

Denys Poshyvanyk

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Research Interests

Software engineering, evolution and maintenance, program comprehension, mobile app (Android) development, maintenance and testing, reverse engineering, repository mining, source code analysis, traceability, security, reuse

Professional Experience

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

Graduate Director, Computer Science Department, The College of William and Mary, Williamsburg, VA, January 2017 – August 2018

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

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

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

Instructor, in the Department of Computer Science, WSU, Detroit, MI; May 2004 – August 2004

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

Distinguished Reviewer Award at 33rd 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 26th 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 , The College of William and Mary.....	2016
TOSEM Distinguished Referee , ACM Transactions on Software Engineering and Methodology	2015-2016
ACM SIGSOFT Distinguished Paper Award , at the 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).....	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, "SHF: Small: Natural GUI-Based Testing of Mobile Apps via Mining Software Repositories", \$450,000, 10/01/18-09/30/21, sole PI, award CCF-[1815186](#)

NSF, "SaTC: CORE: Small: Enabling Systematic Evaluation of the Soundness of Android Security Analysis Techniques", \$500,000, 9/01/18-8/31/21, 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

[J30] **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)*, *accepted*.

[J29] **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)*, *accepted*.

Presented as **journal-first paper** at the ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering ([ESEC/FSE'18](#))

[J28] Romano, S., **Vendome, C.**, Scanniello, G., and Poshyvanyk, D., “A Multi-study Investigation Into Dead Code”, *IEEE Transactions on Software Engineering (TSE)*, *accepted*.

[J27] **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)*, *accepted*.

[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)*, *accepted*.

[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](#))

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

- [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

- [C120] **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, to appear 12 pages.
Acceptance ratio: 21%
- [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, to appear 12 pages.
Acceptance ratio: 23%
- [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, to appear 12 pages.
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. 831-836.

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, September 23-29, 2018, to appear 12 pages.

Acceptance ratio: 26%

[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, to appear 13 pages.

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, to appear 12 pages.

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, to appear 12 pages.

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, to appear 4 pages.

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, to appear 12 pages.

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 *Proceedings of 26th IEEE/ACM International Conference on Program Comprehension (ICPC’18)*, Gothenburg, Sweden, May 27- 28, 2018, to appear 12 pages.

Acceptance ratio: 37%

[C108] Pantuichina, 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, to appear 4 pages.

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 *Proceedings of 39th IEEE/ACM International Conference 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 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 *Proceedings of 20th IEEE International Conference 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 the Journal of Software: Evolution and Process (JSEP) **special issue among the best papers** at ICSM'11

[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) **special issue 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 International Working Conference 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%

[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 Demonstration, 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., Reville, 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] **Reville, 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

Refereed Workshop Papers, Tutorials, Technical Briefings, and Keynotes

[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 Conference 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 International Conference 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 International 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 International 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 International Conference 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 International Workshop*

on Recommendation Systems for Software Engineering ([RSSE'10](#)), Cape Town, South Africa, 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 *Proceedings of the 31st IEEE/ACM International Conference 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.

Formal Conference Presentations, Invited Talks, and Research Visits

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 ([SEMLA](#)), 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.

Research visit to Huawei Technologies Duesseldorf GmbH, European Research Center, Munich, Germany, December 2015.

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., The College of 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, The College of William and Mary (Spring 2019)

Course: Secure Software Engineering (CSci-780, Graduate)

Instructor, The College of William and Mary (Fall 2018)

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

Instructor, The College of William and Mary (Spring 2018)

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

Instructor, The College of William and Mary (Fall 2017)

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

Instructor, The College of William and Mary (Spring 2017)

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

Instructor, The College of William and Mary (Fall 2016)

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

Instructor, The College of William and Mary (Spring 2016)

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

Instructor, The College of William and Mary (Fall 2015)

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

Instructor, The College of William and Mary (Fall 2014)

Course: Topics in Mining Software Repositories (CSci-780, Graduate)

Instructor, The College of William and Mary (Spring 2014)

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

Instructor, The College of William and Mary (Fall 2013)

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

Instructor, The College of William and Mary (Spring 2013)

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

Instructor, The College of William and Mary (Fall 2012)

