I. Personal Information

Meiyappan Nagappan
David R. Cheriton School of Computer Science
University of Waterloo
200 University Avenue West Waterloo, ON, Canada N2L 3G1
Phone: +1 (519) 888-4567 ext. 38147
Website: http://mei-nagappan.com/ Google Scholar: http://bit.ly/31VypoY

II. Education

Degree	Discipline	Institution	Date of Convocation
Doctorate *A Framework for Analyzing Software System Log Files*	Computer Science	North Carolina State University	May 2011
Master's non-thesis	Computer Science	North Carolina State University	May 2008
Bachelor's	Computer Science and Engg.	Anna University	May 2006

III. Employment History

Position	Institution	Department	Start Date	End Date
Associate Professor	University of Waterloo	School of Computer Science	July 2020	Present
Assistant Professor	University of Waterloo	School of Computer Science	August 2016	June 2020
Assistant Professor	Rochester Institute of Technology	Software Engineering	November 2014	July 2016
Post-Doctoral Fellow	Queen's University at Kingston	School of Computer Science	May 2011	October 2014
Research Intern	Microsoft Research Cambridge		June 2010	August 2010
Research Intern	ABB US Corporate Research Centre		January 2010	May 2010
Research Intern	Lawrence Berkeley National Lab		May 2008	August 2008

IV. Recognitions

- CS-Can|Info-Can Outstanding Early Career Computer Science Researcher Prize for 2020. These prizes are offered by CS-Can|Info-Can (the national Computer Science academic organization) to recognize CS faculty members at Canadian universities within 10 years of their PhD who have made significant contributions early in their academic careers, particularly to research.

- Ross & Muriel Cheriton Faculty Fellowship (2020-2023). The Ross & Muriel Cheriton Faculty Fellowship supports the work of a full-time faculty member in the David R. Cheriton School of Computer Science whose research is in the general areas of computer systems and computer networking. The title of Faculty Fellow recognizes a faculty member whose scholarly work is widely known and respected internationally, who is an accomplished teacher at all levels, and who has displayed a high level of commitment and dedication to her or his School of Computer Science, the Faculty of Mathematics, and the University.

- Early Career Achievement Award at the 15^{th} International Conference on Mining Software Repositories (MSR) (May 2018). MSR is the community in which empirical software engineering researchers publish. It now attracts approximately 150-200 researchers annually from Academia and Industry. This award recognizes outstanding junior researchers who provided outstanding contributions in the area of mining software repositories. The award recognizes research outputs produced by candidates during the early stages of their career.

- ACM Distinguished Paper Award 21st International Conference on Mining Software Repositories for the paper titled "Whodunit: Classifying Code as Human Authored or GPT-4 Generated - A case study on CodeChef problems" (May 2024). One the Distinguished paper awards among 42 published papers (146 submissions that year).

- ACM Distinguished Paper and Best Paper Award 12th Working Conference on Mining Software Repositories for the paper titled "Do Bugs Foreshadow Vulnerabilities? A Study of the Chromium Project" (May 2015). Best paper among 32 published papers (106 submissions that year).

- Best Paper Award 9th Working Conference on Mining Software Repositories for the paper titled "Think Locally, Act Globally: Improving Defect and Effort Prediction Models" (June 2012). Best paper among 18 published papers (64 submissions that year).

V. Publications and Citations

In the software engineering research community, new research is published in both conferences and journals. Typically, the choice is made depending on the length of the article. Conference publications are still limited to 10 pages, while most journals allow for longer papers. Both conferences and journals are considered equally prestigious. The $*$ next to a name in the publications below indicates student that I have directly mentored/supervised/co-supervised. In other papers, I still work directly with the student, but I am calling out the papers of students who I have trained throughout their graduate studies.

Summary

Publication Type	**Number of publications**
Conferences	40
Journals	41
Workshops	11
TOTAL	**91**
Total number of citations = 6111	
h-index = 42	

Journals

41. Partha Chakraborty, Mahmoud Alfadel, Meiyappan Nagappan. (2025). BLAZE: Cross-Language and Cross-Project Bug Localization via Dynamic Chunking and Hard Example Learning (*Impact Factor* – 3.331).

40. Partha Chakraborty, Mahmoud Alfadel, Meiyappan Nagappan. (2024). RLocator: Reinforcement learning for bug localization. IEEE Transactions on Software Engineering (*Impact Factor* – 3.331).

39. Partha Chakraborty, Krishna Kanth Arumugam, Mahmoud Alfadel, Meiyappan Nagappan, Shane McIntosh. (2024). Revisiting the Performance of Deep Learning-Based Vulnerability Detection on Realistic Datasets. IEEE Transactions on Software Engineering (*Impact Factor* – 3.331).

38. Aniruddhan Murali, Mahmoud Alfadel, Meiyappan Nagappan, Meng Xu, Chengnian Sun. (2024). AddressWatcher: Sanitizer based Localization of Memory Leak Fixes. IEEE Transactions on Software Engineering (*Impact Factor* – 3.331).

37. Tavian Barnes, Ken Jen Lee, Cristina Tavares, Gema Rodríguez-Pérez, Meiyappan Nagappan. (2024). Towards understanding barriers and mitigation strategies of software

engineers with non-traditional educational and occupational backgrounds. Empirical Software Engineering (*Impact Factor* – 2.933).

36. Aniruddhan Murali, Gaurav Sahu, Kishanthan Thangarajah, Brian Zimmerman, Gema Rodríguez-Pérez, Meiyappan Nagappan. (2024). Diversity in issue assignment: humans vs bots. Empirical Software Engineering (*Impact Factor* – 2.933).

35. Nimmi Rashinika Weeraddana, Xiaoyan Xu, Mahmoud Alfadel, Shane McIntosh, Meiyappan Nagappan. (2023). An empirical comparison of ethnic and gender diversity of DevOps and non-DevOps contributions to open-source projects. Empirical Software Engineering (*Impact Factor* – 2.933).

34. Owura Asare, Meiyappan Nagappan, N Asokan. (2023). Is github's copilot as bad as humans at introducing vulnerabilities in code? Empirical Software Engineering (*Impact Factor* – 2.933).

33. Sheik Shameer, Gema Rodríguez-Pérez, Meiyappan Nagappan. (2023). Relationship between diversity of collaborative group members' race and ethnicity and the frequency of their collaborative contributions in GitHub. Empirical Software Engineering (*Impact Factor* – 2.933).

32. Yiwen Dong, Zheyang Li, Yongqiang Tian, Chengnian Sun, Michael Godfrey, Meiyappan Nagappan (2022). Bash in the Wild: Language Usage, Code Smells, and Bugs. ACM Transactions on Software Engineering and Methodology (TOSEM).

31. Yusuf Sulistyo Nugroho, Syful Islam, Keitaro Nakasai, Ifraz Rehman, Hideaki Hata, Raula Gaikovina Kula, Meiyappan Nagappan, Kenichi Matsumoto. (2021). How are project-specific forums utilized? A study of participation, content, and sentiment in the Eclipse ecosystem. Empirical Software Engineering (*Impact Factor* – 2.933).

30. Gema Rodríguez-Pérez, Reza Nadri, Meiyappan Nagappan. (2021). Observable Diversity in Software Engineering: A Systematic Literature Review. Empirical Software Engineering (*Impact Factor* – 2.933).

29. Reza Nadri, Gema Rodríguez-Pérez, Meiyappan Nagappan. (2021). On the Relationship Between the Developer's Perceptible Ethnicity and the Evaluation of Contributions in GitHub. IEEE Transactions on Software Engineering (*Impact Factor* – 3.331).

28. Vikram N Subramanian, Ifraz Rehman, Meiyappan Nagappan, Raula Gaikovina Kula. (2020). Analyzing First Contributions on GitHub: What do Newcomers do. IEEE Software (*Impact Factor* – 2.879).

