

Denys Poshyvanyk

Computer Science Department
William and Mary
McGlothlin-Street Hall 105
Williamsburg, VA, 23185

Phone: (757) 221-3476
Fax: (757) 221-1717
E-mail: [dposhyvanyk \(at\) gmail.com](mailto:dposhyvanyk@gmail.com)
<http://www.cs.wm.edu/~denys>

Research Interests

Software engineering (SE); software analytics; evolution and maintenance; program comprehension; deep learning for SE (DL4SE) and SE for deep learning (SE4DL); mobile app development, testing, and security; reverse engineering; repository mining; and traceability.

Professional Experience

Chancellor Professor of Computer Science, in the Department of Computer Science, William and Mary, Williamsburg, VA, August 2022 – present

Graduate Director, Computer Science Department, William and Mary, Williamsburg, VA, January 2017 – August 2018; since July 2022 – present

Full Professor in the Department of Computer Science, William and Mary, Williamsburg, VA, August 2020 – present

Class of 1953 Term Distinguished Associate Professor in the Department of Computer Science, William and Mary, Williamsburg, VA, August 2018 – August 2020

Associate Professor in the Department of Computer Science, William and Mary, Williamsburg, VA, August 2014 – 2018

Assistant Professor in the Department of Computer Science, William and Mary, Williamsburg, VA, August 2008 – July 2014

Graduate Research, Teaching Assistant and Instructor, Department of Computer Science, Wayne State University (WSU), Detroit, MI, Fall 2003 – July 2008

Software Developer, Software Macintosh Kiev (SMK), Kiev, Ukraine; May 2002 – May 2003

Education

Doctor of Philosophy in Computer Science (Fall 2003 – April 2008)

Wayne State University, Detroit, USA

Dissertation title: *Using Information Retrieval to Support Software Maintenance Tasks*

Committee: Daniel Grosu, Jonathan Maletic, Andrian Marcus (advisor), and Václav Rajlich

Master of Arts in Computer Science (2003-2006)

Wayne State University, Detroit, USA

Master of Science (with honors) in Computer Science (2001-2003)

The National University of “Kyiv-Mohyla Academy”, Kiev, Ukraine

Bachelor of Science (with honors) in Information Systems (1996-2001)

The National University at Kharkov, Ukraine

Honors and Awards

Chancellor Professor of Computer Science	2022
ACM Distinguished Speaker	2022
Senior member of ACM and IEEE	2022
Most Influential Paper Award from ICSME 2011.....	2021
Distinguished PC member Award at 35 th IEEE/ACM International Conference on Automated Software Engineering (ASE'20) and Reliable Rapid Response Reviewer (ASE'22).....	2020
ACM SIGSOFT Distinguished Paper Award , at the 42 nd IEEE/ACM International Conference on Software Engineering (ICSE'20).....	2020
Most Influential Paper Award from ICPC 2010.....	2020
ACM SIGSOFT Distinguished Paper Award , 27 th ACM Joint European Software Engineering Conference & Symposium on the Foundations of Software Engineering (ESEC/FSE'19)....	2019
Best Paper Award , at the 9 th ACM Conference on Data and Application Security and Privacy (CODAPSY'19)	2019
Distinguished Reviewer Award at 33 rd IEEE/ACM International Conference on Automated Software Engineering (ASE'18)	2018
Class of 1953 Term Distinguished Associate Professor of Computer Science	2018
Best Early Research Achievement (ERA) Paper Award at 26 th IEEE ICPC 2018	2018
ACM SIGSOFT Distinguished Paper Award , at the 32 nd IEEE/ACM International Conference on Automated Software Engineering (ASE).....	2017
Most Influential Paper Award from ICPC 2007.....	2017
Most Influential Paper Award from ICSM 2006	2016
Distinguished Reviewer Award at 16 th IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM'16).....	2016
ACM SIGSOFT Distinguished Paper Award , at the 24 th IEEE International Conference on Program Comprehension (ICPC'16)	2016
Runner up, Most Influential Paper Award from ICPC 2006.....	2016
Plumeri Award for Faculty Excellence , William and Mary	2016
TOSEM Distinguished Referee , ACM Transactions on Softw. Eng. & Methodology.. 2015-2016	
ACM SIGSOFT Distinguished Paper Award , at the 23 rd ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE).....	2015
ACM SIGSOFT Distinguished Paper Award , at the 37 th IEEE/ACM International Conference on Software Engineering (ICSE).....	2015
ACM SIGSOFT Distinguished Paper Award , at the 28 th IEEE/ACM International Conference on Automated Software Engineering (ASE).....	2013
Best Paper Award , at the 29 th IEEE International Conf. on Software Maintenance (ICSM).....	2013
NSF CAREER Award , CISE CCF Software and Hardware Foundations Program.....	2013
Distinguished Paper Award , at the 26 th IEEE Int. Conf. on Software Maintenance (ICSM)	2010
Best Paper Award , 10 th IEEE Int. Conf. on Source Code Analysis & Manipulation (SCAM)	2010
Michael E. Conrad Outstanding Graduate Research Publication Award , by the Department of Computer Science, Wayne State University	2008
Best Paper Award at the 15 th IEEE Int. Conference on Program Comprehension (ICPC).....	2007
Graduate Research Assistant Recognition Award , by the Graduate School, Wayne State University	2006
Best Paper Award at the 14 th IEEE Int. Conference on Program Comprehension (ICPC).....	2006
Microsoft Student Ambassador Award for Outstanding Academic Developers	2005
Graduate Recognition Award for Exceptional Teaching Service , Wayne State University	2005

Funding Awards

NSF, “Collaborative Research: SHF: Medium: Toward Understandability and Interpretability for Neural Language Models of Source Code”, \$1,074,380, 10/1/23-9/30/27, PI@W&M (with Kevin Moran, PI@UCF and Ziyu Yao, PI@GMU), W&M budget: \$329,183, award CCF-[2311469](#)

Cisco Systems, “From Vulnerability Reports to Exploits: Which Ones Should We Prioritize and Why”, \$75,000, 8/1/2023-7/29/2024, PI (with Evgenia Smirni and Chris Shenefiel)

NSF, “DASS: Enabling Interactive and Comprehensive Open Source Software License Compliance”, \$750,000, 1/10/22-30/09/25, PI (with Oscar Chaparro and Laura Heymann), award CCF-[2217733](#)

Cisco Systems, “Neural-based Code Search and Refactoring”, \$50,000, 10/3/2022-9/30/2023, PI

NSF, “Collaborative Research: CPS: Medium: Enabling Data-Driven Security and Safety Analyses for Cyber-Physical Systems”, \$1,200,000, 1/1/22-12/31/24, co-PI@WM, 50% (with Nadkarni, PI@W&M and Moran, PI@GMU), W&M budget: \$799,839, award CNS-[2132281](#)

Cisco Systems, “Automated Code Review for Measuring and Improving Software System Maintainability”, \$50,000, 6/1/2021-4/30/2022, PI

NSF, “SHF: Small: Towards a Holistic Causal Model for Continuous Software Traceability”, \$500,000, 10/1/20-9/30/23, PI (with Kevin Moran, PI@GMU), award CCF-[2007246](#)

NSF, “Collaborative Research: SHF: Medium: Bug Report Management 2.0”, \$1,200,000, 10/1/20-9/30/24, PI@WM (with Oscar Chaparro, PI@W&M; Kevin Moran, PI@GMU; and Andrian Marcus, PI@UTD), W&M and GMU budget: \$791,321, award CCF-[1955853](#)

NSF, “EAGER: Mapping Future Synergies between Deep Learning and Software Engineering”, \$82,828, 7/15/2019-8/31/2020, PI (with Kevin Moran, co-PI), award CCF-[1927679](#)

Cisco Systems, “Identifying and Tracing Security-related Software Requirements”, \$100,000, 8/1/2019-7/31/2020, PI (with Kevin Moran, co-PI)

NSF, “SHF: Small: Natural GUI-Based Testing of Mobile Apps via Mining Software Repositories”, \$450,000, 10/01/18-08/30/22, sole PI, award CCF-[1815186](#)

NSF, “SaTC: CORE: Small: Enabling Systematic Evaluation of the Soundness of Android Security Analysis Techniques”, \$500,000, 9/01/18-8/31/23, co-PI, 50% (with Adwait Nadkarni, PI), award CNS-[1815336](#)

Cisco Systems, “Enabling Software Security Assurance via a Formal Causal Inference Model of Traceability”, \$100,000, 3/2/2018 – 3/1/2019, sole PI

NSF REU, “CAREER: Enabling License Compliance Analysis and Verification for Evolving Software”, \$8,000, 12/15/17–08/31/18, PI, award CCF-[1253837](#)

Cisco Systems, “Enabling Integrity and Security Assurance via Traceability in the Context of Agile Processes”, \$75,000, 9/20/2016 – 9/19/2017, sole PI

NSF, “SHF: Small: Deep Learning Software Repositories”, \$400,000, 09/01/15-08/31/19, sole PI, award CCF-[1525902](#)

NSF, “CI-EN: RUI: Collaborative Research: TraceLab and Beyond - Building a Shared Research Environment for Reproducible Software Engineering Experiments”, \$728,717, 06/01/15–05/31/18, PI (with Jane Cleland-Huang, DePaul University; Collin McMillan, the University of Notre

Dame and Jane Huffman Hayes, the University of Kentucky); W&M budget: \$250,000, award CNS-[1510239](#)

VSGC, Virginia Space Grant Consortium, Graduate Research Fellowship for Kevin Moran, \$12,000, 7/01/15 – 6/30/17, PI

NSF REU, “CAREER: Enabling License Compliance Analysis and Verification for Evolving Software”, \$12,000, 09/01/14–08/31/18, PI, award CCF-[1253837](#)

NSF CAREER, “CAREER: Enabling License Compliance Analysis and Verification for Evolving Software”, \$446,010, 09/01/13–08/31/18, sole PI, award CCF-[1253837](#)

NSF REU, “SHF: Small: Collaborative Research: An Inductive Framework to Support Software Maintenance”, \$12,000, 08/15/10–07/31/14, PI, Research Experiences for Undergraduates supplement to award CCF-[1016868](#)

NSF, “SHF: Small: Collaborative Research: Linking Evolving Software Requirements and Acceptance Tests”, \$499,999, 09/01/12–08/31/16, PI (with Mark Grechanik, University of Illinois, Chicago), W&M budget: \$250,000, award CCF-[1218129](#)

NSF, “Supporting student travel from underrepresented groups to the 28th IEEE International Conference on Software Maintenance (ICSM 2012)”, \$10,000, 08/01/12–07/31/14, PI, award CCF-[1240505](#)

VSGC, Virginia Space Grant Consortium, Graduate Research Fellowship for Collin McMillan, \$5,000, 7/01/11 – 6/30/12, PI

NSF, “Student Travel Support for the 27th IEEE International Conference on Software Maintenance (ICSM 2011)”, \$10,000, 08/01/11–07/31/12, PI, award CCF-[1118336](#)

NSF REU, “SHF: Small: Collaborative Research: Creating and evolving software via searching, selecting, and synthesizing relevant source code”, \$12,500, 09/01/09–08/30/12, PI, Research Experiences for Undergraduates supplement to award CCF-[0916260](#)

NSF, “SHF: Small: Collaborative Research: An Inductive Framework to Support Software Maintenance”, \$494,082, 08/15/10–07/31/14, PI (with Huzefa Kagdi, Wichita State University), W&M budget: \$247,835, award CCF-[1016868](#)

NSF, “Student Travel Support for the 26th IEEE International Conference on Software Maintenance (ICSM 2010)”, \$6,000, 07/01/10–06/31/11, PI, award CCF-[1033628](#)

NSF, “MRI-R²: Development of a Software Traceability Instrument to Facilitate and Empower Traceability Research and Technology Transfer”, \$2,000,000, 06/01/10–09/30/13, co-PI, (with Jane Cleland-Huang, PI, DePaul University and Jonathan Maletic, co-PI, Kent State University); W&M budget: \$250,001, award CNS-[0959924](#)

NSF, “SHF: Small: Collaborative Research: Creating and evolving software via searching, selecting, and synthesizing relevant source code”, \$353,641, 09/01/09–08/30/13, PI (with Mark Grechanik, University of Illinois, Chicago), W&M budget \$203,641, award CCF-[0916260](#)

VSGC, Virginia Space Grant Consortium, Graduate Research Fellowship for Malcom Gethers, \$10,000, 7/01/09 – 6/30/11, PI

W&M, Chappell Undergraduate Research Fellowship for Trevor Savage, “Aiding Program Comprehension via Browsing Linguistic Topics in Source Code” \$3,000, 6/01/09 – 8/30/09, PI

AFOSR, “Software Plans: Multi-Dimensional Separation of Concerns”, \$328,784, 07/14/08–11/30/09, PI (David Coppit, former PI), award FA9550-07-1-0030

VSGC, Virginia Space Grant Consortium, Graduate Research Fellowship for Meghan Revelle, \$10,000, 7/01/08 – 6/30/10, PI

Refereed Journal Articles¹

[J41] **Bernal-Cárdenas, C., Cooper, N., Havranek, M., Moran, K.,** Chaparro, O., Poshyvanyk, D., and Marcus, A., “Translating Video Recordings of Complex Mobile App UI Gestures into Replayable Scenarios”, *IEEE Transactions on Software Engineering (TSE)*, vol. 49, no. 4, April 2023, pp. 1782-1803.

[J40] Mastropaolo, A., **Cooper, N., Palacio, D.,** Scalabrino, S., Poshyvanyk, D., Oliveto, R., and Bavota, G., “Using Transfer Learning for Code-Related Tasks”, *IEEE Transactions on Software Engineering (TSE)*, vol. 49, no. 4, April 2023, pp. 1580-1598.

[J39] Fazzini, M., **Moran, K., Bernal-Cardenas, C.,** Wendland, T., Orso, A., and Poshyvanyk, D., “Enhancing Mobile App Bug Reporting via Real-time Understanding of Reproduction Steps”, *IEEE Transactions on Software Engineering (TSE)*, vol. 49, no. 4, March 2023, pp. 1246-1272.
Presented as a journal-first paper at the 38th IEEE/ACM International Conference on Automated Software Engineering (ASE’23), Sept. 11-15, 2023, Luxembourg.

[J38] Ciniselli, M., **Cooper, N.,** Pascarella, L., Mastropaolo, A., Aghajani, E., Poshyvanyk, D., Di Penta, M., and Bavota, G., “An Empirical Study on the Usage of Transformer Models for Code Completion”, *IEEE Transactions on Software Engineering (TSE)*, vol. 48, no. 12, December 2022, pp. 4818-4837.

[J37] **Watson, C., Cooper, N., Palacio, D., Moran, K.,** Poshyvanyk, D., “A Systematic Literature Review on the Use of Deep Learning in Software Engineering Research”, *ACM Transactions on Software Engineering and Methodology (TOSEM)*, vol 31, no. 2, March 2022, pp. 1-58.

[J36] **Ami, A.,** Kafle, K., **Moran, K.,** Nadkarni, A., and Poshyvanyk, D., “Systematic Mutation-based Evaluation of the Soundness of Security-focused Android Static Analysis Techniques”, *ACM Transactions on Security & Privacy (TOPS)*, vol. 24, no. 3, February 2021, pp. 1-37.

[J35] Kafle, K., **Moran, K.,** Manandhar, S., Nadkarni, A., and Poshyvanyk, D., “Security in Centralized Data Store-based Home Automation Platforms: A Systematic Analysis of Nest and Hue”, *ACM Transactions on Cyber-Physical Systems (TCPS)*, vol. 5, no. 2, December 2020, pp. 1-27.

[J34] Escobar-Velásquez, C., **Linares-Vásquez, M.,** Bavota, G., **Tufano, M., Moran, K.,** Di Penta, M., **Vendome, C., Bernal-Cárdenas, C.,** and Poshyvanyk, D. “Enabling Mutant Generation for Open- and Closed-Source Android Apps”, *IEEE Transactions on Software Engineering (TSE)*, vol. 48, no. 1, January 22, pp. 186-208.

[J33] Chen, Z., Komrusch, S., **Tufano, M.,** Pouchet, L.-N., Poshyvanyk, D., and Monperrus, M. “SEQUENCER: Sequence-to-Sequence Learning for End-to-End Program Repair”, *IEEE Transactions on Software Engineering (TSE)*, vo. 47, no. 9, September 2021, pp 1943-1959.
Presented as a journal-first paper at the 42nd IEEE/ACM International Conference on Software Engineering (ICSE’20) Seoul, South Korea, May 23rd- 29th, 2020

[J32] Scalabrino, S., Bavota, G., **Vendome, C., Linares-Vásquez, M.,** Poshyvanyk, D., and Oliveto, R. “Automatically Assessing Code Understandability”, *IEEE Transactions on Software Engineering (TSE)*, vol. 47, no. 3, March 2021, pp. 595-613.

¹ Authors marked in **bold** are current and former W&M students

- [J31] **Moran, K., Bernal-Cárdenas, Curcio, M., Bonett, R.,** and Poshyvanyk, D., “Machine Learning-Based Prototyping of Graphical User Interfaces for Mobile Apps”, *IEEE Transactions on Software Engineering (TSE)*, vol. 46, no. 2, February 2020, pp. 196-221.
Presented as a journal-first paper at the ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE'18)
- [J30] **Tufano, M., Watson, C.,** Bavota, G., Di Penta, M., **White, M.,** and Poshyvanyk, D., “An Empirical Study on Learning Bug-Fixing Patches in the Wild via Neural Machine Translation”, *ACM Transactions on Software Engineering and Methodology (TOSEM)*, vol. 28, no. 4, October 2019, pp. 1-29.
- [J29] Romano, S., **Vendome, C.,** Scanniello, G., and Poshyvanyk, D., “A Multi-study Investigation into Dead Code”, *IEEE Transactions on Software Engineering (TSE)*, vol. 46, no. 1, November 2019, pp. 71-99.
- [J28] **Luo, Q., Moran, K.,** Zhang, L., and Poshyvanyk, D., “How Do Static and Dynamic Test Case Prioritization Techniques Perform on Modern Software Systems? An Extensive Study on GitHub Projects”, *IEEE Transactions on Software Engineering (TSE)*, vol. 45, no. 11, November 2019, pp. 1054-1080.
- [J27] **Linares-Vásquez, M.,** Bavota, G., **Bernal-Cárdenas, C.,** Di Penta, M., Oliveto, R., and Poshyvanyk, D., “Multi-objective Optimization of Energy Consumption of GUIs in Android Apps”, *ACM Transactions on Software Engineering and Methodology (TOSEM)*, vol. 27, no. 3, October 2018, pp. 1-47.
- [J26] Scalabrino, S., **Linares-Vásquez, M.,** Oliveto, R., and Poshyvanyk, D., “A Comprehensive Model for Code Readability”, *Journal of Software: Evolution and Process (JSEP)*, vol. 30, no. 6, June 2018, pp. 1-23.
- [J25] Palomba, F., **Linares-Vásquez, M.,** Bavota, G., Oliveto, R., Di Penta, M., Poshyvanyk, D., and De Lucia, A., “Crowdsourcing User Reviews to Support the Evolution of Mobile Apps”, *Journal of Systems and Software (JSS)*, vol. 137, March 2018, pp. 143-162.
- [J24] **Linares-Vásquez, M., Vendome, C., Tufano, M.,** and Poshyvanyk, D., “How Developers Micro-Optimize Android Apps”, *Journal of Systems and Software (JSS)*, vol. 130, no. C, August 2017, pp. 1-23.
Presented as a Journal-First paper at the 24th IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER'17)
- [J23] **Tufano, M.,** Palomba, F., Bavota, G., Oliveto, R., Di Penta, M., De Lucia, A., and Poshyvanyk, D., “When and Why Your Code Starts to Smell Bad (and Whether the Smells Go Away)”, *IEEE Transactions on Software Engineering (TSE)*, vol. 43, no. 11, November 2017, pp. 1063-1088.
- [J22] **Tufano, M.,** Palomba, F., Bavota, G., Di Penta, M., Oliveto, R., De Lucia, A., and Poshyvanyk, D., “There and Back Again: Can you Compile that Snapshot?”, *Journal of Software: Evolution and Process (JSEP)*, vol. 29, no. 4, April 2017, pp. 1-11.
Presented as a Journal-First paper at the 33rd IEEE International Conference on Software Maintenance and Evolution (ICSME'17)
- [J21] **Tufano, M.,** Bavota, G., Poshyvanyk, D., Di Penta, M., Oliveto, R., and De Lucia, A., “An Empirical Study on Developer Related Factors Characterizing Fix-Inducing Commits”, *Journal of Software: Evolution and Process (JSEP)*, vol. 29, no. 1, January 2017, pp. 1-18.

