Daniel E. Krutz

Primary Appointment:
Associate Professor
Rochester Institute of Technology
Department of Software Engineering
ESL Global Cybersecurity Institute
Golisano Building 70
Rochester, NY 14623-5608
Director: Autonomy, WARfare, and Engineering (AWARE) Lab
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Homepage: https://danielkrutz.github.io
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Secondary Appointment:
Courtesy Associate Professor
University of Florida
Dept. of Computer & Information Science & Engineering
1889 Museum RD STE 5400, Gainesville, FL 32611
Email: d.krutz@ufl.edu

RESEARCH INTERESTS

Applied Machine Learning, Self-Adaptive Systems and Experiential Learning

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

- Courtesy Associate Professor, Department of Computer & Information Science & Engineering University of Florida 2024–Present
- Algorithmic Warfare Cross Functional Team (AWCFT) Academic Innovation Council (aka Project Maven). 2019 - 2023 (conclusion of board).
- Research Fellow, US Air Force Office of Scientific Research (AFRL/RI), 2018

HIGHLIGHTS

- Federal Funding: $7.2M+ [PI: $4.8M+; Co-PI: $2.4M+; Sr. Person: $300k]
- NSF CAREER Award 2022.
- Advisor to multiple DOD mission-focused (TRL 8-9) programs.

RESEARCH GRANTS

Federal Funding: $7.2M+ [PI: $4.8M+; Co-PI: $2.4M+; Sr. Person: $300k]

FUNDED

G1: USAF, "Project Dagger: High-Speed VTOL UAV for Maritime Environments", $540,079 (PI: Agamemnon Crassidis; Co-PI: **Daniel Krutz**; 9/25 - 8/27).

G2: NSF, "Supporting High School Computing Teachers with the Accessible Learning Labs", $299,665 [RIT (lead), Syracuse University, University of Rochester] (PI: **Daniel Krutz**; Co-PI: Sam Malachowsky (RIT); Farzana Rahman (SU); Endadul Hoque (SU); Zenon Borys (UR); 1/26 - 12/27).

G3: NSF, "Experiential Accessible Learning Labs for Promoting Inclusive Software Development", $1,876,591 ($1,762,686 RIT Lead + $113,905 Embry Riddle) (PI: **Daniel Krutz**; Co-PI: Sam Malachowsky; 7/24 - 6/29).

G4: 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).

G5: NSA, "GenCyber @ RIT: Secure Computing", $96,443 (PI: **Daniel Krutz**; Co-PI: Sumita Mishra, Yin Pan; 4/24 - 5/25).

G6: NSF, "CPS: Small: Informed Contextual Bandits to Support Decision-Making for Intelligent CPS", $531,899 (PI: **Daniel Krutz**; Co-PI: Travis Desell, Alex Ororbia; 9/22 - 9/25).

G7: NSA, "GenCyber @ RIT: Secure Computing", $75,325 (PI: **Daniel Krutz**; Co-PI: Bruce Herring, Robert St. Jacques; 7/22 - 7/24).

G8: 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).

G9: NSA, "GenCyber @ RIT: Secure Computing", $71,160 (PI: **Daniel Krutz**; Co-PI: Robert St Jacques, Bruce Herring; 8/21 - 8/22).

G10: 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).

G11: NSA, "GenCyber @ RIT: Secure Computing", $60,184 (PI: **Daniel Krutz**; Co-PI: Stacey Watson, Sumita Mishra; 4/20 - 3/22).

G12: NSA, "GenCyber @ RIT: Secure Computing", $106,023 (PI: **Daniel Krutz**; Co-PI: Stacey Watson, Jayalaxmi Charavarthy, Robert St. Jacques; 4/19 - 4/20).

G13: AFRL, "Uncertainty Reduction in Self-Adaptive Systems to Increase System Effectiveness, Efficiency and Resiliency", "Extension Grant" (PI: **Daniel Krutz**; 4/19 - 12/19).

G14: 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).

G15: 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).

G16: 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).

G17: NSA, "GenCyber @ RIT: Secure Web and Mobile Computing", $130,908 (PI: Rajendra Raj; Co-PI: **Daniel Krutz**; 5/18 - 4/19).

G18: RIT, "Making Self-Adaptive Systems More Resilient By Reducing Decision-Making Uncertainty"', $5,000 (PI: **Daniel Krutz**; Co-PI: None; 5/18 - 9/18).

G19: SIGSCE, "Inclusive Apps: Supporting Mobile Accessibility Standards Through Educational Exercises", $3,800 (PI: **Daniel Krutz**; Co-PI: Yasmine El-Glaly; 1/17 - 12/17).

G20: RIT, "FEED Development ", $3,150 (PI: **Daniel Krutz**; Co-PI: None; 1/17 - 12/17).

G21: RIT, "PLASMA: A Set of Educational Mobile Security Modules", $1,800 (PI: **Daniel Krutz**; Co-PI: None; 1/16 - 12/16).

G22: RIT, "FEED Development ", $3,150 (PI: **Daniel Krutz**; Co-PI: None; 1/16 - 12/16).
G23: SIGSCE, "Supporting Education Using a Public Oracle of Vulnerable Mobile Apps", $2,400 (PI: **Daniel Krutz**; Co-PI: None; 1/16 - 12/16).
G24: RIT, "Investigating Android M Permissions: Adoption, Ratings, and Malware", $1,800 (PI: **Daniel Krutz**; Co-PI: None; 1/15 - 12/15).
G25: RIT, "Enhancing Software Engineering Education for Deaf/HoH Students", $525 (PI: **Daniel Krutz**; Co-PI: None; 1/15 - 12/15).

