Shamya Karumbaiah

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RESEARCH INTERESTS

Learning Analytics, Learning Sciences, Human-Centered AI, Machine Learning, Educational Data Mining, AI Tutors, Affective Computing, Algorithmic Bias, AI Ethics, Equity

EDUCATION

- **Ph.D.** (with distinction). Learning Sciences. University of Pennsylvania. 2017 - 2021.

    Dissertation Title: The Upstream Sources of Bias: Investigating Theory, Design, and Methods Shaping Adaptive Learning Systems.

    Advisor: Ryan S Baker.
- **M.S.** Computer Science. University of Massachusetts Amherst. 2015 - 2017.
- **B.E.** Computer Science. Sri Jayachamarajendra College of Engineering. 2007 - 2011.

CURRENT APPOINTMENT

- **Assistant Professor.** Learning Sciences, Department of Educational Psychology, University of Wisconsin-Madison. Also affiliated with the Institute for Diversity Science. 2023 - present.

PRIOR ACADEMIC APPOINTMENTS

- **Postdoctoral Fellow.** Human-Computer Interaction Institute, Carnegie Mellon University. 2022.
    Advisors: Vincent Aleven, Nikol Rummel.
- **Research Fellow.** Penn Center for Learning Analytics, University of Pennsylvania. 2017 - 2021.
    Advisor: Ryan S Baker.
- **Research Assistant.** Center for Knowledge Communication, University of Massachusetts Amherst. Spring 2017.
    Advisors: Beverly Woolf, Ivon Arroyo.
- **Visiting Scholar.** Institute for Creative Technologies, University of Southern California. Summer, Fall 2016.
    Advisor: Benjamin Nye.

PRIOR INDUSTRY EXPERIENCE

- **Artificial Intelligence Intern.** Advanced Technologies and AI, Cisco Systems. Summer 2017.
    Mentor: Antonio Nucci.

- **Software Engineer.** Service Supply Chain, Cisco Systems. 2011 - 2015.
- **Software Intern.** India Software Labs, IBM. Summer 2010.

GRANTS

- **Wisconsin Alumni Research Foundation**
  Office of the Vice Chancellor for Research and Graduate Education
  University of Wisconsin–Madison. 2023.
  $100,000

- *Computational Thinking in Action (CTIA)*
  PAsmart Advancing Grant received with Catalyst@PennGSE
  Pennsylvania Department of Education. 2019-2020.
  $484,689

- *Eastern Pennsylvania Innovation Catalyst (EPIC) Network*
  PAsmart Advancing Grant received with Catalyst@PennGSE
  Pennsylvania Department of Education. 2019-2020.
  $494,368

- *Artificial Intelligence Journal Club*
  Year of Data Grant received with Kings Court English College House
  New Student Orientation & Academic Initiatives, University of Pennsylvania. 2019.

- *A Peer Mentoring Program for Fostering Intellectual Ties and Academic Success in Graduate Computer Science*
  International Programs Office Grant received with CSWomen
  University of Massachusetts Amherst. 2016.

- *Product Health Index (PHI)*
  Burning Platform - Global Data Innovation Grant
  Cisco Systems. 2013.
  $2,500 + incubation

FELLOWSHIPS & SCHOLARSHIPS

- **Nellie McKay Fellowship.** Provost's Office, University of Wisconsin–Madison. 2025. ($67,500 in course releases)
- **Dean's Fellowship.** University of Pennsylvania. 2017-2021. ($106,000 in tuition)
- **Devaraj Arasu Scholarship for Higher Education.** Government of Karnataka, India. 2015 - 2017. ($32,000)
- **International Student Tuition Scholarship.** UMass Amherst. 2015. ($7,500)
- **Gold medal** (for graduating at the top). Bachelor of Engineering in Computer Science, Sri Jayachamarajendra College of Engineering. 2011.
- **Prime Minister's Scholarship.** Government of India. 2007-2011. (undergraduate tuition)

RESEARCH AWARDS

- **Rising Stars in EECS**. Massachusetts Institute of Technology. 2021.