- [J20] **Vendome, C., Linares-Vásquez, M.,** Bavota, G., Di Penta, M., German, D., and Poshyvanyk, D., "License Usage and Changes: A Large-Scale Study on GitHub", *Empirical Software Engineering (EMSE)*, vol. 22, no. 3, June 2017, pp. 1537-1577.
- [J19] **Luo, Q.,** Nair, A., Grechanik, M., Poshyvanyk, D., "FOREPOST: Finding Performance Problems Automatically with Feedback-Directed Learning Software Testing", *Empirical Software Engineering (EMSE)*, vol. 22, no. 1, February 2017, pp. 6–56.
- [J18] Palomba, F., Bavota, G., Di Penta, M., Oliveto, R., Poshyvanyk, D., and De Lucia, A. "Mining Version Histories for Detecting Code Smells", *IEEE Transactions on Software Engineering (TSE)*, vol. 41, no. 5, May 2015, pp. 462-489.
- [J17] Bavota, G., **Linares-Vasquez, M., Bernal-Cardenas, C.,** Di Penta, M., Oliveto, R., and Poshyvanyk, D. "The Impact of API Change- and Fault-Proneness on the User Ratings of Android Apps", *IEEE Transactions on Software Engineering (TSE)*, vol. 41, no. 4, April 2015, pp. 384-407.
- [J16] **Dit, B., Moritz, E., Linares-Vasquez, M.,** Poshyvanyk, D., and Cleland-Huang, J. "Supporting and Accelerating Reproducible Empirical Research in Software Evolution and Maintenance using TraceLab Component Library", *Empirical Software Engineering (EMSE)*, vol. 20, no. 5, October 2015, pp. 1198-1236.
- [J15] Bavota, G., Oliveto, R., **Gethers M.,** Poshyvanyk, D., and De Lucia, A., "Methodbook: Recommending Move Method Refactorings via Relational Topic Models", *IEEE Transactions on Software Engineering (TSE)*, vol. 40, no. 7, July 2014, pp. 671-694.
- [J14] **Linares-Vasquez, M., McMillan, C.,** Poshyvanyk, D., and Grechanik, M., "On Using Machine Learning to Automatically Classify Software Applications into Domain Categories", *Empirical Software Engineering (EMSE)*, vol. 19, no. 3, June 2014, pp. 582-618.
- [J13] Bavota, G., **Gethers M.,** Oliveto, R., Poshyvanyk, D., and De Lucia, A., "Improving Software Modularization via Automated Analysis of Latent Topics and Dependencies", *ACM Transactions on Software Engineering and Methodology (TOSEM)*, vol. 23, no. 4, February 2014.
- [J12] Kagdi, H., **Gethers, M.,** Poshyvanyk, D., "Integrating Conceptual and Logical Couplings for Change Impact Analysis in Software", *Empirical Software Engineering (EMSE)*, vol. 18, no. 5, October 2013, pp. 933-969.
- [J11] **McMillan, C.,** Grechanik, M., Poshyvanyk, D., Xie, Q., and Fu, C., "Searching for Relevant Functions and Their Usages in Millions of Lines of Code", *ACM Transactions on Software Engineering and Methodology (TOSEM)*, vol. 22, no. 4, October 2013.
Selected as a notable article in computing in 2013 by ACM and ThinkLoud
- [J10] **Dit, B., Revelle, M.,** and Poshyvanyk, D., "Integrating Information Retrieval, Execution and Link Analysis Algorithms to Improve Feature Location in Software", *Empirical Software Engineering (EMSE)*, vol. 18, no. 2, April 2013, pp. 277-309.
- [J9] **Dit, B., Revelle, M., Gethers, M.,** and Poshyvanyk, D., "Feature Location in Source Code: A Taxonomy and Survey", *Journal of Software: Evolution and Process (JSEP)*, vol. 25, no. 1, January 2013, pp. 53–95.
- [J8] Poshyvanyk, D., **Gethers, M.,** Marcus, A., "Concept Location using Formal Concept Analysis and Information Retrieval", *ACM Transactions on Software Engineering and Methodology (TOSEM)*, vol. 21, no. 4, November 2012.

- [J7] **McMillan, C.**, Grechanik, M., Poshyvanyk, D., Fu, C., and Xie, Q., "Exemplar: A Source Code Search Engine for Finding Highly Relevant Applications", *IEEE Transactions on Software Engineering (TSE)*, vol. 38, no. 5, September/October 2012, pp. 1069-1087.
- [J6] Kagdi, H., **Gethers, M.**, Poshyvanyk, D., Hammad, M. "Assigning Change Requests to Software Developers", *Journal of Software: Evolution and Process (JSEP)*, vol. 24, no. 1, January 2012, pp. 3-33.
- [J5] **Revelle, M., Gethers, M.**, and Poshyvanyk, D., "Using Structural and Textual Information to Capture Feature Coupling in Object-Oriented Software", *Empirical Software Engineering (EMSE)*, vol. 16, no. 6, 2011, pp. 773-811.
- [J4] Poshyvanyk, D., Marcus, A., Ferenc, R., Gyimóthy, T. "Using Information Retrieval based Coupling Measures for Impact Analysis", *Empirical Software Engineering (EMSE)*, vol. 14, no. 1, February 2009, pp. 5-32.
- [J3] Marcus, A., Poshyvanyk, D., and Ferenc, R., "Using the Conceptual Cohesion of Classes for Fault Prediction in Object Oriented Systems", *IEEE Transactions on Software Engineering (TSE)*, vol. 34, no. 2, March/April 2008, pp. 287-300.
- [J2] Petrenko, M., Poshyvanyk, D., Rajlich, V., Buchta, J., "Teaching Software Evolution in Open Source", *IEEE Computer*, November 2007, pp. 25-31.
- [J1] Poshyvanyk, D., Guéhéneuc, Y. G., Marcus, A., Antoniol, G., Rajlich, V., "Feature Location using Probabilistic Ranking of Methods based on Execution Scenarios and Information Retrieval", *IEEE Transactions on Software Engineering (TSE)*, vol. 33, no. 6, June 2007, pp. 420-432.

Refereed Conference Publications

- [C148] **Yan, Y., Cooper, N.**, Chaparro, O., Moran, K., and Poshyvanyk, D., "Semantic GUI Scene Learning and Video Alignment for Detecting Duplicate Video-based Bug Reports", in *Proceedings of the 46th IEEE/ACM International Conference on Software Engineering (ICSE'24)*, Lisbon, Portugal, April 14-20.
- [C147] **Stalnaker, T., Wintersgill, N.**, Chaparro, O., Di Penta, M., German, D., and Poshyvanyk, D., "BOMs Away! Inside the Minds of Stakeholders: A Comprehensive Study of Bills of Materials for Software Systems", in *Proceedings of the 46th IEEE/ACM International Conference on Software Engineering (ICSE'24)*, Lisbon, Portugal, April 14-20.
- [C146] **Ami, A., Moran, K.**, Poshyvanyk, D., and Nadkarni, A., "'False negative - that one is going to kill you' - Understanding Industry Perspectives of Static Analysis based Security Testing," in *Proceedings of the 45th IEEE Symposium on Security and Privacy (OAKLAND'24)*, San Francisco, USA, May 20-23, 2024.
Acceptance ratio: 21.3%
- [C145] **Chen, A., Yan, Y.**, and Poshyvanyk, D. "ACER: An AST-based Call Graph Generator Framework", in *Proceedings of the 23rd International Working Conference on Source Code Analysis and Manipulation (SCAM'23)*, Engineering Track Track, Bogotá, Colombia, October 2-3th, 2023.
Acceptance ratio: 50%
- [C144] **Rodriguez-Cardenas, D., Palacio, D., Khati, D., Burke, H.**, and Poshyvanyk, D. "Benchmarking Causal Study to Interpret Large Language Models for Source Code", in *Proceedings of the 39th International Conference on Software Maintenance and Evolution (ICSME'23)*, New Ideas and Emerging Results Track, Bogotá, Colombia, October 1-6th, 2023.
Acceptance ratio: 39%

[C143] Mandal, P., Manandhar, S., Kafle, K., **Moran, K.**, Poshyvanyk, D., and Nadkarni, A. "Helion: Enabling Natural Testing of Smart Homes", in *Proceedings of the ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE'23)*, Formal Tool Demonstration, San Francisco, USA, December 3-9, 2023.

Acceptance ratio: 46%

[C142] **Ami, A.**, Ahmed, S., Redoy, R., **Cooper, N.**, Kafle, K., **Moran, K.**, Poshyvanyk, D., and Nadkarni, A. "MASC: A Tool for Mutation-based Evaluation of Static Crypto-API Misuse Detectors", in *Proceedings of the ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE'23)*, Formal Tool Demonstration, San Francisco, USA, December 3-9, 2023.

Acceptance ratio: 46%

[C141] Song, Y., Mahmud, J., De Silva, N., Zhou, Y., Chaparro, O., **Moran, K.**, Marcus, A., and Poshyvanyk, D., "BURT: A Chatbot for Interactive Bug Reporting", in *Proceedings of the 45th IEEE/ACM International Conference on Software Engineering (ICSE'23)*, Formal Tool Demonstration, Melbourne, Australia, May 14th - 20th, 2023, pp. 170-174.

Acceptance ratio: 48%

[C140] Song, Y., Mahmud, J., Zhou, Y., Chaparro, O., **Moran, K.**, Marcus, A., and Poshyvanyk, D., "Toward Interactive Bug Reporting for (Android App) End-Users", in *Proceedings of the ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE'22)*, Singapore, November 14th - 18th, pp. 344-356.

Acceptance ratio: 22%

[C139] Tufano, R., Simone, M., Mastropaolo, A., Pascarella, L., Poshyvanyk, D., and Bavota, G., "Using Pre-Trained Models to Boost Code Review Automation", in *Proceedings of the 44th IEEE/ACM International Conference on Software Engineering (ICSE'22)*, Pittsburg, PA, May 21st - 28th, 2022, pp. 2291-2302.

Acceptance ratio: 26%

[C138] **Moran, K.**, **Yachnes, A.**, **Purnell, G.**, Mahmud, J., **Tufano, M.**, **Bernal-Cárdenas, C.**, Poshyvanyk, D., and **H-Doubler, Z.**, "An Empirical Investigation into the Use of Image Captioning for Automated Software Documentation", in *Proceedings of the 29th IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER'22)*, March 15-18, 2022.

Acceptance ratio: 24%

[C137] **Connor, A.**, **Harris, A.**, **Cooper, N.**, and Poshyvanyk, D., "Can We Automatically Fix Bugs by Learning Edit Operations?", in *Proceedings of the 29th IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER'22)*, Reproducibility Studies and Negative Results Track (RENE), March 15-18, 2022.

[C136] **Ami, A.**, **Cooper, N.**, Kafle, K., Moran, K., Poshyvanyk, D., and Nadkarni, A., "Why Crypto-detectors Fail: A Systematic Evaluation of Cryptographic Misuse Detection Techniques", in *Proceedings of the 43rd IEEE Symposium on Security and Privacy (Oakland'22)*, May 22-26, 2022, pp. 614-631.

[C135] Ciniselli, M., **Cooper, N.**, Pascarella, L., Poshyvanyk, D., Di Penta, M., and Bavota, G., "An Empirical Study on the Usage of BERT Models for Code Completion", in *Proceedings of the 18th IEEE/ACM Conference on Mining Software Repositories (MSR'21)*, Virtual (originally Madrid, Spain), May 17th - 19th, 2021, pp. 108-119.

Acceptance ratio: 34%

[C134] **Cooper, N., Bernal-Cárdenas, C., Chaparro, O., Moran, K.,** and Poshyvanyk, D., “It Takes Two to Tango: Combining Visual and Textual Information for Detecting Duplicate Video-Based Bug Reports”, in *Proceedings of the 43rd IEEE/ACM International Conference on Software Engineering (ICSE’21)*, Virtual (originally Madrid, Spain), May 25th - 28th, 2021, pp. 957-969.

Acceptance ratio: 22%

[C133] Tufano, R., Pascarella, L., **Tufano, M.,** Poshyvanyk, D., and Bavota, G., “Towards Automating Code Review Activities”, in *Proceedings of the 43rd IEEE/ACM International Conference on Software Engineering (ICSE’21)*, Virtual (Madrid, Spain), May 25th - 28th, 2021, pp. 163-174.

Acceptance ratio: 22%

[C132] Mastropaolo, A., Scalabrino, S., **Cooper, N., Palacio, D.,** Poshyvanyk, D., Oliveto, R., and Bavota, G., “Studying the Usage of Text-To-Text Transfer Transformer to Support Code-Related Tasks”, in *Proceedings of the 43rd IEEE/ACM International Conference on Software Engineering (ICSE’21)*, Virtual (originally Madrid, Spain), May 25th - 28th, 2021, pp. 336-347.

Acceptance ratio: 22%

[C131] **Ami, A.,** Kafle, K., **Moran, K.,** Nadkarni, A., and Poshyvanyk, D., “μSE: Mutation-based Evaluation of Security-focused Static Analysis Tools for Android”, in *Proceedings of the 43rd IEEE/ACM International Conference on Software Engineering (ICSE’21)*, Formal Tool Demonstration, Virtual (originally Madrid, Spain), May 25th - 28th, 2021, pp. 53-56.

Acceptance ratio: 37%

[C130] **Havranek, M., Bernal-Cárdenas, C., Cooper, N.,** Chaparro, O., Poshyvanyk, D., and **Moran, K.,** “V2S: A Tool for Translating Video Recordings of Mobile App Usages into Replayable Scenarios”, in *Proc. of the 43rd IEEE/ACM International Conf. on Software Engineering (ICSE’21)*, Formal Tool Demonstration, Virtual (Madrid, Spain), May 25th - 28th, 2021, pp. 65-68.

Acceptance ratio: 37%

[C129] Manandhar, S., **Moran, K.,** Kafle, K., Tang, R., Poshyvanyk, D., and Nadkarni, A. “Towards a Natural Perspective of Smart Homes for Practical Security and Safety Analyses”, in *Proceedings of the 41st IEEE Symposium on Security and Privacy (Oakland’20)*, San Francisco, CA, May 18th - 20th, 2020, pp. 482-499.

[C128] **Bernal-Cárdenas, C., Cooper, N., Moran, K.,** Chaparro, O., Marcus, A., and Poshyvanyk, D., “Translating Video Recordings of Mobile App Usages into Replayable Scenarios”, in *Proceedings of the 42nd IEEE/ACM International Conference on Software Engineering (ICSE’20)*, Seoul, South Korea, May 23rd- 29th, 2020, pp. 309-321.

Acceptance ratio: 20%

This paper won the **ACM SIGSOFT Distinguished Paper Award**

[C127] **Watson, C., Tufano, M., Moran, K.,** Bavota, G., and Poshyvanyk, D., “On Learning Meaningful Assert Statements for Unit Test Cases”, in *Proc. of the 42nd IEEE/ACM International Conf. on Software Engineering (ICSE’20)*, Seoul, South Korea, May 23rd- 29th, 2020, pp. 1398-1409.

Acceptance ratio: 20%

[C126] **Moran, K., Palacio, D., Bernal-Cárdenas, C., McCrystal, D.,** Poshyvanyk, D., Shenefiel, C., and Johnson, J., “Improving the Effectiveness of Traceability Link Recovery using Hierarchical Bayesian Networks”, in *Proceedings of the 42nd IEEE/ACM International Conference on Software Engineering (ICSE’20)*, Seoul, South Korea, May 23rd- 29th, 2020, pp. 873-885.

Acceptance ratio: 20%

[C125] **Tufano, M., Kimko, J., Wang, S., Watson, C.,** Bavota, G., Di Penta, M., and Poshyvanyk, D. “DeepMutation: A Neural Mutation Tool”, in *Proceedings of the 42nd IEEE/ACM International*

Conference on Software Engineering ([ICSE'20](#)), Formal Research Tool Demonstration, Seoul, South Korea, May 23rd- 29th, 2020, pp. 29-33.

Acceptance ratio: 33.3%

[C124] **Tufano, M., Watson, C.,** Bavota, G., Di Penta, M., **White, M.,** and Poshyvanyk, D. "Learning How to Mutate Source Code from Bug-Fixes", in *Proceedings of the 35th IEEE International Conference on Software Maintenance and Evolution ([ICSME'19](#))*, Cleveland, Ohio, USA, September 30-October 4, 2019, pp. 301-312.

Acceptance ratio: 23%

[C123] **Palacio, D., McCrystal, D., Moran, K., Bernal-Cárdenas, C.,** Poshyvanyk, D. and Shenefiel, C., "Learning to Identify Security-Related Issues Using Convolutional Neural Networks", in *Proceedings of the 35th IEEE International Conference on Software Maintenance and Evolution ([ICSME'19](#))*, short paper, Cleveland, Ohio, USA, Sept. 30-October 4, 2019, pp. 140-144.

Acceptance ratio: 56%

[C122] Chaparro, O., **Bernal-Cárdenas, C.,** Lu, J., **Moran, K.,** Marcus, A., Di Penta, M., Poshyvanyk, D., and Ng, V. "Assessing the Quality of the Steps to Reproduce in Bug Reports", in *Proceedings of the 27th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering ([ESEC/FSE'19](#))*, Tallinn, Estonia, August 26th - 30th, pp. 86-96.

Acceptance ratio: 24%

This paper won the **ACM SIGSOFT Distinguished Paper Award**

[C121] **Tufano, M.,** Pantiuchina, J., **Watson, C.,** Bavota, G., Poshyvanyk, D., "On Learning Meaningful Code Changes via Neural Machine Translation", in *Proceedings 41st ACM/IEEE International Conference on Software Engineering ([ICSE'19](#))*, Montréal, QC, Canada, May 25th - May 31st, 2019, pp. 25-36.

Acceptance ratio: 21%

[C120] **Bernal-Cárdenas, C., Moran, K., Tufano, M., Liu, Z., Nan, L., Shi, Z.,** and Poshyvanyk, D., "Guigle: A GUI Search Engine for Android Apps", in *Proceedings 41st ACM/IEEE International Conference on Software Engineering ([ICSE'19](#))*, Formal Research Tool Demonstration, Montréal, QC, Canada, May 25th - May 31st, 2019, pp. 71-74.

