

Daniel E. Krutz

Associate Professor

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RESEARCH INTERESTS

Applied Machine Learning, Self-Adaptive Systems and Inclusive Software Development

EDUCATION

Ph.D. Computer Science, Nova Southeastern University, 2013.

Dissertation: Code Clone Discovery Based on Concolic Analysis

M.S. Software Design & Management, Rochester Institute of Technology, 2007.

B.S. Computer Science & History (Military History Specialization), St. John Fisher College, 2004.

EMPLOYMENT

- Associate Professor, Department of Software Engineering, RIT 2023–Present
- Assistant Professor, Department of Software Engineering, RIT 2017–2023
- Lecturer, Department of Software Engineering, RIT 2010–2017

APPOINTMENTS

Research Fellow, US Air Force Office of Scientific Research (AFRL/RI), 2018

RESEARCH GRANTS

Total: \$6.4M+ [PI: \$4.5M+; Co-PI: \$1.9M+; Sr. Person: \$300k in federal funding]

FUNDED

G1: NSF, “Experiential Accessible Learning Labs for Promoting Inclusive Software Development”, \$1,876,591 (PI: **Daniel Krutz**; Co-PI: Samuel Malachowsky; 7/24 - 6/29).

G2: USAF, “Autonomous Vehicle Health Monitoring System for Performance Optimization with AI enabled Sensor Fusion, Real-Time Data Display & Response, and Adaptive Center of Gravity & Gross Weight Estimation”, \$1,799,881 (\$258,844 to RIT) (PI: Agamemnon Crassidis; Co-PI: **Daniel Krutz**; 3/24 - 11/25).

G3: NSA, “GenCyber @ RIT: Secure Computing”, \$96,443 (PI: **Daniel Krutz**; Co-PI: Sumita Mishra, Yin Pan; 4/24 - 5/25).

- G4: NSF, “Research Experiences for Undergraduates (REU) Supplement - CPS: Small: Informed Contextual Bandits to Support Decision-Making for Intelligent CPS”, \$16,000 (PI: **Daniel Krutz**; Co-PI: Travis Desell, Alex Ororbia; 9/22 - 9/25).
- G5: NSF, “CPS: Small: Informed Contextual Bandits to Support Decision-Making for Intelligent CPS”, \$499,899 (PI: **Daniel Krutz**; Co-PI: Travis Desell, Alex Ororbia; 9/22 - 9/25).
- G6: NSA, “GenCyber @ RIT: Secure Computing”, \$75,325 (PI: **Daniel Krutz**; Co-PI: Bruce Herring, Robert St. Jacques; 7/22 - 7/24).
- G7: NSF, “CAREER: Investigating the Use of Empathy-Building Interventions in Experiential Computing Education”, \$588,426 (PI: **Daniel Krutz**; Co-PI: None; 10/22 - 9/27).
- G8: NSA, “GenCyber @ RIT: Secure Computing”, \$71,160 (PI: **Daniel Krutz**; Co-PI: Robert St Jacques, Bruce Herring; 8/21 - 8/22).