- **Best Paper Nomination** (as first author). ACM LAK 2021. 11th International Learning Analytics and Knowledge Conference.

- **Best Paper Nomination** (as first author). ICQE 2020. 2nd International Conference on Quantitative Ethnography.

- **Best Paper Nomination** (as first author). ICCE 2018. 26th International Conference for Computers in Education (ICCE).

- **Best Paper Nomination** (as first author). EDM 2018. 11th International Conference on Educational Data Mining.

PUBLICATIONS
(italicized names indicate mentored students; bold indicates my own name)

➢ Journal Papers

- Baker, R.S., Esbenshade, L., Vitale, J.M., **Karumbaiah, S.** (2023) Using Demographic Data as Predictor Variables: a Questionable Choice. *Journal of Educational Data Mining (JEDM)*.

- Jensen, M. L., Wright, R. T., Durcikova, A., **Karumbaiah, S.** (2022). Improving Phishing Reporting Using Security Gamification. *Journal of Management Information Systems (JMIS)*.

- Matayoshi, J., **Karumbaiah, S.** (2022) Analyzing Transitions in Sequential Data with Marginal Models. *Journal of Educational Data Mining (JEDM)*.

- **Karumbaiah, S.**, Baker, R.S., Ocumpaugh, J., *Andres, J.M.A.L.* (2021) A Re-Analysis and Synthesis of Data on Affect Dynamics in Learning. *IEEE Transactions on Affective Computing (IEEE TAC)*.

- **Karumbaiah, S.**, Baker, R.S., Ocumpaugh, J. (2021) Context Matters: Differing Implications of Motivation and Help-Seeking in Educational Technology. *International Journal of Artificial Intelligence in Education (IJAIED)*.

- Baker, R.S., Gašević, D., **Karumbaiah, S.** (2021) Four paradigms in learning analytics: Why paradigm convergence matters. *Computers and Education: Artificial Intelligence.*

- Matayoshi, J., **Karumbaiah, S.** (2020) Adjusting the L Statistic when Self-Transitions are Excluded in Affective Dynamics. *Journal of Educational Data Mining (JEDM)*.

- Crossley, S.A., **Karumbaiah, S.**, Ocumpaugh, J., Labrum, M., Baker, R.S. (2020) Predicting Math Identity through Language and Click-stream Patterns in a Blended Learning Mathematics Program for Elementary Students. *Journal of Learning Analytics (JLA)*.

➢ Conference Full Papers in Stringently Refereed Proceedings [avg acceptance rate ~22%]

- **Karumbaiah, S.,** *Borchers, C., Shou, T., Falhs, AC., Liu, P.,* Nagashima, T., Rummel, N., Aleven, V. (2023) A Spatiotemporal Analysis of Teacher Practices in Supporting Student Learning and Engagement in an AI-enabled Classroom. *Proceedings of the 24th International Conference on Artificial Intelligence in Education (AIED)*.

- **Karumbaiah, S.,** Baker, R.S., *Tao, Y., Liu., Z.* (2022) How does Students' Affect in Virtual Learning Relate to Their Outcomes? A Systematic Review Challenging the Positive-Negative

Dichotomy. *Proceedings of the 12th International Learning Analytics and Knowledge Conference (ACM LAK).*

- Matayoshi, J., **Karumbaiah, S.** (2021) Investigating the Validity of Methods Used to Adjust for Multiple Comparisons in Educational Data Mining. *Proceedings of the 13th International Conference on Educational Data Mining (EDM).*

- **Karumbaiah, S.,** Brooks, J. (2021) How Colonial Continuities Underlie Algorithmic Injustices in Education. *Proceedings of the IEEE Research in Equity and Sustained Participation in Engineering, Computing, and Technology (IEEE RESPECT).*

- **Karumbaiah**, S., Lan, A., *Nagpal, S.,* Baker, R.S., Botelho, A., Heffernan, N. (2021) Using Past Data to Warm Start Active Machine Learning: Does Context Matter? *Proceedings of the 11th International Learning Analytics and Knowledge Conference (ACM LAK)* **[Nominated for Best Paper Award]**