27. Reza Nadri, Gema Rodriguez Perez, Meiyappan Nagappan. (2020). Insights into Nonmerged Pull Requests in GitHub: Is There Evidence of Bias Based on Perceptible Race?. IEEE Software (*Impact Factor* – 2.879).

26. Gema Rodriguezperez, Meiyappan Nagappan, Gregorio Robles. (2020). Watch out for Extrinsic Bugs! A Case Study of their Impact in Just-In-Time Bug Prediction Models

on the OpenStack project. IEEE Transactions on Software Engineering (*Impact Factor* – 3.331).

25. Yoshiki Higo, Shinpei Hayashi, Hideaki Hata, Meiyappan Nagappan. (2020). Ammonia: An Approach for Deriving Project Specific Bug Patterns. Empirical Software Engineering (*Impact Factor* – 2.933). 25: 1951–1979.

24. Rahul Iyer*, Alex Yun, Meiyappan Nagappan, Jesse Hoey. (2019). Effects of Personality Traits in Pull Request Acceptance. IEEE Transactions on Software Engineering (*Impact Factor* – 3.331).

23. Bushra Aloraini*, Meiyappan Nagappan, Daniel M German, Shinpei Hayashi, Yoshiki Higo. (2019). An Empirical Study of Security Warnings from Static Application Security Testing Tools. Journal of Systems and Software (*Impact Factor* – 2.559). Volume 158.

22. Jesse Hoey, Tobias Schröder, Jonathan Morgan, Kimberly B Rogers, Deepak Rishi, Meiyappan Nagappan. (2018). Artificial Intelligence and Social Simulation: Studying Group Dynamics on a Massive Scale. Small Group Research. 49(6): 647–683.

21. Harold Valdivia-Garcia*, Emad Shihab, Meiyappan Nagappan. (2018). Characterizing and Predicting Blocking Bugs in Open Source Projects. Journal of Systems and Software (*Impact Factor* – 2.559). 143: 44 – 58.

20. Nuthan Munaiah, Steven Kroh, Craig Cabrey*, Meiyappan Nagappan. (2017). Curating GitHub for Engineered Software Projects. Empirical Software Engineering (*Impact Factor* – 2.933). 22(6): 3219-3253.

19. Nuthan Munaiah, Felivel Camilo, Wesley Wigham, Andrew Meneely, Meiyappan Nagappan. (2017). Do Bugs Foreshadow Vulnerabilities?: An In-depth Study of the Chromium Project. Empirical Software Engineering (*Impact Factor* – 2.933). 22(3): 1305–1347.

18. Ashok Sekar, Roger B Chen, Adrian Cruzat*, Meiyappan Nagappan . (2017). Digital Narratives of Place: Learning About Neighborhood Sense of Place and Travel Through Online Responses. Transportation Research Record: Journal of the Transportation Research Board. 2666: 10-18.

17. Tse-Hsun Chen*, Stephen W Thomas, Hadi Hemmati, Meiyappan Nagappan, Ahmed E Hassan. (2017). An Empirical Study on the Effect of Testing on Code Quality Using Topic Models: A Case Study on Software Development Systems. IEEE Transactions on Reliability (*Impact Factor* – 2.729). 66(3): 806 – 824.

16. Tse-Hsun Chen*, Weiyi Shang, Meiyappan Nagappan, Ahmed E Hassan, Stephen W. Thomas. (2016). Topic-based Software Defect Explanation. Journal of System and Software (*Impact Factor* – 2.559). 129: 79-106.

15. Shane McIntosh, Bram Adams, Meiyappan Nagappan, Ahmed E. Hassan. (2016). Identifying and Understanding Header File Hotspots in C/C++ Build Processes. Automated Software Engineering (*Impact Factor* – 2.200). 23(4): 619-647.

14. Israel J. Mojica Ruiz*, Meiyappan Nagappan, Bram Adams, Thorsten Berger, Steffen Dienst, Ahmed E. Hassan. (2016). An Examination of the Current Rating System used in Mobile App Stores. IEEE Software (*Impact Factor* – 2.879). 33(6): 86-92.

13. Israel J. Mojica Ruiz*, Meiyappan Nagappan, Bram Adams, Thorsten Berger, Steffen Dienst, Ahmed E. Hassan. (2016). Analyzing Ad Library Updates in Android Apps. IEEE Software (*Impact Factor* – 2.879). 33(02): 74-80.

12. Felienne Hermans, Janet Siegmund, Thomas Fritz, Gabriele Bavota, Meiyappan Nagappan, Abram Hindle, Yasutaka Kamei, Ali Mesbah, Bram Adams. (2016). Leaders of Tomorrow on the Future of Software Engineering: A Roundtable. IEEE Software (*Impact Factor* – 2.879). 33(02): 99-104.

11. Hammad Khalid*, Meiyappan Nagappan, Ahmed E. Hassan. (2016). Examining the Relationship between FindBugs Warnings and App Ratings. IEEE Software (*Impact Factor* – 2.879). 33(04): 34-39.

10. Mark D. Syer*, Meiyappan Nagappan, Bram Adams, Ahmed E. Hassan. (2015). Studying the Relationship Between Source Code Quality and Mobile Platform Dependence. Software Quality Journal (*Impact Factor* – 2.141). 23(3): 485 - 508.

9. Mark D. Syer, Meiyappan Nagappan, Bram Adams, Ahmed E. Hassan. (2015). Replicating and Re-Evaluating the Theory of Relative Defect-Proneness. IEEE Transactions on Software Engineering (*Impact Factor* – 3.331). 41(02): 176 - 197.

8. Weiyi Shang, Meiyappan Nagappan, Ahmed E. Hassan. (2015). Studying the Relationship Between Logging Characteristics and the Code Quality of Platform Software. Empirical Software Engineering (*Impact Factor* – 2.933). 20(1): 1-27.

7. Hadi Hemmati, Meiyappan Nagappan, Ahmed E. Hassan. (2015). Investigating the Effect of "Defect Co-fix" on Quality Assurance Resource Allocation: A search-based Approach. Journal of Systems and Software (*Impact Factor* – 2.559). 103: 412-422.

6. Nicolas Bettenburg, Meiyappan Nagappan, Ahmed E. Hassan. (2015). Towards Improving Statistical Modeling of Software Engineering Data: Think Locally, Act Globally!. Empirical Software Engineering (*Impact Factor* – 2.933). 20(2): 294-335.

5. Shane McIntosh, Meiyappan Nagappan, Bram Adams, Audris Mockus, Ahmed E. Hassan. (2015). A Large-Scale Empirical Study of the Relationship between Build Technology and Build Maintenance. Empirical Software Engineering (*Impact Factor* – 2.933). 20(6): 1587-1633.

4. Hammad Khalid*, Emad Shihab, Meiyappan Nagappan, Ahmed E. Hassan. (2015). What Do Mobile App Users Complain About?. IEEE Software (*Impact Factor* – 2.879). 32(03): 70 - 77.

3. Israel J. Mojica Ruiz*, Bram Adams, Meiyappan Nagappan, Steffen Dienst, Thorsten Berger, Ahmed E. Hassan. (2014). A Large-Scale Empirical Study on Software Reuse in Mobile Apps. IEEE Software (*Impact Factor* – 2.879). 31(02): 78 - 86.

2. Israel J. Mojica Ruiz*, Meiyappan Nagappan, Bram Adams, Thorsten Berger, Steffen Dienst, Ahmed E. Hassan. (2014). Impact of Ad Libraries on Ratings of Android Mobile Apps. IEEE Software (*Impact Factor* – 2.879). 31(06): 86 - 92.