- G9: NSF, “Intervention-Based Experiential Education Labs”, \$749,926 (\$671,070 RIT + \$78,856 Bethune-Cookman University) (PI: **Daniel Krutz**; Co-PI: Samuel Malachowsky; 9/21 - 9/24).
- G10: NSA, “GenCyber @ RIT: Secure Computing”, \$60,184 (PI: **Daniel Krutz**; Co-PI: Stacey Watson, Sumita Mishra; 4/20 - 3/22).
- G11: NSA, “GenCyber @ RIT: Secure Computing”, \$106,023 (PI: **Daniel Krutz**; Co-PI: Stacey Watson, Jayalaxmi Charavarthy, Robert St. Jacques; 4/19 - 4/20).
- G12: AFRL, “Uncertainty Reduction in Self-Adaptive Systems to Increase System Effectiveness, Efficiency and Resiliency”, “Extension Grant” (PI: **Daniel Krutz**; 4/19 - 12/19).
- G13: ONR, “A Multimodal Dynamic Bayesian Learning Framework for Complex Decision-making”, \$1,586,800 (PI: Qi Yu; Co-PI: **Daniel Krutz**; 10/18 - 9/22).
- G14: NSF, “Developing Experiential Laboratories for Computing Accessibility Education”, \$299,994 (PI: **Daniel Krutz**; Co-PI: Samuel Malachowsky, Paul Tymann, Yasmine El-Glaly; 9/18 - 8/21).
- G15: NSF, “Collaborative Research: Interactive Video-Enhanced Tutorials on Problem Solving in Physics”, \$290,105 (PI: Robert Teese; Co-PI: Michelle Chabot; Sr. Person **Daniel Krutz**; 9/18 - 8/21).
- G16: NSA, “GenCyber @ RIT: Secure Web and Mobile Computing”, \$130,908 (PI: Rajendra Raj; Co-PI: **Daniel Krutz**; 5/18 - 4/19).
- G17: RIT, “Making Self-Adaptive Systems More Resilient By Reducing Decision-Making Uncertainty”, \$5,000 (PI: **Daniel Krutz**; Co-PI: None; 5/18 - 9/18).
- G18: SIGSCE, “Inclusive Apps: Supporting Mobile Accessibility Standards Through Educational Exercises”, \$3,800 (PI: **Daniel Krutz**; Co-PI: Yasmine El-Glaly; 1/17 - 12/17).
- G19: RIT, “FEED Development”, \$3,150 (PI: **Daniel Krutz**; Co-PI: None; 1/17 - 12/17).
- G20: RIT, “PLASMA: A Set of Educational Mobile Security Modules”, \$1,800 (PI: **Daniel Krutz**; Co-PI: None; 1/16 - 12/16).
- G21: RIT, “FEED Development”, \$3,150 (PI: **Daniel Krutz**; Co-PI: None; 1/16 - 12/16).
- G22: SIGSCE, “Supporting Education Using a Public Oracle of Vulnerable Mobile Apps”, \$2,400 (PI: **Daniel Krutz**; Co-PI: None; 1/16 - 12/16).
- G23: RIT, “Investigating Android M Permissions: Adoption, Ratings, and Malware”, \$1,800 (PI: **Daniel Krutz**; Co-PI: None; 1/15 - 12/15).
- G24: RIT, “Enhancing Software Engineering Education for Deaf/HoH Students”, \$525 (PI: **Daniel Krutz**; Co-PI: None; 1/15 - 12/15).

