

Curriculum Vitae
AMAN YADAV

CONTACT INFORMATION

College of Education
513G Erickson Hall
Michigan State University
East Lansing, MI 48824
Email: ayadav@msu.edu
Phone: 517-719-5530

EDUCATIONAL HISTORY

- 2006 **Ph.D., Michigan State University**
Educational Psychology and Educational Technology; Department of
Counseling, Educational Psychology, and Special Education.
- 2001 **M.S., Michigan State University**
Electrical Engineering; Department of Electrical and Computer
Engineering.
- 1999 **Bachelor of Engineering, Deenbandhu Chhotu Ram University of
Science and Technology**
Electrical Engineering.

PROFESSIONAL EXPERIENCE

- 2022-present Lappan-Phillips Professor of Computing Education, College of
Education and College of Natural Science, Michigan State University
- 2018-2022 Professor, Educational Psychology and Educational Technology,
Michigan State University
- 2014-2018 Associate Professor, Educational Psychology and Educational
Technology, Michigan State University
- 2020-2021 Co-Director, Master of Arts in Educational Technology, Michigan State
University.
- 2016-2020 Director, Master of Arts in Educational Technology, Michigan State
University.
- 2015-2016 Co-Director, Master of Arts in Educational Technology, Michigan State
University.

2012-2014	Associate Professor, Educational Psychology, Department of Educational Studies. Purdue University
2012-2014	Associate Professor (Courtesy), Department of Computer Science. Purdue University
2006-2012	Assistant Professor, Educational Psychology, Department of Educational Studies. Purdue University

AWARDS AND HONORS

- **INSPIRE CS-AI fellowship**, Massachusetts Institute of Technology. Innovative New Spaces for Practice and Rehearsal Teacher Education Computer Science – Artificial Intelligence) is a year-long fellowship program for CS teacher educators to help novice teachers teach computing inclusively.
- **AT&T Award of Excellence in Instructional Technology (Best Enhanced)**, Michigan State University. This award recognizes best practices in the use of technology to enhance teaching and learning.
- **Purdue University Faculty Scholar**, Office of the Provost, Purdue University. This award recognizes outstanding tenured faculty members at Purdue who are on an accelerated path for academic distinction. Scholars receive an annual \$10,000 discretionary allocation for 5 years.
- **Purdue Fellow for Study in a Second Discipline**, Office of the Provost, Purdue University: This fellowship provides faculty an opportunity to extend their scholarship through a new area of study that complements their major area of research and teaching.
- **Department of Educational Studies Discovery Award – Associate Professor Level** This award recognizes associate professors for their research in the Department of Educational Studies
- **Dean’s Fellow**, College of Education, Purdue University. This fellowship allows faculty member to explore leadership opportunities and university administration by leading a project that advances strategic goals of the College of Education.
- **Department of Educational Studies Discovery Award – Assistant Professor Level, 2011**): This award recognizes assistant professors for their research in the Department of Educational Studies.
- **Purdue Teaching for Tomorrow Fellowship Award**, Office of the Provost, Purdue University. This award recognized assistant professors for their demonstrated talent for teaching.
- **College Scholarship for top 5% Electrical Engineering candidates**, Deenbandhu Chhotu Ram University of Science and Technology, India (1998).

GRANTS

Computing Integration for Teacher Education (CITE), \$2,00,0000, 2022-2024, Role: PI at Michigan State. PI at City University of New York: Ashleigh Thompson

Creativity and Computing in Detroit. Apple, \$210,365, 2022-2023. Role: PI

Collaborative Research: Moving beyond access increasing teacher knowledge to teach rigorous equity-focused high school computing. National Science Foundation, \$999,678, 2021-2024.
Role: PI at Michigan State, Co-PI: Michael Lachney. PI at University of Detroit-Mercy: Rick Hill

iCT: Developing a Teacher Micro-credential for Integrating Computational Thinking Across Disciplines, National Science Foundation, \$1,733,861, 2019-2023.
Role: PI. Co-PI: Rafi Santo, Carlos Leon

Role of metacognition in supporting computational skills in elementary students. Siegel Family Endowment. \$100,000, 2020-2021. Role: PI. Co-PI: Emily Bouck

Professional Learning for K-12 educators. Office of the Provost, Michigan State University, \$231,000, 2020-2022. Role: PI. Co-PI: Liz Boltz, Candace Robertson, Brittany Dillman.

iOS Design + Coding Lab Educator Professional Development: A Proposal for the City of Detroit. Apple, \$90,000, 2020-2022
Role: Co-PI

Stackable Pathways to MA: Increasing Access and Reducing Barriers, College of Education, Michigan State University, \$49,000, 2020-2021.
Role: PI. Co-PI: Liz Boltz, Emily Bouck, Matt Brodhead, Brittany Dillman, Adrea Truckenmiller, Erin Hamilton, and Candace Robertson

EAGER: Collaborative Research: Strategies for developing special education preservice teacher competencies in integrated mathematics+computing, National Science Foundation, \$299,936, 2019-2021.
Role: PI. Co-PI: Emily Bouck, Maya Israel

Collaborative Research: EAGER: Growing Computer Science Education as a Discipline: Pathways to PhDs, National Science Foundation, \$ 299,833, 2019-2021.
Role: Senior Personnel. PI: Susanne Hambrusch, Alan Peterfreund

Creation of K-12 teacher education pathway in computing education & computational thinking, Robinhood Foundation, \$809,565, 2019-2021
Role: PI, Co-PI: Mike Zamansky

CT4EDU: Broadening Pathways into Computing by Developing Computational Thinking Competencies in Elementary Classrooms, National Science Foundation, \$998,737, 2017-2022.
Role: PI. Co-PI: Emily Bouck, Christina Schwartz, and Niral Shah

PD4CS: Leading the Way to CS10K: Assessing a Just-in-Time Professional Development Approach for Teacher Knowledge Growth in Computer Science, National Science Foundation, \$1,152,669, 2014-2019.
Role: PI. Co-PI: Susanne Hambrusch, James Lehman, and John T. Korb.

IntroCS POGIL: Process Oriented Guided Inquiry Learning in Introductory Computer Science, National Science Foundation, \$1,984,936, 2017-2022.

Role: Co-PI with Helen Hu, Clifton Kussmaul, Christopher Mayfield

Research on Practice Using STEM Inquiry Embedded with Computational Thinking in Elementary School, National Science Foundation, \$1,013,651, 2015-2019.

Role: Co-PI with Andrew Elby and Ayush Gupta

Collaborative Research: Research Initiation: Facilitating Design Thinking through Cases, National Science Foundation, \$149,986, 2015-2019.

Role: Collaborative proposal with UC-Merced; PI at Michigan State University

National Research Mentoring Network Committee on Institutional Cooperation Academic Network (NRMN-CAN), National Institute of Health, \$464,595, 2015-2017.

Role: Evaluator

AGEP-Transformation: The CIC Professorial Advancement Initiative, National Science Foundation, \$1,417,500, 2013-2017.

Role: Co-PI (Collaborative proposal with Committee on Institutional Cooperation) with Amber Cox, MJT Smith, Christie Sahley, Linda Mason.

Integrating Science, Mathematics and Engineering to Improve Student Learning, Indiana Department of Education, \$450,000, 2014-2015.

Role: Co-PI with Jennifer Hicks, Laura Bofferding, Signe Kastberg, and Tamara Moore.

CS4EDU: Computer Science for Education, National Science Foundation, \$871,456, 2009-2014.

Role: Co-PI with Chris Hoffman, Susanne Hambruch, Voicu Popescu, and James Lehman.

Literacy Enriched Science Through Guided Inquiry - Elevating Thinking and Knowledge.

Indiana Department of Education (Sub-award from I-STEM Network), \$23,457, 2012-2013.

Role: PI.

Enhancing English language learners' vocabulary learning through multimedia storybook reading, Purdue Research Foundation, \$17,287, 2012-2013.

Role: PI

Databib: Fostering Data-Driven Scientific Collaboration with India, Office of Engagement, Purdue University, 2012-2013.

