Kevin Moran, Ph.D.

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RESEARCH INTERESTS

Software engineering, **software security**, machine learning applications to software engineering, software evolution and maintenance, mobile software development, software testing, software data analytics, source code analysis, software design, software traceability

PROFESSIONAL EXPERIENCE

Assistant Professor, University of Central Florida, *Department of Computer Science*	*Fall 2023-present*
Assistant Professor, George Mason University, *Department of Computer Science*	*2020-2023*
Research Assistant Professor, William & Mary, *Department of Computer Science*	*2019-2020*
Post-Doctoral Fellow, William & Mary, *Department of Computer Science*	*2018-2019*
Research Assistant, William & Mary, *Department of Computer Science*	*2015-2018*
System Administrator, William & Mary, *Department of Computer Science*	*2013-2015*

EDUCATION

William & Mary *2018*
Ph.D., Computer Science
Dissertation Title: *Automating Software Development for Mobile Computing Platforms*
Advisor: Dr. Denys Poshyvanyk

William & Mary *2015*
M.S., Computer Science
Thesis Title: *Enhancing Bug Reports for Mobile Apps*
Advisor: Dr. Denys Poshyvanyk

College of the Holy Cross *2013*
B.A., Physics, Computer Science Minor
Advisor: Dr. Timothy Roach

SELECTED AWARDS

ACM SigSoft Early Career Researcher Award	*2024*
MobileSoft Rising Star Award	*2023*
Distinguished Reviewer Awards at *ICPC'21*, *MSR'21*, *ICPC'22*, *MSR'22, ICSE'23 & ICSME'23*	*2021-2023*
ACM SigSoft Distinguished Paper Award at *ICSE'20 & ESEC/FSE'19*	*May 2020 & June 2019*
Best Paper Award at *CODASPY'19*	*March 2019*

RESEARCH FUNDING

Awarded Funding:

Total Research Funding Amount: $4,215,359
GMU's Share of Research Funding: $709,355
UCF's Share of Research Funding: $762,213
My Share of Research Funding: $1,471,568

NSF SHF Program *2023-2027*
- Title: "Collaborative Research: SHF: Medium: Toward Understandability and Interpretability for Neural Language Models of Source Code"
- PI: *Kevin Moran* (UCF), PI: Ziyu Yao (GMU), PI: Denys Poshyvanyk (W&M)
- Award SHF-2311468 Total Award Amount: $1,074,380 *(UCF's Share: $372,599, 34%)*

NSF CIRC Program *2023-2024*
- Title: "Collaborative Research: CCRI: Planning-C: An Infrastructure and Dataset for Research in Android Testing & Analysis"
- PI: Wing Lam (GMU); PI: *Kevin Moran* (UCF), PI: Wei Yang (UT Dallas)
- Award CNS-2235136 Total Award Amount: $99,174 *(UCF's Share: $33,125, 33.4%)*

NSF CPS Program *2022-2025*
- Title: "Collaborative Research: CPS: Medium: Enabling Data-Driven Security and Safety Analyses for Cyber-Physical Systems"
- PI: Adwait Nadkarni (W&M); PI: *Kevin Moran* (GMU/UCF), co-PI: Denys Poshyvanyk (W&M)
- Award CNS-2132285 Total Award Amount: $998,979 (GMU's Share: $104,415) *(UCF's Share: $275,063, 27.5%)*

Cisco Advanced Security Research Group Award *2022-2023*
- Title: "Neural-based Code Search and Refactoring"
- PI: *Kevin Moran*
- Award totaling $50,000 to GMU (unrestricted gift)

Dragon Testing Ltd. Research Award *2022-2023*
- Title: "Toward Automated Human-like Testing of Android Apps via Imitation Learning"
- PI: *Kevin Moran*, co-PI: Wing Lam (GMU)
- Award totaling $60,000 to GMU (unrestricted gift)

Cisco Advanced Security Research Group Award *2021-2022*
- Title: "Automated Code Review for Measuring and Improving Software Maintainability"
- PI: *Kevin Moran* (GMU)
- Award totaling $50,000 (unrestricted gift)

NSF SHF Program *2020-2024*
- Title: "SHF: Medium: Bug Report Management 2.0"
- PIs: *Kevin Moran* (GMU/UCF), Andrian Marcus (UT Dallas), Denys Poshyvanyk (W&M) co-PI: Oscar Chaparro (W&M)
- Award CCF-1955853 Total Award Amount: $1,199,998 (GMU's share: $175,133) *(UCF's share: $81,426, 7%)*

NSF SHF Program   *2020-2023*
- Title: "SHF: Small: Towards a Holistic Causal Model for Continuous Software Traceability"
- PIs: *Kevin Moran* (GMU), Denys Poshyvanyk (W&M)
- Award CCF-2007246 Total Award Amount: $500,000 (GMU's share: $269,807)

NSF EAGER Program   *2019-2020*
- Title: "EAGER: Mapping Future Synergies between Deep Learning and Software Engineering"
- PI: Denys Poshyvanyk (W&M); co-PI: *Kevin Moran* (W&M)
- Award CCF-1927679, totaling $82,828

Cisco Advanced Security Research Group Award   *2019-2020*
- Title: "Identifying and Tracing Security Related Software Requirements"
- PI: Denys Poshyvanyk (W&M); co-PI: *Kevin Moran* (W&M)
- Award totaling $100,000 (unrestricted gift)

REFEREED JOURNAL PUBLICATIONS

[J9]   C. Watson, N. Cooper, D. Nader Palacio, **K. Moran**, and D. Poshyvanyk, "A Systematic Literature Review on the Use of Deep Learning in Software Engineering Research," in *ACM Transactions on Software Engineering and Methodology (TOSEM)*, vol. 31, no. 2, pp.1-58.

[J8]   C. Bernal-Cárdenas, N. Cooper, M. Havranek, **K. Moran**, O. Chaparro, D. Poshyvanyk, and A. Marcus, "Translating Video Recordings of Complex Mobile App UI Gestures into Replayable Scenarios for Native & Hybrid Apps," in *IEEE Transactions on Software Engineering (TSE)*, vol. 49, no. 4, pp. 1782-1803.

[J7]   M. Fazzini, **K. Moran**, C. Bernal-Cárdenas, T. Wendland, A. Orso, and D. Poshyvanyk, "Enhancing Mobile App Bug Reporting via Real-time Understanding of Reproduction Steps," in *IEEE Transactions on Software Engineering (TSE)*, vol. 49, no. 3, pp. 1246-1272.

[J6]   A. S. Ami, K. Kafle, **K. Moran**, A. Nadkarni, and D. Poshyvanyk, "Systematic Mutation-based Evaluation of Security-focused Static Analysis Tools for Android," in *ACM Transactions on Privacy and Security (TOPS)*, vol. 24, no. 3, pp. 1-37.

[J5]   K. Kafle, **K. Moran**, S. Manandhar, A. Nadkarni, and D. Poshyvanyk, "Security in Centralized Data Store-based Home Automation Platforms: A Systematic Study of Nest and Hue," in *ACM Transactions on Cyber Physical Systems (TCPS)*, vol. 5, no. 2, article 2, 27 pages.