GIFTS

- G25: Visions Global Empowerment, “Women in Computing Hackathon”, \$2,750 (PI: **Daniel Krutz**; Co-PI: None; 11/20).

HONORS

- H1: NSF CAREER Award (2022)

- H2: ICWS: 2021, Using Algorithm Selection for Self-Adaptive Service Oriented Systems - Best Paper Award
 H3: GECCO: 2020, Improving Neuroevolutionary Transfer Learning of Deep Recurrent Neural Networks through Network-Aware Adaptation - Best paper nominee
 H4: ICSE-SEET: 2020, Presenting and Evaluating the Impact of Experiential Learning in Computing Accessibility Education - Distinguished Paper Award

PUBLICATIONS

- [1] MANGANO, Domenic ; MALACHOWSKY, Samuel ; KRUTZ, Daniel: Supporting Computing Accessibility and Artificial Intelligence Education Using Experiential Learning Labs. In: *Journal of Computing Sciences in Colleges* (2024)
- [2] LIU, Yang ; MANGANO, Domenic ; NEUPANE, Krishna ; MALACHOWSKY, Samuel ; KRUTZ, Daniel E.: Empathy-Building Interventions: A Comparative Analysis of Experiential and Expression-Based Interventions. In: *Proceedings of the ACM/IEEE 46th International Conference on Software Engineering: Software Engineering Education and Training*. New York, NY, USA : Association for Computing Machinery, 2024 (ICSE-SEET '24)
- [3] SHI, Weishi ; MOSES, Heather ; YU, Qi ; MALACHOWSKY, Samuel ; KRUTZ, Daniel E.: ALL: Supporting Experiential Accessibility Education and Inclusive Software Development. In: *ACM Trans. Softw. Eng. Methodol.* (2023), Sept. <http://dx.doi.org/10.1145/3625292>. – DOI 10.1145/3625292. – ISSN 1049–331X
- [4] LIU, Yang ; MOSES, Heather ; STERNEFELD, Mark ; MALACHOWSKY, Samuel ; KRUTZ, Daniel E.: Do Users Act Equitably? Understanding User Bias Through a Large In-person Study. In: *2023 IEEE/ACM 45th International Conference on Software Engineering: Software Engineering in Society (ICSE-SEIS)*, 2023, S. 83–95
- [5] KHAN, Saad ; MOSES, Heather ; MALACHOWSKY, Samuel ; KRUTZ, Daniel: Experiential Learning in Undergraduate Accessibility Education: Instructor Observations. In: *Journal of Computing Sciences in Colleges* 38 (2023), Nr. 8, S. 54–68
- [6] L-MESSERLE, Kyle ; MALACHOWSKY, Samuel ; KRUTZ, Daniel E.: Open Questions for Empathy-Building Interventions for Inclusive Software Development. In: *Journal of Computing Sciences in Colleges* 38 (2023), Nr. 8, S. 201–213
- [7] MOSES, Heather ; THAZIN, Su T. ; MALACHOWSKY, Samuel ; KRUTZ, Daniel: Experiential Educational Accessibility Modules. In: *Extended Abstracts of the 2023 CHI Conference on Human Factors in Computing Systems*. New York, NY, USA : Association for Computing Machinery, 2023 (CHI EA '23). – ISBN 9781450394222
- [8] DESHPANDE, Niranjana ; SHARMA, Naveen ; YU, Qi ; KRUTZ, Daniel E.: Online Learning Using Incomplete Execution Data for Self-Adaptive Service-Oriented Systems. In: *2022 IEEE International Conference on Web Services (ICWS)*, 2022, S. 296–301
- [9] HAQ, Aizaz U. ; DESHPANDE, Niranjana ; ELSAID, AbdelRahman ; DESELL, Travis ; KRUTZ, Daniel E.: Addressing Tactic Volatility in Self-Adaptive Systems Using Evolved Recurrent Neural Networks and Uncertainty Reduction Tactics. In: *Proceedings of the Genetic and Evolutionary Computation Conference*. New York, NY, USA : Association for Computing Machinery, 2022 (GECCO '22). – ISBN 9781450392372, 12991307
- [10] ZHU, Yuansheng ; SHI, Weishi ; PANDEY, Deep S. ; LIU, Yang ; QUE, Xiaofan ; KRUTZ, Daniel E. ; YU, Qi: Uncertainty-Aware Multiple Instance Learning from Large-Scale Long Time Series Data. In: *2021 IEEE International Conference on Big Data (Big Data)*, 2021, S. 1772–1778