GIFTS

G26: Major League Hackin, "K-12 Computing Outreach", $750 (PI: **Daniel Krutz**; Co-PI: None; 1/25).
G27: 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] Kar, Devroop ; Lyu, Zimeng ; Rajakrishnan, Sheeraja ; Zhang, Hao ; Ororbia, Alex ; Desell, Travis ; Krutz, Daniel: Directly Learning Stock Trading Strategies Through Profit Guided Loss Functions. In: *arXiv e-prints* (2025), S. arXiv–2507

[2] Liu, Yang ; Fokoue, Ernest ; Krutz, Daniel E.: Learning using statistical invariants: when they work and when they dont. In: *Machine Learning* 114 (2025), Nr. 7, S. 154

[3] Kar, Devroop ; Lyu, Zimeng ; Ororbia, Alexander G. ; Desell, Travis ; Krutz, Daniel: Enabling An Informed Contextual Multi-Armed Bandit Framework For Stock Trading With Neuroevolution. In: *Proceedings of the Genetic and Evolutionary Computation Conference Companion*. New York, NY, USA : Association for Computing Machinery, 2024 (GECCO '24 Companion). – ISBN 9798400704956, 19241933

[4] Liu, Yang ; Mangano, Domenic ; Neupana, Neupane ; Malachowsky, S. A. ; Krutz, Daniel E.: Experiential and Expression-Based Accessibility Awareness Interventions to Improve Computing Education. In: *2024 IEEE Frontiers in Education Conference (FIE)*, 2024, S. 1–9

[5] Liu, Yang ; Mangano, Domenic ; Neupane, Krishna P. ; Malachowsky, Samuel ; Krutz, Daniel: Using Accessibility Awareness Interventions to Improve Computing Education. In: *Proceedings of the 46th International Conference on Software Engineering: Software Engineering Education and Training*, 2024

[6] 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

[7] 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

[8] 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

[9] 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

[10] 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

[11] 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

[12] 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

[13] 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

[14] 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

[15] 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

[16] 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

[17] 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

[18] 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

[19] 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

[20] 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

[21] 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

[22] 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

[23] 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)

[24] 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

[25] 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

[26] 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)

[27] 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)

[28] 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

[29] 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

[30] 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

[31] 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

[32] 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

[33] 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

[34] 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

[35] Conference Organization. In: *2016 International Conference on Cloud and Autonomic Computing (ICCAC)*, 2016, S. ix–xi

[36] 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

[37] 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

[38] 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

[39] 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

[40] 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

[41] 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

[42] 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

[43] 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

[44] 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

[45] 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

[46] Krutz, Daniel E. ; Shihab, Emad: CCCD: Concolic code clone detection. In: *Reverse Engineering (WCRE), 2013 20th Working Conference on* IEEE, 2013, S. 489–490

[47] 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

[48] 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

[49] 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

[50] Krutz, Daniel E.: *Code Clone Discovery Based on Concolic Analysis*, Diss., 2013. – 139 S.

[51] 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

DOD Advisor

S1: U.S. Air Force: Advisor to TRL-8 ISR-focused project. Details available upon request & w/clearance.
S2: U.S. Department of Defense: Algorithmic Warfare Cross Functional Team (AWCFT) Academic Innovation Council (*aka Project Maven*). 2019 - 2023 (conclusion of board).

Grant Reviewer

S3: National Science Foundation (NSF) panelist: 2019 - present
S4: Maryland Industrial Partnerships Program (MIPS): 2020

Program Committees

S5: IEEE International Conference on Cognitive Machine Intelligence (CogMI). 2025 - Present
S6: International Conference on Software Engineering - Student Research Competition (ICSE). 2024 - Present
S7: Frontiers in Education (FIE). 2024 - Present
S8: IEEE International Conference on Web Services (ICWS). 2024 - Present
S9: Association for Computing Machinery's Special Interest Group on Computer Science Education (SIGSCE). 2023 - Present
S10: International Conference on Model Driven Engineering Languages and Systems -SRC (MODELS). 2021 - 2023
S11: International Symposium on Cluster, Cloud and Internet Computing (CCGrid). 2019 - 2023
S12: Consortium for Computing Sciences in Colleges (CCSCNE). 2019 - Present
S13: Innovation & Technology in Computer Science Education (ITiCSE). 2018 - Present technical program committee

Publication Reviewer

S14: Software Quality Journal - Springer Nature
S15: Transactions on Dependable and Secure Computing (TDSC)
S16: Conference on Human Factors in Computing (CHI)
S17: Transactions on Mobile Computing
S18: ACM Inroads
S19: Empirical Software Engineering (EMSE)
S20: IEEE Access
S21: Journal of Systems and Software (JSS)
S22: IEEE Software
S23: Journal of Network and Computer Applications (JNCA)
S24: Special Interest Group on Computer Science Education (SIGCSE)
S25: Computers & Security
S26: Journal of Visual Language & Computing
S27: International Conference on University Learning and Teaching (InCULT)
S28: American Society for Engineering Education (ASEE)

UNIVERSITY SERVICE

S29: GCCIS Tenure Committee: 2024-present (Chair 2025)
S30: Dismissal Review Committee for non-tenure-track (alternate): 2024-present
S31: University Academic Senate: 2019-present
S32: GCCIS College Governance Committee (Chair 2017-present): 2016-present
S33: Software Engineering Graduate Curriculum Committee: 2021-2022
S34: ESL GCI Seed Proposal Reviewer: 2020-Present
S35: University Council: 2019-2021
S36: University Nominations Committee: 2020-2022
S37: Coordinator for concurrent sections of Introduction to Software Engineering course (12-15 sections with 240-300 students): 2010-2016
S38: Software Engineering Undergraduate Curriculum Committee: 2012-2016
S39: 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

Last updated: August 14, 2025