Acceptance ratio: 47%

[C119] Kafle, K., **Moran, K.,** Manandhar, S., Nadkarni, A., and Poshyvanyk, D., "A Study of Data Store-based Home Automation", in *Proceedings of 9th ACM Conference on Data and Application Security and Privacy ([CODASPY'19](#))*, Dallas, TX, March 25th-27th, 2019, pp. 73-84.

Acceptance ratio: 23%

This paper won the **Best Paper Award**

[C118] **White, M., Tufano, M.,** Martinez, M., Monperrus, M., and Poshyvanyk, D., "Sorting and Transforming Program Repair Ingredients via Deep Learning Code Similarities", in *Proceedings 26th IEEE International Conference on Software Analysis, Evolution and Reengineering ([SANER'19](#))*, Hangzhou, China, February 24-27, 2019, pp. 479-490.

Acceptance ratio: 27%

[C117] **Moran, K., Watson, C., Hoskins, J., Purnell, G.,** and Poshyvanyk, D., "Detecting and Summarizing GUI Changes in Evolving Mobile Apps", in *Proceedings of 33rd IEEE/ACM International Conference on Automated Software Engineering ([ASE'18](#))*, Montpellier, France, September 3-7, 2018, pp. 542-552.

Acceptance ratio: 21%

[C116] **Tufano, M., Watson, C.,** Bavota, G., Di Penta, M., **White, M.,** and Poshyvanyk, D., “An Empirical Investigation into Learning Bug-Fixing Patches in the Wild via Neural Machine Translation”, in *Proceedings of 33rd IEEE/ACM International Conference on Automated Software Engineering (ASE’18)*, *New Ideas Paper*, Montpellier, France, Sept. 3-7, 2018, pp. 832-837.

Acceptance ratio: 21%

[C115] **Luo, Q., Moran, K.,** Poshyvanyk, D., and Di Penta, M., “Assessing Test Case Prioritization on Mutants and Real Faults”, in *Proceedings of 34th IEEE International Conference on Software Maintenance and Evolution (ICSME’18)*, Madrid, Spain, Sept. 23-29, 2018, pp. 240-251.

Acceptance ratio: 26%

This paper was nominated for IEEE Distinguished Paper Award at ICSME’18

[C114] **Bonett, R.,** Kafle, K., **Moran, K.,** Nadkarni, A., and Poshyvanyk, D., “Discovering Flaws in Security-Focused Static Analysis Tools for Android using Systematic Mutation”, in *Proceedings of 27th USENIX Security Symposium (USENIX’18)*, Baltimore, MD, USA, August 15-17, 2018, pp. 1263-1280.

Acceptance ratio: 19%

[C113] **Vendome, C.,** German, D., Di Penta, M., Bavota, G., **Linares-Vásquez, M.,** and Poshyvanyk, D., “To Distribute or Not to Distribute? Why Licensing Bugs Matter”, in *Proceedings of 40th IEEE/ACM International Conference on Software Engineering (ICSE’18)*, Gothenburg, Sweden, May 27-June 3, 2018, pp. 268-279.

Acceptance ratio: 21%

[C112] **Moran, K., Li, B., Bernal-Cárdenas, C., Jelf, D.,** and Poshyvanyk, D., “Automated Reporting of GUI Design Violations for Mobile Apps”, in *Proceedings of 40th IEEE/ACM International Conference on Software Engineering (ICSE’18)*, Gothenburg, Sweden, May 27-June 3, 2018, pp. 165-175.

Acceptance ratio: 21%

[C111] **Moran, K., Tufano, M., Bernal-Cárdenas, C., Linares-Vásquez, M.,** Bavota, G., **Vendome, C.,** Di Penta, M., and Poshyvanyk, D., “MDroid+: A Mutation Testing Framework for Android”, in *Proceedings of 40th IEEE/ACM International Conference on Software Engineering (ICSE’18)*, Formal Research Tool Demo, Gothenburg, Sweden, May 27-June 3, 2018, pp. 33-36.

Acceptance ratio: 35%

[C110] **Tufano, M., Watson, C.,** Bavota, G., Di Penta, M., **White, M.,** and Poshyvanyk, D., “Deep Learning Similarities from Different Representations of Source Code”, in *Proceedings of the 15th IEEE/ACM Conference on Mining Software Repositories (MSR’18)*, Gothenburg, Sweden, May 28-29, 2018, pp. 542-553.

Acceptance ratio: 33%

[C109] **Li, B., Vendome, C., Linares-Vásquez, M.,** Poshyvanyk, D., “Aiding Comprehension of Unit Test Cases and Test Suites with Stereotype-based Tagging”, in *Proc. of 26th IEEE/ACM Intern. Conf. on Program Comprehension (ICPC’18)*, Gothenburg, SE, May 27- 28, 2018, pp. 52-63.

Acceptance ratio: 37%

[C108] **Pantiuchina, E.,** Bavota, G., **Tufano, M.,** and Poshyvanyk, D., “Towards Just-In-Time Refactoring Recommenders”, in *Proceedings of 26th IEEE/ACM International Conference on Program Comprehension (ICPC’18)*, ERA Track, Gothenburg, Sweden, May 27- 28, 2018, pp. 312-315.

Acceptance ratio: 48%

This paper won the **Best Early Research Achievement (ERA) Paper Award**

[C107] Scalabrino, S., Bavota, G., **Vendome, C., Linares-Vásquez, M.**, Poshyvanyk, D., and Oliveto, R., "Automatically Assessing Code Understandability: How Far Are We?", in *Proceedings of 32nd IEEE/ACM International Conference on Automated Software Engineering (ASE'17)*, Urbana-Champaign, Illinois, USA, October 30 - November 3, 2017, pp. 417-427.

Acceptance ratio: 20.7%

This paper won the **ACM SIGSOFT Distinguished Paper Award**

[C106] **Linares-Vásquez, M., Bernal-Cárdenas, C., Moran, K.**, Poshyvanyk, D., "How do Developers Test Android Applications?", in *Proceedings of 33rd IEEE International Conference on Software Maintenance and Evolution (ICSME'17)*, Industry Track, Shanghai, China, September 20-22, 2017, pp. 613-622.

[C105] **Linares-Vásquez, M., Moran, K.**, Poshyvanyk, D., "Continuous, Evolutionary and Large-Scale: A New Perspective for Automated Mobile App Testing", in *Proceedings of 33rd IEEE International Conference on Software Maintenance and Evolution (ICSME'17)*, Shanghai, China, September 20-22, 2017, pp. 399-410.

Acceptance ratio: 27.8%

[C104] **Linares-Vásquez, M., Bavota, G., Tufano, M., Moran, K., Di Penta, M., Vendome, C., Bernal-Cárdenas, C.**, and Poshyvanyk, D., "Enabling Mutation Testing for Android Apps", in *Proceedings of 11th Joint Meeting of the European Software Engineering Conference and the 25th ACM SIGSOFT International Symposium on the Foundations of Software Engineering (ESEC/FSE'17)*, Paderborn, Germany, September 4-8, pp. 233-244.

Acceptance ratio: 24.4%

[C103] **Vendome, C., Linares-Vásquez, M.**, Bavota, G., Di Penta, M., German, D., and Poshyvanyk, D., "Machine Learning-Based Detection of Open Source License Exceptions", in *Proceedings of 39th IEEE/ACM International Conference on Software Engineering (ICSE'17)*, Buenos Aires, Argentina, May 20-28, 2017, pp. 118-129.

Acceptance ratio: 17%

[C102] **Moran, K., Linares-Vásquez, M., Bernal-Cárdenas, C., Vendome, C.**, and Poshyvanyk, D., "CrashScope: A Practical Tool for Automated Testing of Android Applications", in *Proceedings of 39th IEEE/ACM International Conference on Software Engineering (ICSE'17)*, Formal Research Demonstrations Track, Buenos Aires, Argentina, May 20-28, 2017, pp. 15-18.

Acceptance ratio: 31%

[C101] **Linares-Vásquez, M., Bernal-Cárdenas, C., Bavota, G., Oliveto, R., Di Penta, M.**, and Poshyvanyk, D., "GEMMA: Multi-objective Optimization of Energy Consumption of GUIs in Android Apps", in *Proc. of 39th IEEE/ACM International Conf. on Software Engineering (ICSE'17)*, Formal Research Demonstrations Track, Buenos Aires, Argentina, May 20-28, 2017, pp. 11-14.

Acceptance ratio: 31%

[C100] **Moran, K., Bonett, R., Bernal-Cárdenas, C., Otten, B., Park, D.**, and Poshyvanyk, D., "On-Device Bug Reporting for Android Applications", in *Proceedings of 4th IEEE/ACM International Conference on Conference on Mobile Software Engineering and Systems (MOBILESoft'17)*, Formal Research Tool Demonstrations Track, Buenos Aires, Argentina, May 20-28, 2017.

[C99] **Li, B.**, Poshyvanyk, D., and Grechanik, M., "Automatically Detecting Integrity Violations in Database-Centric Applications", in *Proceedings of 25th IEEE International Conference on Program Comprehension (ICPC'17)*, Buenos Aires, Argentina, May 20-28, 2017, pp. 251-262.

Acceptance ratio: 34%

[C98] **White, M., Tufano, M., Vendome, C.,** and Poshyvanyk, D., "Deep Learning Code Fragments for Code Clone Detection", in *Proceedings of 31st IEEE/ACM International Conference on Automated Software Engineering (ASE'16)*, Singapore, Singapore, September 3-7, 2016, pp. 87-98.
Acceptance ratio: 19%

[C97] **Tufano, M.,** Palomba, F., Bavota, G., Di Penta, M., Oliveto, R., De Lucia, A. and Poshyvanyk, D., "An Empirical Investigation into the Nature of Test Smells", in *Proceedings of 31st IEEE/ACM International Conference on Automated Software Engineering (ASE'16)*, Singapore, Singapore, September 3-7, 2016, pp. 4-15.
Acceptance ratio: 19%

[C96] **Luo, Q., Moran, K.,** and Poshyvanyk, D., "A Large-scale Empirical Comparison of Static and Dynamic Test Case Prioritization Techniques", in *Proceedings of 24th ACM SIGSOFT International Symposium on the Foundations of Software Engineering (FSE'16)*, Seattle, WA, November 13-18, 2016, pp. 559-570.
Acceptance ratio: 27%

[C95] **Linares-Vásquez, M., Li, B., Vendome, C.,** and Poshyvanyk, D., "Documenting Database Usages and Schema Constraints in Database-Centric Applications", in *Proceedings of 25th ACM International Symposium on Software Testing and Analysis (ISSTA'16)*, Saarbrücken, Germany, July 18-20, 2016, pp. 270-281.
Acceptance ratio: 25%

[C94] Grechanik, M., Prabhu, N., **Graham, D.,** Poshyvanyk, D., and Shah, M., "Can Software Project Maturity Be Accurately Predicted Using Internal Source Code Metrics?", in *Proceedings of the 12th International Conference on Machine Learning and Data Mining (MLDM'16)*, New York, NY, July 16-21, 2016, pp. 774-789.
Acceptance ratio: 33%

[C93] Romano, S., **Vendome, C.,** Scanniello, G., and Poshyvanyk, D., "Are Unreachable Methods Harmful? Results from a Controlled Experiment", in *Proceedings of the 24th IEEE International Conf. on Program Comprehension (ICPC'16)*, Austin, TX, May 16-17, 2016, pp. 1-10.
Acceptance ratio: 30%

[C92] Scalabrino, S., **Linares-Vásquez, M.,** Poshyvanyk, D., and Oliveto, R., "Improving Code Readability Models with Textual Features", in *Proceedings of the 24th IEEE/ACM International Conference on Program Comprehension (ICPC'16)*, Austin, TX, May 16-17, 2016, pp. 1-10.
Acceptance ratio: 30%

This paper won the **ACM SIGSOFT Distinguished Paper Award**

Invited to Journal of Software: Evolution and Process (JSEP) **special issue among the best papers** from ICPC'16

[C91] **Linares-Vásquez, M., Holtzhauer, A.,** and Poshyvanyk, D., "On Automatically Detecting Similar Android Apps", in *Proceedings of the 24th IEEE International Conference on Program Comprehension (ICPC'16)*, Austin, TX, May 16-17, 2016, pp. 1-10.
Acceptance ratio: 30%

[C90] **Luo, Q.,** Poshyvanyk, D., and Grechanik, M., "Mining Performance Regression Inducing Code Changes in Evolving Software", in *Proceedings of the 13th IEEE Working Conference on Mining Software Repositories (MSR'16)*, Austin, TX, May 14-15, 2016, pp. 25-36.
Acceptance ratio: 27%

[C89] **Moran, K., Linares-Vásquez, M., Bernal-Cárdenas, C.,** and Poshyvanyk, D., "FUSION: A Tool for Facilitating and Augmenting Android Bug Reporting", in *Proceedings of 38th ACM/IEEE*

International Conference on Software Engineering (ICSE'16), Formal Research Tool Demonstration, Austin, TX, May 14-22, 2016, pp. 609-612.

Acceptance ratio: 32%

[C88] **Luo, Q.**, Poshyvanyk, D., Nair, A., and Grechanik, M., "FOREPOST: A Tool For Detecting Performance Problems with Feedback-Driven Learning Software Testing", in *Proceedings of 38th ACM/IEEE International Conference on Software Engineering (ICSE'16), Formal Research Tool Demonstration, Austin, TX, May 14-22, 2016, pp. 593-596.*

Acceptance ratio: 32%

[C87] **Moran, K., Linares-Vásquez, M., Bernal-Cárdenas, C., Vendome, C.,** and Poshyvanyk, D., "Automatically Discovering, Reporting and Reproducing Android Application Crashes", in *Proceedings of 9th IEEE International Conference on Software Testing, Verification and Validation (ICST'16), Chicago, IL, April 10-15, 2016, pp. 33-44.*

Acceptance ratio: 27%

[C86] **Li, B., Vendome, C., Linares-Vasquez, M.,** Poshyvanyk, D., and Kraft, N., "Automatically Documenting Unit Test Cases", in *Proceedings of 9th IEEE International Conference on Software Testing, Verification and Validation (ICST'16), Chicago, IL, April 10-15, 2016, pp. 341-352.*

[C85] Panichella, A., **Dit, B.,** Oliveto, R., Di Penta, M., Poshyvanyk, D. and De Lucia, A., "Parameterizing and Assembling IR-based Solutions for Software Engineering Tasks using Genetic Algorithms", in *Proceedings of 23rd IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER'16), Osaka, Japan, March 14-18, 2016, pp. 314-325.*

Acceptance ratio: 37%

[C84] Grechanik, M., **Luo, Q.,** Poshyvanyk, D., and Porter, A., "Enhancing Rules For Cloud Resource Provisioning via Learned Software Performance Models", in *Proceedings of 7th ACM/SPEC International Conference on Performance engineering (ICPE'16), short paper, Delft, the Netherlands, March 12-16, 2016, pp. 209-214.*

Acceptance ratio: 33%

[C83] **Linares-Vásquez, M., Li, B., Vendome, C.,** and Poshyvanyk, D., "How Do Developers Document Database Usages in Source Code?", in *Proceedings of 30th IEEE/ACM International Conference on Automated Software Engineering (ASE'15), New Ideas Paper, Lincoln, Nebraska, November 9-13, 2015, pp. 36-41.*

Acceptance ratio: 24%

[C82] Vargas-Baldrich, S., **Linares-Vásquez, M.,** and Poshyvanyk, D., "Automatic Tagging of Software Projects Using Bytecode and Dependencies", in *Proceedings of 30th IEEE/ACM International Conference on Automated Software Engineering (ASE'15), New Ideas Paper, Lincoln, Nebraska, November 9-13, 2015, pp. 289-294.*

Acceptance ratio: 24%

[C81] **Linares-Vásquez, M., Vendome, C., Luo, Q.,** and Poshyvanyk, D., "How Developers Detect and Fix Performance Bottlenecks in Android Apps", in *Proceedings of 31st IEEE International Conference on Software Maintenance and Evolution (ICSME'15), Industry Track, Bremen, Germany, Sept. 29 –Oct. 1, 2015, pp. 352-361.*

Acceptance ratio: 39%

[C80] **Vendome, C., Linares-Vásquez, M.,** Bavota, G., Di Penta, M., German, D., and Poshyvanyk, D., "When and Why Developers Adopt and Change Software Licenses", in *Proceedings of 31st IEEE International Conference on Software Maintenance and Evolution (ICSME'15), Bremen, Germany, Sept. 29 –Oct. 1, 2015, pp. 31-40.*

Acceptance ratio: 22%

[C79] Palomba, F., **Linares-Vásquez, M.**, Bavota, G., Oliveto, R., Di Penta, M., Poshyvanyk, D., and De Lucia, A., "User Reviews Matter! Tracking Crowdsourced Reviews to Support Evolution of Successful Apps", in *Proceedings of 31st IEEE International Conference on Software Maintenance and Evolution (ICSME'15)*, Bremen, Germany, Sept. 29 –Oct. 1, 2015, pp. 291-300.

Acceptance ratio: 22%

[C78] **Moran, K.**, **Linares-Vásquez, M.**, **Bernal-Cárdenas, C.**, and Poshyvanyk, D., "Auto-Completing Bug Reports for Android Applications", in *Proceedings of 10th Joint Meeting of the European Software Engineering Conference and the 23rd ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE'15)*, Bergamo, Italy, August 31-September 4, 2015, pp. 673-686.

Acceptance ratio: 25.4%

[C77] **Linares-Vásquez, M.**, Bavota, G., **Bernal-Cárdenas, C.**, Oliveto, R., Di Penta, M., and Poshyvanyk, D., "Optimizing Energy Consumption of GUIs in Android Apps: A Multi-objective Approach", in *Proceedings of 10th Joint Meeting of the European Software Engineering Conference and the 23rd ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE'15)*, Bergamo, Italy, August 31-September 4, 2015, pp. 143-154.

Acceptance ratio: 25.4%

This paper won the **ACM SIGSOFT Distinguished Paper Award**

[C76] **Shen, D.**, **Luo, Q.**, Poshyvanyk, D., and Grechanik, M., "Automating Performance Bottleneck Detection Using Search-based Application Profiling", in *Proceedings of 24th ACM International Symposium on Software Testing and Analysis (ISSTA'15)*, Baltimore, MD, July 12-17, 2015, pp. 270-281.

Acceptance ratio: 27.7%

[C75] **Tufano, M.**, Palomba, F., Bavota, G., Oliveto, R., Di Penta, M., De Lucia, A. and Poshyvanyk, D., "When and Why Your Code Starts to Smell Bad", in *Proceedings of 37th IEEE/ACM International Conference on Software Engineering (ICSE'15)*, Florence, Italy, May 16-24, 2015, pp. 403-414.

Acceptance ratio: 18.5%

This paper won the **ACM SIGSOFT Distinguished Paper Award**

[C74] **Linares-Vásquez, M.**, Cortés-Coy, L., Aponte, J., and Poshyvanyk, D., "ChangeScribe: A Tool for Automatically Generating Commit Messages", in *Proceedings of 37th IEEE/ACM International Conference on Software Engineering (ICSE'15), Formal Research Tool Demonstration*, Florence, Italy, May 16-24, 2015, pp. 709-712.

[C73] Palomba, F., **Tufano, M.**, Bavota, G., Oliveto, R., Marcus, A., Poshyvanyk, D., and De Lucia, A., "Extract Package Refactoring in ARIES", in *Proceedings of 37th IEEE/ACM International Conference on Software Engineering (ICSE'15), Formal Research Tool Demonstration*, Florence, Italy, May 16-24, 2015, pp. 669-672.