1. Stephen W. Thomas, Meiyappan Nagappan, Dorothea Blostein, Ahmed E. Hassan. (2013). The Impact of Classifier Configuration and Classifier Combination on Bug Localization. IEEE Transactions on Software Engineering (*Impact Factor* – 3.331). 39(10): 1427 - 1443.

Book chapters

2. Meiyappan Nagappan, Emad Shihab. (2016). Mobile App Store Analytics. Tim Menzies and Laurie Williams and Thomas Zimmermann. Perspectives on Data Science for Software Engineering. : 47 - 49. In Press, Elsevier

1. Harold Valdivia-Garcia*, Meiyappan Nagappan. (2016). Diversity in Software Engineering Research. Tim Menzies and Laurie Williams and Thomas Zimmermann. Perspectives on Data Science for Software Engineering. : 297 - 300. In Press, Elsevier

Conference proceedings[1]

40. Noble Saji Mathews, Meiyappan Nagappan. Test-Driven Development and LLM-based Code Generation. 39th IEEE/ACM International Conference on Automated Software Engineering (ASE). 2024.

39. Dheeraj Vagavolu*, Yousra Aafer, Meiyappan Nagappan. (Deep) Learning of Android Access Control Recommendation from Static Execution Paths. IEEE 9th European Symposium on Security and Privacy (EuroS&P). 2024.

38. Ajiromola Kola-Olawuyi, Nimmi Rashinika Weeraddana, Meiyappan Nagappan. The Impact of Code Ownership of DevOps Artefacts on the Outcome of DevOps CI Builds. IEEE/ACM 21st International Conference on Mining Software Repositories (MSR). 2024.

37. Oseremen Joy Idialu, Noble Saji Mathews, Rungroj Maipradit, Joanne M Atlee, Meiyappan Nagappan. Whodunit: Classifying Code as Human Authored or GPT-4 generated-A case study on CodeChef problems (ACM Distinguished Paper). IEEE/ACM 21st International Conference on Mining Software Repositories (MSR). 2024. **ACM SigSoft Distinguished Paper**.

[1]Page numbers are in brackets at the end of each entry

36. Owura Asare, Meiyappan Nagappan, N Asokan. (2024). A User-centered Security Evaluation of Copilot. Proceedings of the 46th IEEE/ACM International Conference on Software Engineering.

35. Aniruddhan Murali, Noble Mathews, Mahmoud Alfadel, Meiyappan Nagappan, Meng Xu. (2024). Fuzzslice: Pruning false positives in static analysis warnings through function-level fuzzing. Proceedings of the 46th IEEE/ACM International Conference on Software Engineering.

34. Diego Saraiva, Daniel Alencar Da Costa, Uirá Kulesza, Gustavo Sizílio, José Gameleira Neto, Roberta Coelho, Meiyappan Nagappan. (2023). Unveiling the Relationship Between Continuous Integration and Code Coverage. 2023 IEEE/ACM 20th International Conference on Mining Software Repositories (MSR). (247 - 259)

33. Brandon Carlson, Kevin Leach, Darko Marinov, Meiyappan Nagappan, Atul Prakash. (2019). Open Source Vulnerability Notification. Open Source Systems (OSS). IFIP Advances in Information and Communication Technology, vol 556. (12-23)

32. Wajdi Aljedaani, Meiyappan Nagappan, Bram Adams, Michael Godfrey. (2019). A Comparison of Bugs across the iOS and Android Platforms of Two Open Source Cross Platform Browser Apps. 6th International Conference on Mobile Software Engineering and Systems (MobileSoft), Montreal, Canada (76-86)

31. Pavneet Singh Kochhar, Stanislaw Swierc, Trevor Carnahan, Hitesh Sajnani, Meiyappan Nagappan. (2018). Understanding the Role of Reporting in Work Item Tracking Systems for Software Development: An Industrial Case Study. Industry track of the 34th International Conference on Software Maintenance and Evolution (ICSME), Madrid, Spain (605-614)

30. Inayat Rehman, Mehdi Mirakhorli, Meiyappan Nagappan, Azad Aralbay, Matthew Thornton. (2018). Roles and Impacts of Hands-on Software Architects in Five Industrial Case Studies. 40th International Conference on Software Engineering (ICSE), Gothenburg, Sweden (117-127)

29. Harold Valdivia-Garcia*, Meiyappan Nagappan. (2017). The Characteristics of False-Negatives in File-level Fault Prediction. 13th International Conference on Predictive Models and Data Analytics in Software Engineering, Toronto, Canada (73 – 82)

28. Bushra Aloraini*, Meiyappan Nagappan. (2017). Evaluating State-of-the-Art Free and Open Source Static Analysis Tools Against Buffer Errors in Android Apps. 33rd IEEE International Conference on Software Maintenance and Evolution (ICSME), Shanghai, China (296-306)

27. Danielle Gonzalez, Joanna C. S. Santos, Andrew Popovich, Mehdi Mirakhorli, Meiyappan Nagappan. (2017). A Large-Scale Study on the Usage of Testing Patterns That Address Maintainability Attributes: Patterns for Ease of Modification, Diagnoses, and Comprehension. 14th International Conference on Mining Software Repositories (MSR), Buenos Aires, Argentina (391 – 401)

26. Kazuhiro Yamashita, Changyun Huang, Meiyappan Nagappan, Yasutaka Kamei, Audris Mockus, Ahmed E Hassan, Naoyasu Ubayashi. (2016). Thresholds for Size and Complexity Metrics: A Case Study from the Perspective of Defect Density. IEEE International Conference on Software Quality, Reliability and Security (QRS), Vienna,Austria (191 - 201)

25. Michael Washburn Jr.*, Pavithra Sathiyanarayanan, Meiyappan Nagappan, Thomas Zimmermann, Christian Bird. (2016). What went Right and What went Wrong: An Analysis of 155 Postmortems from Game Development. 38th International Conference on Software Engineering (ICSE) Software Engineering in Practice (SEIP) track, Austin, United States (280 - 289)

24. Meiyappan Nagappan, Emad Shihab. (2016). Future Trends in Software Engineering Research for Mobile Apps. 23rd International Conference on Software Analysis, Evolution, and Reengineering (SANER), Osaka, Japan (21 - 32)

23. Yuan Tian, Meiyappan Nagappan, David Lo, Ahmed E. Hassan. (2015). What are the Characteristics of High-rated Apps? A Case Study on Free Android Applications. 31st IEEE International Conference on Software Maintenance and Evolution (ICSME), Bremen, Germany (301 - 310)

22. Meiyappan Nagappan, Romain Robbes, Yasutaka Kamei, Éric Tanter, Shane McIntosh, Audris Mockus, Ahmed E. Hassan. (2015). An Empirical Study of Goto in C Code from GitHub Repositories. 10th Joint Meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE), Bergamo, Italy (404-414)

21. Felivel Camilo, Andrew Meneely, Meiyappan Nagappan. (2015). Do Bugs Foreshadow Vulnerabilities? A Study of the Chromium Project. 12th Working Conference on Mining Software Repositories (MSR), Florence, Italy (269 - 279) *(Distinguished Paper and Best Paper Award)*

20. Baishakhi Ray, Meiyappan Nagappan, Christian Bird, Nachiappan Nagappan, Thomas Zimmermann. (2015). The Uniqueness of Changes: Characteristics and Applications. 12th Working Conference on Mining Software Repositories (MSR), Florence, Italy (34-44)

19. Jiaping Gui*, Stuart McIlroy, Meiyappan Nagappan, William G. J. Halfond. (2015). Truth in Advertising: The Hidden Cost of Mobile Ads for Software Developers. 37th International Conference on Software Engineering (ICSE), Florence, Italy (100 - 110)

18. Hammad Khalid*, Meiyappan Nagappan, Emad Shihab, Ahmed E. Hassan. (2014). Prioritizing the Devices to Test your App on: A Case Study of Android Game Apps. 22nd ACM SIGSOFT International Symposium on Foundations of Software Engineering (FSE), Hong Kong (610 - 620)

