE), IEEE Transactions on Knowledge and Data Engineering (TKDE), IEEE Software, IEEE Access, 2020

Reviewer Journal Article, IEEE Transactions on Software Engineering (TSE), Journal of Empirical Software Engineering (EMSE), Journal of Knowledge and Information Systems (KAIS), Journal of Systems and Software (JSS), IEEE Transactions on Reliability (TR), IEEE Transactions on Computational Social Systems (TCSS), IEEE Transactions on Dependable and Secure Computing (TDSC), Journal of Computer Science and Technology (JCST), Journal of Security and Communication Networks (SCN), Journal of Hydroinformatics (HYDRO), International Journal of Technoentrepreneurship (IJTE), IET Software (SEN), China Communications (CNCOMM), Globalisation, Societies and Education (CGSE), International Symposium on Automated Technology for Verification and Analysis (ATVA), IEEE Access, 2019

Co-Chair, Conference Program Committee, 26th IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER) Tool Demo Track, 2019

Member, Conference Program Committees, 41st International Conference on Software Engineering (ICSE) Workshops, 26th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE) New Ideas and Emerging Results (NIER) Track, 16th International Conference on Mining Software Repositories (MSR), 27th IEEE/ACM International Conference on Program Comprehension (ICPC), 12th Innovations in Software Engineering Conference (ISEC), 19th IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM), 13th International Workshop on Software Clones (IWSC), 2019

Member, Conference Program Committees, 40th International Conference on Software Engineering (ICSE) Demonstrations Track, 26th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE) New Ideas and Emerging Results (NIER) Track and Tool Demonstrations Track, 26th IEEE/ACM International Conference on Program Comprehension (ICPC), 11th Innovations in Software Engineering Conference (ISEC), 12th International Conference on Software Technologies (ICSOFT), 18th IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM), 7th International Workshop on Software Mining (SoftwareMining-2018), 2018

Reviewer Journal Article, IEEE Transactions on Software Engineering (TSE), ACM Transactions on Software Engineering and Methodology (TOSEM), Journal of Empirical Software Engineering (EMSE), Automated Software Engineering Journal (AUSE), Journal of Systems and Software (JSS), Journal of Software: Evolution and Process (JSEP), Journal of Knowledge and Information Systems (KAIS), Journal of Software and Systems Modeling (SoSyM), IEEE Transactions on Dependable and Secure Computing (TDSC), IEEE Transactions on Reliability (TR), Frontiers of Computer Science (FCS), Journal of Security and Communication Networks (SCN), Journal of Hydroinformatics (HYDRO), Ministry of Education (MOE) Translational R&D and Innovation Fund Grant Call, 52nd Hawaii International Conference on System Sciences (HICSS), 2018

Co-Chair, Program Committee, 25th Asia-Pacific Software Engineering Conference (APSEC) Early Research Achievements Track, 2018

Member, Conference Program Committees, 39th International Conference on Software Engineering (ICSE), 33rd International Conference on Software Maintenance and Evolution (ICSME), 32nd IEEE/ACM International Conference on Automated Software Engineering (ASE) Tool Demonstration Track, 25th International Conference on Program Comprehension (ICPC), 10th Innovations in Software Engineering Conference (ISEC), 17th IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM), 6th International Workshop on Software Mining, 2017

Reviewer Journal Article, IEEE Transactions on Software Engineering (TSE), Automated Software Engineering Journal (AUSE), Journal of Empirical Software Engineering (EMSE), Journal of Software: Evolution and Process (JSEP), Journal of Systems and Software (JSS), Journal of Computer Science and Technology (JCST), Frontiers of Computer Science (FCS), IEICE Transactions on Information and Systems, International Journal of Web and Grid Services (IJWGS), International Journal of Advanced Intelligence Paradigms (IJAIP), IEEE Transactions on Knowledge and Data Engineering (TKDE), 2017

Local/Finance Chair, 31st International Conference on Automated Software Engineering (ASE 2016), IEEE/ACM, 2016