JANICE K.S. MAK

Clinical Assistant Professor
Mary Lou Fulton Teachers College
Arizona State University
Tempe, Arizona 85287-0611
janice.mak@asu.edu

Education

Texas Tech University
Ph.D., focusing on curriculum and instruction, STEM education, and policy. December 2019.
- *Dissertation Title:* Sixth Grade Students' Self-Regulated Learning and Motivation in a Technology-Enhanced Personalized Learning Environment: A Case Study
- *Advisor:* Dr. Jessica Gottlieb

George Mason University, Fairfax, Virginia
Master of Education in Curriculum and Instruction, focusing on issues of equity and global perspectives in science education. July 2003.
- *Thesis Project:* Equity in Science Education
- *Advisor:* Dr. Jack Levy

Rutgers University (Summa cum laude)
B.A. in Linguistics, minor in Russian. June 1995.

Professional Positions

Clinical Assistant Professor: Division of Educational Leadership and Innovation: Mary Lou Fulton Teachers College. Arizona State University, 2022-present.

Postdoctoral Research Scholar: Division of Educational Leadership and Innovation: Mary Lou Fulton Teachers College. Arizona State University, 2021-2022.

Teach undergraduate and graduate courses in the Mary Lou Fulton Teachers College on environmental education, computer science education and action research. Develop curriculum and courses in education technology and environmental education. Conduct interdisciplinary research related to the accessible computational thinking in science education and culturally responsive pedagogy. Manage technology addendum for higher education partnership with Morocco pre-service teacher initiatives.

Science Curriculum Specialist: Curriculum and Instruction:Paradise Valley Unified School District, 2018-2021.

Lead district-wide implementation of K-12 science curriculum, instruction, professional learning, materials adoption, resources management, and assessment.

Assistant Principal: Whispering Wind Academy & Wildfire Elementary School: Paradise Valley Unified School District, 2016-2018

Co-lead two K-6 schools with implementation of strategic goals, data analysis, and professional learning communities, leading to school letter grade A-rating.

STEM & K-12 Gifted Teacher-on-Assignment: Paradise Valley Unified School District, 2014-2016.

Lead implementation of science, technology, computer science, and gifted initiatives.

Teacher-Innovator: Teacher Development Program: Paradise Valley Unified School District, 2012-2014.

Co-develop STEM and computer science initiatives and model gifted pedagogy in K-6 classrooms.

Achievement Advisor - Gifted Education: Glendale Elementary School District, 2011-2012.

Lead and manage curriculum, instruction, teacher professional development, community outreach, and assessment for the district's gifted program.

Teacher/Mentor: Discovery Elementary School: Glendale, Elementary School District, 2008-2011.

Teach 5th and 6th grade, mentor teachers (pre-service and in-service, lead professional development workshops, and create pacing guides as part of the district curriculum committee.

Middle School Lead Teacher: Anglo-American School of Moscow, 2005-2008.

Teach middle school humanities course, coordinate curriculum and instruction, implement for-credit professional development course through Seattle University

International Baccalaureate (IB) Teacher: Anglo-American School of Moscow, 2002-2005.

Design and implement units of inquiry for instruction within IB Primary Years Program.

Research

REFEREED JOURNAL PUBLICATIONS

1. Benali, M. & **Mak, J.** (2022). A comparative analysis of international frameworks for Teachers' Digital Competences. *International Journal of Education and Development Using Information and Communication Technology*, 18(3), 122-138.

2. **Mak, J.** (September 2021). The Struggle to be Seen and Feel Safe. *The State Education Standard.*

3. **Mak, J.** (March/April 2014). Coding in the Elementary Classroom. *Learning and Leading through Technology.*