17. Weiyi Shang, Meiyappan Nagappan, Ahmed E. Hassan, Zhen Ming Jiang. (2014). Understanding Log Lines Using Development Knowledge. 30th IEEE International

Conference on Software Maintenance and Evolution (ICSME), Victoria, Canada (21 - 30)

16. Shane McIntosh, Bram Adams, Meiyappan Nagappan, Ahmed E. Hassan. (2014). Mining Co-change Information to Understand When Build Changes Are Necessary. 30th IEEE International Conference on Software Maintenance and Evolution (ICSME), Victoria, Canada (241 - 250)

15. Tse-Hsun Chen*, Meiyappan Nagappan, Emad Shihab, Ahmed E. Hassan. (2014). An Empirical Study of Dormant Bugs. 11th Working Conference on Mining Software Repositories (MSR), Hyderabad, India (82 - 91)

14. Thanh H. D. Nguyen, Meiyappan Nagappan, Ahmed E. Hassan, Mohamed N. Nasser, Parminder Flora. (2014). An Industrial Case Study of Automatically Identifying Performance Regression Causes. 11th Working Conference on Mining Software Repositories (MSR), Hyderabad, India (232 - 241)

13. Mark D. Syer, Zhen Ming Jiang, Meiyappan Nagappan, Ahmed E. Hassan, Mohamed N. Nasser, Parminder Flora. (2014). Continuous Validation of Load Test Suites. 5th ACM/SPEC International Conference on Performance Engineering (ICPE), Dublin, Ireland

12. Mark D. Syer*, Meiyappan Nagappan, Ahmed E. Hassan, Bram Adams. (2013). Revisiting Prior Empirical Findings for Mobile Apps: An Empirical Case Study on the 15 Most Popular Open-Source Android Apps. 23rd Annual International Conference on Computer Science and Software Engineering (CASCON), Markham, Canada (283 - 297)

11. Lucas Layman, Madeline Diep, Meiyappan Nagappan, Janice Singer, Robert DeLine, Gina Venolia. (2013). Debugging Revisited: Toward Understanding the Debugging Needs of Contemporary Software Developers. 7th International Symposium on Empirical Software Engineering and Measurement (ESEM) - Industry track, Baltimore, USA (383 - 392)

10. Seyyed Ehsan Salamati Taba, Foutse Khomh, Ying Zou, Ahmed E. Hassan, Meiyappan Nagappan. (2013). Predicting Bugs Using Antipatterns. 29th IEEE International Conference on Software Maintenance (ICSM), Eindhoven, Netherlands (270 - 279)

9. Mark D. Syer, Zhen Ming Jiang, Meiyappan Nagappan, Ahmed E. Hassan, Mohamed N. Nasser, Parminder Flora. (2013). Leveraging Performance Counters and Execution Logs to Diagnose Memory-Related Performance Issues. 29th IEEE International Conference on Software Maintenance (ICSM), Eindhoven, Netherlands (110 - 119)

8. Meiyappan Nagappan, Thomas Zimmermann, Christian Bird. (2013). Diversity in Software Engineering Research. 9th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE), St. Petersburg, Russian Federation (466 - 476)

7. Masateru Tsunoda, Koji Toda, Kyohei Fushida, Yasutaka Kamei, Meiyappan Nagappan, Naoyasu Ubayashi. (2013). Revisiting Software Development Effort Estimation based on Early Phase Development Activities. 10th Working Conference on Mining Software Repositories (MSR), San Francisco, United States (429 - 438)

6. Roman Suvorov*, Meiyappan Nagappan, Ahmed E. Hassan, Ying Zou, Bram Adams. (2012). An Empirical Study of Build System Migrations in Practice: Case Studies on KDE and the Linux Kernel. 28th IEEE International Conference on Software Maintenance (ICSM), Trento, Italy (160 - 169)

5. Tse-Hsun Chen*, Stephen W. Thomas, Meiyappan Nagappan, Ahmed E. Hassan. (2012). Explaining Software Defects using Topic Models. 9th Working Conference on Mining Software Repositories (MSR), Zurich, Switzerland (189 - 198)

4. Nicolas Bettenburg, Meiyappan Nagappan, Ahmed E. Hassan. (2012). Think Locally, Act Globally: Improving Defect and Effort Prediction Models. 9th Working Conference on Mining Software Repositories (MSR) (Best Paper Award), Zurich, Switzerland (60 - 69) *(Best Paper Award)*

3. Israel J. Mojica Ruiz*, Meiyappan Nagappan, Bram Adams, Ahmed E. Hassan. (2012). Understanding Reuse in the Android Market. IEEE 20th International Conference on Program Comprehension (ICPC), Passau, Germany (113 - 122)

2. Meiyappan Nagappan, Mladen A Vouk. (2010). Abstracting Log Lines to Log Event Types for Mining Software System Logs. 7th IEEE Working Conference on Mining Software Repositories (MSR), Cape Town, SA (114-117).

1. Meiyappan Nagappan, Kesheng Wu, Mladen A. Vouk. (2009). Efficiently Extracting Operational Profiles from Execution Logs using Suffix Arrays. 20th IEEE International Symposium on Software Reliability Engineering (ISSRE), Mysuru, India (41-50).

Workshop and other Peer Reviewed Publications

11. Kowndinya Boyalakuntla, Meiyappan Nagappan, Sridhar Chimalakonda, Nuthan Munaiah: Repo- Quester: A Tool Towards Evaluating GitHub Projects. Demo/Tool Track paper in the proceedings of the IEEE International Conference on Software Maintenance and Evolution (ICSME) 2022: (509-513), Cyprus, Greece.

10. Hossein Keshavarz, Meiyappan Nagappan. (2022). ApacheJIT: A Large Dataset for Just-In-Time Defect Prediction. Proceedings of the IEEE/ACM 19th International Conference on Mining Software Repositories (MSR), Pittsburgh, USA, (191-195),

9. Kendall Bailey, Meiyappan Nagappan, Danny Dig. (2019). Examining User-Developer Feedback Loops in the iOS App Store. Proceedings of the 52nd Hawaii International Conference on System Sciences, Maui, USA (7411 - 7420).

8. Jesse Hoey, Tobias Schröder, Jonathan H Morgan, Kimberly B Rogers, Meiyappan Nagappan. (2018). Affective Dynamics and Control in Group Processes. Proceedings of the Group Interaction Frontiers in Technology.

7. Meiyappan Nagappan. (2018). Reconsidering Whether GOTO Is Harmful. Column in IEEE Software. (93 - 95).

6. Meiyappan Nagappan, Mehdi Mirakhorli. (2015). Big(ger) Data in Software Engineering. 37th International Conference on Software Engineering (ICSE) - Tutorial track, Florence, Italy (957 - 958)

5. Catherine Ramirez, Meiyappan Nagappan, Mehdi Mirakhorli. (2015). Studying the Impact of Evolution in R Libraries on Software Engineering Research. 1st International Workshop on Software Analytics (SWAN), Montreal, Canada (29 - 30)

4. Meiyappan Nagappan, Emad Shihab, Ahmed E. Hassan. (2013). Challenges in Mobile Apps: Multi-Disciplinary Perspective. 23rd Annual International Conference on Computer Science and Software Engineering (CASCON), Markham, Canada (378 - 381)

3. Meiyappan Nagappan, Brian Robinson. (2011). Creating Operational Profiles of Software Systems by Transforming their Log Files to Directed Cyclic Graphs. 6th International Workshop on Traceability in Emerging Forms of Software Engineering (TEFSE), Honolulu, US (54 - 57)