- [11] DESHPANDE, Niranjana ; SHARMA, Naveen ; YU, Qi ; KRUTZ, Daniel. E.: R-CASS: Using Algorithm Selection for Self-Adaptive Service Oriented Systems. In: *2021 IEEE International Conference on Web Services (ICWS)*. Los Alamitos, CA, USA : IEEE Computer Society, sep 2021, 61-72. – Best Paper Award
- [12] ELSAID, AbdElRahman ; KARNS, Joshua ; LYU, Zimeng ; KRUTZ, Daniel ; ORORBIA, Alexander ; DESELL, Travis: Improving Neuroevolutionary Transfer Learning of Deep Recurrent Neural Networks through Network-Aware Adaptation. In: *Proceedings of the 2020 Genetic and Evolutionary Computation Conference*. New York, NY, USA : Association for Computing Machinery, 2020 (GECCO '20). – ISBN 9781450371285, 315323. – Best paper nominee
- [13] ELSAID, AbdElRahman ; KARNS, Joshua ; II, Alexander O. ; KRUTZ, Daniel ; LYU, Zimeng ; DESELL, Travis: *Neuroevolutionary Transfer Learning of Deep Recurrent Neural Networks through Network-Aware Adaptation*. 2020
- [14] SHI, Weishi ; MALACHOWSKY, Samuel ; EL-GLALY, Yasmine ; YU, Qi ; KRUTZ, Daniel E.: Presenting and Evaluating the Impact of Experiential Learning in Computing Accessibility Education. In: *Proceedings of the ACM/IEEE 42nd International Conference on Software Engineering: Software Engineering Education and Training*. New York, NY, USA : Association for Computing Machinery, 2020 (ICSE-SEET '20). – ISBN 9781450371247, 4960. – Distinguished Paper Award
- [15] SHI, Weishi ; KHAN, Saad ; EL-GLALY, Yasmine ; MALACHOWSKY, Samuel ; YU, Qi ; KRUTZ, Daniel E.: Experiential Learning in Computing Accessibility Education. In: *Proceedings of the ACM/IEEE 42nd International Conference on Software Engineering: Companion Proceedings*. New York, NY, USA : Association for Computing Machinery, 2020 (ICSE '20). – ISBN 9781450371223, 250251
- [16] ELSAID, AbdElRahman ; KARNAS, Joshua ; LYU, Zimeng ; KRUTZ, Daniel ; ORORBIA, Alexander G. ; DESELL, Travis: Neuro-Evolutionary Transfer Learning Through Structural Adaptation. In: *International Conference on the Applications of Evolutionary Computation (Part of EvoStar)* Springer, 2020, S. 610–625
- [17] PALMERINO, J. ; YU, Q. ; DESELL, T. ; KRUTZ, D.: Improving the Decision-Making Process of Self-Adaptive Systems by Accounting for Tactic Volatility. In: *2019 34th IEEE/ACM International Conference on Automated Software Engineering (ASE)*, 2019. – ISSN 1938–4300, S. 949–961
- [18] SCOCCIA, Gian L. ; PERUMA, Anthony ; PUJOLS, Virginia ; MALAVOLTA, Ivano ; KRUTZ, Daniel E.: Permission Issues in Open-Source Android Apps: An Exploratory Study. In: *2019 19th International Working Conference on Source Code Analysis and Manipulation (SCAM)* IEEE, S. 238–249
- [19] ELSAID, A. ; DESELL, T. ; KRUTZ, D.: Is Adaptivity a Core Property of Intelligent Systems? It Depends. In: *2019 IEEE/ACM 14th International Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS)*, 2019
- [20] SCOCCIA, Gian L. ; PERUMA, Anthony ; PUJOLS, Virginia ; CHRISTIANS, Ben ; KRUTZ, Daniel E.: An Empirical History of Permission Requests and Mistakes in Open Source Android Apps. In: *Proceedings of the 16th International Conference on Mining Software Repositories*, 2019 (MSR '19)
- [21] PERUMA, Anthony ; KRUTZ, Daniel: Security: a critical quality attribute in self-adaptive systems. In: *2018 IEEE/ACM 13th International Symposium on Software Engineering for Adaptive and Self-Managing Systems (SEAMS)* IEEE, 2018
- [22] PERUMA, Anthony ; PALMERINO, Jeffrey ; KRUTZ, Daniel E.: Investigating user perception and comprehension of android permission models. In: *Proceedings of the 5th International Conference on Mobile Software Engineering and Systems* ACM, 2018, S. 56–66