- Ocumpaugh, J., Baker, R.S., **Karumbaiah, S.,** Crossley, S.A., Labrum, M., (2020) Affective Sequences and Student Actions Within Reasoning Mind. *Proceedings of the 21st International Conference on Artificial Intelligence in Education (AIED).*

- **Karumbaiah, S.,** Baker, R.S. (2020) Studying Affect Dynamics using Epistemic Networks. *Proceedings of the 2nd International Conference on Quantitative Ethnography (ICQE).* **[Nominated for Best Paper Award]**

- **Karumbaiah, S.,** Baker, R.S., Barany, A., Shute, V. (2019) Using Epistemic Networks with Automated Codes to Understand Why Players Quit Levels in a Learning Game. *Proceedings of the 1st International Conference on Quantitative Ethnography (ICQE).*

- **Karumbaiah, S.,** Baker, R.S., Ocumpaugh, J. (2019) The Case of Self-Transitions in Affective Dynamics. *Proceedings of the 20th International Conference on Artificial Intelligence in Education (AIED).*

- **Karumbaiah, S.**, Ocumpaugh, J., Baker, R.S. (2019) The Influence of School Demographics on the Relationship Between Students' Help-Seeking Behavior and Performance and Motivational Measures. *Proceedings of the 11th International Conference on Educational Data Mining (EDM).*

- Crossley, S.A., **Karumbaiah, S.**, Ocumpaugh, J., Labrum, M., Baker, R.S. (2019) Predicting Math Success in an Online Tutoring System Using Language Data and Click-stream Variables: A longitudinal analysis. *Proceedings of the 2nd Conference on Language, Data and Knowledge (LDK).*

- Georgila, K., Core, M. G., Nye, B., **Karumbaiah, S.,** Auerbach, D., Ram, M. (2019) Using Reinforcement Learning to Optimize the Policies of an Intelligent Tutoring System for Interpersonal Skills Training. *Proceedings of the 17th International Conference on Autonomous Agents and Multiagent Systems (AAMS).*

- Andres, J.M.A.L., Ocumpaugh, J., Baker, R., Slater, S., Paquette, L., **Karumbaiah, S.**, Jiang, Y., Bosch, N., Munshi, A., Moore, A., Biswas, G. (2019) Affect Sequences and Learning in Betty's Brain. *Proceedings of the 9th International Conference on Learning Analytics and Knowledge (LAK).*

- **Karumbaiah, S.,** Baker, R.S., Shute, V. (2018) Predicting Quitting in Students Playing a Learning Game. *Proceedings of the 11th International Conference on Educational Data Mining (EDM).* **[Nominated for Best Paper Award]**

- Nye, B. D., **Karumbaiah, S.,** Tokel, S. T., Core, M. G., Stratou, G., Auerbach, D., & Georgila, K. (2018) Engaging with the Scenario: Affect and Facial Patterns from a Scenario-Based Intelligent

Tutoring System. *Proceedings of the 19ᵗʰ International Conference on Artificial Intelligence in Education (AIED)*.

- **Karumbaiah, S.,** Andres, J.M.A.L., Botelho, A.F., Baker, R.S., Ocumpaugh, J. (2018) The Implications of a Subtle Difference in the Calculation of Affect Dynamics. *Proceedings of the 26ᵗʰ International Conference on Computers in Education (ICCE)*. **[Nominated for Best Paper Award]**

- **Karumbaiah, S.,** Lizarralde, R., Allessio, D., Woolf, B.P., Arroyo, I., Wixon, N. (2017) Addressing Student Behavior and Affect with Empathy and Growth Mindset. *Proceedings of the 10ᵗʰ International Conference on Educational Data Mining (EDM)*.

➢ **Peer-Reviewed Conference Short Papers**

- **Karumbaiah, S.,** *Borchers, C., Falhs, AC.,* Holstein, K., Rummel, N., Aleven, V. (2023). Teacher Noticing and Student Learning in Human-AI Partnered Classrooms: A Multimodal Analysis. *Proceedings of the 18ᵗʰ International Conference of the Learning Sciences (ICLS)*.