PUBLISHED REFEREED PROCEEDINGS

1. **Mak, J.,** Rosato, J., & Hosten, M. (2023 November). Finding a Home for Data Science Education in Preservice Teacher Programs. In Proceedings of the 16th annual International Conference of Education, Research and Innovation (pp. 368-375). Seville, Spain: DOI: 10.21125/iceri.2023
2. **Mak, J.,** Yazzie, A., Watkins, J., Higgins, M., & Wilch, M. (2023, June). Culturally Responsive-Sustaining Computer Science in Southern Arizona. In *Proceedings of the 2023 Conference on Research in Equitable and Sustained Participation in Engineering, Computing, and Technology (RESPECT).* Atlanta, GA: (in-press IEEE)
3. Yazzie, A., **Mak, J.,** Lozano, Y., & DeLaurentis, M. (2023, June). Four Corners Connecting CS to Culture and Language through Collaboration. *Proceedings of the 2023 Conference on Research in Equitable and Sustained Participation in Engineering, Computing, and Technology (RESPECT).* Atlanta, GA: (in-press IEEE).
4. Su, M., Xin, Y., **Mak, J.,** Kramarczuk, K., Nelson, B., & Ketelhut, D.J., (2023, June). Two Changing Minds: A Journey to Culturally Responsive and Computational Thinking Infused Science Teaching. In *Proceedings of the 17th International Conference of the Learning Sciences (ICLS)*. Montreal, CA: https://2023.isls.org/proceedings/
5. **Mak, J.**, Rosato, J., & Hosten, M. (2023, March). Data Science Landscape in Preservice Teacher Education. In *Proceedings of the 54th ACM Technical Symposium on Computer Science Education* (pp. 1317-1317).
6. Israel, M., Huang, R., **Mak, J.**, Bennett, A., & Bex, R.T. (2023, March). A Community of Practice for Elementary Teaching Promoting Inclusion of Students with Disabilities in CS Instruction. In *Proceedings of the 54th ACM Technical Symposium on Computer Science Education* (pp. 1280-1280).
7. Xin, Y., Kramarczuk, K., **Mak, J.**, Terrell-Shockley, E.,& Ketelhut, D.J. (2023, March). Computational Thinking-Integrated Elementary Science with Culturally Responsive Teaching: A Vignette Study. In *Proceedings of the 54th ACM Technical Symposium on Computer Science Education* (pp. 1309-1309)
8. **Mak, J**., Figueroa, F., Kramarczuk, K., Xin, Y., Terrell-Shockley, E., Ketelhut, D.J., & Nelson, B. (2022, May). Case Study: A Participatory Approach to Building a Consensus-Module of Computational Thinking Infused, Culturally Responsive Science Instruction. In *Proceedings of the 2022 Conference on Research in Equitable and Sustained Participation in Engineering, Computing, and Technology (RESPECT)*. Philadelphia, PA: DOI:10.1109/RESPECT55273.2022
9. Figueroa, F., **Mak, J**., Kramarczuk, K., Xin, Y., Terrell-Shockley, E., Ketelhut, D.J., & Nelson, B. (2022, May). CT for Every Student? Implications for an Equity-Focused PD Experience for Elementary Science Teachers. In *Proceedings of the 2022 Conference on Research in Equitable and Sustained Participation in Engineering, Computing, and Technology (RESPECT)*. Philadelphia, PA: DOI:10.1109/RESPECT55273.2022
10. Bernier, J., Cabrera, L., Figueroa, F., Ha, J., Kramarczuk, K., **Mak, J.**, Su, M., Xin, Y., Yan, L., Ketelhut, D.J., Nelson, B., & Terrell-Shockley, E. (2022, June). Accessible Computational Thinking in Elementary Science. In *Proceedings of the 16th International Conference of the Learning Sciences (ICLS)*. Hiroshima, Japan: https://2022.isls.org/proceedings/
11. Twarek, B., **Mak, J**., Glass, S., Barashango, S. C., & Chang, C. (2022, March). Developing an Ecosystem of Support for K-12 CS Educators. In *Proceedings of the 53rd ACM Technical Symposium on Computer Science Education V. 2* (pp. 1162-1162).
12. Twarek, B.T., Seehorn, D.., **Mak, J.**, O'Grady-Cuniff, D., Ray, M., Sedgwick, V., & Friend, M. (2021, March). *Developing Effective and Equitable K-12 Computer Science Teachers.* In *Proceedings of the 52nd ACM Technical Symposium on Computer Science Education* (pp. 1360-1360).
13. Mensing, K., **Mak, J.**, Bird, M., & Billings, J. (2013, October). *Computational, model thinking and computer coding for U.S. Common Core Standards with 6 to 12 year old students.* In Proceedings

of 2013 IEEE 11th International Conference on Emerging eLearning Technologies and Applications (ICETA) (pp.17-22). Stara Lesna, Slovakia: DOI: 10.1109/ICETA32290.2013

BOOK/REPORT CONTRIBUTION

1. Personalized Learning and Computer Science Education. In the Handbook of Personalized Learning. [Lead author; status - chapter proposal accepted].