- [23] PERUMA, Anthony ; KRUTZ, Daniel E.: Understanding the Relationship Between Quality and Security: A Large-Scale Analysis of Android Applications. In: *International Workshop on Security Awareness from Design to Deployment*. New York, NY, USA : ACM, 2018 (SEAD 2018)
- [24] PERUMA, Anthony ; MALACHOWSKY, Samuel A. ; KRUTZ, Daniel E.: Providing an Experiential Cybersecurity Learning Experience Through Mobile Security Labs. In: *International Workshop on Security Awareness from Design to Deployment*. New York, NY, USA : ACM, 2018 (SEAD 2018)
- [25] EL-GLALY, Yasmine N. ; PERUMA, Anthony ; KRUTZ, Daniel E. ; HAWKER, J. S.: Apps for Everyone: Mobile Accessibility Learning Modules. In: *ACM Inroads* 9 (2018), April, Nr. 2, 30–33. <http://dx.doi.org/10.1145/3182184>. – DOI 10.1145/3182184. – ISSN 2153–2184
- [26] KRUTZ, Daniel E. ; RICHARDS, Thomas: Cyber Security Education: Why Don't We Do Anything About It? In: *ACM Inroads* 8 (2017), Oktober, Nr. 4, 5–5. <http://dx.doi.org/10.1145/3132217>. – DOI 10.1145/3132217. – ISSN 2153–2184
- [27] KRUTZ, Daniel E. ; MUNAIAH, Nuthan ; PERUMA, Anthony ; MKAOUER, Mohamed W.: Who Added That Permission to My App?: An Analysis of Developer Permission Changes in Open Source Android Apps. In: *Proceedings of the 4th International Conference on Mobile Software Engineering and Systems*. Piscataway, NJ, USA : IEEE Press, 2017 (MOBILESoft '17). – ISBN 978–1–5386–2669–6, 165–169
- [28] MCAFEE, Patrick ; MKAOUER, Mohamed W. ; KRUTZ, Daniel E.: CATE: Concolic Android Testing Using Java Pathfinder for Android Applications. In: *Proceedings of the 4th International Conference on Mobile Software Engineering and Systems*. Piscataway, NJ, USA : IEEE Press, 2017 (MOBILESoft '17). – ISBN 978–1–5386–2669–6, 213–214
- [29] CHESTER, Piper ; JONES, Chris ; MKAOUER, Mohamed W. ; KRUTZ, Daniel E.: M-perm: A Lightweight Detector for Android Permission Gaps. In: *Proceedings of the 4th International Conference on Mobile Software Engineering and Systems*. Piscataway, NJ, USA : IEEE Press, 2017 (MOBILESoft '17). – ISBN 978–1–5386–2669–6, 217–218
- [30] DENNIS, Colton ; KRUTZ, Daniel E. ; MKAOUER, Mohamed W.: P-lint: A Permission Smell Detector for Android Applications. In: *Proceedings of the 4th International Conference on Mobile Software Engineering and Systems*. Piscataway, NJ, USA : IEEE Press, 2017 (MOBILESoft '17). – ISBN 978–1–5386–2669–6, 219–220
- [31] KRUTZ, Daniel E. ; MALACHOWSKY, Samuel A.: Teaching android security through examples: a publicly available database of vulnerable apps. In: *ACM Inroads* 7 (2016), Nr. 4, S. 96–98
- [32] Conference Organization. In: *2016 International Conference on Cloud and Autonomic Computing (ICCAC)*, 2016, S. ix–xi
- [33] KRUTZ, Daniel E. ; MUNAIAH, Nuthan ; MENEELY, Andrew ; MALACHOWSKY, Samuel A.: Examining the Relationship Between Security Metrics and User Ratings of Mobile Apps: A Case Study. In: *Proceedings of the International Workshop on App Market Analytics*. New York, NY, USA : ACM, 2016 (WAMA 2016). – ISBN 978–1–4503–4398–5, 8–14
- [34] KRUTZ, Daniel E. ; MIRAKHORL, Mehdi: Architectural Clones: Toward Tactical Code Reuse. In: *Proceedings of the 31st Annual ACM Symposium on Applied Computing*. New York, NY, USA : ACM, 2016 (SAC '16). – ISBN 978–1–4503–3739–7, 1480–1485
- [35] MUNAIAH, Nuthan ; KLIMKOWSKY, Casey ; MCRAE, Shannon ; BLAINE, Adam ; MALACHOWSKY, Samuel A. ; PEREZ, Cesar ; KRUTZ, Daniel E.: Darwin: a static analysis dataset of malicious and benign Android apps. In: *Proceedings of the International Workshop on App Market Analytics* ACM, 2016, S. 26–29