- *Shou, T., Borchers, C.*, **Karumbaiah, S.,** Aleven, V. (2023) Optimizing Parameters for Accurate Position Data Mining in Diverse Classrooms Layouts. *Proceedings of the 15ᵗʰ International Conference on Educational Data Mining (EDM)*.

- **Karumbaiah, S.,** *Zhang, J.,* Baker, R. S., Scruggs, R., Cade, W., Clements, M., Lin, S. (2022). Using Neural Network-Based Knowledge Tracing for a Learning System with Unreliable Skill Tags. *Proceedings of the 14ᵗʰ International Conference on Educational Data Mining (EDM)*.

- Matayoshi, J., **Karumbaiah, S.** (2021) Using Marginal Models to Adjust for Statistical Bias in the Analysis of State Transitions. *Proceedings of the 11th International Learning Analytics and Knowledge Conference (LAK)*.

- Tywoniw, R., Crossley, S.A., Ocumpaugh, J., **Karumbaiah, S.,** Baker R. (2020) Relationships Between Math Performance and Human Judgments of Motivational Constructs in an Online Math Tutoring System. *Proceedings of the 21ˢᵗ International Conference on Artificial Intelligence in Education (AIED)*.

- Lan, A., Botelho, A., **Karumbaiah, S.,** Baker, R.S., Heffernan, N. (2020) Accurate and Interpretable Sensor-free Affect Detectors via Monotonic Neural Networks. *Proceedings of the 10ᵗʰ International Conference on Learning Analytics and Knowledge (LAK)*.

➢ **Book Chapters**

- Hutt, S., Baker, R.S., Ocumpaugh, J., Munshi, A., Andres, J. M. A. L., **Karumbaiah**, S., Slater, S., Biswas, G., Paquette, L., Bosch, N., van Velsen, M. (2022) Quick red fox: An App Supporting a New Paradigm in Qualitative Research on AIED for STEM. *In Artificial Intelligence in STEM Education: The Paradigmatic Shifts in Research, Education and Technology*.

➢ **Peer-Reviewed Posters and Workshop Papers/Presentations**

- **Karumbaiah, S**., Liu, P., Maksimova, A., De Vylder, L., Rummel, N., Aleven, V. (2023) Multimodal Analytics for Collaborative Teacher Reflection of Human-AI Hybrid Teaching: Design Opportunities and Constraints. *Proceedings of the 18th European Conference on Technology Enhanced Learning (ECTEL)*.

- **Karumbaiah, S**. (2022) Upstream Biases in Adaptive Learning Systems. *Graduate Summer School on Algorithmic Fairness.*

- **Karumbaiah, S.**, Brooks, J. (2021) Decoloniality as a Lens of Ethical Foresight for Learning Analytics. *Proceedings of the Workshop on Towards a Philosophical Framework for Learning Analytics at the 11th International Learning Analytics and Knowledge Conference (LAK).*

- Hutt, S., **Karumbaiah, S.**, Ocumpaugh, J. (2021) Optimizing philosophies for predictive models in learning analytics. *Proceedings of the Workshop on Towards a Philosophical Framework for Learning Analytics at the 11th International Learning Analytics and Knowledge Conference (LAK).*

- **Karumbaiah, S.**, Ocumpaugh, J., Labrum, M., Baker, R.S. (2019) Temporally Rich Features Capture Variable Performance Associated with Elementary Students' Lower Math Self-concept. *Proceedings of the Workshop on Online Learning and social-Emotional Learning at the 9th International Conference on Learning Analytics and Knowledge (LAK).*

- **Karumbaiah, S.,** Dabholkar, S., Shim, J., Yoon, S., Chandy, B., Ye, A. (2019) Using Participatory Design to Facilitate In-service Teacher Learning in Computational Thinking. *Proceedings of the 13th International Conference on Computer Supported Collaborative Learning (CSCL).*