[J4]   C. Escobar-Velásquez, M. Linares-Vásquez, G. Bavota, M. Tufano, **K. Moran**, M. Di Penta, C. Vendome, C. Bernal-Cárdenas, and D. Poshyvanyk, "Enabling Mutant Generation for Open- and Closed-Source Mobile Apps," in *IEEE Transactions on Software Engineering (TSE)*, vol. 48, no. 1, pp. 186-208.

[J3]   **K. Moran**, C. Bernal-Cárdenas, M. Curcio, R. Bonett, and D. Poshyvanyk, "Machine Learning-Based Prototyping of Graphical User Interfaces for Mobile Apps," in *IEEE Transactions on Software Engineering (TSE)*, vol. 46, no. 2, pp.196-221 – *presented as a Journal First Paper at FSE'18.*

[J2]   Q. Luo, **K. Moran**, L. Zhang, and D. Poshyvanyk, "How Do Static and Dynamic Test Case Prioritization Techniques Perform on Modern Software Systems? An Extensive Study on GitHub Projects,*" IEEE Transactions on Software Engineering (TSE)*, vol. 45, no. 11, pp. 1054-1080.

[J1]   K. Wallace, **K**. **Moran**, E. Novak, G. Zhou, and K. Sun, "Toward Sensor-Based Random Number Generation for Mobile and IoT Devices," in *IEEE Internet of Things Journal (IoT)*, vol. 3, no. 6, pp. 1189-1201, Dec. 2016.

REFEREED CONFERENCE PUBLICATIONS

* Underlined Students are those advised at GMU & UCF

[C34] Y. Yan, N. Cooper, **K. Moran**, G. Bavota, D. Poshyvanyk, and S. Rich, "Enhancing Code Understanding for Impact Analysis by Combining Transformers and Program Dependence Graphs," *in Proceedings of the 2024 Symposium on the Foundations of Software Engineering (FSE 2024)*, Proto de Galinhas, Brazil, July 15th-19th, 2024 **(11% acceptance rate without revisions)**

[C33] A. Krishnavajjala, SM Hasan Mansur, Justin Jose, **K. Moran**, "MotorEase: Automated Detection of Motor Impairment Accessibility Issues in Mobile App UIs," in *Proceedings of the 46th IEEE/ACM International Conference on Software Engineering (ICSE 2024)*, Lisbon, Portugal, April 14-20, 2024, to appear. **(~25% acceptance rate)**

[C27] J. Mahmud, N. De Silva, S. Ali Khan, S. H. Mostafavi, SM H. Mansur, O. Chaparro, A. Marcus, and **K. Moran**, "On Using GUI Interaction Data to Improve Text Retrieval-based Bug Localization," in *Proceedings of the 46th IEEE/ACM International Conference on Software Engineering (ICSE 2024)*, Lisbon, Portugal, April 14-20, 2024, to appear. **(7% acceptance rate with no revisions)**

[C32] Y. Yan, N. Cooper, O. Chaparro, **K. Moran**, and D. Poshyvanyk, "Semantic GUI Scene Learning and Video Alignment for Detecting Duplicate Video-based Bug Reports," in *Proceedings of the 46th IEEE/ACM International Conference on Software Engineering (ICSE 2024)*, Lisbon, Portugal, April 14-20, 2024, to appear. **(8% acceptance rate with no revisions)**

[C31] S. A. Khan, W. Wang, Y. Ren, B. Zhu, J Shi, A. McGowan, W. Lam, and **K. Moran**, "AURORA: Navigating UI Tarpits via Automated Neural Screen Understanding," *in Proceedings of the 17th International Conference on Software Testing, Verification, and Validation (ICST 2024)*, Toronto, Canada, 2024, to appear **(25% acceptance rate)**

[C30] K. Baral, J. Johnson, J. Mahmud, S. Salma, M. Fazzini, J. Rubin, J. Offutt, and **K. Moran**, "Automating GUI-based Test Oracles for Mobile Apps," *in Proceedings of the 21st International Conference on Mining Software Repositories (MSR 2024)*, Lisbon, Portugal, April 15th-16th, 2024, to appear **(29% acceptance rate)**

[C29] S. Salma, SM H. Mansur, Y. Zhang, and **K. Moran**, "GuiEvo: Automated Evolution of Mobile App UIs," *in Proceedings of the 21st International Conference on Mining Software Repositories (MSR 2024)*, Lisbon, Portugal, April 15th-16th, 2024, to appear **(29% acceptance rate)**

[C28] A. S. Ami, **K. Moran**, D. Poshyvanyk, and A. Nadkarni, "'False negative – that one is going to kill you' – Understanding Industry Perspectives of Static Analysis based Security Testing," in *Proceedings of the IEEE Symposium on Security and Privacy (S&P 2024)*, May 20-23, 2024, pp.19-29. **(21.3% acceptance rate)**

[C26] A. Kumar Dipongkor, and *K. Moran*, "A Comparative Study of Transformer-based Neural Text Representation Techniques on Bug Triaging," in *Proceedings of the 38th IEEE/ACM Itnernational Conference on Automated Software Engineering (ASE 2023)*, Kirchberg, Luxembourg, 2023, pp. 1012-1023. **(21% acceptance rate)**

[C25] SM H. Mansur, S. Salma, D. Awofisayo, and **K. Moran**, "AidUI: Toward Automated Recognition of Dark Patterns in User Interfaces," in *Proceedings of the 45th IEEE/ACM International Conference on Software Engineering (ICSE 2023)*, Melbourne, Australia, 2023, pp. 1958-1970. **(26% acceptance rate)**

[C24] Y. Zhao, S. Talebipour, K. Baral, H. Park, L. Yee, S. A. Khan, Y. Brun, N. Medvidovic, and **K. Moran**, "AVGUST: Automating Usage-based Test Generation from Videos of App Executions," in *Proceedings of the 2022 ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2022)*, Singapore, 2022, pp. 421-433. **(22% acceptance rate)**

[C23] Y. Song, J. Mahmud, Y. Zhou, O Chaparro, **K. Moran**, A. Marcus, and D. Poshyvanyk, "Toward Interactive Bug Reporting for (Android App) End Users," in *Proceedings of the 2022 ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2022)*, Singapore, 2022, pp. 344-356. **(22% acceptance rate)**

[C22] **K. Moran**, A. Yachnes, G. Purnell, J. Mahmud, M. Tufano, C. Bernal-Cárdenas, D. Poshyvanyk, and Z. H-Doubler, "An Empirical Investigation into the Use of Image Captioning for Automated Software Documentation," in *Proceedings of the 29th IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER'22)*, Honolulu, Hawaii, 2022, pp. 514-525. **(24% acceptance rate)**

[C21] J. Johnson, J. Mahmud, T. Wendland, **K. Moran**, J. Rubin, and M. Fazzini, "An Empirical Investigation into the Reproduction of Bug Reports for Android Apps," in *Proceedings of the 29th IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER'22)*, Honolulu, Hawaii, 2022, pp. 321-332. **(24% acceptance rate)**

[C20] A. S. Ami, N. Cooper, K. Kafle, **K. Moran**, D. Poshyvanyk, and A. Nadkarni, "Why Crypto Detectors Fail: A Systematic Evaluation of Cryptographic Misuse Detection Techniques," in *Proceedings of the IEEE Symposium on Security and Privacy (S&P'22)*, 2022. **(15% acceptance rate)**

