Kevin Moran, Ph.D.

Room 4448, Nguyen Engineering Building, Fairfax, VA 22030

 Google Scholar | (703)-993-6826 | kpmoran@gmu.edu | www.kpmoran.com

RESEARCH INTERESTS

Software engineering, mobile software development & security, machine learning applications to software engineering, software testing, software data analytics, source code analysis, software design, software traceability

PROFESSIONAL EXPERIENCE

Assistant Professor, George Mason University, *Department of Computer Science*	*Fall 2020-Present*
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 Distinguished Paper Award at *ICSE'20*	*May 2020*
ACM SIGSOFT Distinguished Paper Award at *ESEC/FSE'19*	*June 2019*
Best Paper Award at *CODASPY'19*	*March 2019*

RESEARCH FUNDING

Awarded Funding:

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

NSF SHF Program   *2020-2024*
- Title: "SHF: Medium: Bug Report Management 2.0"
- PIs: *Kevin Moran* (GMU), Andrian Marcus (UT Dallas), Denys Poshyvanyk (W&M) co-PI: O. Chaparro (W&M)
- Award CCF-1955853 Total Award Amount: $1,199,998 (GMU's share: $256,559)

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; co-PI: *Kevin Moran*
- Award CCF-1927679, totaling $82,828

Cisco Advanced Security Research Group Grant   *2019-2020*
- Title: "Identifying and Tracing Security Related Software Requirements"
- PI: Denys Poshyvanyk; co-PI: *Kevin Moran*
- Award totaling $100,000

REFEREED JOURNAL PUBLICATIONS

[J1] 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), accepted 2021*

[J2] 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), accepted 2021*

[J3] 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), accepted 2020*

[J4] **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), accepted 2018 – presented as a Journal First Paper at FSE'18*

[J5] 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), accepted 2018*

[J6] 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

[C1] 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, to appear.

[C2] 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. *(12.3% acceptance rate)*

[C3] **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)*

[C4] 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*

[C5] 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, 1398-1409. *(20% acceptance rate)*

[C6] 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*

[C7] 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*

[C8] **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)*

[C9] 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)*

[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)*

[C11] **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)*

[C12] **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.

[C13] 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.

[C14] 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)**

[C15] 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)**

[C16] 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)**

[C17] **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)**

[C18] **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)**

[C19] 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 PUBLICATIONS

[S1] 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, to appear.

[S2] 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, to appear.

[S3] 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, to appear 4 pages **(56% acceptance rate)**

[S4] 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)**

[S5] **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.

[S6] **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)**

[S7] **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)**

[S8] **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.

[S9] **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)**

[S10] **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.

[S11] **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)**

[S12] **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, George Mason University:

Term	Subject Code	Enrollment	Instructor Rating	Course Rating
Fall 2020	SWE 632: Design and Development of User Interfaces	30	4.75	4.81

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, Fall 2017, Spring 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, George Mason University	Spring 2021 – Present
Sabiha Salma	Ph.D. in CS, George Mason University	Spring 2021 – Present

Dissertation Committee Member

Emad Aghayi	George Mason University	Ph.D., expected 2022

Master's Student Mentees

George Purnell	William & Mary, M.S. in CS	2018-2019

Undergraduate Mentees

Michael Curcio	William & Mary, B.S. in CS	2017-2018
Zack H'Doubler	William & Mary, B.S. in CS	2017
Daniel McCrystal	William & Mary, B.S. in CS	2018-2019
Ali Yachnes	William & Mary, B.S. in CS	2018-2019
Dan Jelf	William & Mary, B.S. in CS	2017-2018
Zichang (Emma) Liu	William & Mary, B.S. in CS (now Ph.D. student at Rice University)	2018-2019

Richard Bonnet   William & Mary, B.S. in CS (now Ph.D.   2017-2018
                              student at W&M)

FORMAL CONFERENCE PRESENTATIONS & INVITED TALKS

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

Organizing Committee
- ICPC 2022 – ERA Track Chair
- A-Test/LANGETI 2020 – Co-Organizer
- ASE 2020 – Review Process Chair
- ICMSE 2019 – Late Breaking Ideas Track PC Chair

Program Committee Member
- ICPC 2021 – Research Track
- MSR 2021 – Research Track, Data Showcase Track
- Deeptest 2021 – Research Track
- ASE 2020 – Research Track
- ICSME 2020 – Research Track
- INTUITESTBEDS'21 – Research Track
- ICSME 2019 – Research Track
- ASE 2019 – Student Research Competition
- MOBILESoft 2019 – Research Track
- MOBILESoft 2019 – Tool Demos & Mobile Apps Track
- INTUITTESTBEDS 2019 – Research Track
- LANGETI 2019 – Research Track
- INTUITTESTBEDS 2018 – Research Track
- CHI 2019 – Research Track

Editorial Board
- Journal of Systems and Software

Journal Reviewer
- IEEE Transactions on Software Engineering
- Empirical Software Engineering
- IEEE Transactions on the Internet of Things
- ACM Transactions on Software Engineering and Methodology
- Journal of Systems and Software
- Journal of Software: Evolution and Process

External Conference Reviewer
- ICSE 2018
- MSR 2018
- ICPC 2018
- SANER 2018
- ICSE 2017
- FSE 2017
- ICPE 2017
- ICSME 2017
- MSR 2017
- SANER 2017
- ICSE 2016
- FSE 2016
- ICPC 2016
- SANER 2016
- SCAM 2016
- ICSE 2015
- MSR 2015
- ICPC 2015
- ICSME 2015
- SCAM 2015
- ICSME 2014
- SCAM 2014
- APSEC 2014

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

Associate Professor Denys Poshyvanyk (Advisor)
- Class of 1953 Term Distinguished Associate Professor
- William & Mary
- Email: denys@cs.wm.edu
- Phone: (757)-221-3476

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

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

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