[C72] **White, M.**, **Vendome, C.**, **Linares-Vásquez, M.**, and Poshyvanyk, D., "Toward Deep Learning Software Repositories", in *Proceedings of the 12th IEEE Working Conference on Mining Software Repositories (MSR'15)*, Florence, Italy, May 16-17, 2015, pp. 334-345.

Acceptance ratio: 30%

[C71] **Linares-Vásquez, M.**, **White, M.**, **Bernal-Cárdenas, C.**, **Moran, K.**, and Poshyvanyk, D., "Mining Android App Usages for Generating Actionable GUI-based Execution Scenarios", in

Proceedings of the 12th IEEE Working Conference on Mining Software Repositories (MSR'15), Florence, Italy, May 16-17, 2015, pp. 111-122.

Acceptance ratio: 30%

[C70] Palomba, F., Di Nucci, D., **Tufano, M.**, Bavota, G., Oliveto, R., Poshyvanyk, D., and De Lucia, A., "Landfill: an Open Dataset of Code Smells with Public Evaluation", in *Proceedings of the 12th IEEE Working Conference on Mining Software Repositories (MSR'15)*, Data Papers Track, Florence, Italy, May 16-17, 2015, pp. 482-485.

[C69] **Vendome, C.**, **Linares-Vásquez, M.**, Bavota, G., Di Penta, M., German, D., and Poshyvanyk, D., "License Usage and Changes: A Large-Scale Study of Java Projects on GitHub", in *Proceedings of 23rd IEEE International Conference on Program Comprehension (ICPC'15)*, Florence, Italy, May 18-19, 2015, pp. 218-228.

Acceptance ratio: 31.5%

Invited to Empirical Software Engineering **special issue among the best papers** from ICPC'15

[C68] **White, M.**, **Linares-Vásquez, M.**, **Johnson, P.**, **Bernal-Cárdenas, C.**, and Poshyvanyk, D., "Generating Reproducible and Replayable Bug Reports from Android Application Crashes", in *Proceedings of 23rd IEEE International Conference on Program Comprehension (ICPC'15)*, Florence, Italy, May 18-19, 2015, pp. 48-59.

Acceptance ratio: 31.5%

[C67] Le, T.D., **Linares-Vásquez, M.**, Lo, D., and Poshyvanyk, D., "RCLinker: Automated Linking of Issue Reports and Commits Leveraging Rich Contextual Information", in *Proceedings of 23rd IEEE International Conference on Program Comprehension (ICPC'15)*, Florence, Italy, May 18-19, 2015, pp. 36-47.

Acceptance ratio: 31.5%

[C66] Beck, F., **Dit, B.**, **Velasco-Madden, J.**, Weiskopf, D., and Poshyvanyk, D., "Rethinking User Interfaces for Feature Location", in *Proceedings of 23rd IEEE International Conference on Program Comprehension (ICPC'15)*, Florence, Italy, May 18-19, 2015, pp. 151-162.

Acceptance ratio: 31.5%

[C65] Cortes-Coy, L. F., **Linares-Vásquez, M.**, Aponte, J., and Poshyvanyk, D., "On Automatically Generating Commit Messages via Summarization of Source Code Changes", in *Proceedings of 14th IEEE International Working Conference on Software Code Analysis and Manipulation (SCAM'14)*, Victoria, Canada, September 28-29, 2014, pp. 275-284.

Acceptance ratio: 32%

Invited to Journal of Systems and Software **special issue among the best papers** from SCAM'14

[C64] **Linares-Vásquez, M.**, Bavota, G., **Bernal-Cárdenas, C.**, Oliveto, R., Di Penta, M., and Poshyvanyk, D., "Mining Energy-Greedy API Usage Patterns in Android Apps: an Empirical Study", in *Proceedings of 11th IEEE Working Conference on Mining Software Repositories (MSR'14)*, Hyderabad, India, May 31- June 1, 2014, pp. 2-11.

Acceptance ratio: 34%

[C63] **Linares-Vásquez, M.**, **Holtzhauer, A.**, **Bernal-Cárdenas, C.**, and Poshyvanyk, D., "Revisiting Android Reuse Studies in the Context of Code Obfuscation and Library Usages", in *Proceedings of 11th IEEE Working Conference on Mining Software Repositories (MSR'14)*, Hyderabad, India, May 31- June 1, 2014, pp. 242-251.

Acceptance ratio: 34%

[C62] Grechanik, M., **McMillan, C.**, Dasgupta, T., Poshyvanyk, D., and **Gethers, M.**, "Redacting Sensitive Information in Software Artifacts", in *Proceedings of 22nd IEEE International Conference on Program Comprehension (ICPC'14)*, Hyderabad, India, June 2-3, 2014, pp. 314-325.

Acceptance ratio: 48%

[C61] **Linares-Vásquez, M.**, Bavota, G., Di Penta, M., Oliveto, R., and Poshyvanyk, D., "How do API Changes Trigger Stack Overflow Discussions? A Study on the Android SDK", in *Proceedings of 22nd IEEE International Conference on Program Comprehension (ICPC'14)*, Hyderabad, India, June 2-3, 2014, pp. 83-94.

Acceptance ratio: 48%

[C60] **Linares-Vásquez, M.**, **Klock, S.**, **McMillan, C.**, Sabané, A., Poshyvanyk, D., and Guéhéneuc, Y. G., "Domain Matters: Bringing Further Evidence of the Relationships among Anti-patterns, Application Domains, and Quality-related Metrics in Java Mobile Apps", in *Proceedings of 22nd IEEE International Conference on Program Comprehension (ICPC'14)*, Hyderabad, India, June 2-3, 2014, pp. 232-243.

Acceptance ratio: 48%

[C59] Hossen, K., Kagdi, H., and Poshyvanyk, D., "Amalgamating Source Code Authors, Maintainers, and Change Proneness to Triage Change Requests", in *Proceedings of 22nd IEEE International Conference on Program Comprehension (ICPC'14)*, Hyderabad, India, June 2-3, 2014, pp. 130-141.

Acceptance ratio: 48%

[C58] **Dit, B.**, **Wagner, M.**, **Wen, S.**, **Wang, W.**, **Linares-Vásquez, M.**, Poshyvanyk, D., Kagdi, H., "ImpactMiner: A Tool for Change Impact Analysis", in *Proceedings of 36th ACM/IEEE International Conference on Software Engineering (ICSE'14), Formal Research Tool Demonstration*, Hyderabad, India, May 31- June 7, 2014, pp. 540-543.

Acceptance ratio: 36.5%

[C57] **Li, B.**, Grechanik, M., and Poshyvanyk, D., "Sanitizing And Minimizing Databases For Software Application Test Outsourcing", in *Proceedings of 7th IEEE International Conference on Software Testing, Verification and Validation (ICST'14)*, Cleveland, OH, March 31 - April 4 2014, pp. 233-242.

Acceptance ratio: 28%

[C56] Palomba, F., Bavota, G., Di Penta, M., Oliveto, R., De Lucia, A., and Poshyvanyk, D., "Detecting Bad Smells in Source Code Using Change History Information", in *Proceedings of 28th IEEE/ACM International Conference on Automated Software Engineering (ASE'13)*, Palo Alto, CA, November 11-15, 2013, pp. 268-278.

Acceptance ratio: 13.5%

This paper won the **ACM SIGSOFT Distinguished Paper Award**

Invited to Automated Software Engineering journal (JASE) **special issue among the best papers** from ASE'13

[C55] **Moritz, E.**, **Linares-Vásquez, M.**, Poshyvanyk, D., **McMillan, C.**, Grechanik, M., **Gethers, M.**, "ExPort: Detecting and Visualizing API Usages in Large Source Code Repositories", in *Proceedings of 28th IEEE/ACM International Conference on Automated Software Engineering (ASE'13)*, New Ideas Paper Track, Palo Alto, CA, November 11-15, 2013, pp. 646-651.

Acceptance ratio: 23% for full and short papers

[C54] **Dit, B.**, **Moritz, E.**, **Linares-Vásquez, M.**, and Poshyvanyk, D., "Supporting and Accelerating Reproducible Research in Software Maintenance using TraceLab Component

Library", in *Proceedings of 29th IEEE International Conference on Software Maintenance (ICSM'13)*, Eindhoven, the Netherlands, September 22-28, 2013, pp. 330-339.

Acceptance ratio: 22%

This paper won the **Best Paper Award**

Invited to Empirical Software Engineering journal **special issue** from ICSM'13

[C53] Dasgupta, T., Grechanik, M., **Moritz, E., Dit, B.**, and Poshyvanyk, D., "Enhancing Software Traceability By Automatically Expanding Corpora With Relevant Documentation", in *Proceedings of 29th IEEE International Conference on Software Maintenance (ICSM'13)*, Eindhoven, the Netherlands, September 22-28, 2013, pp. 320-329.

Acceptance ratio: 22%

[C52] **Linares-Vásquez, M.**, Bavota, G., **Bernal-Cárdenas, C.**, Di Penta, M., Oliveto, R., and Poshyvanyk, D., "API Change and Fault Proneness: A Threat to Success of Android Apps", in *Proceedings of 9th Joint Meeting of the European Software Engineering Conference and the 21st ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE'13)*, Saint Petersburg, Russia, August 18-26, 2013, pp. 477-487.

Acceptance ratio: 20%

[C51] Bavota, G., **Dit, B.**, Oliveto, R., Di Penta, M., Poshyvanyk, D., and De Lucia, A., "An Empirical Study on the Developers' Perception of Software Coupling", in *Proceedings of 35th IEEE/ACM International Conference on Software Engineering (ICSE'13)*, San Francisco, CA, May 18-26, 2013, pp. 692-701.

Acceptance ratio: 18.5%

[C50] Panichella, A., **Dit, B.**, Oliveto, R., Di Penta, M., Poshyvanyk, D., and De Lucia, A., "How to Effectively Use Topic Models for Software Engineering Tasks? An Approach based on Genetic Algorithms", in *Proceedings of 35th IEEE/ACM International Conference on Software Engineering (ICSE'13)*, San Francisco, CA, May 18-26, 2013, pp. 522-531.

Acceptance ratio: 18.5%

[C49] **Linares-Vásquez, M., Dit, B.**, and Poshyvanyk, D., "An Exploratory Analysis of Mobile Development Issues Using Stack Overflow", in *Proceedings of 10th Working Conference on Mining Software Repositories (MSR'13), Challenge Track*, San Francisco, CA, 2013, pp. 93-96.

Acceptance ratio: 40%

[C48] **Dit, B., Holtzhauer, A.**, Poshyvanyk, D., and Kagdi, H., "A Dataset from Change History to Support Evaluation of Software Maintenance Tasks ", in *Proceedings of 10th Working Conference on Mining Software Repositories (MSR'13), Data Track*, San Francisco, CA, 2013, pp. 131-134.

Acceptance ratio: 55.6%

[C47] Panichella, A., **McMillan, C., Moritz, E.**, Palmieri, D., Oliveto, R., Poshyvanyk, D., and De Lucia, A., "When and How Using Structural Information to Improve IR-based Traceability Recovery", in *Proceedings of 17th European Conference on Software Maintenance and Reengineering (CSMR'13)*, Genova, Italy, March 5-8, 2013, pp. 199-208.

Acceptance ratio: 36%

[C46] **Linares-Vasquez, M.**, Dang, H., Hossen, K., Kagdi, K., **Gethers, M.**, and Poshyvanyk, D., "Triaging Incoming Change Requests: Bug or Commit History, or Code Authorship?" in *Proceedings of 28th IEEE International Conference on Software Maintenance (ICSM'12)*, Riva del Garda, Italy, September 23-30, 2012, pp. 451-460.

Acceptance ratio: 25%

[C45] **Gethers, M.**, Aryani, A., and Poshyvanyk, D., "Combining Conceptual and Domain Couplings to Detect Database and Architectural Dependencies", in *Proceedings of 12th IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM'12)*, Riva del Garda, Italy, September 23-24, 2012, pp.144-153.

Acceptance ratio: 40%

[C44] **Dit, B.**, **Moritz, E.**, and Poshyvanyk, D., "A TraceLab-based Solution for Creating, Conducting, and Sharing Feature Location Experiments", in *Proc. of 20th IEEE Intern. Conf. on Program Comprehension (ICPC'12)*, Passau, Germany, June 11-13 2012, short paper, pp. 203-208.

Acceptance ratio (for short papers): 25%

[C43] **McMillan, C.**, Grechanik, M., and Poshyvanyk, D., "Detecting Similar Software Applications", in *Proceedings of 34th IEEE/ACM International Conference on Software Engineering (ICSE'12)*, Zurich, Switzerland, June 2-9 2012, pp. 364-374.

Acceptance ratio: 21%

[C42] **McMillan, C.**, Hariri, N., Poshyvanyk, D., Cleland-Huang, J., and Mobasher, B., "Recommending Source Code for use in Rapid Software Prototypes", in *Proceedings of 34th IEEE/ACM International Conference on Software Engineering (ICSE'12)*, Zurich, Switzerland, June 2-9 2012, pp. 848-858.

Acceptance ratio: 21%

[C41] **Gethers, M.**, **Dit, B.**, Kagdi, H., and Poshyvanyk, D., "Integrated Impact Analysis for Managing Software Changes", in *Proceedings of 34th IEEE/ACM International Conference on Software Engineering (ICSE'12)*, Zurich, Switzerland, June 2-9 2012, pp. 430-440.

Acceptance ratio: 21%

[C40] Cleland-Huang, J., Shin, Y., Keenan, E., Czauderna, A., Leach, G., **Moritz, E.**, **Gethers, M.**, Poshyvanyk, D., Hayes, J. H., and Li, W., "Toward Actionable, Broadly Accessible Contests in Software Engineering", in *Proceedings of 34th IEEE/ACM International Conference on Software Engineering (ICSE'12)*, New Ideas and Emerging Results Track, Zurich, Switzerland, June 2-9 2012, pp. 1329-1332.

Acceptance ratio: 18%

[C39] Keenan, E., Czauderna, A., Leach, G., Cleland-Huang, J., Shin, Y., **Moritz, E.**, **Gethers, M.**, Poshyvanyk, D., Maletic, J., Hayes, J.H., Dekhtyar, A., Manukian, D., Hussein, S., and Hearn, D., "TraceLab: An Experimental Workbench for Equipping Researchers to Innovate, Synthesize, and Comparatively Evaluate Traceability Solutions," in *Proc. of 34th IEEE/ACM International Conference on Software Engineering (ICSE'12)*, Formal Research Tool Demonstration, Zurich, Switzerland, June 2-9, 2012, pp. 1375-1378.

Acceptance ratio: 31%

[C38] **Gethers, M.**, Kagdi, H., **Dit, B.**, and Poshyvanyk, D., "An Adaptive Approach to Impact Analysis from Change Requests to Source Code", in *Proc. of 26th IEEE/ACM International Conference on Automated Software Engineering (ASE'11)*, Lawrence, Kansas, November 6-10 2011, short paper, pp. 540-543.

Acceptance ratio (full and short papers): 37%

[C37] **McMillan, C.**, **Linares, M. V.**, Poshyvanyk, D., and Grechanik, M., "Categorizing Software Applications for Maintenance", in *Proc. of 27th IEEE International Conference on Software Maintenance (ICSM'11)*, Williamsburg, VA, September 25-30, 2011, pp. 343-352.

Acceptance ratio: 28%

[C36] **Gethers, M.**, Oliveto, R., Poshyvanyk, D., and De Lucia, A., "On Integrating Orthogonal Information Retrieval Methods to Improve Traceability Link Recovery", in *Proc. of 27th IEEE International Conference on Software Maintenance (ICSM'11)*, Williamsburg, VA, September 25-30, 2011, pp. 133-142.

Acceptance ratio: 28%

Invited to JSEP **special issue among the best papers** at ICSM'11

This paper **received the Most Influential Paper Award** from ICSME 2011

[C35] Kagdi, H., **Gethers, M.**, and Poshyvanyk, D., "SE2 Model to Support Software Evolution", in *Proc. of 27th IEEE International Conference on Software Maintenance (ICSM'11)*, Early Research Achievements ([ERA](#)) Track, Williamsburg, VA, September 25 - 30, 2011, pp. 512-515.

Acceptance ratio: 38%

[C34] **Dit, B.**, Guerrouj, L., Poshyvanyk, D., and Antoniol, G., "Can Better Identifier Splitting Techniques Help Feature Location?", in *Proc. of 19th IEEE International Conference on Program Comprehension (ICPC'11)*, Kingston, Ontario, Canada June 22 - June 24 2011, pp. 11-20.

Acceptance ratio: 24%

[C33] **McMillan, C.**, Grechanik, M., Poshyvanyk, D., Xie, Q., and Fu, C., "Portfolio: Finding Relevant Functions And Their Usages", in *Proc. of 33rd IEEE/ACM International Conference on Software Engineering (ICSE'11)*, Honolulu, Hawaii, USA, May 21-28 2011, pp. 111-120.

Acceptance ratio: 14%

[C32] Oliveto, R., **Gethers, M.**, Bavota, G., Poshyvanyk, D., and De Lucia, A., "Identifying Method Friendships to Remove the Feature Envy Bad Smell", in *Proc. of 33rd IEEE/ACM International Conference on Software Engineering (ICSE'11)*, New Ideas and Emerging Results Track, Hawaii, USA, May 21-28 2011, pp. 820-823.

Acceptance ratio: 23%

[C31] **Gethers, M.**, **Savage, T.**, Di Penta, M., Oliveto, R., Poshyvanyk, D., and De Lucia, A., "CodeTopics: Which Topic Am I Coding Now?", in *Proc. of 33rd IEEE/ACM International Conference on Software Engineering (ICSE'11)*, Formal Research Tool Demonstration, Honolulu, Hawaii, USA, May 21-28 2011, pp. 1034-1036.

Acceptance ratio: 36%

[C30] **McMillan, C.**, Grechanik, M., Poshyvanyk, D., Xie, Q., and Fu, C., "Portfolio: A Search Engine for Finding Functions and Their Usages", in *Proc. of 33rd IEEE/ACM International Conference on Software Engineering (ICSE'11)*, Formal Research Tool Demonstration, Honolulu, Hawaii, USA, May 21-28 2011, pp. 1043-1045.

Acceptance ratio: 36%

[C29] Kagdi, H., **Gethers, M.**, Poshyvanyk, D., and Collard, M., "Blending Conceptual and Evolutionary Couplings to Support Change Impact Analysis in Source Code", in *Proc. of 17th IEEE Working Conference on Reverse Engineering (WCRE'10)*, Boston, USA, October 13-16, 2010, pp. 119-128.

Acceptance ratio: 31%

Invited to the Empirical Software Engineering (EMSE) **among the best papers** at WCRE'10

[C28] **Gethers, M.** and Poshyvanyk, D., "Using Relational Topic Models to Capture Coupling among Classes in Object-Oriented Software Systems", in *Proc. of 26th IEEE International Conference on Software Maintenance (ICSM'10)*, Timișoara, Romania, September 12-18, 2010, pp. 1-10.

This paper won the **Distinguished Paper Award**

Acceptance ratio: 27%

[C27] **Savage, T., Dit, B., Gethers, M.,** and Poshyvanyk, D., "Topic_{XP}: Exploring Topics in Source Code using Latent Dirichlet Allocation", in *Proc. of 26th IEEE International Conference on Software Maintenance (ICSM'10)*, Formal Research Tool Demonstration, Timișoara, Romania, September 12-18, 2010, pp. 1-6.