[C19] N. Cooper, C. Bernal-Cárdenas, O. Chaparro, **K. Moran**, and D. Poshyvanyk, "It Takes Two to Tango: Combining Visual and Textual Information for Detecting Duplicate Video-Based Bug Reports," in *Proceedings of the 42nd IEEE/ACM International Conference on Software Engineering (ICSE'21)*, Madrid, Spain, 2021, pp. 957-969. **(27% acceptance rate)**

[C18] S. Manandhar, **K. Moran**, K. Kafle, R. Tang, D. Poshyvanyk, and A. Nadkarni, "Towards a Natural Perspective of Smart Homes for Practical Security and Safety Analyses," in *Proceedings of the 41st IEEE Symposium on Security & Privacy (S&P'20)*, San Francisco, California, 2020. **(12% acceptance rate)**

[C17] **K. Moran**, D. Nader Palacio, C. Bernal-Cárdenas, D. McCrystal, D. Poshyvanyk, C. Shenefiel, and J. Johnson, "Improving the Effectiveness of Traceability Link Recovery using Hierarchical Bayesian Networks," in *Proceedings of the 42nd IEEE/ACM International Conference on Software Engineering (ICSE'20)*, Seoul, South Korea, 2020, pp. 873-885. **(20% acceptance rate)**

[C16] C. Bernal-Cárdenas, N. Cooper, **K. Moran**, O. Chaparro, A. Marcus, and D. Poshyvanyk, "Translating Video Recordings of Mobile Apps into Replayable Scenarios," in *Proceedings of the 42nd IEEE/ACM International Conference on Software Engineering (ICSE'20)*, Seoul, South Korea, 2020, pp. 309-321. **(20% acceptance rate) -** 🏆 *ACM SIGSOFT Distinguished Paper Award*

[C15] C. Watson, M. Tufano, **K. Moran**, G. Bavota, and D. Poshyvanyk, "On Learning Meaningful Assert Statements for Unit Test Cases," in *Proceedings of the 42nd IEEE/ACM International Conference on Software Engineering (ICSE'20)*, Seoul, South Korea, 2020, pp. 1398-1409. **(20% acceptance rate)**

[C14] O. Chaparro, C. Bernal-Cárdenas, J. Lu, **K. Moran**, A. Marcus, M. Di Penta, D. Poshyvanyk, and V. Ng, "Assessing the Quality of the Steps to Reproduce in Bug Reports," in *Proceedings of the 27th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE'19)*, Tallinn, Estonia, 2019, pp. 86-96. **(24% acceptance rate)** *-* 🏆 *ACM SIGSOFT Distinguished Paper Award*

[C13] K. Kafle, **K. Moran**, S. Manandhar, A. Nadkarni, and D. Poshyvanyk, "A Study of Data Store-based Home Automation," in *Proceedings of the 9th ACM Conference on Data and Application Security and Privacy (CODASPY'19)*, Dallas, TX, 2019, pp. 73-84. **(23% acceptance rate)** *–* 🏆 *Best Paper Award*

[C12]   **K. Moran**, C. Watson, J. Hoskins, G. Purnell, and D. Poshyvanyk, "Detecting and Summarizing GUI Changes in Evolving Mobile Apps," in *Proceedings of the 33rd IEEE/ACM International Conference on Automated Software Engineering (ASE'18)*, Montpellier, France, 2018, pp. 543-553. **(21% acceptance rate)**

[C11]   Q. Luo, **K. Moran**, D. Poshyvanyk, and M. Di Penta, "Assessing Test Case Prioritization on Mutants and Real Faults," in *Proceedings of the 34th IEEE International Conference on Software Maintenance and Evolution (ICSME'18)*, Madrid, Spain, 2018, pp. 240-251. **(26% acceptance rate)** – 🏆 *Nominated for IEEE TCSE Distinguished Paper Award*

[C10]   R. Bonett, K. Kafle, **K. Moran**, A. Nadkarni, and D. Poshyvanyk, "Discovering Flaws in Security-Focused Static Analysis Tools for Android using Systematic Mutation," in *Proceedings of the 27th USENIX Security Symposium (USENIX Security '18)*, Baltimore, MD, 2018, pp. 1263-1280. **(19% acceptance rate)**

[C9]   **K. Moran**, B. Li, C. Bernal-Cárdenas, D. Jelf, and D. Poshyvanyk, "Automated Reporting of GUI Design Violations for Mobile Apps," in *Proceedings of the 40th IEEE/ACM International Conference on Software Engineering (ICSE'18)*, Gothenburg, Sweden, 2018, pp. 165-175. **(21% acceptance rate)**

[C8]   **K. Moran**, C. Bernal-Cárdenas, M. Linares-Vásquez, and D. Poshyvanyk, "Overcoming Language Dichotomies: Toward Effective Program Comprehension for Mobile App Development," in *Proceedings of the 26th IEEE/ACM International Conference on Program Comprehension (ICPC'18)*, Invited Paper, Gothenburg, Sweden, 2018, pp. 7-18.

[C7]   M. Linares-Vásquez, C. Bernal-Cárdenas, **K. Moran**, and D. Poshyvanyk, "How do Developers Test Android Applications?," in *Proceedings of the 33rd IEEE International Conference on Software Maintenance and Evolution (ICSME'17)*, Industry Track, Shanghai, China, 2017, pp. 613-622.

[C6]   M. Linares-Vásquez, **K. Moran**, and D. Poshyvanyk, "Continuous, Evolutionary and Large-Scale: A New Perspective for Automated Mobile App Testing," in *Proceedings of the 33rd IEEE International Conference on Software Maintenance and Evolution (ICSME'17)*, Shanghai, China, 2017, pp. 399-410. **(27% acceptance rate)**

[C5]   M. Linares-Vásquez, G. Bavota, M. Tufano, **K. Moran**, M. Di Penta, C. Vendome, C. Bernal-Cárdenas, and D. Poshyvanyk, "Enabling Mutation Testing for Android Apps," in *Proceedings of the 11th Joint Meeting of the European Software Engineering Conference and the 25th ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE'17)*, Paderborn, Germany, 2017, pp. 233-244. **(24% acceptance rate)**

[C4]   Q. Luo, **K. Moran**, and D. Poshyvanyk, "A Large-scale Empirical Comparison of Static and Dynamic Test Case Prioritization Techniques," in *Proceedings of the 24th ACM SIGSOFT International Symposium on the Foundations of Software Engineering (FSE'16)*, Seattle, WA, 2016, pp. 559-570. **(27% acceptance rate)**

[C3]   **K. Moran**, M. Linares-Vásquez, C. Bernal-Cárdenas, C. Vendome, and D. Poshyvanyk, "Automatically Discovering, Reporting and Reproducing Android Application Crashes," in *Proceedings of the 9th IEEE International Conference on Software Testing, Verification, and Validation (ICST'16)*, Chicago, IL, 2016, pp. 33-44. **(27% acceptance rate)**

[C2]   **K. Moran**, M. Linares-Vásquez, C. Bernal-Cárdenas, and D. Poshyvanyk, "Auto-Completing Bug Reports for Android Applications," in *Proceedings of the 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, 2015, pp. 673-686. **(25% acceptance rate)**

[C1]   M. Linares-Vásquez, M. White, C. Bernal-Cárdenas, **K. Moran**, and D. Poshyvanyk, "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, 2015, pp. 111-122. **(30% acceptance rate)**

REFEREED SHORT CONFERENCE & WORKSHOP PUBLICATIONS
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* Underlined Students are those advised at GMU & UCF

[S21] J. Otten, A. Anastasopoulos, and **K. Moran**, "Towards a Universal Python: Translating the Natural Modality of Python into Other Human Languages", in *Proceedings of the 39th International Conference on Software Maintenance and Evolution (ICSME 2023)*, New Ideas and Emerging Research (NIER Track), Bogota, Colombia, 2023, to appear.

