Dr. Sandeep Kaur Kuttal

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A. Professional Preparation

- Ph.D. Computer Science, University of Nebraska, Lincoln, Nebraska, 2014.
- M.Tech. Computer Science and Engineering (**with Distinction**), Punjab Technical University, Jalandhar, India, 2007.
- B.Tech. Computer Science and Engineering, Punjab Technical University, Jalandhar, India, 2001.

B. Appointments

- Associate Professor, Computer Science, North Carolina State University, Raleigh, North Carolina (Fall 2022 to Present).
- Visiting Scholar, Tandy School of Computer Science, University of Tulsa, Tulsa, Oklahoma (Fall 2022 to present).
- Assistant Professor, Tandy School of Computer Science, University of Tulsa, Tulsa, Oklahoma (Fall 2015 to Summer 2022).
- Visiting Faculty Member, Human-AI Collaboration Group, IBM T.J. Watson Research Center, Yorktown Heights, New York (June 2019).
- Postdoctoral Scholar, Department of Electrical Engineering and Computer Science, Oregon State University, Corvallis, Oregon (Fall 2014 to Summer 2015).
- Graduate Teaching Assistant, Department of Computer Science and Engineering, University of Nebraska, Lincoln, Nebraska (Fall 2010 to Fall 2013).
- Graduate Research Assistant, Department of Computer Science and Engineering, University of Nebraska, Lincoln, Nebraska (Spring 2009 to Summer 2014).
- Senior Lecturer, Department of Computer Science and Engineering, Baba Banda Singh Bahadur Engineering College, Fatehgarh Sahib, India (Fall 2007 to Fall 2009).
- Lecturer, Department of Computer Science and Engineering, Baba Banda Singh Bahadur Engineering College, Fatehgarh Sahib, India (Fall 2001 to Spring 2007).

C. Awards

- National Science Foundation CAREER Award, 2021.
- U.S. Air Force Young Investigator Program Award, 2021.
- Honorable Mention, International Conference on Human Factors in Computing Systems, 2021.
- Best Paper, International Conference on Human Factors in Computing Systems, 2016.
- Best Paper, International Conference on Global Software Engineering, 2016.
- First Prize for User-Centered Design, Global User Experience Career Summit, 2014.

D. Research

My research is novel and multidisciplinary. It straddles several areas – Human-Computer Interaction, Software Engineering, Artificial Intelligence, End-User Programming, Gender Studies, and Empirical Evaluations.

D1. Refereed Journal Publications

[1] P. Robe and S. Kuttal, Designing PairBuddy – A conversational agent for pair programming, *ACM Transactions on Computer-Human Interaction*, vol. 29(4), 2021.

[2] S. Kuttal, X. Chen, Z. Wang, S. Balali and A. Sarma, Visual Resume: Exploring developers' online contributions for hiring, *Information and Software Technology*, vol. 138, 2021.

[3] S. Kuttal, S. Kim, C. Martos and A. Bejarano, How do end-user programmers forage in online repositories? An information foraging perspective, *Journal of Computer Languages*, vol. 62, article 101010, 2020.

[4] S. Kuttal and A. Ghosh, Source code comments: Overlooked in the realm of code clone detection, *International Journal of Computer Science and Information Security*, vol. 18(11), pp. 11-22, 2020.

[5] S. Kuttal, M. Sun, A. Ghosh and R. Sharma, Birds of a feather flock together? A study of developers' flocking and migration behavior in GitHub and Stack Overflow, *International Journal of Computer Science and Information Security*, vol. 18(6), pp. 1-12, 2020.

[6] S. Kuttal, Y. Bai, E. Scott and R. Sharma, Tug of perspectives: Mobile app users versus developers, *International Journal of Computer Science and Information Security*, vol. 18(6), pp. 83-94, 2020.

[7] S. Kuttal, M. Burnett, A. Sarma, G. Rothermel, I. Koeppe and B. Shepherd, How end-user programmers debug visual web-based programs: An information foraging theory perspective, *Journal of Visual Languages and Computing*, vol. 53, pp. 22-37, 2019.

[8] S. Kuttal, A. Sarma, G. Rothermel and Z. Wang, What happened to my application? Helping end users comprehend evolution through variation management, *Information and Software Technology*, vol. 103, pp. 55-74, 2018.

