

唐宇田

研究员、博导

信息科学与技术学院
上海科技大学

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研究兴趣与方向

程序分析, 安卓系统, 系统安全, 大规模软件挖掘, 经验软件工程, 模糊测试

教育背景

2013.8- 哲学博士学位, 香港理工大学电子计算学系, 中国香港

2018.9

指导教师 ○ 罗夏朴副教授, 梁金能副教授

2009.9- 学士学位, 吉林大学, 计算机科学与技术学院, 吉林, 中国

2013.6

指导教师 ○ 黄岚教授, 副院长

工作经历

2020.10-至今 研究员, 上海科技大学, 信息科学与技术学院, 中国上海

2020.06- 博士后研究员, 香港城市大学, 中国香港

2020.08

2018.11- 博士后研究员, 香港理工大学, 中国香港

2020.05

2017.08- 兼职研究助理, 香港理工大学, 中国香港

2018.05

科研项目

2020.10- 主持: “Early career research fund (No.2020F0203-000-14)”, 上海科技大学, 经

2026.10 费: 3,000,000 人民币

- 2021.10- 主持: “基于大数据的移动应用恶意成分检测 (No.21PJ1410700)”, 上海市浦江
2023.09 人才计划, 上海市科委, 经费: 300,000 人民币
- 2023.01- 主持: “基于多维度、多语义模块挖掘的 Android 应用去臃肿化技术研究
2025.12 (No.6220072429)”, 国家自然科学基金 (青年项目), 经费: 300,000 人民币
- 2018.01- 参与: “Improving Mobile Users’Privacy Decisions via Exposing Unexpected
2020.12 Sensitive Operations in Hardened Apps”, Research Grants Council GRF, Hong
Kong, 经费: 416,667 港币; 参见 https://cerg1.ugc.edu.hk/cergprod/scrrm00542.jsp?proj_id=15222317
- 2018.03- 参与: “Research and Development of An Advanced IPS System for Aftermar-
2020.05 ket Telematics”, Innovation and Technology Fund (ITF), Hong Kong, 经费:
2,386,066 港币 (包括来自 ITF 的 1,899,340 港币和公司资助的 486,726 港币);

论文出版

总结 ESEC/FSE (1); WWW (1); ASE (3); IEEE TSE (3); IEEE TReli (1); SANER (3); ICPC (2); ISSRE (2); JSS (2); IST (2); JCST (1) JCR-Q1 (9), CCF-A (8), CCF-B(13), Core-A(8)
CCF-A (8), CCF-B(13)

第一作者或通信作者 (11 篇)

- JSEP [11] Hongchen Chao (学生), Shuai Li, Yuming Zhou, Ming Fan, Xuejiao Zhao, Yutian Tang (通讯作者), “Cheating Your Apps: Black-box Adversarial Attacks on Deep Learning Apps”, *Journal of Software: Evolution and Process*, CCF-B 类期刊, SCI;
- ASE’22 [10] Zhichao Zhou (学生), Yuming Zhou, Chunrong Fang, Zhenyu Chen, Yutian Tang (通讯作者) “Selectively Combining Multiple Coverage Goals in Search-Based Unit Test Generation”, *The 37th IEEE/ACM International Conference on Automated Software Engineering (ASE)*, CCF-A 类会议, EI;
- TSE’21b [9] **Yutian Tang**, Hao Zhou, Xiapu Luo, Ting Chen, Haoyu Wang, Zhou Xu, and Yan Cai, “XDebloat: Towards Automated Feature-Oriented App Debloating”, *IEEE Transactions on Software Engineering*, CCF-A 类期刊, 中科院二区, JCR 一区, SCI, 2020 影响因子 IF=6.226;