[S20] P. Mandal, S. Manandhar, K Kafle, **K. Moran**, D. Poshyvanyk, and A Nadkarni, "Helion: Enabling Natural Testing of Smart Homes," in *Proceedings of the 2023 Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2023)*, San Francisco, California, Formal Tool Demonstrations Track, 2023, to appear.

[S19] A. S. Ami, S. Y. Ahmed. R. M. Redoy, N. Cooper, K. Kafle, **K. Moran**, D. Poshyvanyk, and A. Nadkarni, "MASC: A Tool for Mutation-based Evaluation of Crypto-API Misuse Detectors," in *Proceedings of the 2023 Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2023)*, San Francisco, California, Formal Tool Demonstrations Track, 2023, to appear.

[S18] S. Jalil, S. Rafi, T. LaToza, **K. Moran**, & W. Lam, "ChatGPT and Software Testing Education: Promises & Perils", in *Proceedings of the 2nd Software Testing Education Workshop (TestEd'23) co-located with ICST'23*, Dublin, Ireland, 2023, pp. 4130-4137.

[S17] Y. Song, J. Mahmud, N. De Silva, Y. Zhou, O. Chaparro, **K. Moran**, A. Marcus, and D. Poshyvnayk, "BURT: A Chatbot for Interactive Bug Reporting," in *Proceedings of the 45th International Conference on Software Engineering (ICSE 2023)*, Melbourne, Australia, 2023, pp. 170-174. **(48% acceptance rate)**

[S16] S. Talebipour, H. Park, K. Baral, L. Yee, S. A. Khan, **K. Moran,** Y. Brun, N. Medvidovic, and Y. Zhao, "AVGUST: A Tool for Generating Usage-Based Tests from Videos of App Executions," in *Proceedings of the 45th International Conference on Software Engineering (ICSE 2023)*, Melbourne, Australia, 2023, pp. 83-87. **(48% acceptance rate)**

[S15] **K. Moran**, "Learning Patterns from User Interfaces to Support Software Engineering Tasks," *CHI 2022 Workshop on Computational Approaches for Understanding, Generating, and Adapting User Interfaces (Computational UI@CHI'22)*, New Orleans, Louisiana, April 30, 2022.

[S14] J. Mahmud, F. Faisal, R. I. Arnob, A. Anastasopoulos, **K. Moran**, "Code to Comment Translation: A Comparative Study on Model Effectiveness & Errors," *Proceedings of the First Workshop on Natural Language Processing for Programming (NLP4Prog'21) Co-Located with ACL-IJCNLP'21*, Bangkok, Thailand, August 6, 2021, pp.1-16.

[S13] T. Wendland, J. Sun, J. Mahmud, S.M. H. Mansur, S. Huang, **K. Moran**, J. Rubin, and M. Fazzini, "AndroR2: A Dataset of Manually-Reproduced Bug Reports for Android Apps," in *Proceedings of the 2021 International Conference on Mining Software Repositories (MSR'21)*, Data Showcase Track, Madrid, Spain, May 17-19, 2021, pp. 600-604.

[S12] A. S Ami, K. Kafle, **K. Moran**, A. Nadkarni, and D. Poshyvanyk, "Demo: Mutation-based Evaluation of Security-focused Static Analysis Tools for Android," in *Proceedings of the 42nd IEEE/ACM International Conference on Software Engineering (ICSE'21)*, Formal Research Tool Demonstration, Madrid, Spain, 2021, pp. 53-56.

[S11] M. Havranek, C. Bernal-Cárdenas, N. Cooper, O. Chaparro, D. Poshyvanyk, and **K. Moran**, "V2S: A Tool for Translating Video Recordings of Mobile Apps into Replayable Scenarios," in *Proceedings of the 42nd IEEE/ACM International Conference on Software Engineering (ICSE'21)*, Formal Research Tool Demonstration, Madrid, Spain, 2021, pp. 65-68.

[S10]   D. Nader Palacio, D. McCrystal, **K. Moran**, C. Bernal-Cárdenas, D. Poshyvanyk, and C. Shenefiel, "Learning to Identify Security-Related Issues Using Convolutional Neural Networks," *in Proceedings of the 35th International Conference on Software Maintenance and Evolution (ICSME'19)*, Short Paper Track, Cleveland, OH, 2019, pp. 140-144. **(56% acceptance rate)**

[S9]   C. Bernal-Cárdenas, **K. Moran**, M. Tufano, Z. Liu, L. Nan, Z. Shi, and D. Poshyvanyk, "Guigle: A GUI Search Engine for Android Apps," in *Proceedings of the 41st ACM/IEEE International Conference on Software Engineering (ICSE'19)*, Formal Research Tool Demonstration, Montréal, QC, Canada, 2019, pp. 71-74. **(47% acceptance rate)**

[S8]   **K. Moran**, "Automating Software Development for Mobile Computing Platforms," in *Proceedings of the 34th IEEE International Conference on Software Maintenance and Evolution (ICSME'18)*, Doctoral Symposium – Post Doctoral Track, Madrid, Spain, 2018, pp. 749-754.

[S7]   **K. Moran**, M. Tufano, C. Bernal-Cárdenas, M. Linares-Vásquez, G. Bavota, C. Vendome, M. Di Penta, and D. Poshyvanyk, "MDroid+: A Mutation Testing Framework for Android," in *Proceedings of the 40th IEEE/ACM International Conference on Software Engineering (ICSE'18)*, Formal Research Tool Demonstration, Gothenburg, Sweden, 2018, pp. 33-36. **(35% acceptance rate)**

[S6]   **K. Moran**, M. Linares-Vásquez, C. Bernal-Cárdenas, C. Vendome, and D. Poshyvanyk, "CrashScope: A Practical Tool for Automated Testing of Android Applications," in *Proceedings of the 39th IEEE/ACM International Conference on Software Engineering (ICSE'17)*, Formal Research Tool Demonstration, Buenos Aires, Argentina, 2017, pp. 15-18. **(31% acceptance rate)**

[S5]   **K. Moran**, M. Linares-Vásquez, and D. Poshyvanyk, "Automated GUI Testing of Android Apps: From Research to Practice," in *Proceedings of the 39th IEEE/ACM International Conference on Software Engineering (ICSE'17)*, Technical Briefing, Buenos Aires, Argentina, 2017, pp. 505-506.