[C26] Újházi, B., Ferenc, R., Poshyvanyk, D., and Gyimóthy, T., "New Conceptual Coupling and Cohesion Metrics for Object-Oriented Systems", in *Proc. of 10th IEEE Intern. Conf. on Source Code Analysis and Manipulation (SCAM'10)*, Timișoara, Romania, September 12-13, 2010, pp. 33-42.

Acceptance ratio: 38%

This paper won the **Best Paper Award**

Invited to Science of Computer Programming **special issue among the best papers** at SCAM'10

[C25] Grechanik, M., **McMillan, C.,** DeFerrari, L., Comi, M., Crespi, S., Poshyvanyk, D., Fu, C., Xie, Q., and Ghezzi, C., "An Empirical Investigation into a Large-Scale Java Open Source Code Repository", in *Proc. of 4th International Symposium on Empirical Software Engineering and Measurement (ESEM'10)*, Bolzano-Bozen, Italy, September 16-17, 2010.

Acceptance ratio: 29.4%

[C24] **Revelle, M., Dit, B.,** and Poshyvanyk, D., "Using Data Fusion and Web Mining to Support Feature Location in Software", in *Proc. of 18th IEEE International Conference on Program Comprehension (ICPC'10)*, Braga, Portugal, June 30 - July 2, 2010, pp. 14-23.

Acceptance ratio: 19.7%

Invited to the Empirical Software Engineering **special issue among the best papers** at ICPC'10

[C23] Oliveto, R., **Gethers, M.,** Poshyvanyk, D., and De Lucia, A., "On the Equivalence of Information Retrieval Methods for Automated Traceability Link Recovery", in *Proc. of 18th IEEE International Conference on Program Comprehension (ICPC'10)*, Braga, Portugal, June 30 - July 2, 2010, short paper, pp. 68-71.

Acceptance ratio (short papers): 35.5%

This paper **received the Most Influential Paper Award** from ICPC 2010

[C22] Grechanik, M., Fu, C., Xie, Q., **McMillan, C.,** Poshyvanyk, D., Cumby, C., "A Search Engine For Finding Highly Relevant Applications", in *Proc. of 32nd ACM/IEEE International Conf. on Software Engineering (ICSE'10)*, Cape Town, South Africa, May 2-8, 2010, pp. 476-484.

Acceptance ratio: 13.6%

[C21] **Savage, T., Revelle, M.,** and Poshyvanyk, D., "FLAT³: Feature Location and Textual Tracing Tool", in *Proc. of 32nd ACM/IEEE International Conference on Software Engineering (ICSE'10)*, Formal Research Tool Demo, Cape Town, South Africa, May 2-8, 2010, pp. 255-258.

Acceptance ratio: 25%

[C20] Grechanik, M., Fu, C., Xie, Q., **McMillan, C.,** Poshyvanyk, D., and Cumby, C., "Exemplar: EXecutable exaMPLes ARchive", in *Proc. of 32nd ACM/IEEE International Conference on Software Engineering (ICSE'10)*, Formal Research Tool Demonstration, Cape Town, South Africa, May 2-8, 2010, pp. 259-262.

Acceptance ratio: 25%

[C19] **Liu, Y.,** Poshyvanyk, D., Ferenc, R., Gyimóthy, T., and Chrisochoides, N., "Modelling Class Cohesion as Mixtures of Latent Topics", in *Proceedings of the 25th IEEE International Conference on Software Maintenance (ICSM'09)*, Edmonton, Alberta, Canada, September 20-26, 2009, pp. 233-242.

Acceptance ratio: 22%

[C18] Poshyvanyk, D., "Using Information Retrieval to Support Software Maintenance Tasks", in *Proceedings of the 25th IEEE International Conference on Software Maintenance (ICSM'09)*, Doctoral Symposium Track, Edmonton, Alberta, Canada, September 20-26, 2009, pp. 453-456.

[C17] **Tian, K., Revelle, M.,** and Poshyvanyk, D., "Using Latent Dirichlet Allocation for Automatic Categorization of Software", in *Proceedings of the 6th IEEE Working Conference on Mining Software Repositories (MSR'09)*, Vancouver, B.C., Canada, May 16-17, 2009, short paper, pp. 163-166.

Acceptance ratio (short papers): 40%

[C16] **Revelle, M.,** Poshyvanyk, D., "An Exploratory Study on Assessing Feature Location Techniques", in *Proceedings of the 17th IEEE International Conference on Program Comprehension (ICPC'09)*, Vancouver, British Columbia, Canada, May 17-19, 2009, short paper, pp. 218-222.

Acceptance ratio (short papers): 48%

[C15] Kagdi, H., Poshyvanyk, D., "Who Can Help Me with this Change Request?", in *Proceedings of the 17th IEEE International Conference on Program Comprehension (ICPC'09)*, Vancouver, British Columbia, Canada, 2009, short paper, pp. 273-277.

Acceptance ratio (short papers): 48%

[C14] **Pierret, D.,** Poshyvanyk, D., "An Empirical Exploration of Regularities in Open-Source Software Lexicons", in *Proceedings of the 17th IEEE International Conference on Program Comprehension (ICPC'09)*, Vancouver, British Columbia, Canada, 2009, short paper, pp. 228-232.

Acceptance ratio (short papers): 48%

[C13] Poshyvanyk, D., Grechanik, M. "Creating and Evolving Software by Searching, Selecting and Synthesizing Relevant Source Code ", in *Proceedings of the 31st IEEE/ACM International Conference on Software Engineering (ICSE'09), [New Ideas and Emerging Results](#)*, Vancouver, Canada, May 16-24, 2009, pp. 283-286.

Acceptance ratio: 18%

[C12] Liu, D., Marcus, A., Poshyvanyk, D., Rajlich, V., "Feature Location via Information Retrieval based Filtering of a Single Scenario Execution Trace", in *the Proceedings of the 22nd IEEE/ACM International Conference on Automated Software Engineering (ASE'07)*, Atlanta, Georgia, November 5-9, 2007, pp. 234-243.

Acceptance ratio: 12%

[C11] Poshyvanyk, D., Marcus, A., "Using Information Retrieval to Support Design of Incremental Change of Software", in *the Proceedings of the 22nd IEEE/ACM International Conference on Automated Software Engineering (ASE'07), Doctoral Symposium*, Atlanta, Georgia, November 5-9, 2007, pp. 563-566.

[C10] Poshyvanyk, D., Marcus, A., "Combining Formal Concept Analysis with Information Retrieval for Concept Location in Source code", in *the Proceedings of the 15th IEEE International Conf. on Program Comprehension (ICPC'07)*, Banff, Alberta, Canada, June 26-29, 2007, pp. 37-48.

Acceptance ratio: 33%

This paper won the **Best Paper Award**

This paper also **received the Most Influential Paper Award** from ICPC 2007

[C9] Xie, X., Poshyvanyk, D., Marcus, A., "Visualization of CVS Repository Information", in *the Proceedings of the 13th IEEE Working Conference on Reverse Engineering (WCRE'06)*, Benevento, Italy, October 23-27, 2006, pp. 231-242.

Acceptance ratio: 29%

[C8] Poshyvanyk, D., Marcus, A., "The Conceptual Coupling Metrics for Object-Oriented Systems", in the *Proceedings of the 22nd IEEE International Conference on Software Maintenance (ICSM'06)*, Philadelphia, PA, September 25-27, 2006, pp. 469-478.

Acceptance ratio: 28%

This paper **received the Most Influential Paper Award** from ICSM 2006

[C7] Poshyvanyk, D., Petrenko, M., Marcus, A., Xie, X., Liu, D., "Source Code Exploration with Google", in the *Proceedings of the 22nd IEEE International Conference on Software Maintenance (ICSM'06)*, Philadelphia, PA, September 25-27, 2006, short paper, pp. 334-338.

Acceptance ratio (short papers): 30%

This paper was listed as the **Candidate** for the Most Influential Paper Award from ICSM 2006

[C6] Buchta, J., Petrenko, M., Poshyvanyk, D., Rajlich, V., "Teaching Evolution of Open Source Projects in Software Engineering Courses", in the *Proceedings of the 22nd IEEE International Conference on Software Maintenance (ICSM'06)*, Philadelphia, PA, Sept. 25-27, 2006, pp. 136-144.

Acceptance ratio: 28%

[C5] Poshyvanyk, D., Guéhéneuc, Y., Marcus, A., Antoniol, G., Rajlich, V., "Combining Dynamic and Information Retrieval Approaches for Feature Location in the Source Code", in the *Proceedings of the 14th IEEE International Conference on Program Comprehension (ICPC'06)*, Athens, Greece, June 14-16, 2006, pp. 137-148.

Acceptance ratio: 36%

This paper won the **Best Paper Award**

This paper was the **Runner up** for the Most Influential Paper Award from ICPC 2006

[C4] Poshyvanyk, D., Marcus, Dong, Y., "JIRiSS - an Eclipse plug-in for Source Code Exploration", in the *Proceedings of the 14th IEEE International Conference on Program Comprehension (ICPC'06)*, Research Demonstration, Athens, Greece, June 14-16, 2006, pp. 252-255.

[C3] Xie, X., Poshyvanyk, D., and Marcus, A., "3D Visualization for Concept Location in Source Code", in the *Proceedings of the 28th IEEE/ACM International Conference on Software Engineering (ICSE'06)*, Research Demonstration, Shanghai, China, May 20-28, 2006, pp. 839-842.

Acceptance ratio: 45%

[C2] Marcus, A., Poshyvanyk, D., "The Conceptual Cohesion of Classes" in the *Proceedings of the 21st IEEE International Conference on Software Maintenance (ICSM'05)*, Budapest, Hungary, September 25-30, 2005, pp. 133-142.

Acceptance ratio: 30%

[C1] Poshyvanyk, D., Marcus, A., Dong, Y., Sergeyev, A., "IRiSS - A Source Code Exploration Tool" in the *21st IEEE International Conference on Software Maintenance (ICSM'05)*, the *Industrial and Tool Proceedings*, Budapest, Hungary, September 25-30, 2005, pp. 69-72.

Book Chapters

[B1] De Lucia, A., Marcus, A., Oliveto, R., Poshyvanyk, D., "Information Retrieval Methods for Automated Traceability Recovery", in *Software and Systems Traceability* Cleland-Huang, J.; Gotel, O.; Zisman, A. (Eds.), Springer, ISBN 978-1-4471-2238-8, February 2012, pp. 71-98

Workshop Papers, Tutorials, Technical Briefings, Posters, and Keynotes

[P19] Ami, A., Cooper, N., Kafle, K., Moran, K., Poshyvanyk, D., and Nadkarni, A., "Why Crypto-detectors Fail: A Systematic Evaluation of Cryptographic Misuse Detection Techniques", Poster at *Network and Distributed System Security Symposium (NDSS'22)*

- [K18] **Moran, K., Bernal-Cárdenas, C., Linares-Vásquez, M.,** and Poshyvanyk, D., "Overcoming Language Dichotomies: Toward Effective Program Comprehension for Mobile App Development" in *Proceedings of 26th IEEE/ACM International Conference on Program Comprehension (ICPC'18)*, Gothenburg, Sweden, May 27- 28
- [K17] Poshyvanyk, D., "Development, Testing and Maintenance of Android Apps: Challenges, Tools, and Future Directions", in *Proceedings of 5th IEEE/ACM International Conference on Mobile Software Engineering and Systems (MOBILESoft'18)*, May 27-28, Gothenburg, Sweden
- [T16] **Moran, K., Linares-Vásquez, M.,** and Poshyvanyk, D., "Automated GUI Testing of Android Apps: From Research to Practice", in *Proceedings of 39th IEEE/ACM International Conf. on Software Engineering (ICSE'17)*, Technical Briefing, Buenos Aires, Argentina, May 20-28, 2017.
- [T15] **Moran, K., Linares-Vásquez, M.,** and Poshyvanyk, D., "Automated GUI Testing of Android Apps: From Research to Practice", 32nd *IEEE International Conference on Software Maintenance and Evolution (ICSME'16)*, Technical Briefing, Raleigh, NC, October 2-10, 2016.
- [T14] **Linares-Vásquez, M., Moran, K.,** and Poshyvanyk, D., "Automated GUI Testing of Android Apps: Challenges, Approaches, Tools, and Best Practices", 31st *IEEE/ACM Conf. on Automated Software Engineering (ASE'16)*, Tutorial, Singapore, Singapore, September 3-7, 2016.
- [W13] **Dit, B.,** Panichella, A., **Moritz, E.,** Oliveto, R., Di Penta, M., Poshyvanyk, D., and De Lucia, A., "Configuring Topic Models for Software Engineering Tasks in TraceLab", in *Proceedings of 7th ICSE'13 International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE'13)*, San Francisco, California, May 19, 2013, pp. 105-109.
- [W12] Cleland-Huang, J., Czauderna, A., Dekhtyar, A., Gotel O., Huffman Hayes, J., Keenan, E., Leach, G., Maletic, J. Poshyvanyk, D., Shin, Y., Zisman, A., Antoniol, G., Berenbach, B., Egyed, A., Maeder, P. "Grand Challenges, Benchmarks, and TraceLab: Developing Infrastructure for the Software Traceability Research Community", in *Proc. of 6th ICSE'11 Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE'11)*, Honolulu, Hawaii, USA, May 23, 2011.
- [W11] **Klock, S., Gethers, M., Dit, B.,** Poshyvanyk, D. "Traceclipse: An Eclipse Plug-in for Traceability Link Recovery and Management", in *Proc. of 6th ICSE'11 Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE'11)*, Honolulu, Hawaii, USA, May 23, 2011.
- [W10] Poshyvanyk, D., Di Penta, M., Kagdi, H. "6th International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE 2011)", in *Proceedings of the 33rd IEEE/ACM Conf. on Software Engineering (ICSE'11)*, Honolulu, Hawaii, USA, May 23, 2011, pp. 1214-1215.
- [W9] **McMillan, C.,** Poshyvanyk, D., and Grechanik, M., "Recommending Source Code Examples via API Call Usages and Documentation", in *Proc. of 2nd ICSE'10 Workshop on Recommendation Systems for Software Engineering (RSSE'10)*, Cape Town, May 4, 2010.
- [W8] Antoniol, G., Oliveto, R., Poshyvanyk, D. "Foreword for 5th International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE 2009)", in *Proc. of the 31st Conf. on Software Engineering (ICSE'09)*, Vancouver, Canada, May 16-24, 2009, pp. 472-473.
- [W7] **McMillan, C.,** Poshyvanyk, D., and **Revelle, M.,** "Combining Textual and Structural Analysis of Software Artifacts for Traceability Link Recovery", in *the Proceedings of 5th International ICSE'09 Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE'09)*, Vancouver, Canada, May 18th, 2009, pp. 41-48.
- [W6] Grechanik, M., Poshyvanyk, D., "Evaluating Recommended Applications", in *the Proceedings of International FSE'08 Workshop on Recommendation Systems for Software Engineering (RSSE'08)*, Atlanta, Georgia, November 10th, 2008.

[W5] **Dit, B.**, Poshyvanyk, D., Marcus, A., "Measuring the Semantic Similarity of Comments in Bug Reports", *1st International ICPC2008 Workshop on Semantic Technologies in System Maintenance (STSM'08)*, Amsterdam, The Netherlands, June 10th, 2008.

[W4] Poshyvanyk, D., Petrenko, M., Marcus, A., "Integrating COTS Search Engines into Eclipse: Google Desktop Case Study", *2nd International ICSE2007 Workshop on Incorporating COTS Soft. into Software Systems: Tools and Techniques (IWICSS'07)*, Minneapolis, May 22, MN, 2007.

[W3] Poshyvanyk, D., Marcus, A., "Using Traceability Links to Assess and Maintain the Quality of Software Documentation", *4th ACM International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE'07)*, Lexington, KY, March 22-23, 2007, pp. 27-30.

[W2] Xie, X., Poshyvanyk, D., and Marcus, A., "Support for Static Concept Location with sv3D", in *Proceedings of 3rd IEEE International Workshop on Visualizing Software for Understanding and Analysis (VISSOFT'05)*, Budapest, Hungary, September 26, pp. 102-107.

[W1] Marcus, A., Xie, X., Poshyvanyk, D., "When and How to Visualize Traceability Links", in *the Proceedings of the 3rd ACM International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE'05)*, Long Beach, CA, November 8, pp. 56-61.

Patents

[P1] **Moran, K., Linares-Vásquez, M., Bernal-Cárdenas, C.,** and Poshyvanyk, D., "Computer Aided Bug Reporting System for GUI Applications", United States Utility Patent - 10,083,106

Formal Conference Presentations, Invited Talks, and Research Visits

Invited talk on "Deep Learning for Software Engineering" at the Software Engineering at the Era of LLMs Track of 38th IEEE/ACM International Conference on Automated Software Engineering ([ASE'23](#))

Invited talk on "Tips on Scoping Your Research Agenda Before and After Tenure" at the New Faculty Symposium of 38th IEEE/ACM International Conference on Automated Software Engineering ([ASE'23](#))

ACM Distinguished Speaker talk (virtual) "Deep Learning for Software Engineering" at the Institute of Information Technology ([IIT](#)), University of Dhaka, India, July 17, 2023

ACM Distinguished Speaker talk (virtual) "Deep Learning for Software Engineering" at Madanapalle Institute of Technology & Science ([MITS](#)), June 27, 2023

Invited talk "Towards an Interpretable Science for Deep Code Generation", at the U.S. Leadership in Software Engineering & AI Engineering [Workshop: Critical Needs and Priorities](#), Alexandria, VA, June 20-21, 2023

Poster on "Enabling Data-Driven Security and Safety Analyses for Cyber-Physical Systems" at the 12th NSF Cyber-Physical Systems (CPS) PI meeting, Arlington, VA, Nov 8-9, 2022.

Keynote talk "Deep Learning and Software Engineering: Past, Present and Future" at the Workshop on Natural Language based SE ([NLBSE](#)) collocated with [ICSE'22](#)

Invited talk (virtual) "Deep Learning for Software Engineering" at the University of Virginia, Charlottesville, VA, January 31st, 2022.