- **Karumbaiah, S.,** Rahimi, S., Baker, R.S., Shute, V., D'Mello, S.K. (2018) Is Student Frustration in Learning Games More Associated with Game Mechanics or Conceptual Understanding? *Proceedings of the 13th International Conference of the Learning Sciences (ICLS).*

- Nye, B., **Karumbaiah, S.,** Tokel, S. T., Core, M. G., Stratou, G., Auerbach, D., & Georgila, K. (2017) Analyzing Learner Affect in a Scenario-Based Intelligent Tutoring System. *Proceedings of the 18th International Conference on Artificial Intelligence in Education (AIED).*

- **Karumbaiah, S.**, Wright, R. T., Durcikova, A., & Jensen, M. L. (2016) Phishing training: A Preliminary Look at the Effects of Different Types of Training. *Proceedings of the 11th Pre-ICIS Workshop on Information Security and Privacy (WISP)*.

PATENT

- Verma, S., Dash, G., **Karumbaiah, S**., Narayanan, A., Shivanna, M., Biswas, S., Nucci, A. (June 27, 2019) Neural Network-Assisted Computer Network Management. US 2019/0197397 A1.

INVITED TALKS AND PRESENTATIONS

- **Invited Talk**. Bias in Adaptive and Artificially Intelligent Learning Systems. Indian Institute of Technology Bombay. July 19, 2023.

- **Invited Seminar**. Teacher in Action with AI Tutors. Interdisciplinary Training Program for Predoctoral Research in the Education Sciences (ITP), University of Wisconsin-Madison. February 17, 2023.

- **Webinar**. Bias in Adaptive Learning Systems. Quantitative Ethnography Webinar Series. International Society for Quantitative Ethnography. June 7, 2022.

- **Invited Talk**. Algorithmic Injustices in Education. Pace University. April 15, 2022.

- **Invited Talk**. Upstream Biases in Adaptive Learning Systems. Data Science Guild Series. IBM Kyndryl. February 17, 2022.

- **Research Presentation**. The Upstream Sources of Bias in Educational Adaptive Systems. Rising Stars in EECS, Massachusetts Institute of Technology. October 14, 2021.

- **Invited Talk**. The Upstream Sources of Bias in Educational Adaptive Systems. Microsoft PROSE Research Team. September 21, 2021.

- **Invited Talk**. Re-Analysis and Synthesis of Data on Affect Dynamics in Learning. University of California Irvine. April 24, 2020.

- **Featured Talk**. Machine Learning and Learning Sciences. Catalyst with ProjectEd. University of Pennsylvania. April 23, 2019.

- **Research Talk**. Predicting Quitting in Learning Games. The Bay Area Learning Analytics Conference (BayLAN), Stanford University. March 2, 2019.

- **Research Presentation**. Predicting Quitting in Learning Games. At Neural Information Processing System (NeurIPS) Women in Machine Learning. December 7, 2018.

- **Invited Talk**. Promoting Engagement in Virtual Learning Environment. Institute for Software Integrated Systems (ISIS), Vanderbilt University. October 7, 2018.

- **Lightning Talk**. Predicting Quitting in Learning Games. Penn Research in Machine Learning (PriML), University of Pennsylvania. September 15, 2018

- **Invited Talk.** Student Frustration and Learning Game Design. Human Computer Interaction Institute (HCII), Carnegie Mellon University. January 22, 2018.

- **Invited Talk**. Artificial Intelligence – Past, Present and Future. Girls in Technology, Cisco Systems. April 20, 2017.

OTHER PARTICIPATION IN INVITED EVENTS

- **Invited Participant**. Learning Analytics for Equity. New York University. May 21-23, 2023.

- **Invited Panel**. Early Career Panel. Current Topics in Learning Sciences Seminar, University of Wisconsin-Madison. March 24, 2023.

- **Invited Conversation**. Coffie with Proffie. Epistemic Learning Institute Graduate Student Meeting, University of Wisconsin-Madison. February 21, 2023.