- TSE'21a [8] **Yutian Tang***, Haoyu Wang, Xian Zhan, Xiapu Luo*, Yajin Zhou, Hao Zhou, Qiben Yan, Yulei Sui, Jacky Keung, “A Systematical Study on Application Performance Management Libraries for Apps”, *IEEE Transactions on Software Engineering*, CCF-A 类期刊, 中科院二区, JCR 一区, SCI, 2020 影响因子 IF=6.226;
- WMC'21 [7] Jian Huang, Shanhui Liu, **Yutian Tang***, Xiushan Zhang, “Object-Level Remote Sensing Image Augmentation Using U-Net-Based Generative Adversarial Networks”, *Wireless Communication and Mobile Computing*, EI, CCF-C;
- ESEC/FSE'20 [6] **Yutian Tang**, Yulei Sui, Haoyu Wang, Xiapu Luo, Hao Zhou, Zhou Xu, “All Your App Links (are) Belong to Us: Understanding the Threats of Instant Apps based Attacks”, *The ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE)*, Core A, CCF-A 类会议, EI, 所报告的漏洞被谷歌认可;
- ASE'19 [5] **Yutian Tang**, Xian Zhan, Hao Zhou, Xiapu Luo, Zhou Xu, Yajin Zhou, Qiben Yan, “Demystifying Application Performance Management Libraries for Android”, *The 34th IEEE/ACM International Conference on Automated Software Engineering (ASE)*, CCF-A 类会议, EI;
- ICPC'17 [4] **Yutian Tang**, Hareton Leung, “Constructing Feature Model by Identifying Variability-aware Modules”, 25th IEEE/ACM International Conference on Program Comprehension (ICPC), CCF-B 类会议, EI;
- SANER'17 [3] **Yutian Tang**, Hareton Leung, “StiCProb: A Novel Feature Mining Approach using Conditional Probability”, 24th IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER), CCF-B 类会议, EI;
- SOFTENG'15 [2] **Yutian Tang**, Hareton Leung, “Feature Mining for Product Line Construction”, The First International Conference on Advances and Trends in Software Engineering (SOFTENG), EI;
- ICEIS'15 [1] **Yutian Tang**, Hareton Leung, “A Top-down Feature Mining Framework for Software Product Line”, 17th International Conference on Enterprise Information Systems (ICEIS), EI;

非第一作者 (19 篇)

- TSE'22 [19] Le Yu, Haoyu Wang, Xiapu Luo, Tao Zhang, Kang Liu, Jiachi Chen, Hao Zhou, Yutian Tang, Xusheng Xiao, "Towards Automatically Localizing Function Errors in Mobile Apps with User Reviews", *IEEE Transactions on Software Engineering*, CCF-A 类期刊, 中科院二区, JCR 一区, SCI, 2020 影响因子 IF=6.226;
- WWW'22 [18] Guosheng Xu, Siyi Li, Hao Zhou, Shucen Liu, **Yutian Tang**, Li Li, Xiapu Luo, Xusheng Xiao, Guoai Xu and Haoyu Wang, "Lie to Me: Abusing the Mobile Content Sharing Service for Fun and Profit", *The Web Conference (WWW)*, CCF-A;
- ICPDS'21 [17] Zejun Wu, Chao Ma, Xiaochuan Shi, Libing Wu, Dian Zhang, **Yutian Tang**, "BRNN-GAN: Generative Adversarial Networks with Bi-directional Recurrent Neural Networks for Multivariate Time Series Imputation", *IEEE International Conference on Parallel and Distributed Systems*, CCF-C, EI;
- AppliedSC'21b [16] Zhen Yang, Jacky Keung, Md Alamgir Kabir, Xiao Yu, **Yutian Tang**, Miao Zhang, Shuo Feng, "AComNN: Attention Enhanced Compound Neural Network For Financial Time-Series Forecasting With Cross-Regional Features", *Applied Soft Computing*, JCR 一区, SCI;
- TReli'21 [15] Kunsong Zhao, Zhou Xu, Tao Zhang, **Yutian Tang**, Meng Yan, "Simplified Deep Forest Model based Just-In-Time Defect Prediction for Android Mobile Apps", *IEEE Transactions on Reliability*, 中科院三区, JCR 一区, SCI;
- SAC'21 [14] Kunsong Zhao, Zhou Xu, Meng Yan, **Yutian Tang**, Ming Fan, Gemma Catolino, "Just-in-Time Defect Prediction for Android Apps via Imbalanced Deep Learning Model", *The 36th ACM/SIGAPP Symposium On Applied Computing*, EI
- IST'20 [13] Zhou Xu, Tao Zhang, Jacky Keung, Meng Yan, Xiapu Luo, Xiaohong Zhang, Ling Xu, **Yutian Tang**, "Feature Selection and Embedding Based Cross Project Framework for Identifying Crashing Fault Residence" *Information and Software Technology (IST)*, CCF-B 类, JCR-二区, SCI;
- ASE'20 [12] Hao Zhou, Haoyu Wang, Yajin Zhou, Xiapu Luo, **Yutian Tang**, Lei Xu, Ting Wang, "Demystifying Dichard Android Apps", *35th IEEE/ACM International Conference on Automated Software Engineering (ASE)* Core A, CCF-A 类会议, EI;