2. Meiyappan Nagappan, Brendan Murphy, Mladen A. Vouk. (2011). Which Code Construct Metrics are Symptoms of Post Release Failures?. 2nd International Workshop on Emerging Trends in Software Metrics (WETSoM), Honolulu, US (65 - 68)

1. Meiyappan Nagappan, Aaron Peeler, Mladen Vouk. (2011). Modeling Cloud Failure Data: A Case Study of the Virtual Computing Lab. 2nd International Workshop on Software Engineering for Cloud Computing, Honolulu, US (8-14)

VI. Software Distribution

7. Mayil AI: A GenAI developer productivity tool for bug localization. Commercialized. https://www.mayil.ai/

6. FuzzSlice: A fuzzing tool for intelligent optimized fuzzing. Commercialized. https://fuzzslice.com/

5. ApplyPlus: A tool to intelligently apply security patches. An advanced version of git-apply. (in collaboraotion with BlackBerry). https://github.com/meido/ApplyPlus

4. SE Garage: An App Store for Software Engineering Research Tools. Archives SE research tools and acts as an app store for them. (Under development with funding from ACM SIGSOFT). https://segarage.org/

3. RepoReaper: A software package that helps clean the noise in the GitHub dataset and helps researchers choose a large number of engineered software projects for their case studies.
   https://github.com/RepoReapers/reaper

2. Ammonia: An Approach for Deriving Project Specific Bug Patterns. Already fixed more than a dozen bugs in open source projects.
   https://github.com/YoshikiHigo/NH3

1. Vulnerable JavaScript Library Detector in Hybrid Apps. Found multiple apps in the Google Play store that uses vulnerable libraries. (In preparation for release).
   https://git.uwaterloo.ca/nvolodin/thesis/tree/master/code

VII. Research Funding History

Program	Role	Total Funding	Share	Start Date	End Date
National Cybersecurity Consortium: Transfer Fuzzing for Devices Without Firmware	Co-Applicant	$255,471	$127,735	June-23	Mar-27
CPI-Wat.AI Seed Grant: Finding False Positives in Deep Learning Based Vulnerability Detection Techniques	Co-Applicant	$20,000	$10,000	Apr-23	Mar-25
Google Award: To understand the sources of discrimination faced by Hispanic and Black open-source developers in online social-coding platforms	Co-Applicant	$76,000	$38,000	Jan-22	Dec-22
NSERC Alliance: Reducing False Positives in Statically Detecting Mobile App and Platform Level	Co-Applicant	$450,000	$150,000	Jan-21	Dec-23

Waterloo-Huawei Joint Innovation Lab (Industry Grant): Reducing False Positives in Statically Detecting Mobile App and Platform Level Security Warnings	Co-Applicant	$450,000	$150,000	Jan-20	Dec-22
NSERC Alliance: Pre- and post-release bug prediction in an industrial setting	Co-Applicant	$66,000	$33,000	Sept-20	Aug-22
Bank of Montreal (Industry Grant): Pre and post release bug prediction	Co-Applicant	$66,000	$33,000	May-19	May-21
SAP Canada (Industry Grant): Machine Learning for Software Security	Co-Applicant	$40,000	$20,000	Dec-18	Jun-20
NSERC CRD: IDE-Assisted Learning (IDEAL): Helping developers to solve their "Now Problems" now	Co-Applicant	$76,924	$38,462	May-18	May-19
CA Technologies (Industry Grant): IDE-Assisted Learning (IDEAL): Helping developers to solve their "Now Problems" now	Co-Applicant	$100,000	$50,000	Jan-18	May-19
NSERC Discovery: Understanding the impact of mobile app markets on software practice, Grant	Principal Applicant	$140,000	$140,000	Apr-17	Apr-22

Digging into Data Challenge: THEMIS.COG: Theoretical And Empirical Modeling Of Identity And Sentiments In Collaborative Groups (NSERC, SSHRC, NSF, DFG), Grant [2]	Co-Applicant	$850,000 for Canada + US + Germany. NSERC + SSHRC = $199,504	$99,752	Apr-17	Apr-20
Startup funds from the Department of Computer Science at the University of Waterloo, Grant	Principal Applicant	$120,000	$120,000	Sep-16	Aug-21
Collaborative Research: Helping Mobile App Developers Make Implementation Decisions Based on App Store Analysis, Grant	Principal Applicant	$650,000	$320,000 Returned after leaving the US.	Jul-16	Jun-19
Quantifying End-User Issues Across Different Mobile App Platforms, Grant (from RIT)	Principal Applicant	$19,000	$19,000	Jan-15	Jun-16
TOTAL		$3,379,395	$1,348,949		

VIII. Student/Postdoctoral Supervision

Summary: With each student, I was involved from the stage of identifying what problem needed to be solved. From the idea stage, I guided them to identify the literature relevant to the problem. From there I supervised them in building the solutions for the problems and in collecting the data required to evaluate their solutions. Finally, I helped them in writing and reviewing their written work in order to get them published in top SE conferences and journals. I have worked with a diverse set of students from more than 10 different countries and more than half them are either women or visible minorities.

[2]This is a multi-disciplinary grant with computer scientists and sociologists (team of four) from Canada, US, and Germany. This team was one of 14 to receive this highly competitive grant from the Trans-Atlantic Platform for the Social Sciences and Humanities (T-AP).

HQP Type	Current Supervision/Co-Supervision	Graduated Supervised/Co-Supervised	Mentored as a Postdoc
Post-Doc	2	1	0
Ph.D.	4	2	0
Masters	7	20	4
Undergrad	3	17	1
TOTAL	**16**	**40**	**5**

Details

Trainee	Role	Degree	Period	Current Status
Rungroj Maipradit	Co-Supervisor	Post Doctoral Fellow	Jan 2023 - Jan 2025	Completed
Mahmoud Alfadel	Co-Supervisor	Post Doctoral Fellow	Jan 2022 - Dec 2024	Completed (UCalgary)
Gema Rodriguez Perez	Supervisor	Post Doctoral Fellow	Jan 2019 - July 2021	Completed (UBC-O)
Murali Aniruddhan	Supervisor	Doctorate	Jan 2022 – present	In Progress
Partha Chakraborty	Supervisor	Doctorate	Jan 2021 - present	Completed
Kishanthan Thangarajah	Supervisor	Doctorate	Jan 2021 - present	In Progress
Bushra Aloraini	Supervisor	Doctorate	Oct 2015 - Sept 2020	Completed (Microsoft)
Harold Valdivia-Garcia	Supervisor (for the last 2 years)	Doctorate	Oct 2014 – Aug 2016	Completed (Bloomberg)
Noble Mathews	Supervisor	Master's Thesis	Sept 2023 – Dec 2024	Completed
Kio Gods-favour	Supervisor	Master's Thesis	May 2023 – Dec 2024	Completed

Vikram Subramanian	Supervisor	Master's Thesis	May 2023 – Aug 2024	Completed
Deborah Etsanake	Supervisor	Master's Research Paper	Jan 2023 – Apr 2024	Completed
Joy Idialu	Co-Supervisor	Master's Thesis	Sept 2022 – Apr 2024	Completed
Ayinde Yakubu	Co-Supervisor	Part time Master's Thesis	Sept 2022 – present	In Progress
Ajiromola Kola-Olawuyi	Supervisor	Master's Thesis	May 2022 – Dec 2023	Completed
Dheeraj Vagavolu	Co-Supervisor	Master's Thesis	September 2021 – Aug 2023	Completed
Nasif Ahmed	Supervisor	Master's Thesis	September 2021 – May 2024	Completed
Krishnakanth Arumugam	Supervisor	Master's Thesis	September 2021 – May 2023	Completed
Owura Asare	Co-Supervisor	Master's Thesis	September 2021 – Aug 2023	Completed
Daniel Erhabor	Supervisor	Master's Thesis	Jan 2021 – Aug 2023	Completed
Murali Aniruddhan	Supervisor	Master's Thesis	Jan 2021 – Dec 2021	Completed
Venkatraman Arumugam	Supervisor	Master's Thesis	Sept 2020 – June 2022	Completed
Hossein Keshavarz	Supervisor	Master's Thesis	Sept 2020 – May 2022	Completed
Shivasurya Sankara-pandian	Supervisor	Master's Thesis	Sept 2019 – May 2021	Completed