Role: Co-PI with Michael Witt and Thomas Hacker

Classroom Links to Words and Sounds, Institute of Educational Sciences, United States Department of Education, \$1,738,508, 2007-2010.

Role: Investigator with Doug Powell and Karen Diamond.

Portable Immersive Virtual Learning Environment for Biotechnology Education, Discovery Learning Center, 1 year, \$25,000, 2008-2009.

Role: Co-PI with Kari Clase and Nicollela Adamo-Villani.

The Engineer as an Entrepreneur: Using Case-Driven, Problem-Based Learning to Develop Adaptive Expertise, Purdue's Engineer of 2020, \$40,000, 2008-2009.

Role: Co-PI with Joe Sinfield and Robin Adams.

Case Based Instruction in Engineering (CaBIE). Purdue University Research Foundation, \$22,000, 2007-2008.

Role: PI.

Mathematical Reform From Interactive Video Experiences (MR. FIVE), Instructional Development Center, Purdue University, \$15,000, 2007-2008.

Role: PI

Study Abroad and International Learning (SAIL) Grant, International Programs, Purdue University, \$6,410, 2007-2008.

Role: PI

Role of beliefs in learning to teach from video-case based instruction: A case study of preservice teachers in a literacy methods course. Michigan State University Spencer Small Research Grant, \$1000, 2002-2003.

Role: PI

BOOKS

C. Mouza, A. Leftwich, & A. Yadav (Eds.) (2022). *Preparing In-Service Teachers to Teach Computer Science: Models, Practices and Policies*. Information Age Publishing

Yadav, A., & Berthelsen, U.D. (Eds.) (2021). *Computational Thinking in Education: A Pedagogical Perspective*. Routledge. <https://doi.org/10.4324/9781003102991>

C. Mouza, A. Yadav, & A. Leftwich (2021). *Preparing Pre-Service Teachers to Teach Computer Science: Models, Practices and Policies*. Information Age Publishing

JOURNAL ARTICLES

Yadav, A., & Lachney, M. (in press). Teaching with, about, and through technology: Visions for the future of teacher education. *Journal of Technology and Teacher Education*.

Yadav, A. & Heath, M. (2022). Breaking the code: Confronting racism in computer science through community, criticality, and citizenship. *TechTrends*. DOI: 10.1007/s11528-022-00734-9

- Yadav, A., Heath, M., & Hu, A. D. (2022). Toward justice in computer science through community, criticality, and citizenship. *Communications of the ACM*, 65(5), 42-46. DOI: 10.1145/3527203
- Yadav, A., Ocak, C., & Oliver, A. (2022). Computational Thinking and Metacognition. *TechTrends*. DOI: 10.1007/s11528-022-00695-z
- Dunbar, K., & Yadav, A. (2022). Shifting to student-centered learning: Influences of teaching a summer service learning program. *Teaching and Teacher Education*. 110, DOI: 10.1016/j.tate.2021.103578.
- Yadav, A., Smith, M. J. T., Farber, C. R., & Mason, L. J. (2021). Professorial Advancement Initiative: A cross institutional collaboration to increase faculty diversity in STEM. *Frontiers in Psychology*, 12. DOI: 10.3389/fpsyg.2021.733173.
- Lishinki, A. & Yadav, A. (2021). Self-evaluation interventions: Impact on self-efficacy and performance in introductory programming. *ACM Transactions on Computing Education*. DOI: 10.1145/3447378
- Margulieux, L. E., & Yadav, A. (2021). Middle science computing integration with preservice teachers. *Journal of Computers in Mathematics and Science Teaching*, 40(1), 29-49.
- Lachney, M., Yadav, A., Drazin, M., Allen, M. C., & Babbitt, W. (2021). Culturally responsive debugging: A method to support cultural experts' early engagement with code. *TechTrends*. DOI: 10.1007/s11528-021-00618-4
- Boltz, L., Yadav, A., Dillman, B., & Robertson, C. (2021). Online and blended learning: Contexts and conditions for education in an emergency. *British Journal of Educational Technology*. DOI: 10.1111/bjet.13075/
- Bouck, E.C., Sands, P., Long, H., & Yadav A. (2021). Preparing special education preservice teachers to teach computational thinking and computer science in mathematics. *Teacher Education and Special Education*. DOI::10.1177/088846421992376376
- Bouck, E. C., & Yadav, A. (2021). Providing access and opportunity for computational thinking and computer science to support mathematics for students with disabilities. *Journal of Special Education Technology*. DOI: 10.1177/0162643420978564
- Lachney, M., Bennett, A., Eglash, R., Yadav., A., & Moudgalya, S. (2021). Teaching in an open village: A case study on culturally responsive computing in compulsory education. *Computer Science Education*. DOI: 10.1080/08993408.2021.1874228
- Yadav, A., Seals, C. D., Sullivan, S. M., Lachney, M., Clark, Q., Dixon, K. & Smith, M. J. T. (2020). The forgotten scholar: Underrepresented minority postdoc experiences in STEM fields. *Educational Studies*, 56(2), 160-185, DOI: 10.1080/00131946.2019.1702552.
- Lachney, M. & Yadav A. (2020). Computing and community in formal education. *Communications of the ACM*, 63(3), 18-21.

- Caeli, E. N. & Yadav, A. (2020). Unplugged approaches to computational thinking: A historical perspective. *TechTrends*, 64, 29–36. DOI: 10.1007/s11528-019-00410-5
- Rich, K. M., Yadav, A., & Larimore, R. (2020). Teacher implementation profiles for integrating computational thinking into elementary mathematics and science instruction. *Education and Information Technologies*. DOI: 10.1007/s10639-020-10115-5
- Rich, K. M. & Yadav, A. (2020). Applying levels of abstraction to mathematics word problems. *TechTrends*. DOI: 10.1007/s11528-020-00479-3
- Lachney, M., Boltz, L., Dillman, B., Robertson, C. & Yadav A. (2020). Local classroom, global technologies: Towards the integration of sociotechnical macroethical issues into teacher education. *Bulletin of Science, Technology & Society*, 38(1-2), 13–22.
- McGill, M. M., DeLyser, L., Brennan, K., Franke, B., Kaylor, E., Mayhew, E., Mills, K. and Yadav, A. (2020). Evaluation and assessment for improving CS teacher effectiveness. *ACM Inroads* 11(4), 35–41. doi:10.1145/3410478
- García-Peñalvo, F. J., Casado-Lumbreras, C. Colomo-Palacios, R. & Yadav, A. (2020). Smart learning. *Applied Sciences*, 10(19), 1-7. DOI: doi:10.3390/app10196964.
- Yadav, A., & Berges, M. (2019). Computer science pedagogical content knowledge: Characterizing teacher performance. *ACM Transactions on Computing Education*, 19 (3), DOI: 10.1145/3303770
- Rich, K. M., Yadav, A., & Zhu, M. (2019). Abstraction in students’ mathematics strategies: Productive starting points for introducing CT concepts. *Journal of Computers in Mathematics and Science Teaching*, 38 (3), 267-298.
- Rich, K. M., Yadav, A., & Schwarz, C. V. (2019). Computational thinking, mathematics, and science: Elementary teachers’ perspectives on integration. *Journal of Technology and Teacher Education*, 27(2), 165-205
- Yadav, A., & Seals, C. (2019). Taking the next step: Supporting postdocs to develop an independent path in academia. *International Journal of STEM Education*, 6(1), 1-15. DOI: 10.1186/s40594-019-0168-1
- Gretter, S., Yadav, A., Sands, P. & Hambrusch, S. (2019). Equitable Learning Environments in K-12 Computing: Teachers’ Views on Barriers to Diversity. *ACM Transactions on Computing Education*, 19 (3), 1-16. DOI: 10.1145/3282939
- Qian, Y., Hambrusch, S., Yadav, A., & Gretter, S. (2019). Teachers’ perceptions of student misconceptions in introductory programming. *Journal of Educational Computing Research*. DOI: 10.1177/0735633119845413
- Yadav A., Alexander, V., & Mehta, S. (2019). Case-based instruction in undergraduate engineering: Does student confidence predict learning? *International Journal of Engineering Education*, 35(1), 1-10.