- [36] MALACHOWSKY, S. A. ; KRUTZ, D. E.: A project component in a web engineering course. In: *2015 IEEE Frontiers in Education Conference (FIE)*, 2015, S. 1–6
- [37] KRUTZ, D. E. ; MENEELY, A. ; MALACHOWSKY, S. A.: An insider threat activity in a software security course. In: *2015 IEEE Frontiers in Education Conference (FIE)*, 2015, S. 1–6
- [38] KRUTZ, Daniel E. ; MIRAKHORLI, Mehdi ; MALACHOWSKY, Samuel A. ; RUIZ, Andres ; PETERSON, Jacob ; FILIPSKI, Andrew ; SMITH, Jared: A dataset of open-source Android applications. In: *Mining Software Repositories (MSR), 2015 IEEE/ACM 12th Working Conference on Mining Software Repositories* IEEE, 2015, S. 522–525
- [39] KRUTZ, Daniel E. ; MALACHOWSKY, Samuel A. ; SHIHAB, Emad: Examining the effectiveness of using concolic analysis to detect code clones. In: *Proceedings of the 30th Annual ACM Symposium on Applied Computing* ACM, 2015, S. 1610–1615
- [40] KRUTZ, D. E. ; MALACHOWSKY, S. A. ; JONES, S. D. ; KAPLAN, J. A.: Enhancing the educational experience for deaf and hard of hearing students in software engineering. In: *2015 IEEE Frontiers in Education Conference (FIE)*, 2015, S. 1–9
- [41] KRUTZ, Daniel E. ; LE, Wei: A code clone oracle. In: *Proceedings of the 11th Working Conference on Mining Software Repositories* ACM, 2014, S. 388–391
- [42] KRUTZ, Daniel E. ; MALACHOWSKY, Samuel A. ; REICHLMAYR, Thomas: Using a Real World Project in a Software Testing Course. In: *Proceedings of the 45th ACM Technical Symposium on Computer Science Education*. New York, NY, USA : ACM, 2014 (SIGCSE '14). – ISBN 978–1–4503–2605–6, 49–54
- [43] KRUTZ, Daniel E. ; SHIHAB, Emad: CCCD: Concolic code clone detection. In: *Reverse Engineering (WCRE), 2013 20th Working Conference on* IEEE, 2013, S. 489–490
- [44] KRUTZ, D. E. ; MENEELY, A.: Teaching Web Engineering using a project component. In: *2013 IEEE Frontiers in Education Conference (FIE)*, 2013. – ISSN 0190–5848, S. 1366–1368
- [45] KRUTZ, D. E. ; VALLINO, J. R.: Experiencing disruptive behavior in a team using moles. In: *2013 IEEE Frontiers in Education Conference (FIE)*, 2013. – ISSN 0190–5848, S. 1492–1495
- [46] KRUTZ, D. E. ; LUTZ, M.: Bug of the Day: Reinforcing the importance of testing. In: *2013 IEEE Frontiers in Education Conference (FIE)*, 2013. – ISSN 0190–5848, S. 1795–1799
- [47] KRUTZ, Daniel E.: *Code Clone Discovery Based on Concolic Analysis*, Diss., 2013. – 139 S.
- [48] LUTZ, M. J. ; VALLINO, J. R. ; MARTNEZ, K. ; KRUTZ, D. E.: Instilling a software engineering mindset through freshman Seminar. In: *2012 Frontiers in Education Conference Proceedings*, 2012. – ISSN 0190–5848, S. 1–6

WORKSHOPS, TUTORIALS AND OTHER PRESENTATIONS

- P1: *Tutorial*, “Enhancing Computing Accessibility Education Using Experiential Labs: A Focus on Screen Readers and Dexterity Impairments” (CCSCNE) Ithaca, New York, United States - April, 2023
- P2: *Tutorial*, “The Accessible Learning Labs: Supporting Accessibility Education” (ASE) Ann Arbor, Michigan, United States - October, 2022
- P3: *Tutorial*, “ALL: Accessibility Learning Labs for Computing Accessibility Education” (ITISCE) Remote, (COVID), - July, 2021
- P4: *Tutorial*, “Supporting Computing Accessibility Education Using Experiential Learning Labs” (CCSCNE) Remote, (COVID), - April, 2021

- P5: *Tutorial*, “Using Experiential Learning to Support Accessibility in Computing Education” (CSEE&T) Remote, (COVID), - October, 2020
- P6: *Tutorial*, “Creating Accessible Software Using Experiential Learning Labs” (ASE) Remote, (COVID), - September, 2020
- P7: *Panel*, “What and How to Teach Accessibility” (SIGSCE) Remote, (COVID), - June, 2020
- P8: *Presentation*, “Accessibility Learning Labs” (CCSCNE) New Haven, Connecticut, USA - April, 2019
- P9: *Invited Talk*, “Mobile Security Education” (n/a) Technische Universität Berlin, Berlin, Germany - July, 2017
- P10: *Presentation*, “PLASMA: Educational Mobile Security Labs” (SEED Workshop) Syracuse, New York, USA - June, 2017
- P11: *Presentation*, “Experiential Cybersecurity Educational Labs” (NYCWiC) Rochester, New York, USA - April, 2017

EXTERNAL SERVICE

Advisory Boards

- S1: U.S. Department of Defense: Algorithmic Warfare Cross Functional Team (AWCFT) Academic Innovation Council (Project Maven). 2019 - 2023 (conclusion of board).