[9] W. Jernigan, A. Horvath, T. Cuilty, M. Burnett, M. Lee, S. Kuttal, A. Peters, I. Kwan, F. Bahmani and A. Ko, General principles for a generalized Idea Garden, *Journal of Visual Languages and Computing*, vol. 39, pp. 51-65, 2017.

[10] S. Kuttal, A. Sarma and G. Rothermel, On the benefits of providing versioning support for end users: An empirical study, *ACM Transactions on Computer-Human Interaction*, vol. 21(2), pp. 9:1-9:43, 2014.

D2. Rigorously Reviewed Conference Publications

[1] J. Hart, S. K. Kuttal, M. Ensley, Gender effects on creativity when pair programming with a human vs. an agent, In *Artificial Intelligence in HCI*, H. Degen and S. Ntoa (Eds.). Springer International Publishing, 2023.

[2] Abim Sedhain, Leon Shahnewaz, Riley Raasch, Sandeep Kaur Kuttal, Developers foraging behavior in code hosting sites: A gender perspective, In *Artificial Intelligence in HCI*, H. Degen and S. Ntoa (Eds.). Springer International Publishing, 2023.

[3] Abim Sedhain, Yao Wang, Brett McKinney, Sandeep Kaur Kuttal Modeling foraging behavior in GitHub, In *Artificial Intelligence in HCI*, H. Degen and S. Ntoa (Eds.). Springer International Publishing, 2023.

[4] P. Robe, S. K. Kuttal, J. Aubuchon and J. Hart, Pair Programming Conversations with Agents vs. Developers: Challenges & Opportunities for SE Community, *The ACM Joint*

European Software Engineering Conference, and Symposium on the Foundations of Software Engineering, 2022.

[5] J. Hart, J. Aubuchon and S. K. Kuttal, Feasibility of using YouTube Conversations for Pair Programming Intent Classification, *IEEE Symposium on Visual Languages and Human-Centric Computing*, 2022.

[6] A. McAuliffe, J. Hart and S. K. Kuttal, Evaluating Gender Effects in Pair Programming Conversations, *IEEE Symposium on Visual Languages and Human-Centric Computing*, 2022.

[7] A. Sedhain, S. S. Ragavan, B. McKinney and S. K. Kuttal, Estimating Foraging Values and Costs in Stack Overflow, *IEEE Symposium on Visual Languages and Human-Centric Computing*, 2022.

[8] A. Sedhain and S. K. Kuttal, Information Seeking Behavior for Bugs on GitHub: An Information Foraging Perspective, *IEEE Symposium on Visual Languages and Human-Centric Computing*, 2022.

[9] V. Diwanji, A. Sedhain, G. Bodi and S. K. Kuttal, Developers' Foraging Behavior on Stack Overflow, *IEEE Symposium on Visual Languages and Human-Centric Computing*, 2022.

[10] C. Lott, A. McAuliffe and S. Kuttal**,** Remote Pair Collaborations of CS Students: Leaving Women Behind? in *Proceedings of Visual Languages and Human-Centric Computing*, 2021.

[11] S. Kuttal, A. Sedhain and J. AuBuchon, Designing a Gender-Inclusive Conversational Agent For Pair Programming: An Empirical Investigation. In *Artificial Intelligence in HCI*, H. Degen and S. Ntoa (Eds.). Springer International Publishing, 59–75, 2021.

[12] S. Kuttal, B. Ong, K. Kwasny and P. Robe, Trade-offs for substituting a human with an agent in a pair programming context: The good, the bad and the ugly, *Proceedings of the International Conference on Human Factors in Computing Systems*, 2021. (***Honorable Mention Award)***

[13] S. Kuttal, J. Myers, S. Gurka, D. Magar, D. Piorkowski and R. Bellamy, Towards designing conversational agents for pair programming: Accounting for creativity strategies and conversational styles, *Proceedings of the IEEE Symposium on Visual Languages and Human-Centric Computing*, 2020.

[14] P. Robe, S. Kuttal, Y. Zhang and R. Bellamy, Can machine learning facilitate remote pair programming? Challenges, insights and implications, *Proceedings of the IEEE Symposium on Visual Languages and Human-Centric Computing*, 2020.

[15] S. Kuttal, K. Gerstner and A. Bejarano, Remote pair programming in online computer science education: Investigating through a gender lens, *Proceedings of the IEEE Symposium on Visual Languages and Human-Centric Computing*, pp. 75-85, 2019.