Most Influential Paper presentation from ICSME 2011 "On Integrating Orthogonal Information Retrieval Methods to Improve Traceability Link Recovery: Ten Year Later" at the 37th IEEE International Conference on Software Maintenance and Evolution (ICSME'21), October 1st, 2021

Panelist presentation at the Networking and Information Technology Research & Development (NITRD) Workshop on "Software in the Era of Extreme Heterogeneity", Sept. 22-24, 2020

Most Influential Paper presentation from ICPC 2010 "On the Equivalence of Information Retrieval Methods for Automated Traceability Link Recovery: Ten Year Later" at the 28th IEEE International Conference on Program Comprehension (ICPC'20), July 15th, 2020

Invited (virtual) Talk (with Baishakhi Ray) on "Deep Learning and Software Engineering: State of Research and Future Directions; A Community Report Resulting from the 2019 NSF Workshop on DL and SE", Discussion series by the Software Productivity, Sustainability, and Quality and Artificial Intelligence R&D Interagency Working Groups, and the Artificial Intelligence R&D Discussion Series at the Networking and Information Technology Research and Development (NITRD), Washington D.C., June 4th, 2020

Invited Talk "Deep Learning for Software Engineering", 2nd International Summer School on Software Engineering ([SIESTA'19](#)), Termoli, Italy, September 5th, 2019

Invited Talk (with Kevin Moran) "Better Together: Deep Learning and Software Engineering", National Institute of Standards and Technology ([NIST](#)), U.S. Department of Commerce, July 22nd, 2019

Invited Talk "How to navigate graduate school toward a rewarding Ph.D." Software Engineering Mentoring Workshop at [ICSE'19](#), Montreal, Canada, May 28th, 2019

Cisco Advanced Security Research Advisory Board Meeting presentation (with Kevin Moran) on "Enabling Integrity and Security Assurance via Software Traceability", April 30th, 2019

Invited work on "Better Together: Deep Learning and Software Engineering", Discussion series by the Software Productivity, Sustainability, and Quality and Artificial Intelligence R&D Interagency Working Groups, and the Artificial Intelligence R&D Discussion Series at the Networking and Information Technology Research and Development (NITRD), Washington D.C., March 7th, 2019 [[YouTube](#)]

Invited talk "Development, Testing and Maintenance of Android Apps: Challenges, Tools, and Future Directions" at Virginia Tech, October 5th, 2018

Invited talk "Development, Testing and Maintenance of Android Apps: Challenges, Tools, and Future Directions" at Georgia Tech, September 12th, 2018

Invited talk "Machine Learning-Based Prototyping of Graphical User Interfaces for Mobile Apps" at the Software Engineering for Machine Learning Applications ([SEMELA](#)), École Polytechnique de Montréal, June 12-13, 2018

Keynote talk "Overcoming Language Dichotomies: Toward Effective Program Comprehension for Mobile App Development" at the 26th IEEE/ACM International Conference on Program Comprehension ([ICPC'18](#)), Gothenburg, Sweden, May 27- 28, 2018

Keynote talk "Development, Testing and Maintenance of Android Apps: Challenges, Tools, and Future Directions" at the 5th IEEE/ACM International Conference on Mobile Software Engineering and Systems ([MOBILESoft'18](#)), Gothenburg, Sweden, May 27- 28, 2018

Cisco Advanced Security Research Advisory Board Meeting presentation (with Kevin Moran) on "Enabling Integrity and Security Assurance via Software Traceability", May 8th, 2018

Cisco Research Center presentation (with Kevin Moran) on Enabling Integrity and Security Assurance via Information Retrieval Software Traceability: Current Progress and the Next Steps, March 6th, 2018

Most Influential Paper presentation from ICPC 2007 “Combining Formal Concept Analysis with Information Retrieval for Concept Location in Source Code” at the 25th IEEE International Conference on Program Comprehension (ICPC’17), May 23rd, 2017.

Keynote, Most Influential Paper from ICSM 2006 presentation “The Conceptual Coupling Metrics for Object-Oriented Systems” at the 32nd IEEE International Conference on Software Maintenance and Evolution (ICSME’16), Raleigh, NC, October 5th, 2016.

Invited tutorial presentation “Maintaining and Evolving Mobile Apps” at the 2016 Summer School on Software Engineering, Free University of Bolzano-Bozen, Bolzano, Italy, September 15th, 2016.

Invited talk “Automated GUI Testing of Android Apps: From Research to Practice” at the Free University of Bolzano-Bozen, Bolzano, Italy, September 12th, 2016.

Research paper presentation “On Automatically Detecting Similar Android Apps” at the ICPC’16, May 17th, Austin, TX, 2016.

Invited talk "Supporting Evolution and Maintenance of Mobile Apps" at the University of Texas at Dallas, Richardson, TX, March 28th, 2016.

Invited talk "Supporting Evolution and Maintenance of Mobile Apps" at the University of Virginia, Charlottesville, VA, March 16th, 2016.

NL+SE: NSF Interdisciplinary Workshop on Statistical NLP and Software Engineering, Microsoft Research, Redmond, WA, October 25-27, 2015.

Keynote talk “Mining Unstructured Data for Mobile Software Development: Challenges and Opportunities” at 5th Workshop on Mining Unstructured Data ([MUD’15](#)), Bremen, Germany, September 28th, 2015.

Invited talk “Supporting and Accelerating Reproducible Research in Software Maintenance using TraceLab Component Library” at 8th International Symposium on Software and Systems Traceability (SST’15), Florence, Italy, May 17th, 2015

Invited talk “Program comprehension tools for searching code and documenting changes” and research visit at ABB Corporate Research, Raleigh, NC, February 6th, 2015

Invited talk “On the impact of API change- and fault-proneness on the user ratings of Android apps” at 36th CREST Open Workshop on “App Store Analysis”, University College London, UK, October 27th – October 28th, 2014

Dagstuhl Seminar 14261, "Software Development Analytics", Schloss Dagstuhl, Wadern, Germany, June 22-June 27, 2014

Invited talk "Searching for Relevant Functions and Their Usages in Millions of Lines of Code" and research visit at Florida State University, Tallahassee, USA, March 21, 2014

Invited talk "Searching for Relevant Functions and Their Usages in Millions of Lines of Code" at George Mason University, Fairfax, USA, March 28, 2013

Invited talk "Searching for Relevant Functions and Their Usages in Millions of Lines of Code" at Drexel University, Philadelphia, USA, February 25, 2013

Research paper presentation on "Detecting Similar Software Applications" at the ICSE’12, Zurich, Switzerland, June 6, 2012

Technical Briefing on "Software Engineering in the Age of Data Privacy", co-presented at the 34th IEEE/ACM International Conference on Software Engineering (ICSE'12), Zurich, Switzerland, June 5, 2012

Invited talk at the Ultra-Large Scale Software CREATE Distinguished Seminar on "Searching for Relevant Functions and Their Usages in Millions of Lines of Code" and research visit at Queen's University, Kingston, Ontario, April 20, 2012

Research visit to DePaul University for NSF project on "Development of a Software Traceability Instrument to Facilitate and Empower Traceability Research and Technology Transfer", Chicago, IL, April 9-10, 2012

Research visit to DePaul University for NSF project on "Development of a Software Traceability Instrument to Facilitate and Empower Traceability Research and Technology Transfer", Chicago, IL, January 24-25, 2011

Invited talk on "Utilizing Web Mining Algorithms to Support Feature Location in Source Code" and research visit at Accenture Technology Labs, Chicago, IL, September 30-October 2, 2010

Invited talk "Using Data Fusion and Web Mining to Support Feature Location in Software" and research visit on at École Polytechnique de Montréal, Montreal, Canada, August 2-4, 2010

Research visit to DePaul University for NSF project launch on "Development of a Software Traceability Instrument to Facilitate and Empower Traceability Research and Technology Transfer", Chicago, IL, July 19-20, 2010

Research paper presentation of "On the Equivalence of Information Retrieval Methods for Automated Traceability Link Recovery" at the ICPC'10, Braga, Portugal, June 30, 2010

Research paper presentation of "Using Data Fusion and Web Mining to Support Feature Location in Software" at the ICPC'10, Braga, Portugal, June 30, 2010

Formal research demo presentation of "FLAT³: Feature Location and Textual Tracing Tool" at the ICSE'10, Cape Town, South Africa, May 7th, 2010

Research paper presentation of "Modeling Class Cohesion as Mixtures of Latent Topics" at the ICSM'09, Edmonton, Alberta, Canada, September 24, 2009

Research paper presentation of "Using Information Retrieval to Support Software Maintenance Tasks" at the ICSM'09, Edmonton, Alberta, Canada, September 22, 2009

Research visit to Accenture Technology Labs, Chicago, IL, August 27-29, 2009

Project progress report presentation of "Software Plans: Multi-Dimensional Separation of Concerns" at the AFOSR Systems and Software PI Meeting, Arlington, VA, May 27, 2009

Research paper presentation of "Creating and Evolving Software by Searching, Selecting and Synthesizing Relevant Source Code" at the ICSE-NIER'09, Vancouver, BC, Canada, May 20, 2009

Research paper presentation of "Who Can Help Me with this Change Request?" at the ICPC'09, Vancouver, British Columbia, Canada, May 18, 2009

Research paper presentation of "Evaluating Recommended Applications" at the RSSE'08, Atlanta, Nov 10, 2008

Invited talk "Using Information Retrieval to Support Concept Location in Software" at Towson U., North Dakota State U., Lehigh U., William and Mary, U. of Houston, U. of Denver, U. of Missouri-Rolla, U. of Louisiana at Lafayette, U. of Texas at San Antonio, 2008

Research paper presentation of "Feature Location via Information Retrieval based Filtering of a Single Scenario Execution Trace" at IEEE/ACM ASE'07, Georgia, Atlanta, November 8, 2007

Doctoral symposium presentation of "Using Information Retrieval to Support Design of Incremental Change of Software" at IEEE/ACM ASE'07, Georgia, Atlanta, November 5, 2007

Invited colloquium presentation of "Using Information Retrieval to Support Software Maintenance Tasks" at Wayne State University, November, 2007

Research paper presentation of "Combining Formal Concept Analysis with Information Retrieval for Concept Location in Source Code" at IEEE ICPC'07, Banff, Canada, June 27, 2007

Research paper presentation of "Integrating COTS Search Engines into Eclipse: Google Desktop Case Study" at ICSE'07 IWICSS, Minneapolis, MN, May 22, 2007

Research paper presentation of "Using Traceability Links to Assess and Maintain the Quality of Software Documentation" at ACM GCT/TEFSE'07, Lexington, KY, March 23, 2007

Research paper presentation of "The Conceptual Coupling Metrics for Object-Oriented Systems" at IEEE ICSM'06, Philadelphia, PA, September 27, 2006

Research paper presentation of "Combining Probabilistic Ranking and Latent Semantic Indexing for Feature Identification" at IEEE ICPC'06, Athens, Greece, June 15, 2006

Research demo presentation of "JIRiSS - an Eclipse plug-in for Source Code Exploration" at IEEE ICPC'06, Athens, Greece, June 16, 2006

Research demo presentation of "3D Visualization for Concept Location in Source Code" at IEEE/ACM ICSE'06, Shanghai, China, May 26, 2006

Poster presentation of "JRipples: An Eclipse Plug-in for Software Evolution" ETX'05, CA, 2005

Teaching Experience

Instructor, William and Mary (Fall 2023)

Course: Software Engineering (CSci-435/535, Undergraduate/Graduate)

Instructor, William and Mary (Spring 2023)

Course: Advanced Software Engineering (CSci-635, Graduate)

Instructor, William and Mary (Fall 2022)

Course: Software Engineering (CSci-435/535, Undergraduate/Graduate)

Instructor, William and Mary (Spring 2022)

Course: Advanced Software Engineering (CSci-635, Graduate)

Instructor, William and Mary (Fall 2021)

Course: Software Engineering (CSci-435/535, Undergraduate/Graduate)

Instructor, William and Mary (Spring 2021)

Course: Advanced Software Engineering (CSci-635, Graduate)

Instructor, William and Mary (Fall 2020)

Course: Software Engineering (CSci-435/535, Undergraduate/Graduate)

Instructor, William and Mary (Spring 2020)

Course: Advanced Software Engineering (CSci-635, Graduate)

Instructor, William and Mary (Fall 2019)

Course: Software Engineering (CSci-435/535, Undergraduate/Graduate)

Instructor, William and Mary (Spring 2019)
Course: Secure Software Engineering (CSci-780, Graduate)

Instructor, William and Mary (Fall 2018)
Course: Software Engineering (CSci-435/535, Undergraduate/Graduate)

Instructor, William and Mary (Spring 2018)
Course: Advanced Software Engineering (CSci-635, Graduate)

Instructor, William and Mary (Fall 2017)
Course: Software Engineering (CSci-435/535, Undergraduate/Graduate)

Instructor, William and Mary (Spring 2017)
Course: Software Engineering (CSci-435/535, Undergraduate/Graduate)

Instructor, William and Mary (Fall 2016)
Course: Advanced Software Engineering (CSci-635, Graduate)

Instructor, William and Mary (Spring 2016)
Course: Software Engineering (CSci-435/535, Undergraduate/Graduate)

Instructor, William and Mary (Fall 2015)
Course: Advanced Software Engineering (CSci-635, Graduate)

Instructor, William and Mary (Fall 2014)
Course: Topics in Mining Software Repositories (CSci-780, Graduate)

Instructor, William and Mary (Spring 2014)
Course: Advanced Software Engineering (CSci-635, Graduate)

Instructor, William and Mary (Fall 2013)
Course: Software Maintenance and Evolution (CSci-780, Graduate)

Instructor, William and Mary (Spring 2013)
Course: Software Engineering (CSci-435/535, Undergraduate/Graduate)

Instructor, William and Mary (Fall 2012)
Course: Advanced Software Engineering (CSci-635, Graduate)

Instructor, William and Mary (Spring 2012)
Course: Software Engineering (CSci-435/535, Undergraduate/Graduate)

Instructor, William and Mary (Fall 2011)
Course: Advanced Software Engineering (CSci-635, Graduate)

Instructor, William and Mary (Spring 2011)
Course: Software Engineering (CSci-435/535, Undergraduate/Graduate)

Instructor, William and Mary (Fall 2010)
Course: Advanced Software Engineering (CSci-635, Graduate)

Instructor, William and Mary (Spring 2010)
Course: Software Engineering (CSci-435/535, Undergraduate/Graduate)

Instructor, William and Mary (Fall 2009)
Course: Topics in Software Maintenance and Evolution (CSci-780-02, Graduate)

Instructor, William and Mary (Spring 2009)
Course: Software Engineering (CSci-435/535, Undergraduate/Graduate)

Instructor, William and Mary (Fall 2008)

Course: Topics in Software Maintenance and Evolution (CSci-780-02, Graduate)

Teaching Assistant, Wayne State University (Winter 2007, Fall 2005, Winter 2005)

Course: Intro to Software Engineering (CSC 4110, Undergraduate), taught by Andrian Marcus.

Teaching Assistant, Wayne State University (Winter 2007)

Course: Software Engineering Environments (CSC 7110, Graduate), taught by Andrian Marcus.

Lab Instructor, Wayne State University (Winter 2006)

Course: Data Structures and Algorithms (CSC2200, Undergraduate), taught by Suzanne Jennings

Teaching Assistant, Wayne State University (Fall 2004)

Course: Advanced Software Engineering (CSC 6110, Graduate), taught by Václav Rajlich

Instructor, Wayne State University (Summer 2004)

Course: Intro to Computer Science (CSC 1000, Undergraduate).

Lab Instructor, Wayne State University (Winter 2004)

Course: Intro to Computer Science (CSC 1000, Undergraduate), taught by Narendra Goel

Teaching Assistant, Wayne State University (Fall 2003)

Course: Hardware Architecture (CSC 4100, Undergraduate), taught by Loren Schwiebert

Teaching Assistant, The National University of "Kyiv-Mohyla Academy" (Winter 2002)

Course: Declarative Programming and Knowledge-based Systems (Graduate).

Student Supervision

Current Graduate Students:

David Nader Palacio, *William and Mary*, Ph.D. student (Fall 2017 – present)

Ph.D. thesis title: *TBD*

Amit Seal Ami, *William and Mary*, Ph.D. student (Fall 2018 – present)

(co-supervised with Adwait Nadkarni)

Ph.D. thesis title: *TBD*

Awards: COVA CCI Dissertation Fellowship Award

Daniel Humberto Rodriguez Cardenas, *William and Mary*, Ph.D. student (Fall 2021 – present)

Ph.D. thesis title: *TBD*

Yanfu Yan, *William and Mary*, Ph.D. student (Summer 2021 – present)

Ph.D. thesis title: *TBD*

Sebastian Alejandro Velasco Dimate, *Ph.D. student* (Fall 2022 – present)

Ph.D. thesis title: *TBD*

Awards: Selected as [CRA-E Graduate Fellow](#)

Trevor Stalnaker, *Ph.D. student* (Fall 2021 – present)

(co-supervised with Oscar Chaparro)

Ph.D. thesis title: *TBD*

Awards: 2023-2025 [VSGC](#) Graduate Research Fellowship

Nathan Wintersgill, *Ph.D. student* (Fall 2022 – present)

(co-supervised with Oscar Chaparro)

Ph.D. thesis title: *TBD*

Dipin Khati, *Ph.D. student* (Summer 2022 – present)

Ph.D. thesis title: *TBD*

Aaron Harris, *William and Mary, M.S./Ph.D. student (Summer 2022 – present)*
M.S./Ph.D. thesis title: *TBD*

Conor O'Brien, *William and Mary, M.S. student (Fall 2023 – present)*
M.S. thesis title: *TBD*

Current Undergraduate Students:

Andrew Chen, *William and Mary, undergraduate, honors thesis (since December 2022)*,
Project title: Interpretability for Large Language Models Trained on Functional
Programming Languages

Lydia Danas, *William and Mary, undergraduate, honors thesis (since Fall 2023)*,
Project title: *TBD*

Henry Burke, *William and Mary, undergraduate, honors thesis (since Summer 2023)*,
Project title: *TBD*

Cole Granger, *William and Mary, undergraduate, honors thesis (since Summer 2023)*,
Project title: *TBD*

Past Ph.D. Students:

Nathan Cooper *William and Mary, Ph.D. student (Fall 2018 – Spring 2023)*
Ph.D. thesis title: Intelligent Software Tooling for Improving Software Development
Awards: 2020-2022 [VSGC](#) Graduate Research Fellowship
ACM SIGSOFT Distinguished Paper Award at ICSE'20
2021 Laurie Sanderson Award for Excellence in Undergraduate Mentoring
First position after graduation: Lead Research Scientist for the [Code.AI](#) Team at [Stability.AI](#)

Carlos Eduardo Bernal Cardenas, *William and Mary, Ph.D. student (Fall 2014 – August 2021)*
Ph.D. thesis title: On Supporting Android Software Developers and Testers
Awards: *ACM SIGSOFT Distinguished Paper Award at ESEC/FSE'15*
ACM SIGSOFT Distinguished Paper Award at ESEC/FSE'19
ACM SIGSOFT Distinguished Paper Award at ICSE'20
First position after graduation: Software Development Engineer II, [Microsoft](#)

Cody Watson, *William and Mary, Ph.D., 2020*
Ph.D. thesis title: Deep Learning in Software Engineering (DL4SE)
First position after graduation: Tenure-track Assistant Professor at [Washington and Lee](#)

Michele Tufano, *William and Mary, Ph.D., 2019*
Ph.D. thesis title: Learning Code Transformations via Neural Machine Translation
Awards: *ACM SIGSOFT Distinguished Paper Award at ICSE'15*
*William & Mary Graduate Research Symposium Award for Excellence in Scholarship in
the Natural & Computational Sciences, 2019*
First position after graduation: Machine learning Software Engineer at [Microsoft](#)
Current position: Applied Scientist in Visual Studio group at [Microsoft](#)

Kevin Moran, *William and Mary, Ph.D., 2018*
Ph.D. thesis title: Automating Software Development for Mobile Computing Platforms
Awards: *MobileSoft'23 Rising Star Award*
ACM SIGSOFT Distinguished Paper Award at ICSE'20
ACM SIGSOFT Distinguished Paper Award at ESEC/FSE'19