- QRS'20 [11] Kunsong Zhao, Zhou Xu, Tao Zhang, **Yutian Tang**, "Simplified Deep Forest Model based Just-In-Time Defect Prediction for Android Mobile Apps", *20th International Conference on Software Quality, Reliability, and Security (QRS)* CCF-C 类会议, EI;
- SANER'20 [10] Yan Cai, **Yutian Tang**, Haicheng Li, Le Yu, Hao Zhou, Xiapu Luo, Liang He, Purui Su, "Resource Race Attacks on Android", *27th IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER)*, CCF-B 类会议, EI, 所报告的漏洞被谷歌认可;
- JSS'19 [9] Zhou Xu, Shuai Li, Jun Xu, Jin Liu, Xiapu Luo, Yifeng Zhang, Tao Zhang, Jacky Keung, **Yutian Tang**, "LDFR: Learning deep feature representation for software defect prediction", *Journal of Systems and Software (JSS)*, CCF-B 类期刊, JCR-一区;
- QRS'19 [8] Zhou Xu, Sizhe Ye, Tao Zhang, Zhen Xia, Shuai Pang, Yong Wang, **Yutian Tang**, "MVSE: Effort-Aware Heterogeneous Defect Prediction via Multiple-View Spectral Embedding", *19th International Conference on Software Quality, Reliability, and Security (QRS)*, CCF-C 类会议, EI;
- ISSRE'19 [7] Zhou Xu, Shuai Pang, Yifeng Zhang, **Yutian Tang**, Jin Liu, Xiapu Luo, Jacky Keung, Xiaohui Cui, "Identifying Crashing Fault Residence Based on Cross Project Model", *International Symposium on Software Reliability Engineering (ISSRE)*, CCF-B 类会议, EI, Core-A;
- JCST'19 [6] Zhou Xu, Shuai Pang, Tao Zhang, Xiapu Luo, **Yutian Tang**, Xiao Yu, Lei Xue, "Cross Project Defect Prediction via Balanced Distribution Adaptation based Transfer Learning", *Journal of Computer Science and Technology (JCST)*, CCF-B 类期刊, SCI;
- JSS'19 [5] Zhou Xu, Shuai Li, Xiapu Luo, Jin Liu, Tao Zhang, **Yutian Tang**, Jun Xu, Peipei Yuan, Jacky Keung, "TSTSS: A Two-Stage Training Subset Selection Framework for Cross Version Defect Prediction", *Journal of Systems and Software (JSS)*, CCF-B 类期刊, JCR 一区, SCI;
- SANER'19 [4] Xian Zhan, Tao Zhang, **Yutian Tang**, "A Comparative Study of Android Repackaged Apps Detection Techniques", *2019 IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER)*, CCF-B 类会议, EI;