Grant Reviewer

- S2: National Science Foundation (NSF) panelist: 2019, 2020, 2021, 2022, 2023
- S3: Maryland Industrial Partnerships Program (MIPS): 2020

Program Committees

- S4: IEEE International Conference on Web Services (ICWS). 2024 - Present
- S5: Association for Computing Machinery’s Special Interest Group on Computer Science Education (SIGSCE). 2023 - Present
- S6: International Conference on Model Driven Engineering Languages and Systems -SRC (MODELS). 2021 - 2023
- S7: International Symposium on Cluster, Cloud and Internet Computing (CCGrid). 2019 - Present
- S8: Consortium for Computing Sciences in Colleges (CCSCNE). 2019 - Present
- S9: Innovation & Technology in Computer Science Education (ITiCSE). 2018 - Present

Publication Reviewer

- S10: Transactions on Dependable and Secure Computing (TDSC)
- S11: Conference on Human Factors in Computing (CHI)
- S12: Transactions on Mobile Computing
- S13: ACM Inroads
- S14: Empirical Software Engineering (EMSE)
- S15: IEEE Access
- S16: Journal of Systems and Software (JSS)
- S17: IEEE Software
- S18: Journal of Network and Computer Applications (JNCA)
- S19: Special Interest Group on Computer Science Education (SIGCSE)
- S20: Computers & Security
- S21: Journal of Visual Language & Computing
- S22: International Conference on University Learning and Teaching (InCULT)
- S23: Frontiers in Education (FIE)
- S24: American Society for Engineering Education (ASEE)

UNIVERSITY SERVICE

- S25: College Academic Senate: 2019-present
- S26: GCCIS College Governance Committee (Chair 2017-present): 2016-present
- S27: Software Engineering Graduate Curriculum Committee: 2021-2022
- S28: ESL GCI Seed Proposal Reviewer: 2020-Present
- S29: University Council: 2019-2021
- S30: University Nominations Committee: 2020-2022
- S31: Coordinator for concurrent sections of Introduction to Software Engineering course (12-15 sections with 240-300 students): 2010-2016
- S32: Software Engineering Undergraduate Curriculum Committee: 2012-2016
- S33: Software Engineering honors advocate: 2015-2017

PhD Students

- St1: Advisor: Devroop Kar: *TBD* - Graduation: TBD
- St2: Advisor: Sheeraja Rajakrishnan: *TBD* - Graduation: TBD
- St3: Advisor: Yang Lui: *TBD* - Graduation: TBD
- St4: Committee Member: Benjamin Meyers: *Helping Software Developers Confront and Organize Their Mistakes with Human Error Informed Micro Post-Mortems* - Graduation: 2023
- St5: Committee Member: AbdElRahman A. ElSaid: *Nature Inspired Topology Optimization Of Recurrent Neural Networks* - Graduation: 2021

COURSES TAUGHT

- C1: Research Methods (Graduate)
- C2: Web Engineering (Undergraduate) - *Developed new course*
- C3: Engineering of Secure Software (Undergraduate)
- C4: Foundations of Software Engineering (Graduate)
- C5: Introduction to Software Engineering (Undergraduate)
- C6: Software Testing (Undergraduate)
- C7: Freshman Seminar (Undergraduate)
- C8: Senior Project Coaching (Undergraduate)
- C9: Engineering of Enterprise Software Systems (Undergraduate)

INDUSTRY EXPERIENCE

- Technology Consultant, Mindex Technologies 8/2009 – 8/2010.
- Sr. Software Engineer, 5Linx Enterprises, 2/2009–8/2009.
- R&D Software Developer, Xerox Corporation 5/2004–1/2009.

PROFESSIONAL ASSOCIATIONS

- Association for Computing Machinery (ACM)
- Institute of Electrical and Electronics Engineers (IEEE)
- Access Computing

REFERENCES

Available upon request

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