2. Perception of Preservice Moroccan Teachers Regarding the Adoption of ChatGPT in their Teaching Practices, in Artificial Intelligence and Higher Education, Routledge. {Co-author; status - chapter accepted for publication and currently under peer review].

3. Digital Promise. (2023). Partnerships for Change: Transforming Research on Emergent Learning Technologies https://circls.org/partnerships-for-change [Co-editor, Report]

4. Code.org, CSTA, & ECEP Alliance. (2022). 2022 State of computer science education. Retrieved from https://advocacy.code.org/stateofcs [Co-author]

5. Code.org, CSTA, & ECEP Alliance. (2021). 2021 State of computer science education: Accelerating action through advocacy. Retrieved from https://advocacy.code.org/stateofcs [Co-author]

6. **Mak, J.** (2016). Global STEM Learners. In J. Lindsay (Author) The Global Educator.

REFEREED CONFERENCE PRESENTATIONS AND WORKSHOPS

1. **Mak, J.** (2024). *Strategies for Broadening Teachers' Views of Early-grade Learners' Competencies Through Computational Thinking*. Paper to be presented at American Educational Research Association (AERA) 2024 Annual Conference, Philadelphia, PA, United States.

2. **Mak, J.** (2024, April). *Computer Science Education State Supervisors: Moving toward Just and Equitable Access to Computing Education?* Poster to be presented at American Educational Research Association (AERA) 2024 Annual Conference, Philadelphia, PA, United States

3. Xin, Y., Su, M., **Mak, J.**, Coen, A., Figueroa, F., Kramarczuk, K., Ketelhut, D., & Lin, Y. (2024, April). *Two Trajectories: Elementary Teachers' Evolving Understandings of Culturally Responsive and Computational Thinking Infused Science Teaching*. Paper to be presented at American Educational Research Association (AERA) 2024 Annual Conference, Philadelphia, PA, United States.

4. Mak, J., Rosato, J., & Hosten, M. (2023, April). *Co-Designing an Agenda of Consequence: Advancing the Opportunity for a Data-Inclusive Approach to Preservice Teacher Education*. American Educational Research Association (AERA) 2023 Annual Conference, Chicago, IL.

5. Mak, J., Lin, Y., Su, M., Kramarczuk, K., Terrell-Shockley, E., Ketelhut, D.J., (2023, April). *K-5 Accessible, Computational Thinking-Integrated Science Education: A Conceptual Framework*. Presentation given at the National Association for Research in Science Teaching (NARST) 2023 Annual Conference, Chicago, IL.

4. **Mak, J.** (2023, April). *Co-constructing Systemic Support for Sustaining Humanizing and Inclusive*

Computer Science Teacher Education. American Educational Research Association (AERA) 2023, Chicago, IL.

5. Hosten, M., **Mak, J.**, & Rosato, J. (2023, October). *Data Science Landscape Exploration in Preservice Teacher Pathways.* Paper presented at National Council of Teachers of Mathematics (NCTM) 2023 Research Conference, Washington DC.

7. Kramarczuk, K., Cabrera, L., Jass Ketelhut, D., Terrell-Shockley, E., Xin, Y., **Mak, J.,** Nelson, B., Bernier, J., Ha, J., Su, M., Yan, L., & Figueroa, F. (2022 January). *A Professional Development Model for Integrating Computational Thinking and Culturally Responsive Teaching Practices into Elementary Science Practice.* Poster presented at the Association for Science Teaching Education (ASTE) Annual Conference 2022, Greenville, SC.

8. **Mak, J.**, Glass, S., Barashango, S.C., & Chang, C. (2021, July). *Computer Science Coaching Toolkit.* Workshop presented at the Computer Science Teachers Association conference. *Online format.*

9. Sleasman, S., **Mak, J**., Nelson, B**.**, Breen, M., Castelhano, J., & Knight, M. (2019, July*). Arizona Computer Science: from Standards to Implementation*. Presentation given at the Computer Science Teachers Association conference, Phoenix, AZ.

INVITED PAPERS AND TALKS

1. **Mak, J.** Foreman, J., Echohawk, C., Hoeft, L., Lebau, O., Wright, L. & Perez, G. (2023, November). Invited Panelist - *Driving Access and Inclusion: Equitable Empowerment for Indigenous Communities.* Google, National Congress of American Indians, New Orleans, LA.