- IST'18 [3] Zhou Xu, Jin Liu, Xiapu Luo, Zijiang Yang, Yifeng Zhang, Peipei Yuan, **Yutian Tang**, Tao Zhang, "Software Defect Prediction Based on Kernel PCA and Weighted Extreme Learning Machine", Information and Software Technology (IST), CCF-B 类期刊, JCR-一区, SCI;
- ISSRE'18 [2] Xuejiao Zhao, Hongwei Li, **Yutian Tang**, Dongjing Gao, Lingfeng Bao, Chinghung Lee, "A Smart Context-aware Program Assistant based on Dynamic Programming Event Modeling", The 29th IEEE International Symposium on Software Reliability Engineering (ISSRE), CCF-B 类会议, Core-A, 最佳工业论文奖, EI;
- ICPC'18 [1] Zhou Xu, Shuai Li, **Yutian Tang**, Xiapu Luo, Tao Zhang, Jin Liu, Jun Xu, "Cross Version Defect Prediction with Representative Data via Sparse Subset Selection", 26th IEEE/ACM International Conference on Program Comprehension (ICPC), CCF-B 类会议, Core-B, EI;

教学经历

- 课程讲师 CS132 软件工程, 上海科技大学; 2021 (春, 秋) (本科课程), (中英双语教学); 64 学时, 教学评价: 4.6/5
- 课程讲师 CS224 程序分析, 上海科技大学 2022 (春) (研究生课程), (中英双语教学); 64 学时

新闻采访及媒体报道

- 中国之声 21/8/2021 – 中央广电总台中国之声采访; [详见 <https://mp.weixin.qq.com/s/glvaDNdsAAXrdAn9imDgnQ>]

获奖及奖学金

- 2020 上海市浦江人才计划
- 2018 最佳工业论文奖软件可靠性工程国际会议, 论文题目: "A Smart Context-aware Program Assistant based on Dynamic Programming Event Modeling"
- 2013-2017 香港理工大学博士奖学金
- 2012 吉林大学, 本科生研究奖一等奖
- 2012 吉林大学二等奖学金
- 2011 吉林大学三等奖学金

学生指导

研究生指导 指导博士研究生 2 人，硕士研究生 3 人
本科指导 本科生毕业设计 2020 年 1 人，2021 年 4 人。

学术服务

基金审稿专家

基金审稿专家 上海中小企业创新项目通讯评审家

国际期刊编委委员会

编委 Frontiers in Computer Science (ESCI indexed)

编委 Scientific Programming (SCI indexed)

国际会议程序委员会评审委员

2023

评审专家 [1] Program Committee, The ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE) CCF-A 类, 2023;

评审专家 [2] Program Committee, IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER) CCF-B 类, 2023;

评审专家 [3] Program Committee, IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER-Artifact Track) CCF-B 类, 2023;

评审专家 [4] Technical Program Committee, TInternational Conference on Software Engineering & Knowledge Engineering (SEKE) CCF-C 类, 2023;

评审专家 [5] Technical Program Committee, The 17th International Working Conference on Variability Modelling of Software-Intensive Systems (VaMoS), 2023;

2022

评审专家 [1] Artefact Evaluation Program Committee, The ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE) CCF-A 类, 2022;

评审专家 [2] ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI) CCF-A 类, 2022

评审专家 [3] Future Technologies Conference (FTC) 2022

- 评审专家 [4] Computing Conference 2022
- 评审专家 [5] International Conference of Modern Systems Engineering Solutions 2022
- 评审专家 [6] IEEE/ACM International Conference on Mobile Software Engineering and Systems (MOBILESoft Industry Track), 2022;
- 评审专家 [7] IEEE/ACM International Conference on Mobile Software Engineering and Systems (MOBILESoft), 2022;
- 评审专家 [8] Technical Program Committee, TInternational Conference on Software Engineering & Knowledge Engineering (SEKE) CCF-C 类, 2022;
- 评审专家 [9] Artefact Evaluation Program Committee, International Conference on Software Engineering (ICSE) CCF-A 类, 2022;
- 评审专家 [10] Technical Program Committee, The International Conference on Program Comprehension (ICPC) CCF-B 类, 2022;