[16] C. Zhou, S. Kuttal and I. Ahmed, What makes a good developer? An empirical study of developers' technical and social competencies, *Proceedings of the IEEE Symposium on Visual Languages and Human-Centric Computing*, pp. 319-321, 2018.

[17] A. Ghosh and S. Kuttal, Semantic clone detection: Can source code comments help? *Proceedings of the IEEE Symposium on Visual Languages and Human-Centric Computing*, pp. 315-317, 2018.

[18] S. Ragavan, B. Pandya, D. Piorkowski, C. Hill, S. Kuttal, A. Sarma and M. Burnett, PFIS-V: Modeling foraging behavior in the presence of variants, *Proceedings of the International Conference on Human Factors in Computing Systems*, pp. 6232-6244, 2017.

[19] C. Martos, S. Kim and S. Kuttal, Reuse of variants in online repositories: Foraging for the fittest, *Proceedings of the IEEE Symposium on Visual Languages and Human-Centric Computing*, pp. 124-128, 2016.

[20] S. Ragavan, S. Kuttal, C. Hill, A. Sarma, D. Piorkowski and M. Burnett, Foraging among an overabundance of similar variants, *Proceedings of the International Conference on Human Factors in Computing Systems*, pp. 3509-3521, 2016. (***Best Paper Award***)

[21] A. Sarma, X. Chen, S. Kuttal, L. Dabbish and Z. Wang, Hiring in the global stage: Profiles of online contributions, *Proceedings of the International Conference on Global Software Engineering*, pp. 1-10, 2016. (***Best Paper Award***)

[22] W. Jernigan, A. Horvath, T. Cuilty, M. Burnett, M. Lee, S. Kuttal, A. Peters, I. Kwan, F. Bahmani and A. Ko, Principles of Idea Garden hints for end-user programmers, *Proceedings of the IEEE Symposium on Visual Languages and Human-Centric Computing*, pp. 235-243, 2015.

[23] S. Kuttal, A. Sarma and G. Rothermel, Predator behavior in the wild web world of bugs: An information foraging theory perspective, *Proceedings of the IEEE Symposium on Visual Languages and Human-Centric Computing*, pp. 59-66, 2013.

[24] S. Kuttal, A. Sarma and G. Rothermel, Debugging support for end-user mashup programming, *Proceedings of the International Conference on Human Factors in Computing Systems*, pp. 1609-1618, 2013.

[25] S. Kuttal, Variation support for end users, *Proceedings of the IEEE Symposium on Visual Languages and Human-Centric Computing*, pp. 183-184, 2013.

[26] S. Kuttal, A. Sarma and G. Rothermel, History repeats itself more easily when you log it: Versioning for mashups, *Proceedings of the IEEE Symposium on Visual Languages and Human-Centric Computing,* pp. 69-72, 2011.

[27] S. Kuttal, A. Sarma, A. Swearngin and G. Rothermel, Versioning for mashups – An exploratory study, *Proceedings of the International Symposium on End-User Development*, pp. 25-41, 2011.

D3. Book Chapters

[1] S. Kuttal, A. Sedhain, and B. Riethmeier, How do web-active end-user programmers forage? *Coding Theory – Recent Advances, New Perspectives and Applications*, S. Radhakrishnan (Ed.), IntechOpen, London, United Kingdom, 2021.

D4. Keynote and Invited Lectures/Talks

[1] Bridging Programmers' Collaboration Gaps with Intelligent Programmer-Centric Systems, *Johannes Kepler University*, Linz, Austria, May 2023.

[2] Bridging Programmers' Collaboration Gaps with Intelligent Programmer-Centric Systems, *University of Sydney*, Sydney Australia, May 2023.

[3] Designing PairBuddy — A Conversational Agent for Pair Programming, *International Conference on Human Factors in Computing Systems*, Hamburg, Germany, April 2023.

[4] Bridging Programmers' Collaboration Gaps with Intelligent Programmer-Centric Systems, *Wake Forest University*, Winston-Salem, October 2022.

[5] Inclusive Pair-Programming Conversational Agent meets Co-Pilot, *GitHub Next* and *Microsoft Research Lab*, April 2022.

[6] Bridging Programmers' Collaboration Gaps with Intelligent Programmer-Centric Systems, *North Carolina State University*, Raleigh, March 2022.