2**. Mak, J.** (2023, March). Keynote - *Building Bridges to Belonging*. International Women's Day, Infosys Foundation Crossroads, Tempe, AZ

3. **Mak, J.** & Garvin, M. (2023, March). Featured video series - *CS Sparks: Computer science education policy.* Infosys Foundation.

4. **Mak, J.,** Rubio, J., Murillo, D., & Hargrove, B. (2023, February). Invited panelist - *AZ Spotlight: Local Innovations with National Applicability.* Infosys Foundation Crossroads, Tempe, AZ

5. **Mak, J.** (2022, September). Invited keynote - *Turn it Around*. Arizona Postdoctoral Researcher Annual Conference, Tucson, AZ.

6. **Mak, J.** (2022, May). *Rethink, Reimagine, Realize*. Invited keynote, Dakhla International Conference, Morocco.

7. **Mak, J.** (2022, January). *Connecting Education to Learning*. Invited panelist, Smart Region Summit: Arizona State University, Tempe, AZ.

8. **Mak, J.** (2021, June). *Computational Thinking and Computer Science: From Standards to Practice.* Invited presenter at International Conference on Computational Thinking + STEM Education, National Institute of Education, Nanyang Technological University, Singapore.

9. **Mak, J.** (2021). *Data Science Leaky Pipeline, Women in Data Science*. Invited panelist, Women

in Data Science, University of Arizona, Tucson, Arizona.

10. Culatta, R., **Mak, J.** & Rosenworcel, J. (2020). *Equity and Digital Learning.* Invited panelist, National Association for State Boards of Education annual conference.

11. **Mak, J.** (2020). *Arizona Education - State of the State.* Invited panelist, Rio Salado 2020 Conference.

12. **Mak, J.** (2020). *Computer Science - State of the State*. Invited Keynote, Center for Digital Education AZ CIO/CTO Conference.

13. **Mak, J.** (2019). *Computer Science Teacher Certification - Microcredential Pathways?.* Invited panelist, Code.org/Computer Science Teachers Association State Policy Forum.

14. **Mak, J.** (2019). *Enabling Effective Implementation of Competency-based STEM Curriculum in Turkey*. Invited consultant, International Bureau of Education (IBE)-UNESCO, Istanbul, Turkey.

15. **Mak, J.** (2018). *Science-Centered Language Development.* Presenter, PVUSD.

16. **Mak, J.** (2018). *Three-dimensional Science - from Vision to Implementation.* Presenter, PVUSD.

17. **Mak, J.** (2018). *Innovations in the New Science Standards*. Presenter, PVUSD.

18. **Mak, J.** (2017). *Computer Science for Arizona.* Presenter, CIO/CTO Forum.

19. **Mak, J.** (2017). *Three Powerful Words can Unlock Computer Science Success.* Author, ISTE.

20. **Mak, J.** (2016). *Math - Focus on the Implications of the Shifts*. Invited talk, Student Achievement Partners.

21. **Mak, J.** (2016). *Celebrate Hour of code with these Activities and Resources.* Author, ISTE.

22. **Mak, J.** (2016). *Your Students can Create Virtual Reality Expeditions.* Author, ISTE.

23. **Mak, J.** (2016). *Google Expeditions Offers Stunning Field Trips without Leaving Schools.* Author, ISTE.

24. **Mak, J.** (2015). *Math - Teachers' Talk - Implementation.* Invited talk, Achieve National Convening.

25. **Mak, J.** (2015). *Computer Science Fundamentals.* Presenter, Google Apps for Education AZ Summit. Presenter.

26. **Mak, J.** (2015). *STEM in the Middle.* Author, Desert Ridge Lifestyles.

27. **Mak, J.** (2015). *Google CSFirst Ignites Interest in Computer Science.* Author, ISTE.

28. **Mak, J.** (2015). *Global Science Inquiry's Benefits for Students.* Author, eschool news.

29. **Mak, J.** (2014). *Computer Science Across the Curriculum.* Invited talk, Science Foundation Arizona STEM Conference.

30. **Mak, J.** (2014). *The Framework for K-12 Science Education.* Invited talk, AZ Science Teachers Association/Arizona Department of Education.

31. **Mak, J.** (2014). *Creative Coding*. Presenter, Google Apps for Education AZ Summit.