- **Podcast**. Bias. SoLAR Spotlight - Conversations on Learning Analytics. Society for Learning Analytics Research. May 31, 2022.

- **Invited Panel**. Defining the Scope of LAK. Learning Analytics and Knowledge. March 23, 2022.

- **Invited Panel**. Women in Learning Analytics Panel. Learning Analytics Masters Program, University of Wisconsin-Madison. March 9, 2022.

- **Researcher**. Shifting Power in Educational Research and Development, University of Pittsburgh + Remake Learning. 2020.

COURSES TAUGHT

- **Introduction to Learning Sciences I.** Department of Educational Psychology, University of Wisconsin-Madison. Fall 2023.

- **Introduction to Learning Sciences II.** Department of Educational Psychology, University of Wisconsin-Madison. Spring 2024. (upcoming)

OTHER TEACHING EXPERIENCE

- **Independent Study.** Detection of Refection-Worthy Moments from Teachers' Multimodal Data. Human-Computer Interaction Institute, Carnegie Mellon University. Spring 2022, Summer 2022, Fall 2022.

- **Tutorial.** Introduction to Bias Research in Learning Analytics. Learning Analytics Summer Institute (LASI). April 28, 2021 (upcoming). June 14 and 16, 2022.

- **Guest Lecture.** Learning Analytics and Mixed Reality. In EDUC 639: Design of Learning Environments. University of Pennsylvania. April 28, 2021.

- **Instructor.** *Experiences in Applied Computational Thinking (EXACT).* Graduate School of Education, University of Pennsylvania. Summer 2018, Fall 2018, Summer 2019, Fall 2019, Spring 2020.

- **Program Designer.** *Computational Thinking in Action (CTiA).* PAsmart Advancing Grant with Catalyst @ Penn GSE, Pennsylvania Department of Education. Spring 2019.

- **Guest Lecture.** Big Data and Learning Analytics. In EDUC 639: Design of Learning Environments. University of Pennsylvania. April 4, 2019.

- **Guest Lecture.** Learning Analytics and Educational Data Mining. In EDLT535 - Researching and Evaluating Technologies for Learning. Drexel University. February 7, 2019.

- **Program Designer.** *Experiences in Applied Computational Thinking (EXACT).* Catalyst @ PennGSE, University of Pennsylvania. Fall 2017 - Spring 2018.

STUDENT ADVISING

- **Doctoral Thesis Examiner**, Pankaj Chavan, An Evidence-based Feedback System for Lectures: From Data to Practice, Indian Institute of Technology Bombay, 2023.

- **Minor Doctoral Advisor.** Foram Gathia. Department of Curriculum and Instruction, University of Wisconsin-Madison, 2023-present.

OTHER MENTORSHIP EXPERIENCE

- Ananya Ganesh. Doctoral Student. Department of Computer Science, University of Colorado-Boulder, 2023-present.

- Jais Brohinsky. Doctoral Student. Department of Curriculum and Instruction, University of Wisconsin-Madison, 2023-present.

- Ann-Christin Falhs. Doctoral Student. Ruhr University Bochum. 2022-present.

- Conrad Borchers. Doctoral Student. Human-Computer Interaction Institute, Carnegie Mellon University. 2022-present.

- Pinyang Liu. Research Assistant. Human-Computer Interaction Institute, Carnegie Mellon University. 2022-2023.

- Lea De Vylder, Megna Kokkalera, Tianze Shou, Wenhan Li, Ziqi Ding. Summer Internship. Undergraduate Students. Statistics/Machine Learning, Carnegie Mellon University. 2022.

- Hanqing Liu. Summer Undergraduate Research Apprenticeship (SURA). Carnegie Mellon University. 2022.

- Tong Hu, Jihyo Chung, Kay Nam. Independent Study. Undergraduate Students. Statistics/Machine Learning, Carnegie Mellon University. 2022.

- Amy Elizabeth Guillotte. Doctoral Student. Graduate School of Education, UPenn. 2021.

- Yan Tao, Haripriya Valayaputtur. Research Assistants. Master Students. Learning Sciences and Technology, UPenn. 2021-2022.