Sheik Shameer Sheik Saleem	Supervisor	Master's Thesis	Sept 2019 – April 2021	Completed
Kilby Baron	Co-Supervisor	Master's Thesis	Sept 2018 – Sept 2020	Completed
Reza Nadri	Supervisor	Master's Thesis	Sept 2018 – Aug 2020	Completed
Achyudh Ram	Co-Supervisor	Master's Thesis	Sept 2018 – July 2020	Completed
Lakshmanan Arumugam	Supervisor	Master's Thesis	Jan 2018 – May 2020	Completed
Arman Naeimian	Co-Supervisor	Master's Thesis	Sept 2017 – Sept 2019	Completed
Rahul Iyer	Co-Supervisor	Master's Thesis	Sept 2017 – Aug 2019	Completed
Nikita Volodin	Co-Supervisor	Master's Thesis	Sept 2016 – Jan 2019	Completed
Angshuman Ghosh [Mitacs Graduate Scholarship in 2016]	Co-Supervisor	Master's Thesis	Sept 2016 – Sept 2018	Completed (Loblaws Digital
Craig Cabrey	Supervisor	Master's Thesis	Aug 2015 - Aug 2016	Completed (Facebook)
Zhihao Chi	Supervisor	Master's Thesis	Aug 2015 - Aug 2016	Completed (Saab Sensis)
Michael Pu	Supervisor	Undergraduate Research Assistant	Jan 2024 – Present	In Progress
Preeti Valunjkar	Supervisor	Undergraduate Research Assistant	Jan 2024 – Present	In Progress

Annie Zhang	Supervisor	Undergraduate Research Assistant	Jan 2024 – Present	In Progress
Vikram Subramanian	Supervisor	Undergraduate Research Assistant	May 2019 – Dec 2022	Completed
Yuvika Khardenavis	Supervisor	Undergraduate Research Assistant	May 2020 – Dec 2020	Completed
Yinuo Wang	Supervisor	Undergraduate Research Assistant	May 2020 – Aug 2020	Completed
Shayon Banerjee	Supervisor	Undergraduate Research Assistant	May 2020 – Aug 2020	Completed
Spandan Garg	Supervisor	Undergraduate Research Assistant	May 2019 – Aug 2019	Completed
Yuxiao Yu	Supervisor	Undergraduate Research Assistant	Sept 2018 – Dec 2018	Completed
Yin Lin	Supervisor	Mitacs Globalink research intern	Jun 2018 – Aug 2018	Completed
Andrew Bond	Supervisor	Undergraduate Research Assistant	May 2018 – Dec 2018	Completed
Boshen Cui	Supervisor	Undergraduate Research Assistant	May 2018 – Aug 2018	Completed
Shivanghi Patwardhan	Supervisor	Undergraduate Research Assistant	Jan 2018 - May 2018	Completed
Russell Pecka	Supervisor	Undergraduate Research Assistant	Jan 2018 - May 2018	Completed

Adrian Cruzat	Supervisor	Undergraduate Research Assistant	Jan 2016 - May 2016	Completed
Michael Washburn	Supervisor	Undergraduate Research Assistant	May 2015 - Aug 2015	Completed
David Durst	Supervisor	Undergraduate Research Assistant	Aug 2015 - Dec 2015	Completed
Giovanni Carvelli	Supervisor	Undergraduate Research Assistant	Aug 2015 - Dec 2015	Completed (Datto)
Austin Malerba	Supervisor	Undergraduate Research Assistant	Aug 2015 - Dec 2015	Completed (Target Corp)
Paul Hulbert	Supervisor	Undergraduate Research Assistant	Aug 2015 - Dec 2015	Completed

Mentored as a Postdoctoral Fellow

Trainee	**Role**	**Degree**	**Period**	**Current Status**
Hammad Khalid[3,4]	Mentor	Master's Thesis Undergraduate Research Assistant	Sep 2012 - Aug 2014 May 2012 - Aug 2012	Completed (Shopify)
Israel Mojica[3]	Mentor	Master's Thesis	Sep 2011 - May 2013	Completed (Intel Security)

[3]Student Supervision as a Post Doctoral Fellow in the Software Analysis and Intelligence Lab at Queen's University (only includes students mentored from start to finish in their research).

[4]Won the Gold Medal at the ACM student Resarch Competition at the Internation Conference on Software Engineering in 2015 at San Francisco, USA.

Tse-Hsun Chen[3]	Mentor	Master's Thesis	Sep 2011 - May 2013	Completed (Concordia University Asst. Prof.)
Mark D.Syer[3]	Mentor	Master's Thesis	May 2011 - May 2013	Completed (Facebook)

Thesis Titles of Students

32. Noble Mathews (2024). Code Generation and Testing in the Era of AI-Native Software Engineering. University of Waterloo MMath Thesis.

31. Partha Chakraborty (2024). Optimizing Automated Bug Localization for Practical Use. University of Waterloo PhD Thesis.

30. Kio Godsfavour (2024). SWE-bench-secret: Automating AI Agent Evaluation for Software Engineering Tasks. University of Waterloo MMath Thesis.

29. Vikram Subramanian (2024). BugLLM: Explainable Bug Localization through LLMs. University of Waterloo MMath Thesis.

28. Joy Idialu (2024). Classifying Code as Human Authored or GPT-4 Generated. University of Waterloo MMath Thesis.

27. Nasif Ahmed (2024). Variability in Factors Influencing Pull Request Merge Decisions: A Microscopic Exploration. University of Waterloo MMath Thesis.

26. Ajiromola Kola-Olawuyi(2023). The Impact of Code Ownership of DevOps Artefacts on the Outcome of DevOps CI Builds. University of Waterloo MMath Thesis.

25. Dheeraj Vagavolu(2023). Android Access Control Recommendation as a Deep Learning Task. University of Waterloo MMath Thesis.

24. Krishnakanth Arumugam (2023). Evaluating Deep Learning-based Vulnerability Detection Models on Realistic Datasets. University of Waterloo MMath Thesis.

23. Owura Asare (2023). Security Evaluations of GitHub's Copilot. University of Waterloo MMath Thesis.

22. Daniel Erhabor (2022). Measuring the Performance of Code Produced with GitHub Copilot. University of Waterloo MMath Thesis.

21. Venkatraman Arumugam (2022). Adaptive Cross-Project Bug Localization with Graph Learning. University of Waterloo MMath Thesis.

20. Hossein Keshavarz (2022). JITGNN: A Deep Graph Neural Network for Just-In-Time Bug Prediction. University of Waterloo MMath Thesis.

19. Aniruddhan Murali (2021). AddressWatcher: Automatic Memory Leak Fixing. University of Waterloo MMath Thesis.

18. Shivasurya Sankarapandian (2021). Detecting Exploitable Vulnerabilities in Android Applications. University of Waterloo MMath Thesis.

17. Sheik Shameer Sheik Saleem (2021). An Analysis of Human Aspects of Collaborative Group Members in OSS development. University of Waterloo MMath Thesis.

16. Bushra Aloraini (2020). Towards Better Static Analysis Security Testing Methodologies. University of Waterloo Ph.D. Dissertation.

15. Kilby Baron (2020). Evaluating the Effectiveness of Code2Vec for Bug Prediction When Considering That Not All Bugs Are the Same. University of Waterloo MMath Thesis Co-Supervised with Mike Godfrey.