32. **Mak, J.** (2014). *Creativity, Coding and Computational Thinking.* Presenter, AZ Gifted Education Conference.

33. **Mak, J.** (2013). *Robotics and Engineering for Girls.* Presenter, ASU Fulton Schools of Engineering - K-12 Outreach.

EXTRAMURAL RESEARCH AND GRANT FUNDING

Google. 2023. Weaving CS Visions. $75,000

National Science Foundation-CAREER. 2023. Computer Science Education Supervisors - Toward Support for All. $619,035.

Arizona Department of Education/University of Arizona. Natives who Code. 2023. $500,000. Collaborative grant with University of Arizona (ASU -subaward).

Google. Four Corners Computer Science (CS) Convening. 2023. $400,000. Collaborative grant with the Computer Science Teachers Association and AZ, CO, NM, and UT State Departments of Education to advance Indigenous CS efforts in the Four Corners region.

Burton Family Foundation. Data Science Summit. 2023. $36,478. Collaborative grant with the Arizona Department of Education for statewide data science summit.

Burton Family Foundation. Data Science in Pre-service Teacher Education. 2023. $50, 000. Collaborative grant with the Arizona Department of Education for statewide data science summit.

National Science Foundation (NSF). Accessible Computational Thinking (ACT) in Elementary Science Classes within and across Culturally and Linguistically Diverse Contexts. $931,000. Researcher and Consultant. ACT investigates best practices for providing experiences for all elementary children to participate in and engage with computational thinking (CT) integrated into science instruction. Specifically, we explore how elementary science teachers develop the skills and dispositions to provide access to CT for culturally and linguistically diverse learners by incorporating Culturally Responsive Teaching (CRT) practices.

USAID. Technology Addendum: Higher Education Partnership-Morocco. $1,000,000. Technology Addendum Manager. Coordinate with members of Moroccan Ministry of Education government, higher education institutions, USAID and others to help establish formal educational and research partnership with Morocco.

National Science Foundation. Travel scholarship to attend CISE Education and Workforce PI meeting. May 2022.

Arizona Community Foundation. Computer Science Teachers Association - Arizona Chapter Development. 2022. $25,000. Coordinate with CSTA-Arizona to expand and strengthen presence and stability of the Arizona chapter through establishing regional presence, community engagement, and professional learning.

Burton Family Foundation. Data Sciences Academy. 2022. $50,000. Grant to support funding for summer teacher professional learning in data science.

InfoSys. Computer Science Professional Learning. 2022. $150,000. Coordinate with CSTA - Arizona to plan, implement, and evaluate summer professional learning for K-12 computer science teachers.

Thomas R. Brown Foundation. Data Sciences Academy. 2022. $7,500. Grant to support funding for academic year teacher professional learning in data science.

Arizona Community Foundation. Computer Science Teachers Association - Arizona Chapter Development. 2019. $25,000. Coordinate with CSTA-Arizona to expand and strengthen presence and stability of the Arizona chapter through establishing regional presence, community engagement, and professional learning.

Google. Integrating Bootstrap units into middle and high school algebra classes using GSuite. 2018-2019. PI: Jeff Billings. Senior personnel: Janice Mak. Creation of PD to integrate the Bootstrap CS/Math curriculum into middle and high school courses in Paradise Valley Schools, Arizona.

FUNDED RESEARCH ADVISORY BOARDS

National Science Foundation (NSF): Rural AZ Hubs Advancing Computer Science (AZ-HACS). 2020-2022. Advisory Board Member. This grant focuses on assessing levels of preparedness and implementation of AZ Computer Science Standards in rural AZ K-8 schools.

University of Arizona: *Data Sciences Academy.* 2021-present. Advisory Board Member.

U.S. Department of Education (USDOE): *CSforEL, CSTA.* 2020-2024. Collaborator. Four-year research project to attract, retain, and engage English learners in AP Computer Science Principles in Arizona, New Mexico, San Diego County, and Orange County.

Teaching and Mentoring

HIGHER EDUCATION COURSES TAUGHT

(MLFTC: Teachers College.)

Curriculum Development:

- MLFTC: 9-credit sequence - K-12 blended and online learning specialization
- MLFTC: Professional learning - AI in education

Graduate Level:

- MLFTC: EDU 555 Master's Ed. Policy: Translating Research for Educational Change

• MLFTC: EDU 593 Master's Ed. Leadership: Action Research Capstone

Undergraduate Level:

• MLFTC: SCN 302, 301 (ASU) – Environmental Education

Service

UNIVERSITY

2023-present: Invited to and participated in the ASU Generative AI Community of Practice. Meet with faculty across ASU to develop, innovate, and address Gen-AI related topics.