- Yadav A., Krist, C. Good. J., & Caeli. E. (2018). Computational thinking in elementary classrooms: Measuring teacher understanding of computational ideas for teaching science. *Computer Science Education*. DOI: 10.1080/08993408.2018.1560550
- Mouza, C., Yadav, A., Leftwich, A. (2018). Developing computationally literate teachers: Current perspectives and future directions for teacher preparation in computing education. *Journal of Technology and Teacher Education*, 26 (3), 333-352.
- Qian, Y., Hambrusch, S., Yadav, A., & Gretter, S. (2018). Who needs what: Recommendations for designing effective online Professional Development for Computer Science Teachers. *Journal of Research on Technology in Education*. DOI: 10.1080/15391523.2018.1433565
- Gretter, S., Yadav A. (2018). What do preservice teachers think about teaching media literacy? An exploratory study using the theory of planned behavior. *Journal of Media Literacy Education*, 10(1), 104-123.
- Zhou, N., & Yadav, A. (2017). Effects of multimedia story reading and questioning on preschoolers' vocabulary learning, story comprehension and reading engagement. *Educational Technology, Research, and Development*. DOI: 10.1007/s11423-017-9533-2
- Gretter, S., Yadav A., & Gleason, B. (2017). Media and narrative transportation: Walking the line between reality and fiction in online spaces. *Journal of Media Literacy Education*, 9 (1), 1-21.
- Yadav, A., Stephenson, C., & Hong, H. (2017). Computational thinking for teacher education. *Communications of the ACM*, 60 (4), 55-62. DOI:10.1145/2994591
- Yadav A., & Cooper, S. (2017). Fostering creativity through computing. *Communications of the ACM*, 60 (2), 31-33. DOI: 10.1145/3029595
- Yadav, A., Gretter, S., Hambrusch, S. & Sands, P. (2016). Expanding computer science education in schools: Understanding teacher experiences and challenges. *Computer Science Education*, 26, 235-254. DOI: 10.1080/08993408.2016.1257418
- Yadav, A., Hong, H., & Stephenson, C. (2016). Computational thinking for all: Pedagogical approaches to embedding a 21st century problem solving in K-12 classrooms. *TechTrends* 60, 565-568. DOI: 10.1007/s11528-016-0087-7.
- Gretter, S., & Yadav, A. (2016). Computational thinking and media & information literacy: An integrated approach to teaching twenty-first century skills. *TechTrends*, 60, 510–516. DOI: 10.1007/s11528-016-0098-4.
- Yadav, A., Bozic, C., Gretter, S., & Nauman, E. (2015). Benefits and challenges of implementing case-based instruction: A student perspective. *International Journal of Engineering Education*, 31 (6), 1554-1563.
- DeSchryver, M. D. & Yadav, A. (2015). Creative and computational thinking in the context of new literacies: Working with teachers to scaffold complex technology-mediated

- approaches to teaching and learning. *Journal of Technology and Teacher Education*, 23(3), 411-431.
- Voogt, J., Fisser, P., Good, J., Mishra, P., & Yadav, A. (2015). Computational thinking in compulsory education: Towards an agenda for research and practice. *Education and Information Technologies*, 20, 715-728. DOI: 10.1007/s10639-015-9412-6
- Yadav, A., Mayfield, C., Zhou, N., Hambrusch, S., Korb, J. T. (2014). Computational thinking in elementary and secondary teacher education. *ACM Transactions on Computing Education*, 14(1), 1-16.
- Yadav, A., Vinh, M., Shaver, G., Meckl, P., & Firebaugh, S. (2014). Case-based Instruction: Improving students' conceptual understanding through cases in a mechanical engineering course. *Journal of Research in Science Teaching*, 51(5), 659-677.
- Mishra, P., Yadav, A., & the Deep-Play Research Group (2013). Of art and algorithms: Rethinking Technology & Creativity in the 21st Century, *TechTrends*, 57(3), 10-14.
- Farahmand, F., Yadav, A., & Spafford, E. H. (2013) Characterizing risks in virtual worlds: A learning technology application. *Journal of Computing in Higher Education*, 25, 49-67 doi: 10.1007/s12528-013-9067-5.
- Yadav, A., Korb, J. T. (2012). Learning to teach computer science: The need for a methods course. *Communications of the Association for Computing Machinery*, 55(11), 31-33.
- Garcia, J., Sinfeld, J., Yadav, A., & Adams, R. (2012). Enhancing student attitudes toward learning and perspectives on problem solving through entrepreneurially-oriented case-based instruction. *International Journal of Engineering Education*, 28 (2), 1-10.
- Yadav, A., Lundeberg, M. A., Bunting, C. F., & Subedi, D. R. (2011). It doesn't feel like learning: Problem-solving instruction works but still presents challenges. *ASEE PRISM*, 20(7), 51.
- Yadav, A., Subedi D., Lundeberg, M. A., & Bunting, C. F. (2011). Problem-based learning: Influence on students' learning in an electrical engineering course. *Journal of Engineering Education*, 100, 253-280.
- Yadav, A., Phillips, M., Lundeberg, M. A., Koehler, M. J., Clouse, K., & Dirkin, K. H. (2011). If a picture is worth a thousand words is video worth a million? Differences in affective and cognitive processing of video and text cases. *Journal of Computing in Higher Education*, 23, 15-37.
- Yadav, A., Shaver, G. M., & Meckl, P. (2010). Lessons learned: Implementing the case teaching method in a mechanical engineering course. *Journal of Engineering Education* 99(1), 55-69.

- Yadav, A., Bouck, E. C., Da Fonte, M. A., & Patton, S. (2009). Instructing special education pre-service teachers through literacy video cases. *Teaching Education, 20*(2), 149-162.
- Yadav, A., & Beckerman, J. (2009). Implementing case studies in a plant pathology course: Impact on student learning and engagement. *Journal of Natural Resources and Life Science Education, 38*, 50-55.
- Yadav, A. & Barry, B. E. (2009). Using case-based instruction to increase ethical understanding in engineering: What do we know? What do we need? *International Journal of Engineering Education, 25*(1), 138-143.
- Bouck, E. C., & Yadav, A. (2008). Assessing calculators as assessment accommodations for students with disabilities. *Assistive Technology Outcomes and Benefits, 5*(1), 19-28.
- Yadav, A. (2008). What works for them? Preservice teachers' perceptions of their learning from video cases. *Action in Teacher Education, 29*(4), 27-38.
- Yadav, A., Lundeberg, M. A., & DeSchryver, M., Dirkin, K. H., Schiller, N., Maier, K., & Herreid, C. F. (2007). Teaching science with case studies: A national survey of faculty perceptions on the benefits and challenges of using cases. *Journal of College Science Teaching, 37*(1), 34-38.
- Yadav, A., & Koehler, M. J. (2007). The role of epistemological beliefs in preservice teachers' interpretation of video cases of early-grade literacy instruction. *Journal of Technology and Teacher Education, 15*(3), 335-361.
- Lundeberg, M. A., & Yadav, A. (2006). Assessment of case study teaching: Where do we go from here? Part II. *Journal of College Science Teaching, 35*(6), 8-13.
- Lundeberg, M. A., & Yadav, A. (2006). Assessment of case study teaching: Where do we go from here? Part I. *Journal of College Science Teaching, 35*(5), 10-13.
- Mishra, P., & Yadav, A. (2006). Using hypermedia for learning complex concepts in chemistry: A qualitative study on the relationship between prior knowledge, beliefs, and motivation. *Education and Information Technologies, 11*(1), 33-69.
- Koehler, M., Yadav, A., Phillips, M., & Cavazos-Kottke, S. (2005). What is video good for? Examining how media and story genre interact. *Journal of Educational Multimedia and Hypermedia, 14* (3), 249-272.