14. Reza Nadri (2020). On the Relationship Between the Developer's Perceptible Ethnicity and the Evaluation of Contributions in GitHub. University of Waterloo MMath Thesis.

13. Achyudh Ram Keshav Ram (2020). Exploiting Token and Path-based Representations of Code for Identifying Security-Relevant Commits. University of Waterloo MMath Thesis.

12. Lakshmanan Arumugam (2020). Semantic Code Search Using Code2Vec: A Bag of Paths Model. University of Waterloo MMath Thesis.

11. Arman Naeimian (2019). Parallel Paths Analysis Using Function Call Graphs. University of Waterloo MMath Thesis Co-Supervised with Semih Salihoglu.

10. Rahul N. Iyer (2019). Effects of Personality Traits and Emotional Factors in Pull Request Acceptance. University of Waterloo MMath Thesis Co-Supervised with Jesse Hoey.

9. Nikita Volodin (2019). Detecting Vulnerable JavaScript Libraries in Hybrid Android Applications. University of Waterloo MMath Thesis Co-Supervised with Urs Hengartner.

8. Angshuman Ghosh (2018). Discovering Play Store Reviews Related to Specific Android App Issues. University of Waterloo MMath Thesis Co-Supervised with Maura R. Grossman.

7. Harold Valdivia-Garcia (2016). Understanding the Impact of Diversity in Software Bugs on Bug Prediction Models. Rochester Institute of Technology Ph.D. Dissertation.

6. Craig Cabrey (2016). Identifying the Presence of Known Vulnerabilities in the Versions of a Software Project. Rochester Institute of Technology MS Thesis.

5. Zhihao Mike Chi (2016). LibDetector: Version Identification of Libraries in Android Applications. Rochester Institute of Technology MS Thesis.

4. Hammad Khalid (2014). On The Link Between Mobile App Quality And User Reviews. Queen's University Master's Thesis mentored as a Post Doctoral Fellow with Ahmed E. Hassan.

3. Israel Mojica (2013). Large-Scale Empirical Studies of Mobile Apps. Queen's University Master's Thesis mentored as a Post Doctoral Fellow with Ahmed E. Hassan.

2. Tse-Hsun Chen (2013). Studying Software Quality Using Topic Models. Queen's University Master's Thesis mentored as a Post Doctoral Fellow with Ahmed E. Hassan.

1. Mark D. Syer (2013). Empirical Studies of Mobile Apps and Their Dependence on Mobile Platforms. Queen's University Master's Thesis mentored as a Post Doctoral Fellow with Ahmed E. Hassan.

IX. Teaching

5. CS 446: Software Design and Architecture (UWaterloo - 4th year Undergraduate level Course) – Instructor (Winter 2017 - 65 students, Winter 2018 - 65 students, Spring 2019 - 130 students, Spring 2020 - 130 students, Spring 2021 - 130 students, Spring 2022 - 130 students)

4. CS 846: Empirical Software Engineering using Ultra Large Repositories (UWaterloo - Graduate level Course) – Instructor (Fall 2016 - 20 students, Fall 2017 - 20 students, Fall 2018 - 20 students, Spring 2020 - 10 students, Spring 2021 - 20 students, Spring 2022 - 20 students)

3. SWEN 749: Software Evolution and Reengineering (RIT - Graduate level Course) – Instructor (Spring 2015 - 20 students, Spring 2016 - 20 students)

2. SWEN 220: Mathematical Models of Software (RIT Undergraduate level Course) – Instructor (Spring 2015 - 20 students, Fall 2015 - 20 students)

1. CISC 835: Empirical Software Engineering using Ultra Large Repositories (Queens University - Graduate level ULSS Course) – Instructor (Fall 2012 - 6 students)

X. International Collaboration

1. 2016 – present: Shinpei Hayashi, Tokyo Institute of Technology, Japan.

2. 2020 – 2022: Glenn Wurster and Scott Cosentino, BlackBerry, Canada.

3. 2019 – 2022: Raula Gaikovina Kula, Nara Institute of Science and Technology, Japan.

4. 2018 – 2019: Darko Marinov, University of Illinois at Urbana-Champaign, US.

5. 2016 – 2022: Yoshiki Higo, University of Osaka, Japan.
6. 2016 – 2022: Hideaki Hata, Nara Institute of Science and Technology, Japan.
7. 2016 - 2018: Trevor Carnahan, Microsot, Redmond.
8. 2013 – 2017: William Halfond, University of Southern California, US.
9. 2013 – 2016: Romain Robbes, University of Chile, Chile and Free University of Bozen-Bolzano, Italy.
10. 2012 – 2018: Thomas Zimmerman and Chris Bird, Microsoft Research, US.
11. 2012 – 2018: Yasutaka Kamei, Kyushu University, Japan
12. 2012 – 2017: Audris Mockus, University of Tennessee-Knoxville, US
13. 2012 – 2021: Bram Adams, Queen's University, Canada
14. 2012 – 2017: Thorsten Berger, University of Leipzig, Germany and Chalmers University, Sweden.

XI. Service

External Service

A. Editorial Activities

2019/5 – present: Associate Editor, Empirical Software Engineering Journal

2019/12 - 2023/12: Associate Editor, IEEE Transactions on Software Engineering

2017/8 – 2021/7: Associate Editor, Journal of Systems & Software

2017/1 – 2020/1: Information Director, IEEE Transactions on Software Engineering

2015/6 – 2019/1: Editor-in-Chief, IEEE Software Blog, Report

B. Program Co-Chair

1. 9th IEEE/ACM International Conference on Mobile Software Engineering and Systems (MobileSoft 2022) co-located with International Conference on Software Engineering (ICSE) 2022, Pittsburgh, USA.
2. 18th International Conference on Mining Software Repositories (MSR 2021) co-located with International Conference on Software Engineering (ICSE) 2021, Madrid, Spain.
3. 20th International Conference on Software Quality, Reliability, and Security (QRS 2020), Macau, China.

4. 16th International Conference on Predictive Models and Data Analytics in Software Engineering (PROMISE 2020), co-located with ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE) 2020, Sacramento, CA.

C. Program Committee

1. 38th, 42nd, 43rd International Conference on Software Engineering - Research Track (ICSE 2016, 2020, 2021).
2. 28th ACM Joint Meeting on European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2020).
3. 30th, 31st, 32nd, 34th, 35th IEEE International Conference on Software Maintenance and Evolution (ICSME 2014, 2015, 2016, 2018, 2019).
4. 11th, 12th, 13th, 14th, 15th, 17th ACM/IEEE Working Conference on Mining Software Repositories (MSR 2014, 2015, 2016, 2017, 2018, 2020).
5. 22nd, 23rd, 25th, 26th IEEE International Conference on Software Analysis, Evolution, and Reengineering (SANER 2014, 2015, 2016, 2018).
6. 38th International Conference on Software Engineering - Poster Track (ICSE 2016).
7. 1st, 2nd International Workshop on BIG Data Software Engineering (BIGDSE).
8. 37th International Conference on Software Engineering - Demo Track (ICSE 2015).
9. ERA track of the 22nd International Conference on Program Comprehension (ICPC 2014).
10. ERA track of the 29th IEEE International Conference on Software Maintenance (ICSM 2013).
11. Data Challenge track of the 10th ACM/IEEE Working Conference on Mining Software Repositories (MSR 2013).
12. 6th, 8th, 9th, 10th, 11th, 12th, ACM SIGSOFT India Software Engineering Conference (ISEC 2013, 2015, 2016, 2017, 2018, 2019).
13. Tool Demo track of the 19th, Working Conference on Reverse Engineering (WCRE 2012).
14. 23rd IEEE International Symposium on Software Reliability Engineering (ISSRE 2012).