[S4]   **K. Moran**, R. Bonnet, C. Bernal-Cárdenas, B. Otten, D. Park, and D. Poshyvanyk, "On-Device Bug Reporting for Android Applications," in *Proceedings of the 4th IEEE/ACM International Conference on Mobile Software Engineering and Systems (MOBILESoft'17)*, Tool Demos and Mobile Apps Track, Buenos Aires, Argentina, 2017, pp. 215-216. **(44% acceptance rate)**

[S3]   **K. Moran**, M. Linares-Vásquez, and D. Poshyvanyk, "Automated GUI Testing of Android Apps: From Research to Practice," in *Proceedings of the 32nd IEEE International Conference on Software Maintenance and Evolution (ICSME'16)*, Technical Briefing, Raleigh, NC, 2016, pp. 648-648.

[S2]   **K. Moran**, M. Linares-Vásquez, C. Bernal-Cárdenas, and D. Poshyvanyk, "FUSION: A Tool for Facilitating and Augmenting Android Bug Reporting," in *Proceedings of the 38th IEEE/ACM International Conference on Software Engineering (ICSE'16)*, Formal Research Tool Demonstration, Austin, TX, 2016, pp. 609-612. **(32% acceptance rate)**

[S1]   **K. Moran**, "Fixing Bug Reporting for Mobile and GUI-Based Applications," in *Proceedings of the 38th IEEE/ACM International Conference on Software Engineering (ICSE'16)*, Doctoral Symposium, Austin, TX, 2016, pp. 831-834. **(22% acceptance rate)**

ADDITIONAL AWARDS & FELLOWSHIPS

S. Laurie Sanderson Award for Excellence in Undergraduate Mentoring   *March 2018*
- William & Mary

Graduate Student Award for Excellence in Scholarship   *March 2018*
- William & Mary

NASA Graduate Research Fellowship   *2015-2017*
- Virginia Space Grant Consortium (VSGC)

NSF Student Travel Awards for *ESEC/FSE'15* & *ICSE'16*   *August 2015 & May 2016*
- National Science Foundation

ACM Student Research Competition Graduate Student Finalist (*ESEC/FSE'15*)   *November 2015*
- Association for Computing Machinery & Microsoft

NASA Summer Research Fellowship   *Summer 2011*
- Massachusetts Space Grant Consortium (MASGC)

Eagle Scout Award   *2007-present*
- Boy Scouts of America

TEACHING EXPERIENCE

Instructor of Record, University of Central Florida:

Term	Course Title	Enrollment	Instructor Rating	Course Rating
Spring 2024	CEN 5016: Software Engineering	69	N/A	N/A
Fall 2023	COP3223H: Honors Introduction to Programming in C	25	3.12/5.00	3.24/5.00

Instructor of Record, George Mason University:

Term	Course Title	Enrollment	Student Participation	Learning Outcomes	Course Environment & Experience	Instructor Preparation & Course Organization
Spring 2023	SWE 432: Web Application Development	57	3.77/5.00	4.40/5.00	4.40/5.00	4.33/5.00
Fall 2022	SWE 432: Web Application Development	57	4.07/5.00	4.53/5.00	4.69/5.00	4.64/5.00
Spring 2022	CS/SWE 795: Intersections of Deep Learning & Software Engineering	20	4.18/5.00	4.23/5.00	4.65/5.00	4.55/5.00

Term	Course Title	Enrollment	Instructor Rating	Course Rating
Fall 2021	SWE 432: Web Application Development	55	4.70/5.00	4.60/5.00
Spring 2021	SWE 632: Design and Development of User Interfaces	30	5.00/5.00	4.69/5.00
Fall 2020	SWE 632: Design and Development of User Interfaces	30	4.75/5.00	4.81/5.00

Teaching Assistant, William & Mary:

Software Engineering (CS 635: Graduate)   *Fall 2015, Fall 2016, Spring 2018*
- Invited lecturer and student research project director

Software Engineering (CS 435: Undergraduate)   *Spring 2016, Spring 2017, Fall 2017, Fall 2018, Fall 2019*
- Invited lecturer and student project director

STUDENT MENTORSHIP

Dissertation Committee Chair

In Progress

S. M. Hasan Mansur	Ph.D. in CS, George Mason University	Fall 2020 – Present
Junayed Mahmud	Ph.D. in CS, University of Central Florida	Spring 2021 – Present
Sabiha Salma	Ph.D. in CS, George Mason University	Spring 2021 – Present
Safwat Ali Khan	Ph.D. in CS, George Mason University	Fall 2021 – Present
Arun Krishnavajjala	Ph.D. in CS, George Mason University	Spring 2022 – Present
Atish Kumar Dipongkor	Ph.D. in CS, University of Central Florida	Fall 2022- present

Dissertation Committee Member

Maryam Arab	Ph. D. in CS, George Mason University	expected 2023
Emad Aghayi	Ph.D. in CS, George Mason University	expected 2023
Kesina Baral	Ph.D. in CS, George Mason University	2022
Sunil Manandhar	Ph.D. in CS, William & Mary	2022

Master's Student Mentees

Asra Naseem	Independent Study, George Mason University	2022
Meet Ghandi	SE Seminar Project, George Mason University	2022
Juhi Kamdar	SE Seminar Project, George Mason University	2022
George Purnell	M.S. in CS, William & Mary	2018-2019

Undergraduate Mentees

Yule Zhang	B.S. in CS, George Mason University	2022
Kristen Goebel	Summer REU @ GMU, Clarkson University B.S. in CS & Mathematics (Now Ph.D. student at Oregon State University)	2021
Jasmine Obas	Summer REU @ GMU, George Mason University B.S. in CS	2021-2022
Zichang (Emma) Liu	Summer REU @ William & Mary, W&M B.S. in CS (now Ph.D. student at Rice University)	2018-2019
Daniel McCrystal	Summer REU @ William & Mary, W&M B.S. in CS	2018-2019
Ali Yachnes	Summer REU @ William & Mary, W&M B.S. in CS	2018-2019
Dan Jelf	Summer REU @ William & Mary, W&M B.S. in CS	2017-2018
Michael Curcio	Summer REU @ William & Mary, W&M B.S. in CS	2017-2018

| Zack H'Doubler | Summer REU @ William & Mary, W&M B.S. in CS | 2017 |
| Richard Bonnet | Summer REU @ William & Mary, B.S. in CS (began Ph.D. at W&M) | 2017-2018 |

<u>High School Mentees (via George Mason University's Aspiring Scientists Summer Internship Program)</u>

Sophia Lin	Thomas Jefferson High School of Science & Technology	2023
Justin Jose	South Lakes High School	2022
Alyssa McGowan	Thomas Jefferson High School of Science & Technology	2022-23
Anish Pothireddy	Osbourn Park High School (now an undergraduate at the Wharton School at the University of Pennsylvania)	2021
Damilola Awofisayo	Thomas Jefferson High School of Science & Technology (now an undergraduate at Duke University), *co-author of ICSE'23 paper*	2021

FORMAL CONFERENCE PRESENTATIONS & INVITED TALKS

Invited Talk – UCF, Learning Institute for Elders (LIFE) Seminar Series, Orlando, FL *January 30th, 2024*
- "Of Minds & Machines: AI in Everyday Life"