CONFERENCE PROCEEDINGS

- Yadav, A., Israel, M., Bouck, E., Cobo, A., & Samuels, J. (2022). Achieving CSforAll: Preparing special education pre-service teachers to bring computing to students with disabilities. *Proceedings of the 53rd ACM Technical Symposium on Computer Science Education (SIGCSE '22)*. DOI: 10.1145/3478431.3499333

- Opps, Z., & Yadav, A. (2022). Who belongs in computer science? *Proceedings of the 53rd ACM Technical Symposium on Computer Science Education (SIGCSE '22)*. DOI: 10.1145/3478431.3499401
- Mayfield, C., Moudgalya, S. K., Yadav, A., Kussmaul, C. & Hu, H. (2022). POGIL in CS1: Evidence for student learning and belonging. *Proceedings of the 53rd ACM Technical Symposium on Computer Science Education (SIGCSE '22)*
- Kussmaul, C., Hu, H., Campbell, P., Mayfield, C., & Yadav, A., (2022). Professional development and support for POGIL in computer science. *Proceedings of the 53rd ACM Technical Symposium on Computer Science Education (SIGCSE '22)*
- Larimore, R., Yadav, A., Rich, K., & Shah, N. (2021). Computational thinking in elementary classrooms: Using classroom dialogue to measure equitable participation. *Proceedings of the Research in Equity and Sustained Participation in Engineering (RESPECT)*.
- Yadav, A., Mayfield, C., Moudgalya, S. K., Kussmaul, C., & Hu, H. H. (2021). Collaborative learning, self-efficacy, and student performance in CS1 POGIL classrooms. *Proceedings of the 52nd ACM Technical Symposium on Computer Science Education (SIGCSE '21)*, March 13–20, 2021, Virtual Event, USA. ACM, New York, NY, USA, 7 pages. DOI: 10.1145/3408877.3432373
- Yadav, A., Lishinski, A., & Sands, P. (2021). Self-efficacy profiles for computer science teachers. *Proceedings of the 52nd ACM Technical Symposium on Computer Science Education (SIGCSE '21)*, March 13–20, 2021, Virtual Event, USA. ACM, New York, NY, USA, 7 pages. doi: 10.1145/3408877.3432441
- Moudgalya, S. K., Mayfield, C., Yadav, A., Kussmaul, C., & Hu, H. H. (2021). Measuring students' sense of belonging in introductory CS courses. *Proceedings of the 52nd ACM Technical Symposium on Computer Science Education (SIGCSE '21)*, March 13–20, 2021, Virtual Event, USA. ACM, New York, NY, USA, 7 pages
- Moudgalya, S. K., Yadav, A., Sands, P., Vogel, S., & Zamansky, M. (2021). Teacher Views on Computational Thinking as a Pathway to Computer Science. *Annual Conference on Innovation and Technology in Computer Science Education, ITiCSE*. <https://doi.org/10.1145/3430665.3456334>
- Sands, P., & Yadav, A. (2020). Self-regulation for high school learners in a MOOC computer science course. *Proceedings of the 2020 ACM SIGCSE Technical Symposium on Computer Science Education (SIGCSE '20)*. ACM, New York, NY, USA, 845-851. doi: 10.1145/3328778.3366818
- Margulieux, L. & Yadav, A. (2020). Middle Science Computing Integration with Preservice Teachers. In Gary H. Marks & Denise Schmidt-Crawford (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference* (pp. 54-63). Online: Association for the Advancement of Computing in Education (AACE).

- Odden, T. O., Yadav, A., Tellefsen, C. W., Caeli, E. N., (2020). Integrating computing into K-16 education: Scaffolding teacher and student learning in STEM disciplines. *Proceedings of the 2020 ACM Conference on Innovation and Technology in Computer Science Education*, ACM, New York, NY, USA. 517–518. doi: 10.1145/3341525.3393961
- Grover, S., Fisler, K., Lee, I., & Yadav, A. (2020). Integrating Computing and Computational Thinking into K-12 STEM Learning. In *Proceedings of the 51st ACM Technical Symposium on Computer Science Education* (pp. 481–482). Association for Computing Machinery.
- Hambrusch, S., Peterfreund, A., Yadav, A., & Ko, A. (2020). Graduate Programs in CS Education: Why 2020 is the Right Time. In *Proceedings of the 51st ACM Technical Symposium on Computer Science Education* (pp. 1407). Association for Computing Machinery.
- Kafai, Y., Baskin, J., Fields, D., Goode, J., Twarek, B., & Yadav, A. (2020). Looking Ahead: Professional Development Needs for Experienced CS Teachers. In *Proceedings of the 51st ACM Technical Symposium on Computer Science Education* (pp. 1118–1119). Association for Computing Machinery.
- Yadav, A., Larimore, R., Rich, K., Schwarz, C. (2019). Integrating computational thinking in elementary classrooms: Introducing a toolkit to support teachers. In *Proceedings of Society for Information Technology & Teacher Education International Conference 2019*. Chesapeake, VA: AACE.
- Rich, K., & Yadav (2019). Infusing Computational Thinking Instruction into Elementary Mathematics and Science: Patterns of Teacher Implementation. In *Proceedings of Society for Information Technology & Teacher Education International Conference 2019*. Chesapeake, VA: AACE.
- Yadav, A., Kussmaul, C., Mayfield, C., & Hu, H. H. (2019). POGIL in computer science: Faculty motivation and challenges. In *Proceedings of ACM Special Interest Group on Computer Science Education*. Minneapolis, MN. DOI: 10.1145/3287324.3287360
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BOOK CHAPTERS

Yadav, A., Rich, K., Schwarz, C., & Larimore, R. (in press). Developing elementary teachers' competencies in integrating computational thinking ideas in classrooms: Using a toolkit as a scaffold. In C. Mouza, A. Ottenbreit-Leftwich, & A. Yadav (Eds). *Professional Development for In-Service Teachers: Research and Practices in Computing Education*. Information Age: Charlotte, NC.

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- Grover, S., & Yadav, A. (2020). Integrating programming into other subjects. In S. Grover (Ed.) *Computer science in K-12: An A to Z handbook on teaching programming* (pp. 83-98). Edfinity.
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Yadav A., Gretter, S., & Wilson, C. (2020). *State of computer science in Michigan*. Michigan Department of Education.

Delyser, L., Goode, J, Guzdial, M., Kafai, Y., Yadav, A. (2018). *Priming the computer science teacher pump: Integrating computer science education into schools of education*. New York: CSforAll.

Yadav A., Burkhart, D., Moix, D., Snow, E., Bandaru, P., & Clayborn, L. (2015). *Sowing the seeds: A landscape study on assessment in secondary computer science education*. New York, NY: Computer Science Teachers Association.

PRESENTATIONS

Yadav, A., & Heath, M. (2022, April). *The information asymmetry of “colorblind” computer science curricula: Confronting racism through community, criticality, and citizenship*. American Educational Research Association Annual Meeting, San Diego, CA.

Oack, C., Yadav, A., & Patel, A. (2022, April). *Analyzing teacher education faculty's computational thinking perspectives for equitable computer science education*. American Educational Research Association, San Diego, CA.

Hung, E., Yadav, A., Rich, K., & Oack, C. (2022, April). *Integrating computational thinking in elementary classrooms: Teacher views after a yearlong implementation*. American Educational Research Association Annual Meeting, San Diego, CA.

Yadav A., (2021, October). *Computing integration in K-12 to support disciplinary instruction*. CS for Michigan. Virtual Event.