[7] Visual Resume: Exploring developers' online contributions for hiring, *IEEE International Conference on Software Analysis, Evolution and Reengineering*, Honolulu, Hawaii, March 2022.

[8] Bridging Programmers' Collaboration Gaps with Intelligent Programmer-Centric Systems, *University of Maryland*, Baltimore County, Feb 2022.

[9] Bridging Programmers' Collaboration Gaps with Intelligent Programmer-Centric Systems, *Colorado State University*, Colorado, Feb 2022.
[10] Human-centric software engineering: Fostering effective collaborations, *Indian Institute of Technology*, Ropar, India, October 2021.
[11] How do end-user programmers forage in online repositories? An information foraging perspective, *IEEE Symposium on Visual Languages and Human-Centric Computing,* St. Louis, USA, October 2021.
[12] Designing conversational agents for programmers, *Punjabi University*, Patiala, India, October 2021.
[13] Testing software: Challenges and hardships of non-traditional testers, presented at the *International Workshop on User Interface Test Automation and Testing Techniques for Event Based Software* at the *International Conference on Software Testing, Verification and Validation,* Porto, Portugal, October 2020.
[14] Characterizing brain neural response in the same and mixed genders pairs*, Laureate Institute for Brain Research*, Tulsa, Oklahoma, December 2020.
[15] Towards designing conversational agents for pair programming*,* Human-AI Collaboration Group, T.J. Watson Research Center, Yorktown Heights, New York, June 2019.
[16] On the benefits of providing versioning support for end users: An empirical study*, International Conference on Human Factors in Computing Systems*, Seoul, Korea, April 2015.
[17] Variation management to enhance end users' programming experience*, University of Memphis*, Memphis, Tennessee, February 2015.
[18] Variation management to enhance end users' programming experience*, University of Tulsa*, Tulsa, Oklahoma, February 2015.

D5. Discussion Panels/Invited Seminars

[1] Theory of Programming, *Dagstuhl Seminar*, Germany, June 2022.
[2] Career in Industry vs Academia, *IEEE Education Society Kerala Chapter*, India, May 2022.
[3] Is Metaverse a Real Deal?, *Bangkok University Life Talk*, Thailand, March 2022.

D6. Current Students

Graduate

- Alex McAuliffe (Computer Science Ph.D., Expected graduation 2026)
- Shandler Mason (Computer Science Ph.D., Expected graduation 2026)

Current UnderGraduate

- Marcus Kim (REU, Fall 2022 and Spring 2023)
- Helen Solomon (REU, Fall 2022 and Independent Studies, Spring 2023)
- Audrey Si (Independent Studies, Spring 2023)
- Hannah Estes (Fall 2022 and Spring 2023)

Prior UnderGraduate

- Afnan Idries (Independent Study, Fall 2022)
- Mollie Jordan (Independent Study, Fall 2022)

Dissertation Committee Member

- Aafaq Sabir (Written Prelim Exam)
- Md Rayhanur Rahman (Oral Prelim Exam)
- Amy Isvik (Oral Prelim Exam)
- Kewen Peng (Oral Prelim Exam)
- Lorenzo Niel (Oral Prelim Exam)

- Andre Lustosa Cabral De Paula Motta (Dissertation Committee member)
- Erfan Al-Hossami at UNC Charlotte (Dissertation Committee member)

Former Students at the University of Tulsa

Graduate

- Peter Robe (Computer Science M.S., Graduated 2021)
- Akash Ghosh (Computer Science M.S., Graduated 2019)
- Abim Sedhain (Computer Science M.S., 2022)
- Jacob Hart (Computer Science M.S., 2023)