- Anand Syam. Research Assistant. Undergraduate Student. Computer Science, BITS Pilani. 2021.

- Ziyang Liu. Research Assistant. Master Student. Graduate School of Education, UPenn. 2020.

- Sachit Nagpal. Research Assistant. Tandon School of Engineering, New York University. 2020.

- Saumya Shah, Muthhukumar Palaniyapan, Arnav Dhamija. Teaching Assistants. School of Engineering and Applied Science, UPenn. 2020.

- Yuhan Lin. Teaching Assistant. Graduate School of Education, UPenn. 2020.

- Juliana Choi, Mark Lovett. Resident Assistants. Science and Technology Wing, Kings Court English College House, UPenn. 2019-2020.

- Priyansh Sharma, Dan Truong. Teaching Assistants. School of Engineering and Applied Science, UPenn. 2020.

- Jooeun Shim. Doctoral Student. Graduate School of Education, UPenn. 2018-2019.

- Yeyu Wang. Research Assistant. Penn Center for Learning Analytics. 2018-2019.

- Rina Madhani. Master Student. Penn Graduate School of Education. 2018-2019.

- Andy Ye. Teaching Assistant. School of Engineering and Applied Science, UPenn. 2019.

SERVICE TO THE RESEARCH COMMUNITY

➢ Grant Reviewing

- Reviewer, National Science Foundation (NSF, 2023)

➢ Journal Reviewing

- Reviewer, Learning: Research & Practice (RLRP, 2023)
- Reviewer, Journal of Higher Education (JHE, 2023)
- Reviewer, Journal of Learning Analytics (JLA, 2022)
- Reviewer, British Journal of Educational Technology (BJET, 2022)
- Reviewer, Computer Based Learning in Context (CBLC, 2021, 2022)
- Reviewer, International Journal of Artificial Intelligence in Education (IJAIED, 2020, 2021, 2022)
- Reviewer, IEEE Transactions on Learning Technologies (IEEE TLT, 2020, 2021, 2022)
- Reviewer, Behaviormetrika: Special Issue on Work at the Intersection of Educational Data Mining and Statistics (BHMK, 2021)
- Reviewer, International Journal of Artificial Intelligence in Education: Special Issue on The FATE of AI in Education: Fairness, Transparency, Accountability, Ethics (IJAIED FATE, 2020)
- Reviewer, Computers in Human Behavior (CHB, 2020)
- Sub-reviewer, Scientometrics (SCIM, 2019)

➢ **Program Committee**

- Member, Equity, Diversity, and Inclusion in Educational Technology Research and Development, International Conference on Artificial Intelligence in Education (AIED Workshop, 2023)
- Member, Technology 4 Education (T4E, 2023)
- Member, International Conference on Educational Data Mining (EDM, 2022)
- Member, ACM Conference on Fairness, Accountability, and Transparency (ACM FAccT, 2022)
- Member, International Learning Analytics and Knowledge Conference (LAK, 2022)
- Member, International Conference on Artificial Intelligence in Education (AIED, 2022)
- Member, International Conference on Quantitative Ethnography (ICQE, 2022)
- Member, IEEE Conference on Research in Equity and Sustained Participation in Engineering, Computing, and Technology (IEEE RESPECT, 2022)

➢ **Conference Reviewing**

- Reviewer, Affective Computing and Intelligent Interaction (ACII, 2019, 2022)
- Reviewer, International Conference on Quantitative Ethnography (ICQE, 2020)
- Reviewer, International Conference of the Learning Sciences (ICLS, 2020)
- Reviewer, International Conference on Quantitative Ethnography (ICQE, 2019)
- Reviewer, Neural Information Processing System (NeurIPS) Women in Machine Learning (2018)
- Sub-reviewer, User Modelling, Adaptation and Personalization (UMAP, 2016)

➢ **Positions Held**

- **Judge** (Posters). Educational Data Mining. 2023.
- **Session Chair**. AI-Assisted and Interactive Technologies in Educational Context. International Conference on Artificial Intelligence in Education. 2023.
- **Judge** (Sigma Xi Research Project Competition). Meeting of the Minds. Carnegie Mellon University. 2022.
- **Selector** (Learning Sciences Research). McGraw Prize in Education. 2021.
- **Social Media Chair**. Computer-Based Learning in Context (CBLC). 2020-present.

