# Yuan Tian

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## **Research Interests**

I am interested in Software Engineering with a focus on **software maintenance & evolution**, **empirical studies**, and **social media analysis**.

Leveraging techniques from areas including machine learning, natural language processing, social network analysis, I have proposed models to aid software development & maintenance tasks by either automating manual processes or discovering knowledge from large historical software repositories.

## **Research experiences**

2015 – 2016 Institute for Software Research, Carnegie Mellon University, USA Exchange PhD Student Advisor: Claire Le Goues

May – August 2014 Software Analysis and Intelligence Lab, Queen's University, Canada

Visiting Researcher Advisor: Ahmed E. Hassan and Meiyappan Nagappan

November – December 2013 LIP6, INRIA, Paris, France Visiting Researcher Advisor: Julia Lawall

2011 – 2012 School of Information Systems, Singapore Management University, Singapore Visiting Undergraduate Advisor: David Lo

# Honors

- Invited by the National Research Foundation (NRF) of Singapore to attend the Royal Society Commonwealth Science Conference, 2016.

- SMU Presidential Doctoral Fellowship Award, 2015.

- Best Paper Award nomination, ICSM, 2013.

- Travel Grant for Female Students, Google and ICSM, 2013.

- Temasek Foundation Leadership Enrichment and Regional Networking Scholarship, Singapore, 2012.

- Excellent Student Awards, Zhejiang University, 2009

## PUBLICATIONS

#### Journal

[J2] On the unreliability of bug severity data <u>Y Tian</u>, N Ali, D Lo, A.E. Hassan Empirical Software Engineering (EMSE), 2016.

[J1] Automated prediction of bug report priority using multi-factor analysis <u>Y Tian</u>, D Lo, X Xia, C Sun Empirical Software Engineering (EMSE), 2015.

**Book Chapter** [B1] Leveraging Web 2.0 for software evolution <u>Y Tian</u> and D Lo Evolving Software Systems, 2014.

### Conference (Selected)

[C14] Harnessing Twitter to Support Serendipitous Learning of Developers A Sharma, <u>Y Tian</u>, A Sulistya, D Lo, A Yamashita 24th IEEE International Conference on Software Analysis, Evolution, and Reengineering (**SANER** ERA track), 2017.

[c13] Learning to Rank for Bug Report Assignee Recommendation
 <u>Y Tian</u>, D Wijedasa, D Lo, CL Goues
 24th IEEE International Conference on Program Comprehension (ICPC), 2016.

[c12] What's Hot in Software Engineering Twitter Space? A Sharma, <u>Y Tian</u>, D Lo 31st IEEE International Conference on Software Analysis, Evolution, and Reengineering **(ICSME**), 2015.

[c11] What are the Characteristics of High-Rated Apps? A Case Study on Free Android Applications
<u>Y Tian</u>, M Nagappan, D Lo, A E. Hassan
31st IEEE International Conference on Software Maintenance and Evolution (ICSME), 2015.

[c10] NIRMAL: Automatic Identification of Software Relevant Tweets Leveraging Language Model A Sharma, <u>Y Tian</u>, D Lo 22nd IEEE International Conference on Software Analysis, Evolution, and Reengineering **(SANER)**, 2015.

[c9] Potential Biases in Bug Localization: Do They Matter?

PS Kochhar, <u>Y Tian</u>, D Lo

29th International Conference on Automated Software Engineering (ASE), 2014.

[c8] Automated Construction of a Software-Specific Word Similarity Database

Y Tian, D Lo, J Lawall

Software Evolution Week-IEEE Conference on Software Maintenance, Reengineering and Reverse Engineering (CSMR-WCRE), 2014

[c7] DRONE:Predicting Priority of Reported Bugs by Multi-Factor Analysis <u>Y Tian</u>, D Lo, C Sun 29th IEEE International Conference on Software Maintenance (**ICSM**), 2013.

[c6] Predicting Project Outcome Leveraging Socio-Technical Network Patterns
D Surian, <u>Y Tian</u>, D Lo, H Cheng, EP Lim
17th European Conference on Software Maintenance and Reengineering (CSMR), 2013.

[c5] Automatic Classification of Software Related Microblogs PK Prasetyo, D Lo, A Palakorna, <u>Y Tian</u>, EP Lim 28th IEEE International Conference on Software Maintenance (**ICSM** ERA track), 2012.

[c4] Information Retrieval Based Nearest Neighbor Classification for Fine-Grained Bug Severity Prediction <u>Y Tian</u>, D Lo, C Sun
19th Working Conference on Reverse Engineering (WCRE), 2012.

[c3] What Does Software Engineering Community Microblog About? <u>Y Tian</u>, P Achananuparp, IN Lubis, D Lo, EP Lim

10th Working Conference on Mining Software Repositories (**MSR**), 2012.

[c2] Improved Duplicate Bug Report Identification <u>Y Tian</u>, C Sun, D Lo
16th European Conference on Software Maintenance and Reengineering (CSMR), 2012.

[c1] Identifying Linux Bug Fixing Patches <u>Y Tian</u>, J Lawall, D Lo 34th International Conference of Software Engineering (**ICSE**), 2012.

## ACADEMIC ACTIVITIES

### Journal Reviewer

- Transactions on Software Engineering and Methodology (TOSEM).

- Transactions on Software Engineering (TSE).

- Transactions on Information Systems (TOIS).
- Information and Software Technology Journal (IST).

#### **Conference External Reviewer**

- International Working Conference on Source Code Analysis & Manipulation (SCAM), 2016.

- Mining Software Repository (MSR), 2016.

- Empirical Software Engineering and Measurement (ESEM), 2016.

- Asia-Pacific Software Engineering Conference (APSEC), 2015.

### Talks

- Talk on "Bug Report Analytics" invited by Advanced Digital Sciences Center (**ADSC**), Singapore, 2016.

- Present paper in the 29th International Conference on Software Maintenance (**ICSM**), 2013.

- Present paper in the 28th International Conference on

Software Maintenance (ICSM), 2012.

### **Conference Volunteer**

- The 31st IEEE/ACM International Conference on Automated Software Engineering (ASE), 2016.

- The 3rd International Conference on Social Informatics (SocInfo), 2011.

## Education

*Ph.D.* , Software Engineering 2012 – 2017 (expected) Singapore Management University, Singapore Advisor: David Lo, Associate Professor GPA: 4.00/4.00

*B.S.*, Computer Science and Technology 2008 – 2012 Chu Kochen Honors College Zhejiang University, China GPA: 3.87/4.00, ranks top 5% over 199 students

## References

David Lo (PhD advisor) Associate Professor, School of Information Systems, Singapore Management University, davidlo@smu.edu.sg

Ahmed E. Hassan (collaborator of EMSE2016 Journal paper, ICSME2015 paper) Professor, School of Computing, Queen's University, ahmed@cs.queensu.ca

Claire Le Goues (colloborater of ICPC2016 paper) Assistant Professor, School of Computer Science, Carnegie Mellon University, clegoues@cs.cmu.edu

Julia Lawall (collaborator of ICSE2012 paper) Senior Research Scientist, Inria/LIP6 julia.lawall@lip6.fr

Xin Xia (collaborator of EMSE2015 Journal paper) Research Assistant Professor, College of Computer Science and Technology, Zhejiang University, xxkidd@zju.edu.cn