Invited Talk – UCF, CECS Virtual Seminar Series, Virtual *September 29th, 2023*
- "Building Practical Automation for Software Engineers"

Invited Talk – Teach with AI Conference, Orlando, Florida *September 24th, 2023*
- "ChatGPT and Computer Science Education: Promises & Perils"

Invited Talk – ASE'23, New Faculty Symposium Kirchberg, Luxembourg *September 11th, 2023*
- "Surviving and Thriving in your Early Career as an Assistant Professor"

Keynote Address, MSR Asia Summit, Hokkaido, Japan *July 23rd, 2023*
- "Learning Patterns from User Interfaces to Automate Software Engineering Tasks"

Invited Talk – ICSE'23, New Faculty Symposium Melbourne, AUS *May 16th, 2023*
- "Surviving and Thriving in your Early Career as an Assistant Professor"

Invited Talk – Vanderbilt University, CS8395, Virtual *October 24th, 2022*
- "Deep Learning & Software Engineering: A Retrospective & Paths Forward"

Invited Talk – UCF Cybersecurity and Privacy Cluster, Orlando, FL *October 14th, 2022*
- "Building Practical Automation for Software (Security) Engineers"

Keynote Address – A-Mobile'22 Workshop Co-Located with ASE'22, Virtual *October 10th, 2022*
- "The Promise of (Machine) Learning from UIs to Support Software Engineering for Mobile Apps"

Invited Panelist –AeSIR'22, Virtual *September 23rd, 2022*
- "Automated Support for Improving Code Understandability: Tools from 2030"

Invited Talk – Samsung Research Software Engineering Summit, Virtual *September 23rd, 2022*
- "Deep Learning & Software Engineering: A Retrospective & Paths Forward"

Invited Talk – Apple, Human-Centered Machine Intelligence Team, Virtual *August 4th, 2022*
- "Learning Patterns from User Interfaces to Automate Software Engineering Tasks"

Invited Talk – Google Brain, Learning for Code Team, Virtual *July 20th, 2022*
- "Deep Learning for Software Engineering: Models, Interpretability, and Applications"

Paper Presentation – CHI'22 Workshop on Computational UIs, New Orleans, LA *April 30th, 2022*
- "Learning Patterns from User Interfaces to Support Software Engineering Tasks"

Invited Talk – GMU Software Engineering Seminar Series, Fairfax, VA *September 9th, 2021*
- "Toward a Deeper Understanding of Neural Language Models for Code Generation"

Invited Talk – ACM SigSoft Webinar Series, Virtual *July 14th, 2021*
- "Deep Learning & Software Engineering: A Retrospective and Paths Forward"

Research Paper Presentation – ICSE'20 , Virtual (originally Seoul South Korea) *July 8th, 2020*
- "Improving Traceability Link Recovery using Hierarchical Bayesian Networks"

Invited Seminar Talk – University of Notre Dame *March 5th, 2020*
- "Toward Practical Automation for Software Engineering"

Invited Seminar Talk – University of Minnesota *March 2nd, 2020*
- "Toward Practical Automation for Software Engineering"

Invited Seminar Talk – University of Rhode Island *February 26th, 2020*
- "Toward Practical Automation for Software Engineering"

Invited Seminar Talk – University of Maryland Baltimore County *February 18th, 2020*
- "Toward Practical Automation for Software Engineering"

Invited Seminar Talk – Michigan State University *February 14th, 2020*
- "Toward Practical Automation for Software Engineering"

Invited Seminar Talk – George Mason University *February 6th, 2020*
- "Toward Practical Automation for Software Engineering"

Invited Seminar Talk – Loyola University Chicago *February 3rd, 2020*
- "Toward Practical Automation for Software Engineering"

Invited Seminar Talk – Bucknell University *January 29th, 2020*
- "Toward Practical Automation for Software Engineering"

Invited Seminar Talk – Virginia Commonwealth University *January 27th, 2020*
- "Toward Practical Automation for Software Engineering"

Invited Seminar Talk – University of Memphis *January 24th, 2020*
- "Toward Practical Automation for Software Engineering"

Invited Seminar Talk – Temple University *January 21st, 2020*
- "Toward Practical Automation for Software Engineering"

Invited Seminar Talk – Marquette University *January 17th, 2020*
- "Toward Practical Automation for Software Engineering"

Invited Seminar Talk – Villanova University *January 14th, 2020*
- "Toward Practical Automation for Software Engineering"

Emerging Scholar Series - Stryker Center, Williamsburg, VA *September 18th, 2019*
- "Software Engineering in the Age of Artificial Intelligence"

Research Paper Presentation - ESEC/FSE'19, Tallinn, Estonia *August 28th, 2019*

- "Assessing the Quality of the Steps to Reproduce in Bug Reports"

Artificial Intelligence Speaker Series - NIST, Gaithersburg, MD   *September 18th, 2019*
- "Software Engineering in the Age of Artificial Intelligence"

Invited Colloquium Talk – William & Mary, Williamsburg, VA   *October 26th, 2018*
- "Toward Practical Automation for Software Engineering"

Journal First Paper Presentation - *FSE'18*, Orlando, FL   *September 27th, 2018*
- "Machine Learning-Based Prototyping of Graphical User Interfaces for Mobile Apps"

Research Paper Presentation - *ICSME'18*, Madrid, Spain   *September 27th, 2018*
- "Assessing Test Case Prioritization on Real Faults and Mutants"

Doctoral Symposium Presentation - *ICSME'18*, Madrid, Spain   *September 25th, 2018*
- "Automating Software Development for Mobile Computing Platforms"

Research Paper Presentation - *ASE'18*, Montpellier, France   *September 6th, 2018*
- "Detecting and Summarizing GUI changes in Evolving Mobile Apps"

Research Paper Presentation - *ICSE'18*, Gothenburg, Sweden   *May 30th, 2018*
- "Automated Reporting of GUI Design Violations for Mobile Apps"

Tool Demo Paper Presentation - *ICSE'18*, Gothenburg, Sweden   *May 30th, 2018*
- "MDroid+: A Mutation Testing Framework for Android Apps"

Cisco Advanced Security Research Advisory Board Meeting (with Denys Poshyvanyk)   *May 8th, 2018*
- "Enabling Integrity and Security Assurance via Software Traceability"

Cisco Research Center Presentation (with Denys Poshyvanyk)   *March 6th, 2018*
- "Enabling Integrity and Security Assurance via Information Retrieval and Software Traceability"

Research Paper Presentation - *ICSME'17*, Shanghai, China   *September 20th, 2017*
- "Continuous, Evolutionary, and Large Scale: A New Perspective for Automated Mobile App Testing"

Research Paper Presentation - *ICSME'17*, Shanghai, China   *September 20th, 2017*
- "How do Developers Test Android Applications?"