D. Organizing Committee

1. Journal First Co-Chair, 22nd International Conference on Mining Software Repositories (MSR 2025) co-located with International Conference on Software Engineering (ICSE) 2025, Ottawa, Canada.

2. Workshops Co-chair, 33rd IEEE International Symposium on Software Reliability Engineering (ISSRE 2022).

3. Web Co-chair, 41st International Conference on Software Engineering(ICSE 2019).

4. Publicity Chair, 14th International Conference on Predictive Models and Data Analytics in Software Engineering (PROMISE 2018).

5. Publicity Co-Chair, 34th International Conference on Software Maintenance and Evolution (ICSME 2018).

6. Organizer, 1st and 2nd International Workshop on App Market Analytics, Workshop Co-Located with 24th and 25th ACM SIGSOFT International Symposium on the Foundations of Software Engineering (FSE 2016, 2017).

7. Publicity Chair, 24th ACM SIGSOFT International Symposium on the Foundations of Software Engineering (FSE 2016).

8. Organizer, Mobile App Store Analytics, Shonan Workshop (similar to Dagstuhl workshop), 2015.

9. Student Volunteer Chair, 36th International Conference on Software Engineering (ICSE 2014).

10. Organizer, Challenges in Mobile Apps: A Multi-Disciplinary Perspective, Workshop Co-Located with the 23rd Annual International Conference on Computer Science and Software Engineering (CASCON 2013).

11. PC Chair, 4th IEEE International Workshop on Empirical Software Engineering in Practice (IWESEP 2012).

12. Website Chair, 19th IEEE International Symposium on Software Reliability Engineering (ISSRE 2008).

Internal Service

1. 2022 – 2023: School Advisory Committees on Appointments (SACA) - Faculty Hiring Committee - EDIC Liason.

2. 2021 - 2023: School of Computer Science Associate Director of Graduate Studies (Grad admissions).

3. 2021 – 2022: School Advisory Committees on Appointments (SACA) - Faculty Hiring Committee - EDIC Liason.

4. 2020 – 2022: School of Computer Science Equity, Diversity, and Inclusion Committee (EDIC).
5. 2020 – 2022: Faculty of Math Anti-Racism Committee.
6. 2019 – 2020: School Advisory Committees on Appointments (SACA) - Faculty Hiring Committee
7. 2018 – 2019: Grad Committee - Admissions and scholarship review
8. 2018 – 2018: Strategic Plan Implementation Working Group for Research at the Math Faculty
9. 2017 – 2018: School Advisory Committees on Appointments (SACA) - Faculty Hiring Committee
10. 2016 – 2017: Undergrad Recruiting Committee
11. 2015 – 2016: Faculty Hiring Committee at the Department of Software Engineering in Rochester Institute of Technology.

XII. Presentations

19. November 3, 2024: AIWare Bootcamp in Toronto. Panel on FMware for 10X Developer Productivity - Myth or Fact.
18. October 10, 2024: Cybersecurity and Privacy Institute Annual Conference. Panel on Protecting Data Through Software Security.
17. March 29, 2024: Invited talk at the FM+SE Summit 2024 in Tokyo. Security and Runtime Performance of Code Generated by GitHub Copilot.
16. November 2, 2023: Math Research Days Invited Talk. A Hopeful Case for Generative AI in Software Engineering.
15. September 30, 2023: Invited talk at the University of Waterloo Centre for Information Integrity and Information Systems Assurance. A Hopeful Case for Generative AI in Software Engineering.
14. May 30, 2023: Cambridge Forum on Canadian Cyber Security. A Hopeful Case for Generative AI in Software Engineering.
13. May 18, 2023: Invited Talk at RIT's ESL Global Cybersecurity Institute. A Hopeful Case for Generative AI in Software Engineering.
12. January 4, 2023: Invited talk at IIT Tirupati, India. Generic Cross-language Static Data Flow Analysis.

11. (2022). Bias in evaluating code contributions. It Will Never Work in Theory: Live!, Online

10. (2019). End-to-End Detection of Open-Source Libraries with Known Vulnerabilities in Mobile Applications. 2nd Edition SAP Security Research Seminar, Mougins, France

9. (2018). Trends and Challenges in Software Engineering Research for Mobile Apps. SE Summer School@unibz2018, Free University of Bozen-Bolzano, Bolzano, Italy

8. (2016). Future Trends in Software Engineering Research for Mobile Apps. 23rd IEEE International Conference on Software Analysis, Evolution, and Reengineering, Osaka, Japan

7. (2016). Curating GitHub for Engineered Software Projects. Software Engineering Mix Volume 2: Large-scale Data Analysis of Software Repositories. Co-Located with Microsoft Research Faculty Summit. Seattle, USA.

6. (2014). Analytics on Ad Library Maintenance in Android Apps. Dagstuhl Seminar 14261 - Software Development Analytics, Dagstuhl, Germany

5. (2014). Big(ger) Data in Software Engineering. MSR Asia, Tokyo, Japan

4. (2013). Large Scale Studies of Mobile Apps in the Android and iOS Markets. IBM Research, Bangalore, India

3. (2013). Leveraging Performance Counters and Execution Logs to Diagnose Memory-Related Performance Issues. Tata Research Development & Design Centre, Pune, India

2. (2013). Towards Improving Statistical Modelling of Software Engineering Data: Think Locally, Act Globally. Symposium on Augmenting Software Developer Support to Improve Productivity, Monte Verita, Ascona, Switzerland

1. (2013). Large Scale Studies of Mobile Apps in the Android and iOS Markets. Microsoft Research, Redmond, United States

XIII. Interview and Media Relations

10. (2023). Thanks to generative AI, profits are up and costs are down at these businesses, Globe and Mail.
Online: https://www.theglobeandmail.com/business/article-generative-ai-businesses-cost-savings/

9. (2023). Learning to code takes on a new meaning as AI shakes up programming, Globe and Mail.
Online: https://www.theglobeandmail.com/business/article-ai-code-generate-gpt-4/

8. (2021). Want to succeed on GitHub? Your odds are better if you're white. Issie Lapowsky, Protocol.
Online: https://www.protocol.com/policy/github-race-bias-study

7. (2021). Software developers' perceived race may affect success of their proposals: study. Tara Deschamps, The Canadian Press.
Online: https://www.thestar.com/business/2021/07/29/software-developers-perceived-race-affects-success-of-their-proposals-study.html

6. (2019). GitHub Releases New Tools to Report Vulnerabilities. Rina Diane Caballar, IEEE Spectrum.
Online: https://spectrum.ieee.org/tech-talk/computing/software/github-releases-new-tools-to-report-vulnerabilities

5. (2015). Empirical Study On How C Devs Use Goto In Practice Says "Not Harmful". Posted by timothy on Slashdot.
Online: https://developers.slashdot.org/story/15/02/12/1744207/empirical-study-on-how-c-devs-use-goto-in-practice-says-not-harmful

4. (2015). Free Apps With Ads May Be Killing Your Phone's Battery And Data Plan. By Alex Konrad, Forbes.
Online: https://www.forbes.com/sites/alexkonrad/2015/04/01/free-app-ads-kill-phone-battery-and-data/#45f37d6623cc

3. (2015). Free Apps With Ads Impact Smartphone Performance, Battery Life: Study. By Press Trust of India, NDTV.
Online: https://gadgets.ndtv.com/apps/news/free-apps-with-ads-impact-smartphone-performance-battery-life-study-677320

2. (2015). Your 'Free' Apps Could Be Costing You More Than Your Paid Apps. Keith Wagstaff, Today.
Online: https://www.today.com/money/your-free-apps-could-be-costing-you-more-your-paid-t12926

1. (2015). Study: Ad-Supported Apps Come with Hidden Costs.
Online: https://www.wirelessweek.com/news/2015/04/study-ad-supported-apps-come-hidden-costs