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

Instructor, The College of William and Mary (Spring 2012)

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

Instructor, The College of William and Mary (Fall 2011)

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

Instructor, The College of William and Mary (Spring 2011)

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

Instructor, The College of William and Mary (Fall 2010)

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

Instructor, The College of William and Mary (Spring 2010)

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

Instructor, The College of William and Mary (Fall 2009)

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

Instructor, The College of William and Mary (Spring 2009)

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

Instructor, The College of 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:

Carlos Eduardo Bernal Cardenas, *College of William and Mary, Ph.D. student (Fall 2014 – present)*

Ph.D. thesis title: *TBD*

Awards: *ACM SIGSOFT Distinguished Paper Award at ESEC/FSE'15*

Michele Tufano, *College of William and Mary, Ph.D. student (Fall 2014 – present)*

Ph.D. thesis title: *TBD*

Awards: *ACM SIGSOFT Distinguished Paper Award at ICSE'15*

Cody Watson, *College of William and Mary, Ph.D. student (Spring 2017 – present)*

Ph.D. thesis title: *TBD*

Richard Bonett, *College of William and Mary, M.S./Ph.D. student (Fall 2017 – present)*

(co-supervised with Adwait Nadkarni)

Ph.D. thesis title: *TBD*

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

Ph.D. thesis title: *TBD*

George Purnell, *College of William and Mary, M.S./Ph.D. student (Summer 2018 – present)*

Ph.D. thesis title: *TBD*

Current Undergraduate Students:

Daniel McCrystal, *College of William and Mary, undergraduate, NSF REU (Summer 2018),*

Project title: *Empirical Evaluation of Formal Causal Inference Model of Traceability*

Ali Yachnes, *College of William and Mary, undergraduate, NSF REU (Summer 2018),*

Project title: *Understanding Functionality in Mobile Application GUIs*

Emma Liu, *College of William and Mary, undergraduate, NSF REU (Summer 2018),*

Project title: *Improving Detecting and Reporting GUI Violations in Android Apps*

Past Ph.D. Students:

Kevin Moran, *College of William and Mary, Ph.D. student (Summer 2014 – August 2018)*

Ph.D. thesis title: *Automating Software Development for Mobile Computing Platforms*

Awards: *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 at William and Mary

Christopher Vendome, *College of William and Mary, Ph.D. student (Summer 2013 – August 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, *College of William and Mary, Ph.D., 2018*

Ph.D. thesis title (tentative): *On Improving (Non) Functional Testing*

First position after graduation: Research/Software engineer at Amazon, Alexa machine learning science team

Boyang Li, *College of 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

Martin White, *College of 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](#)

Mario Linares-Vásquez, *College of 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, *College of 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, *College of 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, *College of 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: *Arts and Sciences Distinguished Dissertation Award*

Southern Regional Education Board (SREB) Dissertation Fellowship (\$20,000), 2011/12

Distinguished Paper Award, 26th IEEE ICSM'10

2010-2011 [VSGC](#) Graduate Research Fellowship

2009-2010 [VSGC](#) Graduate Research Fellowship

Meghan Revelle, *College of 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: 2009-2010 [VSGC](#) Graduate Research Fellowship

2008-2009 [VSGC](#) Graduate Research Fellowship

2008 Google Anita Borg Scholarship Finalist

Past M.S. Students:

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

thesis title: *Enhancing Bug Reports for Mobile Apps.*

First position after graduation: Ph.D. student at the College of William and Mary

Andrew Holtzhauer, *College of William and Mary, M.S. (Fall 2012 – Summer 2014), NSF REU (May 2012–Aug 2012), M.S. thesis title: Studying and Enabling Reuse in Android Mobile Apps.*

First position after graduation: Software Systems Engineer at [MITRE](#)

Evan Moritz, *College of William and Mary, M.S. (Fall 2011 - Summer 2013), NSF REU (May 2011–Aug 2011), 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, *College of 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:

Michael Curcio, *College of 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, *College of 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, *College of 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, *College of 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 the College of William and Mary

Nathan Owen, *College of William and Mary, undergraduate, NSF REU (Spring 2017), Project title: Automating Rapid Prototyping for Android Applications*
 First position after graduation: Microsoft