- Best Paper Award at [CODAPSY'19](#)
 2018 Laurie Sanderson Award for Excellence in Undergraduate Mentoring
 2018 W&M Graduate Research Symposium Award for Excellence in Scholarship
 2015-2017 [VSGC](#) Graduate Research Fellowship
 2nd place (silver medal) in ACM Student Research Competition (SRC) at [FSE'15](#)
 First position after graduation: Post-doc fellow at William and Mary
 Current position: Tenure-track Assistant Professor at [George Mason University](#)
- Christopher Vendome, *William and Mary, Ph.D., 2018*
 Ph.D. thesis title: *Assisting Software Developers with License Compliance*
 Awards: *ACM SIGSOFT Distinguished Paper Award at ASE'17*
 First position after graduation: Tenure-track Assistant Professor at the Department of Computer Science and Software Engineering at [Miami University](#)
- Qi Luo, *William and Mary, Ph.D., 2018*
 Ph.D. thesis title (tentative): *On Improving (Non) Functional Testing*
 First position after graduation: Research/Software Scientist at [Amazon](#), Alexa machine learning science team
- Boyang Li, *William and Mary, Ph.D., 2018*
 Ph.D. thesis title: *Automatically Documenting Software Artifacts*
 Awards: *Honorable Mention, CHI'17 and CHI'18*
 First position after graduation: Senior R&D Engineer at ABB Robotics R&D Center, CA
 Current position: Senior Software Engineer at [LinkedIn](#)
- Martin White, *William and Mary, Ph.D., 2017*
 Ph.D. thesis title: *Deep Learning Software Repositories*
 First position after graduation: Senior Lead Scientist at [Booz Allen Hamilton](#)
 Current position: Chief Scientist at [Booz Allen Hamilton](#)
- Mario Linares-Vásquez, *William and Mary, Ph.D., 2016*
 Ph.D. thesis title: *Supporting Evolution and Maintenance of Android Apps*
 First position after graduation: Tenure-track Assistant Professor, [Universidad de los Andes](#)
 Awards: *Best Paper Award, 29th IEEE [ICSM'13](#)*
 1st place (gold medal) in ACM Student Research Competition (SRC) at [ICSE'15](#)
 International Student Achievement Award, Jack Wolf Scholarship
ACM SIGSOFT Distinguished Paper Award at [ESEC/FSE'15](#)
 Best Presentation Award at ICSME'15 Industry Track
 2016 Stephen K. Park Graduate Research Award
ACM SIGSOFT Distinguished Paper Award at [ICPC'16](#)
ACM SIGSOFT Distinguished Paper Award at [ASE'17](#)
- Bogdan Dit, *William and Mary, Ph.D., 2015*
 Ph.D. thesis title: *Configuring and Assembling Information Retrieval based Solutions for Software Engineering Tasks*
 First position after graduation: Tenure-track Assistant Professor, [Boise State University](#).
 Awards: *Best Paper Award, 29th IEEE [ICSM'13](#)*
- Collin McMillan, *William and Mary, Ph.D., 2012*
 Ph.D. thesis title: *Searching, selecting, and synthesizing source code components*
 First position after graduation: Tenure-track Assistant Professor, [University of Notre Dame](#)
 Current position: **Associate Professor (with tenure)**, [University of Notre Dame](#)
 Awards: 2011 Stephen K. Park Graduate Research Award

2010-2011 [VSGC](#) Graduate Research Fellowship
ACM SIGSOFT Distinguished Paper Award at [ICSE'14](#)
Best Paper Award at ICPC'14
2015 NSF CAREER [Award](#)

Malcom Gethers, *William and Mary, Ph.D., 2012*

Ph.D. thesis title: *Information Integration for Software Maintenance and Evolution*
First position after graduation: Tenure-track Assistant Professor, University of Maryland,
Baltimore County ([UMBC](#))
Awards: **Most Influential Paper Awards** from ICPC 2010 and ICSME 2011
Arts and Sciences Distinguished Dissertation Award
Southern Regional Education Board (SREB) Dissertation Fellowship (\$20,000), 2011/12
Distinguished Paper Award, 26th IEEE [ICSM'10](#)
2009-2011 [VSGC](#) Graduate Research Fellowship

Meghan Revelle, *William and Mary, Ph.D., 2010*

Ph.D. thesis title: *Supporting Feature-Level Software Maintenance*
First position after graduation: Research Scientist at Air Force
Awards: 2008-2010 [VSGC](#) Graduate Research Fellowship
2008 Google Anita Borg Scholarship Finalist

Past M.S. Students:

Trevor Stalnaker (co-advised with Oscar Chaparro), *W&M, M.S. (Fall 2021 – Spring 2023)*

M.S. thesis title: *A Comprehensive Study of Bills of Materials for Software Systems*
First position after graduation: Ph.D. student at W&M

Scott Marsden, *M.S. student (Fall 2022 – Spring 2023)*

M.S. thesis title: *A Reevaluation of Why Crypto-detectors Fail: A systematic Reevaluation of
Cryptographic Misuse Detection Techniques*

Andrew Sprague, *William and Mary, M.S. (Fall 2018 – Summer 2019)*

M.S. project title: *Machine Learning-based Prototyping of GUIs for Mobile Apps*

George Purnell, *William and Mary, M.S. (Summer 2018 – May 2019)*

M.S. project title: *Learning to Describe Mobile GUIs*
First position after graduation: Software engineer at [Fast Enterprises](#)

Kevin Moran, *William and Mary, M.S./Ph.D. (Summer 2014 – Summer 2015)*

M.S. thesis title: *Enhancing Bug Reports for Mobile Apps.*
First position after graduation: Ph.D. student at William and Mary

Andrew Holtzhauer, *William and Mary, M.S. (Fall 2012 – Summer 2014), NSF REU*

M.S. thesis title: *Studying and Enabling Reuse in Android Mobile Apps.*
First position after graduation: Software Systems Engineer at [MITRE](#)

Evan Moritz, *William and Mary, M.S. (Fall 2011 - Summer 2013), NSF REU*

M.S. thesis title: *TraceLab: Reproducing Empirical Software Engineering Research.*
Awards: *Best Paper Award, 29th IEEE ICSM'13*
First position after graduation: Scientist at [Naval Surface Warfare Center](#)

Derrin Pierret, *William and Mary, M.S. project (January 2009 – May 2009)*

M.S. project title: *Patterns in Software Artifacts*
First position after graduation: software developer at [Fidelity Investments](#).

Xinrong (Travis) Xie, *Wayne State University, M.S. Student, advisor Andrian Marcus (2004 – 2006)*

M.S. Thesis Title: *Visualization of CVS Repository Information*
First position after graduation: software developer at [PayPal](#)

Yubo Dong, *Wayne State University, M.S. Student, advisor Andrian Marcus (2005 – 2007)*
M.S. Thesis Title: *IRiSS and JIRiSS – Interactive Tools for Concept Location in Software Systems*
First position after graduation: software developer at [PPI Tech Communications](#)

Past Undergraduate Students:

Maddy Havranek, *William and Mary, undergraduate, NSF REU (since Summer 2020),*
Honors thesis title: *Translating Video Recordings of Mobile App Usages into
Replayable Scenarios*
First position after graduation: [Peloton](#)

Avi Urbach, *William and Mary, undergraduate, NSF REU (Summer 2021-Fall 2021),*
Project title: *Interpretable Code Generation*

Xianglu Peng, *William and Mary, undergraduate (Summer-Fall 2021),*
Project title: *Supervised DETR model for Tango*
First position after graduation: M.S. student at [Yale University](#)

Charles Wang, *William and Mary, undergraduate (Fall 2020),*
Project title: *A Manifold Exploration of Unconditioned Deep Coding*
First position after graduation: M.S. student at [UC Berkeley](#)

Roger Clanton *William and Mary, undergraduate (Spring 2021)*
Project title: *Using Information Transmission to Interpret Unsupervised Traceability*

Daniel McCrystal, *William and Mary, undergraduate, NSF REU (Summer 2018– 2020),*
Project title: *Empirical Evaluation of Formal Causal Inference Model of Traceability*
Awards: Stephen K. Park Undergraduate Research Award
First position after graduation: Facebook

Ali Yachnes, *William and Mary, undergraduate, NSF REU (Summer 2018– Dec. 2019),*
Project title: *Understanding Functionality in Mobile Application GUIs*
Awards: Stephen K. Park Undergraduate Research Award
First position after graduation: Amazon

Emma Liu, *William and Mary, undergraduate, NSF REU (Summer 2018 – December 2018),*
Project title: *Improving Detecting and Reporting GUI Violations in Android Apps*
First position after graduation: Ph.D. student at [Rice University](#)

Michael Curcio, *William and Mary, undergraduate, NSF REU (Summer 2017-Spring 2018),*
Honors thesis title: *Clarity: An Exploration of Semantic Information Encoded in Mobile
Application GUIs*
First position after graduation: Software Developer at [iWorks](#)

Dan Jelf, *William and Mary, undergraduate, NSF REU (Summer 2017), Project title: Detecting and
Reporting GUI Violations in Android Apps*
First position after graduation: Software Developer at [AidData](#)

Ben Wade, *William and Mary, undergraduate, NSF REU (Summer 2017), Project title: Detecting
License Violations in Deployed Systems*
First position after graduation: Software Analyst at [Daniel H. Wagner Associates](#)

Richard Bonett, *William and Mary, undergraduate, NSF REU (Spring 2017), Project title: Automating
Rapid Prototyping for Android Applications*

First position after graduation: M.S./Ph.D. student at William and Mary

Nathan Owen, *William and Mary, undergraduate, NSF REU (Spring 2017), Project title: Automating Rapid Prototyping for Android Applications*

First position after graduation: Microsoft

Quint Governator, *William and Mary, undergraduate, NSF REU (Summer 2016), Project title: Automatic Generation of Test Cases for Android*

Jack Lynch, *William and Mary, undergraduate, NSF REU (Spring 2016), Project title: A Tool for Autocompleting Bug Reports*

GwonJae Cho, *William and Mary, undergraduate, (Summer 2015), Project title: Large-scale Mining of SVN Repositories on SourceForge*

First position after graduation: graduate student at [Columbia](#) University

Peter Johnson, *William and Mary, undergraduate, NSF REU (Fall 2013), Project title: CrashDroid: reproducible and replayable crash reports for Android*

First position after graduation: [Trello, Inc.](#)

Bina Kakusa, *William and Mary, undergraduate, NSF REU (Spring - Summer 2014), Project title: Studying Feature Location with Brain Computer Interfaces*

First position after graduation: M.D. student at [Stanford](#) University School of Medicine

Jaleo Velasco-Madden, *William and Mary, NSF REU (Fall 2013-Spring 2014)*

Project title: *Rethinking User Interfaces for Feature Location*

First position after graduation: software engineer at [CGI Federal](#)

Michael Wagner, *William and Mary, NSF REU (May 2012-Dec 2012),*

Project title: *ImpactMiner: A Tool for Change Impact Analysis*

First position after graduation: software engineer at [Business & Engineering Systems Co.](#)

Trevor Savage, *William and Mary, Chappell Summer Fellowship (May 2009-Aug 2010)*

Project title: *Identifying and browsing linguistic topics in source code*

First position: graduate student in [HCI](#) at Carnegie Mellon University ([CMU](#))

Governance

Ph.D. dissertation and M.S. thesis committee member:

Yang Song, William and Mary, Ph.D. (2024), advisor Oscar Chaparro

Xiaoyu Sun, Monash University, Ph.D. (2023), advisor John Grundy and Li Li

Kaushal Kafle, William and Mary, Ph.D. (2023), advisor Adwait Nadkarni

Camilo Andres Escobar Velasquez, Universidad de los Andes, Ph.D. (2022), advisor Mario Linares-Vásquez

Sunil Manandhar, William and Mary, Ph.D. (2022), advisor Adwait Nadkarni

Jinfeng Lin, University of Notre Dame, Ph.D. (2022), advisor Jane Cleland-Huang

Mouna Abidi, Polytechnique Montréal, Ph.D. (2021), advisor Foutse Khomh

Masud Rahman, *University of Saskatchewan*, Ph.D. (2020), advisor Chanchal Roy

Bin Lin, *University of Lugano*, Ph.D. (2020), advisors Gabriele Bavota and Michele Lanza

Mohammed Elarnaoty, *Virginia Tech*, Ph.D. (2020), advisor Francisco Servant

Farnaz Behrang, *Georgia Tech*, Ph.D. (2020), advisor Alessandro Orso

Mattia Fazzini, *Georgia Tech*, Ph.D. (2019), advisor Alessandro Orso

Fiorella Zampetti, *University of Sannio*, Ph.D. (2019), advisor Massimiliano Di Penta

Victoria Cooper, *William and Mary*, Ph.D. (2019), advisor Pieter Peers

Simone Romano, *University of Basilicata*, Potenza Ph.D. (2018), advisor Giuseppe Scanniello
 Andrea Di Sorbo, *U Sannio*, Ph.D. (2017), advisors Gerardo Canfora & Corrado Aaron Visaggio
 Laura Inozemtseva, *University of Waterloo*, Ph.D. (2017), advisor Reid Holmes
 Majda Moussa, *École Polytechnique Montréal*, Ph.D., advisor Giulio Antonioli
 Ruben Saborido, *École Polytechnique Montréal*, Ph.D., advisor Giulio Antonioli
 Ed Novak, *William and Mary*, Ph.D. (2016), advisor Qun Li
 Md Atiqur Rahman, *William and Mary*, Ph.D., advisor Peter Kemper
 Mingzhou Zhou, *William and Mary*, Ph.D., advisor Xipeng Shen
 Guoyang Chen, *William and Mary*, Ph.D., advisor Xipeng Shen
 Weilin Wang, *William and Mary*, Ph.D., advisor Xipeng Shen
 Panayiotis Foteinos, *William and Mary*, Ph.D. (2013), advisor Nikos Chrisochoides
 Sonia Haiduc, *Wayne State University*, Ph.D. (2013), advisor Andrian Marcus
 Scott Grant, *Queen's University*, Ph.D. (2012), advisor James R. Cordy
 Eddy Z. Zhang, *William and Mary*, Ph.D. (2012), advisor Xipeng Shen
 Kelvin Kai Tian, *William and Mary*, Ph.D. (2012), advisor Xipeng Shen
 Yixun Liu, *William and Mary*, Ph.D. (2011), advisor Nikos Chrisochoides
 Yunlian Jiang, *William and Mary*, Ph.D. (2011), advisor Xipeng Shen
 Ziyu Guo, *William and Mary*, M.S. (2011), advisor Xipeng Shen
 Michael Weissberger, *William and Mary*, M.S. (2010), advisor Nikos Chrisochoides
 Andriy Fedorov, *William and Mary*, Ph.D. (2009), advisor Nikos Chrisochoides

Departmental service:

Graduate Director of Computer Science..... July 2022- July 2024
 Chair of the Graduate Admissions Committee July 2022- July 2024
 Chair, Graduate Recruiting and Outreach Committee..... 2021-2022
 Diversity, Equity and Inclusion Committee..... 2021-2022
 Awards and Prizes Committee 2021-2022
 Chair, Faculty Recruiting Committee..... 2020-2021
 Graduate Recruiting and Outreach Committee..... 2020-2021
 Graduate Admissions Committee 2009-2014, 2016-2019
 Faculty Recruiting Committee 2010-2012, 2013-2021
 Graduate Director of Computer Science..... January 2017- August 2018
 Chair of the Graduate Admissions Committee January 2017- August 2018
 Graduate Curriculum Committee..... 2017-2018, 2022-2023
 Chair of the Colloquium Committee..... 2015-2016
 Park Graduate Award Committee..... 2012/2013
 Departmental Colloquium Committee 2008-2015, 2017-2019
 Departmental hardware committee 2008/2009

College service:

Assistant Dean Search Committee, Arts and Sciences..... 2023-2024
 Committee on Graduate Studies (COGS), Arts and Sciences..... 2022-2024
 Student Fee Professorship Committee Spring 2022
 Faculty compensation board Fall 2021
 Zable Recruitment Fellowships Committee..... 2020-2021
 Term Distinguished Professorship Committee.....2019
 Freshmen Advisor, Academic Advising Program 2010-2014, 2015-2022
 Natural & Comp. Sciences Judging Panel for Graduate Research Symposium 2012-2019
 Committee on Graduate Studies (COGS), Arts and Sciences..... January 2017- August 2018

Grant Writing Panel for W&M Arts and Sciences Graduate Students.....2014
 Arts and Sciences Graduate Awards Committee 2011/2012
 Session Chair for the 9th Annual Graduate Research Symposium (GRS) at W&M 2010-2019

Professional Service

Computer Science Community Service:

Computing Research Association ([CRA-E](#)) Board of Directorssince June 2018
 MSCS Pathway Consortium, as CS@W&M representative.....since 2022

Editorial boards:

Associate Editor for IEEE Transactions on Software Engineering ([TSE](#)) 2017-2021
 Associate Editor for the Empirical Software Engineering Journal ([EMSE](#)), Springersince 2014
 Associate Editor for the Journal of Software: Evolution and Process ([JSEP](#)), Wileysince 2017
 Associate Editor for the Science of Computer Programming ([SCP](#)), Elsevier.....since 2020
 Associate Editor for ACM Trans. on Softw. Engineering and Methodology ([TOSEM](#))since 2021
 ACM TOSEM Board of Distinguished Reviewers ([TOSEM](#))since 2019

Steering Committees:

Member, ACM International Conference on the Foundations of SE ([FSE](#))since 2023
 Member, IEEE/ACM Intern. Conference on Automated Software Engineering ([ASE](#))since 2021
 Member, IEEE/ACM Intern. Conf. on Mobile Software Engineering and Systems 2019-2022
 Member, NL+SE: NSF Interdisciplinary Workshop on Statistical NLP and SE.....2015
 Member, International Conference on Software Maintenance and Evolution ([ICSME](#)) ... 2014-2017
 Chair Elect of the Steering Committee of [ICPC](#) 2012-2014
 Member, International Conference on Program Comprehension ([ICPC](#)), second term... 2013-2016
 Member, International Conference on Program Comprehension ([ICPC](#)), first term..... 2010-2013

Organizing committees:

Program Committee (PC) Co-chair for the ACM SIGSOFT Symposium on the Foundations of Software Engineering ([FSE/25](#))2025
New Ideas and Emerging Results (NIER) Track Chair for the 39th IEEE/ACM International Conference on Automated Software Engineering ([ASE/24](#))2024
General Co-Chair for the 11th IEEE/ACM International Conference on Mobile Software Engineering and Systems ([MOBILESoft/24](#)).....2024
New Faculty Symposium Co-chair for the 38th IEEE/ACM International Conference on Automated Software Engineering ([ASE/23](#))2023
Artifacts Evaluation Co-chair for the ACM SIGSOFT Symposium on the Foundations of Software Engineering ([ESEC/FSE/23](#))2023
Awards Co-Chair for the 10th IEEE/ACM International Conference on Mobile Software Engineering and Systems ([MobileSoft/23](#))2023
Most Influential Paper (MIP) Paper Award Co-chair for the 31st IEEE/ACM International Conference on Program Comprehension ([ICPC/23](#))2023
Doctoral Symposium Co-chair for the 45th IEEE/ACM Intern. Conference on Software Engineering ([ICSE/23](#))2023
Program Committee Co-chair for the 36th IEEE/ACM International Conference on Automated Software Engineering ([ASE/21](#))2021
Program Committee Co-chair for the Research Demonstrations track at the 35th IEEE/ACM International Conference on Automated Software Engineering ([ASE/20](#))2020