- Rich, K. & Yadav, A (2021, April). *Exploring the focus of student thinking during an integrated mathematics and computer science activity*. AERA Annual Meeting. Virtual Event.
- Dunbar, K. & Yadav, A (2021, April). *Influences of teaching a summer service-learning program on teaching beliefs and practices*. AERA Annual Meeting. Virtual Event.
- Sands, P., Yadav, A., Moudgalya, S. K., & Zamansky, M. (2021, April). *Teacher beliefs about integrating CT in K-5 curriculum*. AERA Annual Meeting. Virtual Event.
- Caskurlu, S., Dunbar, K. & Yadav, A., Santo, R., & Leon, C. (2021, April). *Teacher competencies for computational thinking integration into K-12 curriculum: A systematic review*. AERA Annual Meeting. Virtual Event.
- Caskurlu, S., Yadav, A., & Santo, R. (2021, March). *Preparing teachers for computational thinking integration in K-12: A meta-aggregation*. In Proceedings of the 52nd ACM Technical Symposium on Computer Science Education (SIGCSE '21), March 13–20, 2021, Virtual Event, USA.
- Azeka, S. & Yadav, A. (2021). *A computational thinking integration model for K-12*. Session at the annual meeting of Computer Science Teachers Association. Virtual Event.
- Yadav, A., Rich, K., Schwarz, C., & Larimore, R. (2020, June). *Leveraging computational thinking to teach elementary mathematics and science*. In S. Grover (chair). Integrating STEM and computing in PK-12: Operationalizing computational thinking for STEM learning and assessment. Accepted to an interactive poster session at the International Conference of the Learning Sciences in Nashville, TN.
- Rich, K., Yadav, A. & Bouck, E. (2020, April) *Elementary Students' Use of Computational Thinking Practices Introduced via Math and Science* [Roundtable Session]. AERA Annual Meeting San Francisco, CA <http://tinyurl.com/t9lzrew>(Conference Canceled)
- Dunbar, K. & Yadav, A. (2020, April) *Codable Robots and Math Learning: What's the Value Added?* [Poster Session]. AERA Annual Meeting San Francisco, CA <http://tinyurl.com/wkwwau6> (Conference Canceled)
- Lachney, M. L., Yadav, A. & Drazin, M. (2020, April) *Sparring With Technology: Culturally Responsive Computing at a Youth Boxing Gym* [Paper Session]. AERA Annual Meeting San Francisco, CA <http://tinyurl.com/s54p7jm> (Conference Canceled)
- Rich, K., Yadav, A. & Zhu, M. (2020, April) *Bringing Levels of Abstraction to Mathematics Problem Solving* [Structured Poster Session]. AERA Annual Meeting San Francisco, CA <http://tinyurl.com/yxgt3v7v> (Conference Canceled)
- Schwarz, C. V., Larimore, R., Ashley, J. & Yadav, A. (2020, April) *Infusing Computational Thinking Into Upper Elementary Science Teaching* [Structured Poster Session]. AERA Annual Meeting San Francisco, CA <http://tinyurl.com/yybahdyw> (Conference Canceled)

- Yadav, A. (2020, March). *Achieving CSforAll: Starting early by developing elementary teacher competencies in computing education*. Workshop at Research in Equity and Sustained Participation in Engineering, Computing, and Technology. Portland, OR.
- Yadav, A., & Rich, K. (2019, October). Computational thinking as an on-ramp to computer science: Developing elementary teacher knowledge in computing. Presentation at the K-12 Summit on Computer Science in Detroit, MI.
- Wilson, J. P., & Kochanek, J. (2019, April). *Towards computer science for all in elementary school: Co-Developing computational thinking activities into mathematics and science instruction*. Presentation at the Carnegie Foundation Summit on Improvement in Education, San Francisco, CA.
- Yadav, A. (2019, April). *Leveraging computational thinking in k-12 classrooms: An examination into teachers' understanding of integrating computational concepts*. Paper presented at the Annual Meeting of American Educational Research Association, Toronto, CA.
- Yadav, A., & Mehta, S. (2019, April). *Learning from case-based instruction in engineering: Does confidence predict learning*. Paper presented at the Annual Meeting of American Educational Research Association, Toronto, CA.
- Mehta, S. & Yadav, A. (2019, April). *Gendered representation in computer science: Exploring women's belonging, interest, confidence, and persistence*. Paper presented at the Annual Meeting of American Educational Research Association, Toronto, CA.
- Mehta, S., & Yadav, A. (2018, October). *Gender equity in computer science*. Paper presented at the 44th Annual Research on Women and Education Fall Conference, San Antonio, TX.
- Yadav, A., & Wilson, J. (2018, September). CT4EDU: Building equitable access for CT in elementary classrooms. Paper presented at CsforAll Knowledge Forum, El Paso, TX.
- Fletcher, C., & Yadav, A. (2018, May). *Scaling up teacher supply to meet demand*. Workshop at Infosys CrossRoads, Scotts Valley, CA.
- Leftwich, A., & Yadav, A. (2018, April). *Models for teacher preparation in computer science*. Paper presented at the Annual Meeting of American Educational Research Association, New York, NY.
- Rich, K. M., & Yadav, A. (2018, March). Unplugged approaches to CT: Embedding computational ideas into teacher education. In J. Voogt (Chair), Learning and Teaching Computational Thinking – Challenges for Teacher Education. Symposium conducted at the annual meeting of the Society for Information Technology in Teacher Education (SITE), Washington, DC.
- Yadav, A. (2018, March). *Postdoc perceptions of their mentoring: Results from AGEPAI*. Paper presented at AGEPA National Research Conference, Berkeley, CA.

- Kattula, H., & Yadav, A., (2018, March). *Broadening pathways into computing by developing computational thinking competencies in elementary classrooms*. Presentation at Michigan Association for Computer Users in Learning (MACUL) Conference, Grand Rapids, MI.
- Yadav, A., Gretter, S., Good, J. (2017, April). *Computer science for all: Role of gender in middle school students' perceptions about programming*. Paper presented at the Annual Meeting of American Educational Research Association, San Antonio, TX.
- Yadav, A., & Herron, M. A. (2017, April). *What does it mean to be an effective teacher? Preservice teacher beliefs about effective classroom instruction*. Paper presented at the Annual Meeting of American Educational Research Association, San Antonio, TX.
- Good, J., & Yadav, A. (2017, April). *Teachers' views of computational thinking: Implications for embedding computational thinking in k-12*. Paper presented at the Annual Meeting of American Educational Research Association, San Antonio, TX.
- Gretter, S., & Yadav, A. (2017, April). *Media and information literacy in teacher education: Preservice teachers' perspectives*. Paper presented at the Annual Meeting of American Educational Research Association, San Antonio, TX.
- Mehta, S., Yadav, A., & Martini, A. (2017, April). *Students' conceptions of engineering design: An exploratory study in engineering capstone*. Paper presented at the Annual Meeting of American Educational Research Association, San Antonio, TX.
- Seals, C., Clark, Q., Yadav, A., Dixon, K., Soto, C., & Nancy Schwartz (2017, April). *The Forgotten Scholar: Professional Development for Minority Postdocs in STEM*. Selected to present at the American Educational Research Association Annual Meeting, San Antonio, TX.
- Krist, C., Elby, A., Good, J., Gupta, A., Sohr, E. R., & Yadav, A. (2017, April). *Integrating computational thinking strategies that support science inquiry: A case study from a summer PD*. Paper presented at the Annual Meeting of American Educational Research Association, San Antonio, TX.
- Yadav, A., Seals, C., Schwartz, N., Risner, L., & McGee, R. (2017, March). *NRMN-CAN & AGEP-PAI: Developing underrepresented postdocs for academia*. Paper presented at Understanding Interventions, San Antonio, TX.
- Yadav, A., Seals, C., Smith, M., & Farber, C. (2017, February). *Challenges & efficacy of underrepresented minority postdocs of STEM*. Presented at the AGEP National Forum, Washington, DC.
- Yadav, A., Soto, C., Clark, Q., Dixon, K. & Smith, M. (2016, April). *Examining challenges for underrepresented minority (URM) postdoc into the professoriate in STEM disciplines*. Paper presented at the Annual Meeting of American Educational Research Association, Washington, DC.