Tool Demo Paper Presentation - at *ICSE'17*, Buenos Aires, Argentina   *May 24th, 2017*
- "CrashScope: A Practical Tool for Automated Testing of Android Applications"

Technical Briefing - *ICSE'17*, Buenos Aires, Argentina   *May 23rd, 2017*
- "Automated GUI Testing of Android Apps: From Research to Practice"

Tool Demo Paper Presentation - *MOBILESoft'17*, Buenos Aires, Argentina   *May 22nd, 2017*
- "On-Device Bug Reporting for Android Applications"

Research Paper Presentation - *FSE'16*, Seattle, WA   *November 16th, 2016*
- "A Large-Scale Empirical Comparison of Static and Dynamic Test Case Prioritization Techniques"

Technical Briefing Presentation - *ICSME'16*, Raleigh, NC   *October 5th, 2016*
- "Automated GUI Testing of Android Apps: From Research to Practice"

Tool Demo Paper Presentation - *ICSE'16*, Austin, TX   *May 18th, 2016*
- "FUSION: A Tool for Facilitating and Augmenting Android Bug Reporting"

Doctoral Symposium Presentation - *ICSE'16*, Austin, TX   *May 18th, 2016*
- "Fixing Bug Reporting for Mobile and GUI-Based Applications"

Research Paper Presentation - at *ICST'16*, Chicago, IL   *April 12th, 2016*
- "Automatically Discovering, Reporting, and Reproducing Android Application Crashes"

Research Paper Presentation - *ESEC/FSE'15*, Bergamo, Italy   *September 4th, 2015*
- "Auto-Completing Bug Reports for Android Applications"

ACM Student Research Competition Presentation - *ESEC/FSE'15*, Bergamo, Italy   *September 4th, 2015*
- "Enhancing Android Application Bug Reporting"

AWARDED PATENTS

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

PROFESSIONAL SERVICE

Editorial Boards:

- **Editorial Board Member & J1F Coordinator** for Journal of Systems and Software (**JSS**)   2021-present
- **Member of Board of Distinguished Reviewers** for Transactions on Software Engineering & Methodology (**TOSEM**)   2021-present

Organizing Committee:

- **Program Committee Co-Chair** for the 32nd IEEE/ACM International Conference on Program Comprehension (**ICPC'24**)   2024
- **Program Committee Co-Chair** for the Research Forum Track at the 11th International Conference on Mobile Software Engineering and Systems (**MobileSoft'24**)   2024
- **Program Committee Co-Chair** for the Journal First Track for the 39th International Conference on Software Maintenance and Evolution (**ICSME'23**)   2023
- **Program Committee Co-Chair** for the Workshop Track for the 16th International Conference on Software Testing, Verification, and Validation (**ICST'23**)   2023
- **Program Committee Co-Chair** for ERA Track for the 30th International Conference on Program Comprehension (**ICPC'22**)   2022
- **Co-Organizer** for the Workshop on Automating Test Case Design, Selection, and Evaluation (**A-Test'21**)   2021
- **Co-Coordinator** of the "Meet Your Peers" Event at the 36th IEEE/ACM International Conference on Automated Software Engineering (**ASE'21**)   2021
- **Review Process Chair** for the 36th International Conference on Automated Software Engineering (**ASE'21**)   2021
- **Program Committee Co-Chair** for the 35th International Conference on Software Maintenance and Evolution (**ICSME'19**)   2019
- **Proceedings Chair** for the 6th IEEE/ACM Conference on Mobile Software Engineering & Systems (**MobileSoft'19**)   2019
- **Publicity Co-Chair** for the 5th IEEE/ACM Conference on Mobile Software Engineering & Systems (**MobileSoft'18**)   2018

Program Committees:

- 47th IEEE/ACM International Conference on Software Engineering (**ICSE'25**)   2025
- 1st International Conference on AI Foundation Models and Software Engineering (**FORGE'24**)   2024
- 21st International Conference on Mining Software Repositories (**MSR'24**), Mining Challenge Track, Data and Tool Showcase Track   2024
- 33rd ACM SigSoft International Symposium on Software Testing & Analysis (**ISSTA'24**)   2024
- 11th International Conference on Mobile Software Engineering & Systems (**MobileSoft'24**)   2024
- 17th International Conference on Software Testing, Verification, and Validation (**ICST'24**), Tool Demonstration Tack   2024
- 46th International Conference on Software Engineering (**ICSE'24**), J1F Track, Doctoral Symposium Track   2024
- 40th International Conference on Software Maintenance and Evolution (**ICSME'24**)   2024
    - 🏆 Distinguished Reviewer Award
- 38th IEEE/ACM International Conference on Automated Software Engineering (**ASE'23**)   2023
- 39th International Conference on Software Maintenance and Evolution (**ICSME'23**)   2023
    - 🏆 Distinguished Reviewer Award
- 39th International Conference on Software Maintenance and Evolution (**ICSME'23**), NIER Track   2023
- 45th International Conference on Software Engineering (**ICSE'23**)   2023
    - 🏆 Distinguished Reviewer Award
- 45th International Conference on Software Engineering (**ICSE'23**), NIER Track   2023
- 31st International Conference on Program Comprehension (**ICPC'23**), ERA Track   2023
- 14th Asia-Pacific Symposium on Internetware (**Internetware'23**)   2023
- 2023 Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (**ESEC/FSE 2023**), Artifact Track   2023
- CHI'23 Workshop on the Future of Computational Approaches for Understanding & Adapting User Interfaces (**Computational UI @ CHI'23**)   2023
- 4th International Workshop on Testing for Deep Learning and Deep Learning for Testing (**DeepTest'23**) 2023
- 5th International Conference on Artificial Intelligence Testing (**AITest'23**)   2023
- 2023 ACM CHI Conference on Human Factors in Computing Systems (**CHI'23**), External Reviewer   2023
- 10th International Conference on mobile Software Engineering and Systems (**MobileSoft'23**), NIER Track 2023
- 20th IEEE/ACM International Conference on Mining Software Repositories (**MSR'23)**   2023
- 30th IEEE International Conference on Software Analysis, Evolution, and Reengineering (**SANER'23**)   2022
- 37th International Conference on Automated Software Engineering (**ASE'22**), Journal First Track   2022
- 30th Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (**ESEC/FSE'22**), Doctoral Symposium   2022
- 15th International Conference on the Quality of Information and Communications Technology (**QUATIC'22**), ICT Verification and Validation Track   2022
- 6th International Workshop on Programming Technology for the Future Web (**ProWeb'22**)   2022
- 36th AAAI Conference on Artificial Intelligence (**AAAI'22**), Undergraduate Consortium   2022
- **ICSE'22** - Workshop on Designing and Running Project-based Courses in Software Engineering Education (**DREE'22**)   2022
- **ICLR 2022** - Deep Learning for Code Workshop (**DL4C'22**)   2022
- **ICSE'22** - Workshop on Recruiting Participants for Empirical Software Engineering (**RoPES'22**)   2022
- ACM Innovation in Software Engineering Conference (**ISEC'22**), ACM SRC   2022
- 9th IEEE/ACM Conference on Mobile Software Engineering & Systems (**MobileSoft'22**), NIER Track   2022
- 15th International Conference on Software Testing, Verification, and Validation (**ICST'22**), Testing Tools 2022
- 15th International Conference on Software Testing, Verification, and Validation (**ICST'22**), Demos Track 2022
- 37th IEEE/ACM International Conference on Automated Software Engineering (**ASE'22**)   2022