2023: Participated in Beagle Learning (an inquiry-based learning framework and software platform)professional training to become a facilitator representing ASU to partner schools and communities.

2022: Invited collaborator for School for Future and Innovation. Reviewed citizen science curriculum for SciStarter on Data Literacy.

COLLEGE/SCHOOL

• 2023: MLFTC: Guest presenter, Artificial Intelligence in Education, ASU Induction Professional Learning Network. This is a community for early-career K-12 educators that offers professional coaching and a supportive peer network.

• 2023: MLFTC: Guest presenter, Data Science for K-12 Education, Geocivics Annual Conference . This session connected to the goal of the conference: "Building Strong Teacher Leaders" to encourage teachers to become leaders in their schools and communities across all disciplines.

• 2023: MLFTC: Guest presenter, Artificial Intelligence, The Urban Collaborative. This is a national network of more than 100 school districts whose leaders are committed to increasing effective and inclusive special education services.

• 2023-present: Member, Education Technology Faculty Search Committee (Division 2)

• 2023-present: MLFTC: Member, Learning Futures Collaborative - Artificial Intelligence

• 2023: Member, Education Technology Faculty Interview Committee (Division 1)

• 2022-2023: MLFTC, Learning Futures Collaborative-New American High School.

• 2022: MLFTC: Member, Post-doctoral Research Scholar Search Committee

• 2020-2021: Paradise Valley Unified School District: Chair, Assessment Committee

• 2018-2021: Paradise Valley Unified School District: Chair, Health Education Committee

• 2016-2018: Paradise Valley Unified School District: Co-chair, Data Review Committee

• 2014-2016: Paradise Valley Unified School District: Co-chair, Professional Development Committee

• 2012-2014: Paradise Valley Unified School District: Technology Committee

• 2002-2005: Anglo-American School of Moscow: Member, Curriculum and Assessment Committees

EDITORIAL BOARDS AND REVIEWER SERVICE

• 2023: American Education Research Association (AERA), manuscript reviewer.

• 2023: Association for Computing Machinery Special Interest Group Computer Science Education (ACM-SIGCSE), proposal reviewer.

• 2023: Research in Equity and Sustained Participation in Engineering, Computing, and Technology (RESPECT), Perspectives in Equity track reviewer.

• 2022-2023: National Association of Research in Science Teaching (NARST), reviewer.

• 2018 – 2022: International Society for Technology in Education (ISTE), Empowered Learner.

• 2021 – present: National Science Foundation, Panelist.

• 2020 – 2021: United States Department of Education Rural Tech Grant, Reviewer Panelist.

• 2018 – 2019: Computer Science Teachers Association, National Conference Proposals Reviewer.

PROFESSIONAL ORGANIZATION MEMBERSHIPS

• American Educational Research Association

• International Society of the Learning Sciences

• National Association for Research in Science Teaching

• Association for Computing Machinery

• Computer Science Teachers Association: elected member, board of directors

• CS for AZ: co-founder and co-director

• Computer Science Teachers Association - Arizona: President

• Arizona Science Teachers Association

• International Society for Technology in Education

• National Council of Teachers of Mathematics

• National Science Teaching Association

PROFESSIONAL ORGANIZATION SERVICE

• 2023-present: Computer Science Teachers Association/CSEdResearch. Invited Advisory Committee Member: Reimagining CS Pathways - High School and Beyond. This project's goal is to articulate a shared vision for CS instruction between secondary and college-level. Honored to be among the top 5% of applicants nationally selected to participate.

• 2023-present: Gates Foundation/Concord Consortium. Invited Advisor: Launch Collective for Data Science Education-K12. Inform, shape, and plan for national launch of K12 data science convening. Honored to be selected from national pool of applicants.

• 2023-present: STEM AZ Collaborative Advisory Council. Invited Advisor: Advise the STEM collaborative composed of teacher leaders from state math, education technology, and science teachers associations on STEM education.

• 2023: University of Arizona, Invited Guest Speaker: Computer Science Workshop for K-12 educators.