- Yadav, A., Soto, C., Smith, M., Cox, A., & Dixon, K. (2016, March). *CIC professorial advancement initiative: Challenges and Opportunities to mentor underrepresented minority postdocs transition into the professoriate*. Paper presented at Understanding Interventions, Philadelphia, PA.
- Yadav, A., Soto, C., Smith, M., Marks, A., Dixon, K., & Clark, Q. (2016, March). *Moving forward: Assessing preparedness of URMs for the transition to the professoriate*. Poster session presented at the National Postdoctoral Association Annual Meeting, Grand Rapids, MI.
- Yadav A., Gretter, S., Sands, P., Hambrusch, S., Korb, T., & Qian, Y. (2015, July). *From Online Professional Development to Classroom Pedagogy: Working at the Nexus of Research*. Paper presented at annual meeting of Computer Science Teachers Association, Grapevine, TX.
- Yadav, A., Soto, C., Smith, M., Marks, A., & Dixon, K. (2015, May). *CIC AGEP Professorial Advancement Initiative*. Paper presented at Understanding Interventions, San Diego, CA.
- Zhou, N., & Yadav, A. (2015, April). *Effects of iPad story reading and questioning on young children's literacy learning*. Paper presented at the Annual Meeting of American Educational Research Association, Chicago, IL.
- Yadav, A. (2015, April). *Case-based instruction in engineering: A student perspective on implementation*. Paper presented at the Annual Meeting of American Educational Research Association, Chicago, IL.
- Wolf, L., Yadav, A., Good, J., Margaritis, M., & Berges, M. (2015, March). *Computer science and computational thinking: International perspective on developing student and teacher competencies*. Panel at Society for Information Technology and Teacher Education, Las Vegas, NV.
- Fisser, P., Voogt, J., Good, J., Yadav, A. (2015, March). *Positioning computational thinking in the curriculum*. Paper presented at Society for Information Technology and Teacher Education, Las Vegas, NV
- Yadav, A. & Arnold, M. (2014, April). *A qualitative study about the impact of case-based instruction in an undergraduate mechanical engineering course*. Paper presented at the Annual Meeting of American Educational Research Association, Philadelphia, PA.
- Yadav, A., Hambrusch, S., Korb, T., & Gretter, S. (2014, January). *Professional Development for CS teachers: A framework and its implementation*. Paper presented at the future directions in computing education summit, Orlando, FL.
- Yadav, A. & Zhou, N. (2013, April). *Computational thinking in teacher education: Assessing preservice teachers' understanding of computational thinking*. Paper presented at the Annual Meeting of American Educational Research Association, San Francisco, CA

- Yadav, A. & Hart, M. (2012, November). *Computer science education opportunities for business teachers*. Paper presented at Indiana Business, Marketing, and Information Technology Conference, Indianapolis, IN.
- Yadav, A. & Subedi, D. (2011, April). *Learning from case studies in an undergraduate engineering course*. Paper presented at the Annual Meeting of American Educational Research Association, New Orleans, LA.
- Yadav, A., Zhou, N., Mayfield, C., Hambrusch, S., & Korb, J. T. (2011, March). *Introducing computational thinking in education courses*. Paper presented at ACM Special Interest Group on Computer Science Education, Dallas, TX.
- Zhou, N., Xuemei, W., Yadav, A., Mayfield, C., Lehman, J., Hambrusch, S., & Korb, J. T. (2011). *Computational thinking in pre-service teacher education: Integrating CT module in the curriculum*. Paper presented at SITE 2011 - Society for Information Technology & Teacher Education International Conference, Nashville, TN.
- Clase, K. L., Adamo-Villani, N., Gooding, S. L., Yadav, A., Karpicke, J. D., Gentry, M. (2009, October). *Enhancing Creativity in Synthetic Biology with Interactive Virtual Environments*. Paper presented at 39th annual ASEE/IEEE Frontiers in Education Conference. San Antonio, TX.
- Yadav, A., Shaver, G. M., & Meckl, P. (2009, June). *Comparing the lecture method with case teaching method in a mechanical engineering course*. Paper presented at the American Society of Engineering Education Annual Conference and Exposition, San Antonio, TX.
- Yadav, A., Subedi, D., & Lundeberg, M., & Bunting, C. (2009, April). *Project-based learning in an electrical engineering course*. Paper presented at the Annual Meeting of American Educational Research Association, San Diego, CA.
- Cheville, A., Yadav, A., Subedi, D., & Lundeberg, M. (2008, October). *Assessing the engineering curriculum through bloom's taxonomy*. Paper presented at 38th annual ASEE/IEEE Frontiers in Education Conference, Saratoga Springs, NY.
- Arnold, M., Yadav, A., Shaver, G. M., & Nauman, E. A. (2008, June). *Measuring student perceptions of case-based instruction in an engineering course*. Paper presented at the American Society of Engineering Education Annual Conference and Exposition, Pittsburg, PA.
- Yadav, A. (2008, March). *Video case in teacher education: How does scaffolding impact preservice teacher?* Paper presented at the Annual Meeting of American Educational Research Association, New York, NY.
- Yadav, A., Bouck, E. C., Da Fonte, M. A., & Patton, S. (2008, March). *Video case-based instruction in the preparation of future special educators*. Paper presented at the Annual Meeting of American Educational Research Association, New York, NY.

- Barry, B., & Yadav, A. (2007, June). *The case method: Using case-based instruction to increase ethical understanding in engineering courses*. Paper presented at the American Society of Engineering Education Annual Conference and Exposition, Honolulu, HI.
- Yadav, A. (2007, April). *Preservice teachers' perceptions about the implementation of video cases in a literacy methods course*. Paper presented at the Annual Meeting of American Educational Research Association, Chicago, IL.
- Heutsche, A. M., Bouck, E. C., Yadav, A., Okolo, C., & Englert, C. S. (2007, January). *The virtual history museum: Web-based social studies teaching and learning*. Paper presented at the annual meeting of American Historical Association, Atlanta, GA.
- Yadav, A., Lundeberg, M. A., & DeSchryver, M., Dirkin, K. H., Schiller, N., & Herreid, C. (2006, April). *National survey of faculty perceptions of case-based instruction in science*. Paper presented at the Annual Meeting of American Educational Research Association, San Francisco, CA.
- Dirkin, K., Yadav, A., Phillips, M., Koehler, M., Hilden, K., & Lundeberg, M. (2005, June). *Is the movie better than the book? Differences in engagement and delayed recall of video and text cases in science*. Paper presented at the ED-MEDIA -World Conference on Educational Multimedia, Hypermedia and Telecommunications, Montreal, QC: Association for the Advancement of Computing in Education (AACE).
- Phillips, M.M., Koehler, M. J., Zhang, G., Yadav, A., & Rosaen, C. (2005, June). Results of an experiment evaluating the use of video cases to help pre-service teachers become better teachers of literacy. Paper presented at ED-MEDIA 2005, World Conference on Educational Multimedia, Hypermedia & Telecommunications. Montreal, Canada.
- Yadav, A., & Koehler, M. J. (2005, April). *An analysis of the interaction of preservice teachers' epistemological beliefs and video teaching cases*. Paper presented at the annual meeting of the American Educational Research Association, Montreal, QC.
- Koehler, M. J., Mishra, P., & Yadav, A. (2005, April). *The development of Technological Pedagogical Content Knowledge in a design seminar*. Paper presented at the Annual Meeting of the American Educational Research Association, Montreal, QC.
- Yadav, A., & Koehler, M. J. (2005, March). *A qualitative study about the role of preservice teachers' beliefs in learning from literacy instruction video-cases*. Paper presented at SITE 2004 - Society for Information Technology & Teacher Education International Conference, Phoenix, AZ: Association for the Advancement of Computing in Education (AACE).
- Boling, E., Knezek, S., Siebenthal, S., & Yadav, A (2004, December). *Considerations of pedagogy and research using Reading Classroom Explorer (RCE)*. In C. Harrison (Chair), *Using Technology to (Re)Conceptualize Literacy Teacher Education: Considerations of Design, Pedagogy and Research*. Symposium conducted at the National Reading Conference, Miami, FL.