- 29th IEEE International Conference on Software Analysis, Evolution, and Reengineering (**SANER'22**) 2022
- 19th IEEE/ACM International Conference on Mining Software Repositories (**MSR'22**), Reg. Reports 2022
- 19th IEEE/ACM International Conference on Mining Software Repositories (**MSR'22**) 2022
  - 🏆 Distinguished Reviewer Award
- 30th IEEE/ACM International Conference on Program Comprehension (**ICPC'22**), RENE Track 2022
- 30th IEEE/ACM International Conference on Program Comprehension (**ICPC'22**) 2022
  - 🏆 Distinguished Reviewer Award
- 34th ACM Symposium on User Interface Software and Technology (**UIST'21**), External Reviewer 2021
- 3rd IEEE International Conference on Artificial Intelligence Testing (**AITest'21**) 2021
- 29th Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (**ESEC/FSE'21**), Tool Demos Track 2021
- 37th International Conference on Software Maintenance and Evolution (**ICSME'21**) 2021
- 29th IEEE/ACM International Conference on Program Comprehension (**ICPC'21**) 2021
  - 🏆 Distinguished Reviewer Award
- 18th IEEE/ACM International Conference on Mining Software Repositories (**MSR'21**) 2021
  - 🏆 Distinguished Reviewer Award
- 18th IEEE/ACM International Conference on Mining Software Repositories (**MSR'21**), Data Showcase 2021
- 2nd International Workshop on Testing for Deep Learning and Deep Learning for Testing (**DeepTest'21**) 2021
- 35th IEEE/ACM International Conference on Automated Software Engineering (**ASE'20**), RRR Reviewer 2020
- 36th IEEE International Conference on Software Maintenance and Evolution (**ICSME'20**) 2020
- 7th International Workshop on User Interface Test Automation (**INTUITESTBEDS'21**) 2021
- 35th International Conference on Software Maintenance and Evolution (**ICSME'19**) 2019
- 34th IEEE/ACM International Conference on Automated Software Engineering (**ASE'19**), ACM SRC 2019
- 6th IEEE/ACM Conference on Mobile Software Engineering & Systems (**MobileSoft'19**) 2019
- 6th IEEE/ACM Conference on Mobile Software Engineering & Systems (**MobileSoft'19**), Tool Demos and Mobile Apps Track 2019
- 5th International Workshop on User Interface Test Automation (**INTUITESTBEDS'19**) 2019
- 1st Workshop on Languages and Tools for Next Generation Testing (**LANGETI'19**) 2019
- 2019 ACM Conference on Human Factors in Computing Systems (**CHI'19**), External Reviewer 2019
- 4th International Workshop on User Interface Test Automation (**INTUITTESTBEDS'18**) 2018

Conference Session Chair

- 45th International Conference on Software Engineering (**ICSE'23**) 2023
- 29th IEEE International Conference on Software Analysis, Evolution, and Reengineering (**SANER'22**) 2022
- 36th IEEE/ACM International Conference on Automated Software Engineering (**ASE'21**) 2021
- 35th International Conference on Software Maintenance and Evolution (**ICSME'19**) 2019

Research Proposal Reviewer or Panelist

- National Science Foundation (NSF) (one virtual panel) 2022
- National Science Foundation (NSF) (one virtual panel) 2020
- The Knowledge Foundation, Sweden (proposal review) 2019

Journal Reviewer
- IEEE Transactions on Software Engineering 2019-present
- Empirical Software Engineering 2019-present
- IEEE Transactions on the Internet of Things 2019
- Software Testing, Verification, & Reliability 2019-2020
- ACM Transactions on Software Engineering and Methodology 2019-present

- Journal of Systems and Software   2019-present
- Journal of Software: Evolution and Process   2019-2020

External Conference Reviewer

ICSE 2018	MSR 2017	MSR 2015
MSR 2018	SANER 2017	ICPC 2015
ICPC 2018	ICSE 2016	ICSME 2015
SANER 2018	FSE 2016	SCAM 2015
ICSE 2017	ICPC 2016	ICSME 2014
FSE 2017	SANER 2016	SCAM 2014
ICPE 2017	SCAM 2016	APSEC 2014
ICSME 2017	ICSE 2015	

UNIVERSITY SERVICE

<u>George Mason University</u>

- Committee Member, Web Committee   *2020-2022*
- Committee Member, PhD Admissions Committee   *2020-2023*
- Committee Member, Faculty Search Committee   *2022-2023*
- Aspiring Scientists Summer Internship (**ASSIP**) Program Mentor   *2020-2023*
- Software Engineering Seminar Series Organizer   *2021-2023*
- CASBBI NSF NRT Program Mentor   *2020-2022*
- ASSIP Experience Panelist   *2023*

<u>University of Central Florida</u>

- Software Engineering Reading Group (SERG), Organizer   *2023-present*
- Cyber Security and Privacy Cluster, Center Formation Committee   *2023-present*

COMMUNITY OUTREACH

<u>George Mason University</u>

- Research Mentor for Shenandoah Valley High School Students as part of Virginia ACSE program
                                                                          2022-2023
- Speaker/Mentor for ICSE'23 Doctoral Symposium   *2023*
- Faculty Advisor for the GMU CS Graduate Student Association   *2021-2023*
- SWE Lab Space Coordinator   *2022-2023*
- Organizer for PhD Student Welcome Event for Admitted PhD Students   *2020-2023*
- Mentor in Multi-institutional PhD Recruiting Event for Computer Science *2020-2022*
- Aspiring Scientists Summer Internship (**ASSIP**) Program Mentor   *2020-2023*
- Research Talk at All-Hallows High School in NY, New York   *2021*
- Mentor and Invited Speaker at TechHacks Hackathon for Women & Non-binary High School Students
                                                                          2021

<u>University of Central Florida</u>

- Invited Talk – **UCF**, Learning Institute for Elders (LIFE) Seminar Series**,** Orlando, FL   *2024*
  - "Of Minds & Machines: AI in Everyday Life"

- Mentor for ICSE'24 Student Mentoring Program   *2024*
- Speaker/Mentor for ASE'23 Doctoral Symposium   *2023*

PROFESSIONAL AFFILIATIONS

- **Association for Computing Machinery (ACM)**   *2013-present*
  - Special Interest Group on Software Engineering (**ACM SIGSOFT**)

- **Institute of Electrical and Electronics Engineers (IEEE)**   *2013-present*

- **Sigma Pi Sigma American Physics Honor Society (SPS)**   *2013-present*

INTERCOLLEGIATE ATHLETICS

Holy Cross Men's Varsity Heavyweight Rowing Team (Division I-EARC)   *2009-2013*
- Competed in the 2013 IRA National Collegiate Rowing Championship Regatta

REFERENCES

Professor Denys Poshyvanyk (Ph.D. Advisor)
- Chancellor Professor of Computer Science
- William & Mary
- Email: denys@cs.wm.edu
- Phone: (757)-221-3476

Professor Massimiliano Di Penta
- Professor of Computer Science
- University of Sannio
- Email: dipenta@unisannio.it
- Phone: +39 0824 305536

Professor Andrian Marcus
- Professor of Computer Science
- University of Texas at Dallas
- Email: amarcus@utdallas.edu
- Phone: (972)-883-4246

Associate Professor Adwait Nadkarni
- Associate Professor of Computer Science
- William & Mary
- Email: apnadkarni@wm.edu
- Phone: (919)-455-3955