Co-chair for the NSF 2019 Workshop on Deep Learning and Software Engineering	2019
Program Committee Co-chair for 6 th IEEE/ACM International Conference on Mobile Software Engineering and Systems (MobileSoft'19).....	2019
Program Committee Co-chair for Negative Results in Software Analysis, Evolution, and Reengineering track at the 25 th IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER'18)	2018
Co-Chair of Tool Demo and Mobile Applications Track at 5 th IEEE/ACM International Conference on Mobile Software Engineering and Systems (MobileSoft'18).....	2018
Program Committee Co-chair for the 32 nd IEEE International Conference on Software Maintenance and Evolution (ICSME'16)	2016
Engaging Undergraduates in Your Research workshop at ICSE'16	2016
Contest Chair (TraceLab) for the 8 th International Symposium on Software and Systems Traceability (SST'15)	2015
Program Committee Co-chair for the Early Research Achievements (ERA) track at the 30 th IEEE International Conference on Software Maintenance (ICSME)	2014
Program Committee Co-chair for the 21 st IEEE International Conference on Program Comprehension (ICPC)	2013
Program Committee Co-chair for the 19 th International Working Conference on Reverse Engineering (WCRE).....	2012
Student Support Chair (ICSM).....	2012
Co-Chair for Student Symposium Track at the 20 th IEEE International Conference on Program Comprehension (ICPC)	2012
Program Committee Co-chair for the 18 th International Working Conference on Reverse Engineering (WCRE).....	2011
Program Committee Co-chair for the Research Demonstrations track at the 27 th IEEE International Conference on Software Maintenance (ICSM).....	2011
Local Chair for the 27 th IEEE International Conference on Software Maintenance (ICSM).....	2011
Local Chair for the 11 th IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM).....	2011
Local Chair for the 13 th IEEE International Symposium on Web Systems Evolution (WSE).....	2011
Co-Chair for Student Symposium Track at the 19 th IEEE International Conference on Program Comprehension (ICPC)	2011
General Chair for the 6 th International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE).....	2011
Program Committee Co-chair for the Early Research Achievements (ERA) track at the 26 th IEEE International Conference on Software Maintenance (ICSM).....	2010
Program Committee Co-Chair for the 5 th International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE) collocated with IEEE/ACM ICSE	2009
Proceedings Chair for IEEE International Conference on Program Comprehension (ICPC).....	2009
Publicity Chair for 4 th IEEE VISSOFT	2007
Co-organizer of Working Session on IR Approaches in Software Evolution at IEEE ICSM	2006

Program Committees and Boards:

40 th IEEE International Conference on Software Maintenance and Evolution (ICSME'24)	2024
ACM International Conference on the Foundations of Software Engineering (FSE'24)	2024
32 nd IEEE International Conference on Program Comprehension (ICPC'24)	2024
ICSE'24 International Workshop on Large Language Models for Code (LLM4Code)	2024
38 th IEEE/ACM ASE – Most Influential Paper Award Committee	2023
38 th IEEE/ACM International Conference on Automated Software Engineering (ASE'23)	2023

39 th IEEE International Conference on Software Maintenance and Evolution (ICSME'23)	2023
ICLR'23 Workshop on Deep Learning for Code (DL4C)	2023
ICSE'23 4 th International Workshop on Automated Program Repair (APR'23)	2023
Joint Meeting of the European Software Engineering Conference and the ACM SIGSOFT	
Symposium on the Foundations of Software Engineering (ESEC/FSE'23)	2023
45 th IEEE/ACM Intern. Conf. on Software Engineering (ICSE'23), Area Chair for SE+AI	2023
38 th IEEE International Conference on Software Maintenance and Evolution (ICSME'22)	2022
ICLR'22 Workshop on Deep Learning for Code (DL4C)	2022
37 th IEEE/ACM International Conference on Automated Software Engineering (ASE'22)	2022
44 th IEEE/ACM Intern. Conference on Software Engineering (ICSE'22), Tool Demos	2022
Joint Meeting of the European Software Engineering Conference and the ACM SIGSOFT	
Symposium on the Foundations of Software Engineering (ESEC/FSE'21)	2021
ACM SIGSOFT International Symposium on Software Testing and Analysis (ISSTA'21)	2021
43 rd IEEE/ACM Intern. Conference on Software Engineering (ICSE'21), Tool Demos	2021
36 th IEEE International Conference on Software Maintenance and Evolution (ICSME'20)	2020
35 th IEEE/ACM International Conference on Automated Software Engineering (ASE'20)	2020
7 th IEEE/ACM Intern. Conf. on Mobile Software Engineering and Systems (MobileSoft'20)	2020
42 nd IEEE/ACM Intern. Conference on Software Engineering (ICSE'20), Program Board	2020
42 nd IEEE/ACM Intern. Conference on Software Engineering (ICSE'20), Workshops Track	2020
35 th IEEE International Conference on Software Maintenance and Evolution (ICSME'19)	2019
27 th ACM Symposium on the Foundations of Software Engineering (ESEC/FSE'19)	2019
16 th ACM/IEEE International Conference on Mining Software Repositories (MSR'19)	2019
10 th International Workshop on Software and Systems Traceability (SST'19) at ICSE'19	2019
26 th IEEE International Conference on Software Analysis, Evolution, and Reengineering	
(SANER'19) – Reproducibility and Negative Results (RENE) Track	2019
41 st IEEE/ACM International Conference on Software Engineering (ICSE'19) –NIER track	2019
41 st IEEE/ACM International Conference on Software Engineering (ICSE'19) –Workshops	2019
33 rd IEEE/ACM International Conference on Automated Software Engineering (ASE'18)	2018
26 th IEEE International Conference on Program Comprehension (ICPC'18)	2018
15 th International Conference on Mining Software Repositories (MSR'18)	2018
Workshop on NLP for Software Engineering (NL4SE)	2018
40 th IEEE/ACM International Conference on Software Engineering (ICSE'18)	2018
40 th IEEE/ACM International Conference on Software Engineering (ICSE'18) –Demo Track	2018
25 th IEEE Intern. Conf. on Software Analysis, Evolution and Reengineering (SANER'18)	2018
32 nd IEEE/ACM International Conference on Automated SE (ASE'17) - ERP	2017
17 th IEEE Intern. Working Conf. on Source Code Analysis and Manipulation (SCAM'17)	2017
33 rd IEEE International Conference on Software Maintenance and Evolution (ICSME'17)	2017
11 th Joint Meeting of the European Software Engineering Conference and the 25 th ACM	
SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE'17)	2017
39 th IEEE/ACM International Conference on Software Engineering (ICSE'17)	2017
14 th IEEE/ACM International Conference on Mining Software Repositories (MSR'17)	2017
8 th ACM/SPEC International Conference on Performance Engineering (ICPE'17)	2017
24 th IEEE Intern. Conf. on Software Analysis, Evolution, & Reengineering (SANER'17)	2017
16 th International Conference on Software Reuse (ICSR'17)	2017
NL+SE: FSE'16 Workshop on the Naturalness of Software (NLSE'16)	2016
31 st IEEE/ACM Conf. on Automated Software Engineering (ASE'16) – Doctoral Symp	2016
24 th ACM Symposium on the Foundations of Software Engineering (FSE'16) – SRC Track	2016
24 th ACM International Symposium on the Foundations of Software Engineering (FSE'16)	2016
16 th IEEE Intern. Working Conf. on Source Code Analysis and Manipulation (SCAM'16)	2016

38 th IEEE/ACM International Conference on Software Engineering (ICSE'16).....	2016
24 th IEEE International Conference on Program Comprehension (ICPC'16)	2016
23 rd IEEE Intern. Conf. on Software Analysis, Evolution and Reengineering (SANER'16)	2016
14 th Intern. Workshop on Principles of Software Evolution (IWPSE'15)	2015
15 th IEEE Intern. Working Conf. on Source Code Analysis and Manipulation (SCAM'15)	2015
31 st IEEE International Conference on Software Maintenance and Evolution (ICSME'15).....	2015
31 st IEEE International Conf. on Software Maintenance and Evolution (ICSME'15) – ERA.....	2015
23 rd IEEE International Conference on Program Comprehension (ICPC'15)	2015
8 th International Symposium on Software and Systems Traceability (SST'15)	2015
12 th Working Conference on Mining Software Repositories (MSR'15).....	2015
37 th IEEE/ACM International Conference on Software Engineering (ICSE'15).....	2015
1 st North American Search-based Software Engineering Symposium (NasBASE'15).....	2015
2 nd IEEE Conf. on Software Visualization (VISSOFT'14) – New Ideas and Tool Demos Track..	2014
21 st Asia-Pacific Software Engineering Conference (APSEC'14)	2014
4 th Int. Workshop on Mining Unstructured Data (MUD'14)	2014
4 th Int. Workshop on Recommendation Systems for Software Engineering (RSSE'14)	2014
30 th IEEE Intern. Conf. on Software Maintenance and Evolution (ICSME'14) – Tool Demos	2014
14 th IEEE Intern. Working Conf. on Source Code Analysis & Manipulation (SCAM'14)	2014
22 nd IEEE International Conference on Program Comprehension (ICPC'14)	2014
11 th Working Conference on Mining Software Repositories (MSR'14).....	2014
36 th IEEE/ACM International Conference on Software Engineering (ICSE'14).....	2014
36 th IEEE/ACM International Conf. on Software Engineering (ICSE'14) – NIER Track	2014
36 th IEEE/ACM Conference on Software Engineering (ICSE'14) – Tutorials and TB Track.....	2014
Joint 18 th European Conference on Software Maintenance and Reengineering / 21 st Working Conference on Reverse Engineering (CSMR-18/WCRE-21).....	2014
Joint 18 th European Conference on Software Maintenance and Reengineering / 21 st Working Conference on Reverse Engineering (CSMR-18/WCRE-21) – Tool Demo Track.....	2014
1 st Working Conference on Software Visualization – New Ideas & Tool Demo(VISSOFT'13)...	2013
20 th Working Conference on Reverse Engineering (WCRE'13)	2013
13 th International Workshop on Principles of Software Evolution (IWPSE'13)	2013
13 th IEEE Int. Working Conf. on Source Code Analysis and Manipulation (SCAM'13).....	2013
1 st Int. ASE'13 Workshop on ML and IR for Software Evolution (MALIR-SE'13)	2013
1 st Int. ICSE'13 Workshop on Natural Language Analysis in SE (NaturaLiSE'13)	2013
29 th IEEE International Conf. on Software Maintenance (ICSM) – Doctoral Symposium.....	2013
10 th Working Conference on Mining Software Repositories (MSR'13).....	2013
7 th International Workshop on Traceability in Emerging Forms of SE (TEFSE'13)	2013
17 th European Conference on Software Maintenance and Reengineering (CSMR).....	2013
35 th IEEE/ACM International Conf. on Software Engineering (ICSE'13)– SCORE'13 Track	2013
12 th IEEE Intern. Conf. on Source Code Analysis and Manipulation (SCAM) – Tool Demos	2012
20 th ACM Symposium on the Foundations of SE (FSE) – Tool Demo Track	2012
28 th IEEE International Conference on Software Maintenance (ICSM).....	2012
28 th IEEE International Conf. on Software Maintenance (ICSM) – Doctoral Symposium.....	2012
4 th Workshop on Search-driven Dev: Users, Infrastructure, Tools & Evaluation (SUITE).....	2012
3 rd International Workshop on Recommendation Systems for Software Engineering (RSSE) ...	2012
20 th IEEE International Conference on Program Comprehension (ICPC)	2012
34 th ACM/IEEE International Conf. on Software Engineering (ICSE) – Tool Demo Track	2012
16 th European Conference on Software Maintenance and Reengineering (CSMR).....	2012
8 th European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE) – Tool Demo Track	2011

12 th International Workshop on Principles on Software Evolution (IWPSE)	2011
27 th IEEE International Conference on Software Maintenance (ICSM)	2011
27 th IEEE International Conference on Software Maintenance (ICSM) – Industry Track.....	2011
17 th Working Conference on Reverse Engineering (WCRE)	2010
26 th IEEE International Conference on Software Maintenance (ICSM)	2010
26 th IEEE International Conference on Software Maintenance (ICSM) – Tool Demo Track	2010
18 th IEEE International Conference on Program Comprehension (ICPC)	2010
14 th European Conference on Software Maintenance and Reengineering (CSMR).....	2010
16 th Working Conference on Reverse Engineering (WCRE)	2009
25 th IEEE International Conference on Software Maintenance (ICSM) – Tool Demo Track	2009
25 th IEEE International Conference on Software Maintenance (ICSM)	2009
17 th IEEE International Conference on Program Comprehension (ICPC)	2009
13 th IEEE Euro Conf. on Software Maintenance and Reengineering (CSMR) – Tool Demo	2009
15 th Working Conference on Reverse Engineering (WCRE) – Tool Demo Track	2008

Research Proposal Reviewer or Panelist:

National Science Foundation (NSF) (one virtual panel).....	2023
Research Grants Council (RGC) of Hong Kong (RGC/HK).....	2023
Coastal Virginia Center for Cyber Innovation (COVA CCI)	2022
National Science Foundation (NSF) (one virtual panel).....	2022
Research Grants Council (RGC) of Hong Kong (RGC/HK).....	2022
National Science Foundation (NSF) (two virtual panels).....	2020
National Science Foundation (NSF), Alexandria, VA (one panel).....	2019
National Science Foundation (NSF), Alexandria, VA (three panels)	2018
Research Grants Council (RGC) of Hong Kong (RGC/HK).....	2018
Research Grants Council (RGC) of Hong Kong (RGC/HK).....	2017
National Science Foundation (NSF), Arlington, VA (two panels).....	2016
Swiss National Science Foundation.....	2016
Research Grants Council (RGC) of Hong Kong (RGC/HK).....	2016
Natural Sciences and Engineering Research Council of Canada (NSERC)	2016
National Science Foundation (NSF), Arlington, VA	2015
Research Grants Council (RGC) of Hong Kong (RGC/HK).....	2015
National Science Foundation (NSF), Arlington, VA	2014
Natural Sciences and Engineering Research Council of Canada (NSERC)	2014
Kuwait Foundation for the Advancement of Sciences (KFAS)	2014
National Science Foundation (NSF), Arlington, VA	2013
Swiss National Science Foundation.....	2012

Editors of special issues:

Guest Editor, continuous special section on AI and SE, ACM Transactions on Software Engineering and Methodology (TOSEM).....	since 2023
Co-editor of ASE'21 special issue, Journal on Automated SE (IASE), Springer	2022
Co-editor of ICSME'16 special issue, Empirical Software Engineering (EMSE), Springer	2017
Co-editor of WCRE'12 special issue, Journal of Software: Evolution and Process (ISEP).....	2013
Co-editor of WCRE'11 special issue, Journal of Software: Evolution and Process (ISEP).....	2012

Conference session chair:

Joint Meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE'23)	2023
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39 th IEEE International Conference on Software Maintenance and Evolution (ICSME'23)	2023
38 th IEEE/ACM International Conference on Automated Software Engineering (ASE'23)	2023
45 th IEEE/ACM International Conference on Software Engineering (ICSE'23)	2023
36 th IEEE/ACM International Conference on Automated Software Engineering (ASE'21)	2021
40 th IEEE/ACM International Conference on Software Engineering (ICSE'18) – Tool Demos ...	2018
38 th IEEE/ACM International Conference on Software Engineering (ICSE'16).....	2016
24 th IEEE International Conference on Program Comprehension (ICPC'16).....	2016
31 st IEEE International Conference on Software Maintenance and Evolution (ICSME'15).....	2015
10 th Joint Meeting of the European Software Engineering Conference and the 23 rd ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE'15)	2015
37 th IEEE/ACM International Conference on Software Engineering (ICSE'15).....	2015
23 rd IEEE International Conference on Program Comprehension (ICPC'15).....	2015
36 th CREST Open Workshop on “App Store Analysis”, University College London, UK.....	2014
14 th IEEE International Working Conf. on Source Code Analysis & Manipulation (SCAM)	2014
30 th IEEE International Conference on Software Maintenance (ICSM), ERA.....	2014
29 th IEEE International Conference on Software Maintenance (ICSM), ERA.....	2013
10 th Working Conference on Mining Software Repositories (MSR)	2013
17 th European Conference on Software Maintenance and Reengineering (CSMR).....	2013
19 th Working Conference on Reverse Engineering (WCRE)	2012
28 th IEEE International Conference on Software Maintenance (ICSM).....	2012
20 th IEEE International Conference on Program Comprehension (ICPC)	2012
18 th Working Conference on Reverse Engineering (WCRE)	2011
27 th IEEE International Conference on Software Maintenance (ICSM).....	2011
19 th IEEE International Conference on Program Comprehension (ICPC)	2011
18 th IEEE International Conference on Program Comprehension (ICPC)	2010
16 th Working Conference on Reverse Engineering (WCRE).....	2009
25 th IEEE International Conference on Software Maintenance (ICSM).....	2009
5 th International Workshop on Traceability in Emerging Forms of SE (TEFSE).....	2009
17 th IEEE International Conference on Program Comprehension (ICPC)	2009
7 th IEEE International Conference on Mining Software Repositories (MSR)	2009

Panels and Volunteer:

Panelist for Doctoral Symposium at CSMR'13	2013
Panelist for Doctoral Symposium at WCRE'12	2012
Panelist for Grand Challenges, Benchmarks, and TraceLab: Developing Infrastructure for the Software Traceability Research Community at TEFSE'11	2011
Panelist for New Software Engineering Faculty and Research Symposium at ICSE'11	2011
Industry Panel Participant at 8 th Int. Conf. on Aspect-Oriented Software Dev. (AOSD)	2009
SV for IEEE/ACM International Conference on Software Engineering (ICSE).....	2006, 2005
SV for ACM Conf. on OO Programming, Sys, Languages and Apps (OOPSLA)	2005
SV for IEEE International Workshop on Program Comprehension (IWPC).....	2005
Microsoft Technical Student Partner for Wayne State University	2008, 2007, 2006, 2005

Reviewer:

Communications of the ACM (CACM)	2023
IEEE Access Journal	2023
IEEE Transactions on Software Engineering (TSE).....	2023-2010, 2008
ACM Transactions on Software Engineering and Methodology (TOSEM) ...	2023-2012, 2010, 2009
Automated Software Engineering Journal (IASE).....	2014

Science of Computer Programming ([SCP](#))2023, 2022, 2012, 2011, 2010, 2008
 Empirical Software Engineering ([EMSE](#)) 2023-2008
 Journal of Software: Testing, Verification and Reliability ([STVR](#))2020, 2019, 2013, 2012, 2011
 Journal of Systems and Software ([JSS](#)) 2018-2011
 Journal of Software: Evolution and Process ([JSEP](#)) 2021-2008
 Software: Practice and Experience ([SPE](#))2013, 2012
 IEEE [Software](#)2020, 2019, 2018
 Software Quality Journal ([SQJ](#))2016, 2015, 2014, 2010, 2008
 Information and Software Technology Journal ([IST](#))2017, 2014, 2013, 2012, 2009
 IEEE Transactions on Reliability2015
 Journal of Object Technology2011
 Advances in Software Engineering2011, 2010
 Journal of Web Engineering.....2008
 IEEE Transactions on Systems, Man, and Cybernetics2009
 IEEE International Conference on Software Maintenance ([ICSM](#))2007, 2005
 IEEE International Conference on Program Comprehension ([ICPC](#)).....2008, 2007, 2006, 2005
 IEEE Working Conference on Reverse Engineering (WCRE).....2008, 2007, 2006, 2005
 IEEE European Conference on Software Maintenance and Reengineering ([CSMR](#))2007, 2006
 IEEE Working Conference on Mining Software Repositories ([MSR](#))2009, 2008, 2007
 ACM Workshop on Traceability in Emerging Forms of Soft. Engineering ([TEFSE](#))2007, 2005