- Dickson, W. P., Bouck, E. C., Collins, B., Kidwai, K., Phillips, M. M., & Yadav, A. (2004, April). *The "Top Ten" doctoral programs in Educational Psychology: U.S. News & World Report rankings and doctoral program websites*. Poster presentation at the annual meeting of the American Educational Research Association, San Diego, CA.
- Yadav, A. (2004, March). *Using a hypermedia environment for preservice teachers to highlight exemplary teaching practices in literacy and reading instruction*. Paper presented at SITE 2004 - Society for Information Technology & Teacher Education International Conference, Atlanta, GA: Association for the Advancement of Computing in Education (AACE).
- Koehler, M. J., Mishra, P., Yahya, K., Yadav, A. (2004, March). *Successful Teaching with Technology: The Complex Interplay of Content, Pedagogy, and Technology*. Paper presented at SITE 2004 - Society for Information Technology & Teacher Education International Conference, Atlanta, GA: Association for the Advancement of Computing in Education (AACE).
- Yadav, A. (2003, November). *Complexity and ill-structuredness of teaching: Learning from cases in a digital video case based hypermedia learning environment*. Paper presented at E-Learn 2003 -- World Conference on E-Learning in Corporate, Government, Healthcare, & Higher Education, Phoenix, AZ: Association for the Advancement of Computing in Education (AACE).
- Mishra, P., Khan, G., Kidwai, K., & Yadav, A. (2003, March). *An analysis of information technology curriculum in Indian schools*. Paper presented at Comparative and International Education Society, New Orleans, LA.
- Yadav, A., Knezek, S., & Ferdig, R. E (2002, December). *Overview of the Reading Classroom Explorer – based cases of exemplary literacy instruction*. In Dennis G. Mike (Chair), *Exploring the Use of Video and Web-Based Tools in Literacy Pre-Service Instruction: The Design, Implementation, and Evaluation of Two Federally Funded Literacy Projects*. Symposium conducted at the National Reading Conference, Miami, FL.
- Oliver, S., Pearson, P. D., Suh, Y., Park, H., Ferdig, R. E., & Yadav, A. (2002, April). *Examining the development of teacher knowledge in a hypermedia learning environment*. In S. Oliver (Chair), *Assessing the Impact of the Reading Classroom Explorer (RCE) on Literacy Learning*. Symposium conducted at the American Educational Research Association (AERA) Annual Meeting, New Orleans, LA.
- Ferdig, R. E., Oliver, S., Yadav, A., Roehler, L. R., Pearson, P. D. (2002, March). *Video, database, and web-based learning environments as tools for preservice education: The case of the Reading Classroom Explorer*. Interactive session presented at the Society for Information Technology and Teacher Education (SITE) national conference, Nashville, Tennessee.
- Oliver, S., Hughes, J., Norman, P., Pearson, P. D., Roehler, L. R., Ferdig, R. E. & Yadav, A. (2001, April). *Reading Classroom Explorer: Using hypermedia to showcase exemplary teaching practices*. Demonstration presented at the American Educational Research Association (AERA) Annual Meeting, Seattle, WA.

Ferdig, R. E., Yadav, A., & Pearson, P. D. (2000, November). *The potential and demands of a technology supported scaffolding environment: Examining scaffolding in the Reading Classroom Explorer*. Paper presented at the National Reading Conference, Scottsdale, AZ.

Roehler, L., Ferdig, R. E., Pearson, P. D., Oliver, S., & Yadav, A. (2000, November). *Teaching literacy instruction through new media: A discussion of the past, present, and future of the Reading Classroom Explorer*. Poster presented at a special CIERA (Center for the Improvement of Early Reading Achievement) meeting at the National Reading Conference, Scottsdale, AZ.

INVITED TALKS /PANELS

Guevara, C/, Ketelhut, D. J., Mouza, C., Patel, A., & Yadav, A. (2022, January). *Teacher education for computational thinking*. Panel discussion by Digital Promise.

Yadav, A. (2021, June). *K-12 computing education: Models for teacher professional learning*. Brown University.

Goode, J., Owens, A., Ryoo, J., Yadav, A., & Zook, E. (2021, June) *Cultivating interest and Competencies in Computing: Authentic Experiences and Design Factors*. Panel discussion by National Academies of Science, Engineering, and Medicine.

Yadav, A. (2021, May). *Developing teacher competencies in computing education*. University of Illinois – Urbana Champaign.

Yadav, A. (2021, April). *Computational thinking in elementary schools: Problem-solving across the curriculum*. CSforCA project.

Yadav, A. (2021, April). *Resourcing elementary teachers of CS*. CSforAll Researcher Practitioner Partnership Projects

Yadav, A., & Moudgalya, S. (2021, March). *Anti-racist computer science education*. CSforCA project.

Yadav, A. (2019, September). *Building a True “Partnership” : Understanding Trust and Power Dynamics in an RPP*. Workshop at NSF CSforAll meeting, Washington, DC.

Yadav, A., (2019, May). *Developing teacher competencies in computing education*. University of Maryland.

Hubwieser, P., & Yadav. A. (2019, March). *Computer science international perspectives*. CS for All Ireland Summit, Galway, Ireland.

Charles, T., Guzdial, M., Powers, K., & Yadav, A. (2019, January). *Panel on computational thinking in K-12*. To Code and Beyond: Thinking + Doing, New York, NY.

- Yadav, A. (2018, December). *Preparing teachers to integrate computational thinking and teach computer science*. Danish School of Education, Aarhus University, Copenhagen, Denmark.
- Yadav, A. (2018, December). *Unplugged approaches to computational thinking in elementary math and science*. Keynote talk International Congress on Educational Innovation Trends (CITIE), Arequipa, Peru.
- Yadav, A. (2018, November). *Active learning approaches in undergraduate engineering and computer science*. University of Michigan, Ann Arbor, MI.
- Yadav, A. (2018, August). *Computational Thinking in K-12: From pre-service to in-service teacher training*. Danish School of Education, Aarhus University, Copenhagen, Denmark.
- Yadav, A. (2018, April). Integrating computational thinking in primary and secondary classrooms. Panel on *Computational Thinking, Teaching, and Equity: Integration in K-12 Classrooms and Programs*, Stanford University, Stanford, CA.
- Yadav A. (2017, November). Computer science teacher professional development: Towards a research agenda on teacher thinking and learning. Keynote at the *12th Workshop in Primary and Secondary Computing Education (WiPSCE)*, Nijmegen. The Netherlands.

SELECTED TEACHING EXPERIENCE

Race, Technology, and Education, Michigan State University. This doctoral course explores how race, technology, and education have and continue to co-shape each other in the United States. In addition, students learn about how technologies can be designed and implemented using anti-racist approaches and how technologies can highlight Black cultural capital and technological innovations.

Technology and Leadership, Michigan State University. This MA course explores the leadership role in charge of being responsible for managing relationships between technology, teaching and learning. Students examine professional development strategies, project management, planning, evaluation, relationship building, along with the ethical and social implications of technology integration.

Teaching and Learning with Technology, Michigan State University. This undergraduate course explores on how to teach *with* and *about* technology. The course focuses on pedagogical skills that prepares pre-service teachers to use technology, including coding to support their disciplinary instructional goals.

Computational Thinking and Problem Solving, Michigan State University. This doctoral course explores how computational thinking is pervasive and influences all facets of our lives. Computational thinking does not necessarily mean programming; it is a way of thinking that includes among other things problem solving, abstracting, algorithmic thinking, and pattern recognition. The course provides an overview of computational thinking; explores ideas that support development of CT skills in the classroom.

Creativity in Teaching and Learning, Michigan State University. This MA course explored a range of questions related to creativity, including: What does the creative process look like? How can we become more creative in teaching? How can technology help us become more creative teachers and learners? How can we integrate creativity in subject matter learning?

Computers and Cognition, Purdue University. This doctoral course dealt with the interaction between memory and human cognition with technology in general and computers in specific. Specifically, the course explores the issues of affordances computers offer in terms of learning and how people learn in a technology rich environment.

Advanced Educational Psychology, Purdue University. This doctoral course provided a broad overview of theories and research within educational psychology, encompassing cognitive development, learning, instruction, and educational assessment.

Learning and Motivation, Purdue University. This undergraduate course introduced pre-service K-12 teachers to basic concepts of classroom management, learning, motivation, and assessment. The course builds understanding of these concepts and novice-level skill in applying those concepts to teaching and learning situations in K-12 schools.

Introduction to Education Research I: Methodology, Purdue University. An introductory course in education research and evaluation methodology, which considers the various methods of education research, the formulation of research hypothesis, and the preparation of research reports.