UnderGraduate

- Jacob AuBuchon (REU 2021, TURC 2021, Computer Science UG)
- Alex McAuliffe (REU 2021, TURC 2021, Computer Science UG)
- Philip Rahal (TURC 2022, Computer Science UG)
- Ronnie Phillips (TURC 2022, Computer Science UG)
- Issa Al Rubaye (TURC 2022, Computer Science UG)
- Marcus Ensley (TURC 2022, Computer Science UG)
- Riley Raash (TURC 2022, Computer Science UG)
- Yao Wang (TURC 2022, Computer Science UG)
- Noura Elnahrawy (Computer Science UG)
- Vaishvi Diwanji (Computer Science UG)
- Grey Bodi (Computer Science UG)
- Jeff Luong (Computer Science UG)
- Devin Pattison (TURC 2021, Computer Science UG)
- Ben Riethmeier (TURC 2021, Computer Science UG)
- Bali Ong (TURC 2020, Computer Gaming and Simulation UG)
- Katherine Kwasny (TURC 2020, Computer Gaming and Simulation UG)
- Jarrow Myers (TURC 2019, Computer Science UG)
- Sam Gurka (TURC 2019, Computer Science UG)
- Yingze Chen (TURC 2019, Computer Science UG)
- Kevin Gerestner (Computer Science/Computer Gaming and Simulation UG)
- Alexandra Bejarano (Computer Science UG, currently Ph.D. student at Colorado School of Mines)
- Caroline Lott (Psychology UG)
- Danny Tapp (Mechanical Engineering UG)
- Van Nguyen (Computer Science UG)
- Yiting Bai (Computer Science UG)
- David Magar (Information Technology UG)
- Michael Sun (Computer Science UG, currently M.S. student at University of California, at Irvine)
- Brooke Shepherd (TURC 2018, Computer Science UG)
- Jiayi Lu (Computer Science UG)
- Philip Gibson (Computer Science UG)
- Cheng Zhou (TURC 2018, Computer Science UG)
- Se Yeon Kim (TURC 2016, Computer Science UG)
- Carlos Martos (Computer Science UG)
- Steven Alfonso Hernandez (Computer Science UG)
- Cao Huynh (Computer Science UG)

Dissertation Committee Member

- Sami Abuhaimed (Ph.D. 2022)
- Saeid Samadidana (Ph.D. 2019)
- Zenefa Rahaman (Ph.D. 2018)
- Osman Yusel (Ph.D. 2017)

D7. Extramural Funding (Current Total: $7,297,427)

[1] Designing an Interactive Partner to Support Pair Programming (PI), CAREER Grant, National Science Foundation, 2021 ($520,522 over five years).

[2] Supporting Information Foraging by Utilizing Agents' Collective Foraging Behavior (PI), Young Investigator Program Grant, U.S. Air Force Office of Scientific Research, 2021 ($448,754 over three years).

[3] NSF Student and Early-Career Faculty Travel Grant for the 2018 IEEE International Conference on Software Engineering (PI), National Science Foundation, 2018 ($25,175 over one year).

[4] University of Tulsa Cyber Corps Initiative -- Training the Next Generation of MacGyvers (Co-PI), National Science Foundation, 2021 ($6,302,976 over five years)-Retracted funds due to change of institutes.

[5] NSF-CSIRO: AIEnvelope: a Responsible Foundation for Auditing Deep Learning Models (Co-PI with Timothy Menzies), 2022 (Pending).

[6] SHF: Small: Does more ADVICE improve interactive Search-based Requirements Engineering? (Co-PI with Timothy Menzies), 2022 (Pending).

D8. Intramural Funding (Total: $67,970)

[1] Brain-Brain Interactions and Gender Differences in Knowledge-Work Collaboration (PI), Interdisciplinary Project Grant, University of Tulsa, 2020, ($19,200)

[2] Supporting Information Foraging by Utilizing Agents' Collective Foraging Behavior (PI), Faculty Development Summer Fellowship Program, University of Tulsa, 2020 ($10,945 over summer 2020).

[3] Developing Intelligent Pair-Programming Agents to Facilitate Programming (PI), Shark Tank Kick-Start Grant, University of Tulsa, 2019 ($4,990 over one year).

[4] Pair-Buddy: Prototype of Intelligent Agents to Broaden Accessibility of Programming (PI), Faculty Development Summer Fellowship Program, University of Tulsa, 2018 ($10,945 over summer 2018).

[5] Improving API Learning (PI), Faculty Development Summer Fellowship Program, University of Tulsa, 2017 ($10,945 over summer 2017).

[6] Human-Centered Online Repositories to Support Opportunistic Reuse (PI), Faculty Development Summer Fellowship Program, University of Tulsa, 2016 ($10,945 over summer 2016).

E. Teaching

I teach courses related to my research specialty: human-computer interaction, and software engineering. My courses are geared for novice programmers to foster coding skills, creativity, and collaboration.