TRAVEL AWARDS

- **IEEE RESPECT Scholarship**. Research in Equity and Sustained Participation in Engineering, Computing, and Technology (RESPECT), 2021.
- **Penn Teaching, Learning, and Teacher Education Travel Award.** 13th International Conference on Computer Supported Collaborative Learning (CSCL), 2019.
- **National Science Foundation Travel Award.** 20th International Conference on Artificial Intelligence in Education (AIED), 2019.
- **Penn Graduate School of Education Student Government Travel Award.** The Bay Area Learning Analytics Conference (BayLAN), 2019.

- **Erik Duval Travel Scholarship.** Learning Analytics Summer Institute (LASI), 2018.
- **National Science Foundation Travel Award.** 18th International Conference on Artificial Intelligence in Education (AIED), 2017.
- **Women for UMass Amherst Travel Award.** 10th International Conference on Educational Data Mining (EDM), 2017.
- **Google Travel Grant.** Grace Hopper Celebration of Women in Computing (GHC), 2017.
- **Yelp Award.** Hack The North, University of Waterloo, 2016.
- **EMC Corporation Scholarship.** CRA-W Grad Cohort, 2016.

ACADEMIC SERVICE AT DEPARTMENT AND UNIVERSITY LEVEL

- **Faculty Search Committee**. Learning Sciences, Department of Educational Psychology, University of Wisconsin-Madison. 2023.
- **Recruitment, Admissions, Fellowships, & Awards (RAFA) Committee**. Department of Educational Psychology, University of Wisconsin-Madison. 2023-2024.
- **Graduate Associate.** Science and Technology Wing (STWing), Kings Court English College House (KCECH), University of Pennsylvania. 2019. Advisor: Dr. Krimo Bokreta.
- **Organizing Committee.** Artificial Intelligence Journal Club, New Student Orientation and Academic Initiatives, University of Pennsylvania. 2019.
- **Co-organizer.** Graduate Students in Computer Science Mentoring Program, University of Massachusetts Amherst. 2016.
- **Organizing Committee.** Mentorship and Cultural Awareness Training, University of Massachusetts Amherst. 2016.
- **Diversity Chair.** CSWomen, University of Massachusetts Amherst. 2016.
- **Organizer and Instructor.** NCWIT Symantec Technical Workshop Series, University of Massachusetts Amherst. 2015.
- **Organizer.** Programming Workshop for High School Girls, Women in Engineering and Computing Day, University of Massachusetts Amherst. 2015.
- **Graduate Student Senate Representative.** Status of Diversity Council, University of Massachusetts Amherst. 2015.

OTHER PROFESSIONAL SERVICES

- **Technical Writer** (press releases). Gubbi Labs, Indian Institute of Science (IISc). 2014.
- **Board Member.** India Civic Council, Cisco Systems. 2012 – 2014.   .
- **Founder and Facilitator.** Data Innovation Center of Practice, Cisco Systems. 2013.
- **Organizer.** Data Innovation Fair, Cisco Systems. 2013.
- **Mentor.** Girls in Technology, Cisco Connected Women. 2013.
- **VP (Public Relations).** Toastmasters Club (Cisco). 2012.
- **VP (Membership).** Toastmasters Club (Cisco). 2013.
- **Chief Editor.** Toastmasters Club (Cisco). 2012.

PROFESSIONAL AFFILIATIONS

- Society for Learning Analytics Research (SOLAR)
- International Artificial Intelligence in Education Society (IAIEDS)
- International Society of the Learning Sciences (ISLS)
- International Educational Data Mining Society (IEDMS)
- International Society for Quantitative Ethnography (ISQE)
- European Association of Technology Enhanced Learning (EATEL)