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

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

GwonJae Cho, *College of 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, *College of 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, *College of 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, *College of 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, *College of 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, *College of 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:

Bin Lin, *University of Lugano, Ph.D. (2020), advisors Gabriele Bavota and Michele Lanza*
 Mohammed Elarnaoty, *Virginia Tech, Ph.D. (2020), advisor Francisco Servant*
 Mattia Fazzini, *Georgia Tech, Ph.D. (2019), advisor Alessandro Orso*
 Fiorella Zampetti, *University of Sannio, Ph.D. (2019), advisor Massimiliano Di Penta*
 Victoria Cooper, *The College of 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 Antoniol*
 Ruben Saborido, *École Polytechnique Montréal, Ph.D., advisor Giulio Antoniol*
 Ed Novak, *The College of William and Mary, Ph.D. (2016), advisor Qun Li*
 Md Atiqur Rahman, *The College of William and Mary, Ph.D., advisor Peter Kemper*
 Mingzhou Zhou, *The College of William and Mary, Ph.D., advisor Xipeng Shen*
 Guoyang Chen, *The College of William and Mary, Ph.D., advisor Xipeng Shen*
 Weilin Wang, *The College of William and Mary, Ph.D., advisor Xipeng Shen*
 Panayiotis Foteinos, *The College of 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, *The College of William and Mary*, Ph.D. (2012), advisor Xipeng Shen
 Kelvin Kai Tian, *The College of William and Mary*, Ph.D. (2012), advisor Xipeng Shen
 Yixun Liu, *The College of William and Mary*, Ph.D. (2011), advisor Nikos Chrisochoides
 Yunlian Jiang, *The College of William and Mary*, Ph.D. (2011), advisor Xipeng Shen
 Ziyu Guo, *The College of William and Mary*, M.S. (2011), advisor Xipeng Shen
 Michael Weissberger, *The College of William and Mary*, M.S. (2010), advisor Nikos Chrisochoides
 Andriy Fedorov, *The College of William and Mary*, Ph.D. (2009), advisor Nikos Chrisochoides

Departmental service:

Graduate Director of Computer ScienceJanuary 2017- August 2018
 Chair of the Graduate Admissions CommitteeJanuary 2017- August 2018
 Graduate Curriculum Committee 2017-
 Chair of the Colloquium Committee..... 2015-2016
 Park Graduate Award Committee 2012/2013
 Graduate Admissions Committee 2009-2014
 Departmental Colloquium Committee2008-2015, 2017-
 Faculty Recruiting Committee 2010-2012, 2013-2017
 Departmental hardware committee 2008/2009

College service:

Committee on Graduate Studies (COGS), Arts and Sciences.....January 2017- August 2018
 Grant Writing Panel for W&M Arts and Sciences Graduate Students 2014
 Freshmen Advisor, Academic Advising Program 2010-2014, 2015-2016
 Natural & Comp. Sciences Judging Panel for Graduate Research Symposium..... 2012-2016
 Arts and Sciences Graduate Awards Committee 2011/2012
 Session Chair for the 9th Annual Graduate Research Symposium (GRS) at W&M 2010

Professional Service

Computer Science Community Service:

Computing Research Association ([CRA-E](#)) committee..... since June 2018

Editorial boards:

Associate Editor for IEEE Transactions on Software Engineering ([TSE](#)).....since December 2017
 Associate Editor for the Empirical Software Engineering Journal ([EMSE](#)), Springersince 2014
 Associate Editor for the Journal of Software: Evolution and Process ([JSEP](#)), Wiley..... 2017-2019

Editors of special issues:

Guest co-editor of a special issue from ICSME 2016 in Empirical Software Engineering Journal ([EMSE](#)), Springer 2017
 Guest co-editor of a special issue from WCRE 2012 in the Journal of Software: Evolution and Process ([JSEP](#))..... 2013
 Guest co-editor of a special issue from WCRE 2011 in the Journal of Software: Evolution and Process ([JSEP](#))..... 2012

Steering Committees:

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 Co-chair for 6th 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 25th IEEE International Conference on Software Analysis, Evolution and Reengineering ([SANER'18](#)) 2018
Co-Chair of Tool Demo and Mobile Applications Track at 5th IEEE/ACM International Conference on Mobile Software Engineering and Systems ([MobileSoft'18](#)) 2018
Program Committee Co-chair for the 32nd 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 8th International Symposium on Software and Systems Traceability ([SST'15](#)) 2015
Program Committee Co-chair for the Early Research Achievements (ERA) track at the 30th IEEE International Conference on Software Maintenance ([ICSME](#)) 2014
Program Committee Co-chair for the 21st IEEE International Conference on Program Comprehension ([ICPC](#)) 2013
Program Committee Co-chair for the 19th International Working Conference on Reverse Engineering ([WCRE](#)) 2012
Student Support Chair ([ICSM](#)) 2012
Co-Chair for Student Symposium Track at the 20th IEEE International Conference on Program Comprehension ([ICPC](#)) 2012
Program Committee Co-chair for the 18th International Working Conference on Reverse Engineering ([WCRE](#)) 2011
Program Committee Co-chair for the Research Demonstrations track at the 27th IEEE International Conference on Software Maintenance ([ICSM](#))..... 2011
Local Chair for the 27th IEEE International Conference on Software Maintenance ([ICSM](#))..... 2011
Local Chair for the 11th IEEE International Working Conference on Source Code Analysis and Manipulation ([SCAM](#))..... 2011
Local Chair for the 13th IEEE International Symposium on Web Systems Evolution ([WSE](#))..... 2011
Co-Chair for Student Symposium Track at the 19th IEEE International Conference on Program Comprehension ([ICPC](#)) 2011
General Chair for the 6th 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 26th IEEE International Conference on Software Maintenance ([ICSM](#))..... 2010
Program Committee Co-Chair for the 5th 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 4th IEEE [VISSOFT](#)..... 2007
Co-organizer of [Working Session](#) on IR Approaches in Software Evolution at IEEE ICSM 2006

Program Committees:

27th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering ([ESEC/FSE'19](#)) 2019
16th ACM/IEEE International Conference on Mining Software Repositories ([MSR'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 (NLASE)	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 International Conference on Automated Software Engineering (ASE'16) – Doctoral Symposium Track	2016
24 th ACM International Symposium on the Foundations of Software Engineering (FSE'16) – Student Research Competition 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 Conference on Software Maintenance and Evolution (ICSME'15) – Early Research Achievements Track.....	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 Working Conference 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 Conference on Software Engineering (ICSE'14) – New Ideas and Emerging Results (NIER) Track.....	2014
36 th IEEE/ACM International Conference on Software Engineering (ICSE'14) – Tutorials and Technical Briefings 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 International Workshop on Search-driven development: Users, Infrastructure, Tools and 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), 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

Conference session chair:

40 th IEEE/ACM International Conference on Software Engineering (ICSE'18) – Tool Demos... 2018	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 8th 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 University2008, 2007, 2006, 2005

Reviewer:

IEEE Transactions on Software Engineering ([TSE](#)).....2018-2010, 2008
 ACM Transactions on Software Engineering and Methodology ([TOSEM](#)) ... 2018-2012, 2010, 2009
 Automated Software Engineering Journal ([JASE](#))..... 2014
 Science of Computer Programming ([SCP](#)).....2012, 2011, 2010, 2008
 Empirical Software Engineering ([EMSE](#)) 2018- 2008
 Journal of Software: Testing, Verification and Reliability ([STVR](#)) 2013, 2012, 2011
 Journal of Systems and Software ([JSS](#)) 2017- 2011
 Journal of Software: Evolution and Process ([JSEP](#))..... 2018-2008
 Software: Practice and Experience ([SPE](#))2013, 2012
 Software Quality Journal ([SQJ](#))..... 2016, 2015, 2014, 2010, 2008
 Information and Software Technology Journal ([IST](#)) 2017, 2014, 2013, 2012, 2009
 IEEE Transactions on Reliability 2015
 Journal of Object Technology 2011
 Advances in Software Engineering2011, 2010
 Journal of Web Engineering..... 2008
 IEEE Transactions on Systems, Man, and Cybernetics 2009
 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
 ACM International Conference on Document Engineering ([DocEng](#)) 2004
 International Workshop on Principles of Software Evolution (IWPSE)2007, 2005