Courses at NC State

- CSC 591-002/791-002: Special Topics: Programmer Centered Design and Research (Fall 2022)
- CSC 326 - Software Engineering (Spring 2023)

- CSC 554 - Human-Computer Interaction (Spring 2024)

Courses at TU

I have taught eight different courses at TU, including four new courses in human-computer interaction, and software engineering. Other courses, at the undergraduate and graduate levels, engage industry experts to discuss software development practices and lessons learned from successful as well as failed projects; they introduce students to industry culture and prepare them to succeed in their professional careers. I was nominated for the TU Outstanding Teaching Award by the Effectiveness Committee at the College of Engineering and Natural Sciences in 2021. In 2018, I was a finalist for the TU Women and Gender Studies Program's Linda J. Lacey Award for Mentoring Excellence.

- CS 4053/CS 6863: Interaction Design (Spring 2016-2020, Fall 2020-2021)
- CS 4503: Senior Software Projects I (Fall 2016-2021)
- CS 4513: Senior Software Projects II (Spring 2020-2022)
- CS 5863/CS 7863: User-Centered Design and Research (Fall 2015, 2019; Spring 2021, 2022)
- CS 2003: Fundamentals of Algorithm and Computer Applications (Spring 2017-2019)
- CS 4863/CS 6863: Empirical Software Engineering (Spring 2016)
- CS 7863: Advanced Software Engineering (Fall 2016)
- CS 1003: Code@TU (Summer 2017)

F. Synergistic Activities

F1. International Research Community Activities

I am very active in the human-computer interaction and software engineering research communities and actively participate in the meetings that shape the future directions of my research area. I review approximately 50 research papers each year. I received excellent reviewer recognition at CHI 2017. I am an organizing member of approximately >5 conferences each year.

- Vice-Chair and Steering Committee Member: *IEEE Symposium on Visual Languages and Human-Centric Computing* (2019-2024).
- Member of Editorial Board: *Journal of Computer Language (2021-2025)*.
- Advisory Committee Member: *International Conference on Artificial Intelligence in Human-Computer Interactions* (2020-2023) and *International Conference on Applications of Artificial Intelligence and Machine Learning* (2021).
- Associate Chair & Member of Awards Committee: *International Conference on Human Factors in Computing Systems* (2022).
- Sponsor Chair: *International Conference on Software Testing, Verification and Validation* (2022).
- Most Influential Paper Chair: *IEEE Symposium on Visual Languages and Human-Centric Computing (2022 and 2023)*
- Doctoral Consortium Organizer: *IEEE Symposium on Visual Languages and Human-Centric Computing* (2021).
- Journal First Chair: *IEEE Symposium on Visual Languages and Human-Centric Computing* (2020).
- Travel Grants Chair: *International Conference on Software Engineering* (2020).
- Student Competition Chair: *ACM Symposium on the Foundations of Software Engineering*

(2019).