2021

- 评审专家 [1] Artefact Evaluation Program Committee, The ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE) CCF-A 类, 2021;
- 评审专家 [2] CCF Chinasoftware Conference (ChinaSoft) – Software & Data Intelligence Track, 2021;

期刊审稿人

- 审稿专家 IEEE Transactions on Dependable and Secure Computing; (CCF-A)
- 审稿专家 Journal of Computer Security;
- 审稿专家 IEEE Transactions on Reliability (JCR-Q1);
- 审稿专家 ACM Transactions on Software Engineering and Methodology (TOSEM); (CCF-A)
- 审稿专家 IEEE Transactions on Software Engineering; (CCF-A)
- 审稿专家 Automated Software Engineering (ASE) (CCF-B)
- 审稿专家 Frontier of Computer Science; (CCF-B)
- 审稿专家 SN Applied Sciences;
- 审稿专家 Scientific Programming;
- 审稿专家 SCIENCE CHINA Information Sciences;(CCF-B)
- 审稿专家 IEEE Access;

审稿专家 Security and Communication Networks;

审稿专家 IEEE Transactions on Services Computing, IEEE Transactions on Biometrics, Behavior and Identity Science

会议特邀嘉宾

特邀嘉宾 The 12th International Conference on Advanced Infocomm Technology;

专业、技术任职

2012-至今 中级软件工程师, “中国软件工程师资格考试”

2017-至今 国际安全学会 ISACA 会员

2017-至今 国际电气工程师学会会员

2017-至今 香港软件工程学会会员

2020-至今 欧洲系统与软件工程师学会会员

2020-至今 中国学会会员

2020-至今 中国学会系统软件专家委员会执行委员

2020-至今 中国学会软件工程专家委员会委员

2021-至今 上海计算机学会软件工程专家委员会委员

会议报告及受邀报告

复旦大学 “Demystifying Application Performance Management Libraries for Android”,
8/4/2021, 学术报告

上海科技大学 “System Security, Are We There Yet?”, 6/11/2020, 学术报告;

主旨演讲 The 12th International Conference on Advanced Infocomm Technology(2020)

上海科技大学 “Android, Don’t Lie to Me”, 学术报告

英国女王大学贝尔法斯特 “Android, Don’t Lie to Me”, 学术报告

英国东伦敦大学 “Android, Don’t Lie to Me”, 学术报告

英国邓迪大学 “Android, Don’t Lie to Me”, 学术报告

英国中央兰 “Android, Don’t Lie to Me”, 学术报告
开夏大学

新西兰肯特 “Android, Don’t Lie to Me”, 学术报告
伯雷大学

ESEC/FSE’20 “All Your App Links are Belong to Us: Understanding the Threats of Instant Apps based Attacks”, in *The ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering* 会议报告

同济大学 “All Your App Links are Belong to Us: Understanding the Threats of Instant Apps based Attacks”, 青年论坛学术报告

ASE’19 “Demystifying Application Performance Management Libraries for Android”, in *34th IEEE/ACM International Conference on Automated Software Engineering*, 会议报告

SANER’17 “StiCProb: A Novel Feature Mining Approach Using Conditional Probability”, in *Proceedings of 24th IEEE International Conference on Software Analysis, Evolution, and Reengineering*, 会议报告

ICPC’17 “Constructing Feature Model by Identifying Variability-aware Modules”, *IEEE/ACM International Conference on Program Comprehension*, 会议报告

SOFTENG’15 “Feature Mining for Product Line Construction”, *The First International Conference on Advances and Trends in Software Engineering*, 会议报告

ICEIS’15 “Top-down Feature Mining Framework for Software Product Line,” *Proceedings of the International Conference on Enterprise Information System*, 会议报告