STUDENT COMMITTEES AS CHAIR/CO-CHAIR

Current Doctoral

- Sukanya Moudgalya, Ed. Psych & Ed. Tech., Michigan State University
- Matt Drazin, Ed. Psych & Ed. Tech., Michigan State University
- Zac Opps, Ed. Psych & Ed. Tech., Michigan State University
- Kyle Dunbar, Ed. Psych & Ed. Tech., Michigan State University

Past Doctoral

- Katie Rich, Ed. Psych & Ed. Tech., Michigan State University (2021)
- Swati Mehta, Ed. Psych & Ed. Tech., Michigan State University (2021)
- Phil Sands, Ed. Psych & Ed. Tech., Michigan State University (2021)
- Brian Dillman, Educational Psychology, Purdue University (2019)
- Jon Good, Ed. Psych & Ed. Tech., Michigan State University (2018)
- Alex Lishinski, Ed. Psych & Ed. Tech., Michigan State University (2017)
- Sarah Gretter, Ed. Psych & Ed. Tech., Michigan State University (2017)
- Mauricio Herron, Educational Psychology, Purdue University (2015)
- Ninger Zhou, Educational Psychology, Purdue University (2014)

STUDENT COMMITTEES AS MEMBER

Graduated Doctoral

- Bethany Butson, Educational Psychology, Purdue University
- William J. Imbriale, Ed. Psych & Ed. Tech, Michigan State University
- Brian Arnold, Ed. Psych & Ed. Tech, Michigan State University
- Emily Bovee, Ed. Psych & Ed. Tech, Michigan State University
- Day Greenberg, Ed. Psych & Ed. Tech, Michigan State University
- Cristina Soto, Counseling Psychology, Purdue University
- Yizhou Qiam, Learning, Design, & Technology, Purdue University
- Chris Sloan, Ed. Psych & Ed. Tech, Michigan State University
- Chris Shaltry, Ed. Psych & Ed. Tech, Michigan State University
- Sean Leahy, Ed. Psych & Ed. Tech, Michigan State University
- Vivian Alexander, Educational Psychology, Purdue University
- Adrie Koehler, Learning Design & Technology, Purdue University
- Kadir Kozan, Learning Design & Technology, Purdue University
- Mohd Hazwan, Career & Technical Education, Purdue University
- Chandni Shah, Counseling Psychology, Purdue University
- Christy Bozic, Career & Technical Education, Purdue University
- Rob Bruno, Communication, Purdue University
- Gokce Bulgan, Counseling Psychology, Purdue University
- April Burke, Literacy and Language Education, Purdue University
- Anna Douglas, Educational Psychology, Purdue University
- Silvia Donatelli, Counseling Psychology, Purdue University
- Lisa Duffin, Educational Psychology, Purdue University
- Azadeh Ghaffari, Counseling Psychology, Purdue University
- Jillian Gates, Educational Psychology, Purdue University
- Sereen Mahmoud, Basic Medical Sciences, Purdue University
- Shavonne Moore, Counseling Psychology, Purdue University
- Patrick O’Leary, Child Development & Family Studies, Purdue University
- Catherine Pilote, Counseling Psychology, Purdue University
- Ji Hyun Yu, Learning Design & Technology, Purdue University
- Megan Arnold, Special Education, Purdue University

Graduated Masters (Thesis Only)

- Juan Garcia, Civil Engineering, Purdue University
- Ashley Mueller, Youth Development & Agriculture Education, Purdue University
- Courtney Oliver, School Counseling, Purdue University
- Megan Smith, School Counseling, Purdue University

NATIONAL SERVICE

2018- present *Associate Editor*, Computer Science Education.

2021 *Senior Program Committee Member*, ACM International Computing

- Education Research Conference.
- 2016-2020 *Editorial Review Board Member*, International Journal of Computer Science Education in Schools.
- 2013-2019 *Associate Editor*, ACM Transactions on Computing Education.
- 2016-2018 *Program Committee Member*, International Computing Educational Research
- 2014- 2017 *Executive Board Member*, Computer Science Teachers Association
- 2013-2016 *Chair*, APA Division 15 Early Career Research Grants Committee.
- 2013-2016 *Chair*, Computer Science Teachers Association Task Force on Assessment of Computing Concepts
- 2016 *Member*, ETS Praxis Computer Science National Advisory Committee
- 2016 *Program Review Committee*, MS in Computer Science Education, University of Nebraska at Omaha.
- 2006-2014 *Editorial Review Board Member*, Contemporary Issues in Technology and Teacher Education, Current Practices and English Education.
- 2006-2014 *Editorial Review Board Member*, Interdisciplinary Journal of Problem-based Learning.
- 2007-2013 *Editorial Review Board Member*, International Journal of Teaching and Learning in Higher Education
- 2006-2007 *Editorial Review Board Member*, Journal of Educational Multimedia and Hypermedia.
- 2003-2004 *Student Liaison*, Michigan State University, American Educational Research Association, Division C.

UNIVERSITY SERVICE

- 2021-present *Member*, Search Committee for Dean, College of Education, Michigan State University

- 2020-present *Co-Director, Master of Arts in Educational Technology (MAET), Michigan State University*
- 2016-2020 *Director, Master of Art in Educational Technology (MAET), Michigan State University*
- 2016-2020 *Director, Master of Art in Educational Technology (MAET), Michigan State University*
- 2016-2019 *Member, University Committee on Graduate Studies, Michigan State University*
- 2017 *Co-Chair, Search Committee for Assistant Professor of Educational Psychology and Educational Technology, Michigan State University.*
- 2015-2016 *Co-Director, Master of Arts in Educational Technology (MAET), Michigan State University*
- 2015-2016 *Member, Academic Program and Planning Committee (APPC), College of Education, Michigan State University*
- 2014-2015 *Member, Faculty Grievance Panel, Michigan State University*
- 2013-2014 *Chair, Search Committee for Assistant Professor of Educational Measurement and Research Methods, Purdue University.*
- 2013-2014 *Member, Faculty Affairs Committee, College of Education, Purdue University.*
- 2013-2014 *Member, Grade Appeals Committee, Purdue University.*
- 2012-2014 *Member, Program Evaluation Certificate Task Force, Department of Educational Studies, Purdue University.*
- 2012-2014 *Member, Merit Committee, Department of Educational Studies, Purdue University.*
- 2011-2014 *Program Convener, Computer Science Supplemental Licensure, Teacher Education Council, Purdue University.*
- 2010-2013 *Chair, Awards Committee, College of Education, Purdue University.*
- 2011-2012 *Search Committee Member, Clinical Assistant Professor, Educational Technology Program, College of Education, Purdue University*
- 2009-2010 *Member, Awards Committee, College of Education, Purdue University.*

2007-2011 *Member, Technology Advisory Group, College of Education, Purdue University.*

SOFTWARE DEVELOPMENT

2005 **Classroom Literacy Project, College of Education, Michigan State University and Purdue University.** Developed an online hypermedia tool integrating video to illustrate classroom practices that support early literacy development. My work involved developing the interface of the website and using video-editing software such as Final Cut Pro, Soresen Squeeze

2002 **Virtual University and College of Education, Michigan State University.** Developed an online course to be offered through online Master of Arts in Education at Michigan State University. Work involved developing the course content and development of the course using PHP and PostgreSQL.

2001 **Goals 2K Project, College of Education, Michigan State University.** Developed a website to assist schools in designing and implementing rigorous evaluations of summer school programs funded by the Michigan Department of Education as a part of their Goals 2000 program. Building upon the successful evaluation programs of four model sites in Michigan, it provides users with all the resources they would need to implement their own local evaluation of a summer reading program. And the tools can be used for reading programs that operate during the school year.

1999-2006 **Reading Classroom Explorer, College of Education, Michigan State University, Center for Improvement in Early Reading Achievement.** Developed a web-based hypermedia learning environment designed to provide multiple opportunities for pre-service teachers to develop rich understandings of teaching and learning in classrooms where diversity of pedagogical approaches and diversity of student populations are evident. The application also uses web connectivity for databases using Active Server Pages that registers and schedules students for lab sessions to write essays, which can then be graded over the web. Work involves SQL database, ASP, HTML, Java, JavaScript, and video streaming.

PROFESSIONAL MEMBERSHIPS

- Association for Computing Machinery
- Special Interest Group in Computer Science Education