• 2022: WestEd/Kapor Center, San Francisco, CA. Invited Contributor and Reviewer for Culturally Responsive Sustaining Computer Science Framework.

• 2021 – 2022: Computer Science Teachers Association, Board of Directors.

• 2021-present: University of Arizona, K-14 Design Committee.

• 2021 – 2022: National Association of State Boards of Education, Equity Committee.

• 2020 – 2022: Computer Science Teachers Association, Chicago, IL. Writing team for computer science coaching toolkit.

• 2019 – 2021: Computer Science Teachers Association, Chicago, IL. Writing team for Standards for

K-12 Computer Science Teachers.

• 2019 – 2021: International Society for Technology in Education, Fairfax, VA. Development team for Computational Thinking Microcredentials.

• 2019 – 2020: International Society for Technology in Education, Fairfax, VA. Writing team for Computational Thinking Competencies.

• 2018 – 2019: Computer Science Teachers Association Conference Committee

• 2016 – 2021: Arizona State Board of Education, Appointed Member.

• 2016 – 2021: Arizona K12 Center, Board of Directors.

• 2019 – present: National Science Teaching Association, Technology Advisory Board.

• 2018 – present: International Society for Technology in Education (ISTE), Empowered Learner Advisory Council.

• 2018 –2021: Arizona Department of Education: State Science Leaders

• 2018 – 2020: Computer Science Teachers Association: President, Arizona Chapter.

• 2018 – 2019: Computer Science Teachers Association, Conference Committee.

• 2017-present: National Center for Women in Information Technology, K-12 Advisory Council.

• 2016-2018: Computer Science Teachers Association: Secretary, Arizona Chapter.

• 2016-2017: Chair, Mathematics Standards Subcommittee, Arizona Department of Education.

• 2016 – 2017: Illustrative Mathematics/Open Up Resources, Instructional Materials Reviewer.

• 2014 – 2017: Achieve, Mathematics Instructional Materials Reviewer.

• 2014 – 2016: Arizona Science Teachers Association, Developing Science Leaders Ambassador.

• 2014 – 2016: Association for Supervision and Curriculum Development (ASCD) Arizona Chapter, Board Member.

• 2009 – 2017: Arizona Department of Education, invited mathematics standards and assessment working group member.

HONORS AND AWARDS

• 2023: Emerging Scholars Fellow, Center for Integrative Research in Computing and Learning Sciences (CIRCLS). Selected to participate in community of early career scholars engaged in interdisciplinary computer or learning sciences research.

• 2023: Recipient, National Science Foundation (NSF) CAREER. NSF's most prestigious award that supports the development of early-career faculty to build a lifetime of leadership across education and research.

• 2022: Community for Advancing Discovery Research in Education (CADRE) Fellow, NSF. Participated in career development workshops, advanced a career-development project, and learned about the NSF proposal process.

• 2021: Data Science Fellow, National Institutes of Health (NIH) Office of Data Science Strategy (ODSS). Selected for research training course to network with and learn from leaders in data science field, collaborate with network of STEM educators, and engage with NIH programs that support educational partnerships.

• 2021: Making IT Happen Award Recipient, International Society for Technology in Education (ISTE). This award honors outstanding educators and leaders who demonstrate extraordinary commitment, leadership, courage and persistence in improving digital learning opportunities for students.

• 2018: Award for Advocacy, ISTE. Recognized for leading the way in inspiring innovation and policy in computer science education.

• 2017: Computer Science Spotlight, NSF. Recognized for K-12 computer science education

leadership.
• 2016: PBS Learning Media Digital Innovator, PBS. Recognized as an educator who provides inspiring and innovative opportunities for students to thrive.
• 2015: K-12 I.T. Must-Read Blog, EdTech Magazine. Recognized as one of 50 must-read K-12 IT blog, highlighted as an expert in the field of education technology.
• 2015: Aspirations in Computing Educator Award, National Center for Women in Information Technology (NCWIT). Honored as educator who advocates for gender equity in computing.
• 2015: Semi-finalist Arizona Teacher of the Year, Arizona Education Foundation. Honored as one of top 15 outstanding public school teachers in Arizona.
• 2014: Presidential Award for Excellence in Mathematics and Science Teaching (PAEMST) recipient, NSF/The White House Office of Science and Technology Policy. Recipient of the highest honor bestowed by the United States government specifically for K-12 science, technology, engineering, and mathematics teaching established by Congress in 1983.