- Conference Finance Chair: *IEEE Symposium on Visual Languages and Human-Centric Computing* (2019).
- Poster and Showpiece Chair: *IEEE Symposium on Visual Languages and Human-Centric Computing* (2018).
- NSF Scholarship Chair: *International Conference on Software Engineering* (2018).
- Showpiece and Poster Chair: *IEEE Symposium on Visual Languages and Human-Centric Computing* (2017 and 2019).
- Session Chair: *International Conference on Software Engineering* (2019), *IEEE International Conference on Software Maintenance and Evolution* (2020), *International Conference on Cooperative and Human Aspects of Software Engineering* (2021), *International Conference on Artificial Intelligence in Human-Computer Interactions (2021), IEEE Symposium on Visual Languages and Human-Centric Computing* (2021), *International Conference on Human Factors in Computing Systems* (2022), *The ACM Joint European Software Engineering Conference, and Symposium on the Foundations of Software Engineering* (2022).
- Program Committee Member: *International Conference on Artificial Intelligence in Human-Computer Interactions* (2020-2023), *IEEE Visual Languages and Human-Centric Computing* (2016-2023), *Software Engineering in Society* at *ACM/IEEE International Conference on Software Engineering* (2022), Third Workshop on *Gender Equality, Diversity, and Inclusion in Software Engineering* (2022), *ACM Symposium on User Interface Software and Technology* (2021), *New Ideas and Emerging Results Track of IEEE International Conference on Software Maintenance and Evolution* (2021), Artifact evaluations of *IEEE/ACM Automated Software Engineering* (2021), *IEEE Cooperative and Human Aspects of Software Engineering* (2016-2021), *IEEE International Conference on Software Maintenance and Evolution* (2021), *ACM/IEEE International Conference on Program Comprehension* (2021), *IEEE Doctoral Consortium at International Conference on Software Maintenance and Evolution* (2020), *Poster session at ACM/IEEE International Conference on Software Engineering* (2020), *ACM Student Research Competition at International Conference on Software Engineering* (2020), *ACM International Conference on Intelligent User Interfaces (*2015, 2016, 2019), *New Ideas and Emerging Results at ACM Symposium on the Foundations of Software Engineering* (2019), *ACM/IEEE International Conference on Software Engineering* (2017, 2018, 2019), *IEEE International Conference on Humanized Computing and Communication* (2019), *New Ideas and Emerging Results at International Conference on Software Engineering* (2019), and *ACS/IEEE International Conference on Computer Systems and Applications* (2018).
- Journal and Conferences Paper Reviewer: Reviewer of papers submitted to journals and international conferences on human-computer interaction and software engineering such as *Proceedings of the International Conference on Human Factors in Computing Systems* (2015-2022), *IEEE Visual Languages and Human-Centric Computing* (2016-2022), *International Conference on Artificial Intelligence in Human-Computer Interactions* (2020-2022), *Computer Science Education Taylor & Francis* (2022), Third Workshop on *Gender Equality, Diversity, and Inclusion in Software Engineering* (2022), *Cooperative and Human Aspects of Software Engineering* (2016-2021), *Journal of Computer Language* (2021), *ACM Symposium on User Interface Software and Technology* (2021), *New Ideas and Emerging Results Track of IEEE International Conference on Software Maintenance and Evolution* (2021), Artifact evaluations of *IEEE/ACM Automated Software Engineering* (2021), *IEEE International Conference on Software Maintenance and Evolution* (2021),

ACM/IEEE International Conference on Program Comprehension (2021)*, IEEE Doctoral Consortium at International Conference on Software Maintenance and Evolution* (2020)*, Poster session at ACM/IEEE International Conference on Software Engineering* (2020)*, ACM Student Research Competition at International Conference on Software Engineering* (2020)*, Journal of Information and Software Technology* (2019), *Journal of Systems and Software* (2019)*, ACM Conference on Computer-Supported Cooperative Work and Social Computing* (2016, 2018, 2019)*, ACM International Conference on Intelligent User Interfaces* (2015, 2016, 2019)*, New Ideas and Emerging Results at ACM Symposium on the Foundations of Software Engineering* (2019)*, ACM/IEEE International Conference on Software Engineering* (2017, 2018, 2019)*, IEEE International Conference on Humanized Computing and Communication* (2019)*, New Ideas and Emerging Results at International Conference on Software Engineering* (2019)*, IEEE/ACM International Workshop on Gender Equality in Software Engineering* (2019), *ACS/IEEE International Conference on Computer Systems and Applications* (2018)*, Peer Journal (2017), IEEE Transactions on Software Engineering* (2014, 2016), and *International Symposium on End-User Development* (2013).

- Proposal Panel Reviewer: Mitacs Accelerate Research Proposals (2020), NSF Division of Information and Intelligent Systems, and NSF Division of Computing and Communication Foundations (2017).

F2. University Activities

- Member, Software Engineering Faculty Recruitment Committee (2022-2023).
- Co-Leader, Computer Science Department New Faculty Lunches (Spring 2023).
- TU Chapter Faculty Advisor, Society of Women Engineers (2016 to 2022).
- TU Chapter Faculty Advisor, National Center for Women and Information Technology (2017 to 2022).
- Faculty Advisor, University of Tulsa Young Professionals (2016 to 2019).
- Judge, Annual Research Colloquium (2018 and 2019).
- Judge, Oklahoma Young Entrepreneur Award (2017 and 2018).

F3. Community Activities

- Vice President of Outreach, Tulsa/North-Eastern Oklahoma Society of Women Engineers (2019 to 2022).
- Vice President of Professional Development, Tulsa/North-Eastern Oklahoma Society of Women Engineers (2021 to 2022).
- Volunteer at Introduce a Girl to Engineering Day (2021).
- Volunteer at Clarehouse Hospice (2016 to 2022).
- Volunteer at Neighbors Along the Line – STEM Summit (2018).
- Mentor at Oklahoma Women in Tech (2017 to Present).
- Presenter on STEM career opportunities at Tulsa-Area K-12 Schools (2017 to 2022).