

VITA
 BINGHAMTON UNIVERSITY
 DEPARTMENT OF TEACHING, LEARNING AND EDUCATION LEADERSHIP
 COLLEGE OF COMMUNITY AND PUBLIC AFFAIRS

Amber Simpson
 Associate Professor

EDUCATION:

College/University	Degree/Year	Major/Minor
Clemson University	PhD/2015	Curriculum & Instruction: Mathematics Education
Lincoln Memorial University	EdS/2009	Educational Administration & Supervision
Lincoln Memorial University	MEd/2007	Curriculum & Instruction
East Tennessee State University	BS/2005	Mathematics, Secondary Education

PROFESSIONAL/ACADEMIC EXPERIENCE:

Dates of Employment	Employer	Position(s) held/Time in rank
August 2023-present	Binghamton University	Co-Assistant Director; Institute of Justice and Well-being
August 2022-present	Binghamton University	Associate Professor
August 2017-July 2022	Binghamton University	Assistant Professor/five years
August 2016-May 2017	Indiana University	Visiting Assistant Professor/ one year

August 2015-July 2016 0 1 162.02 225.77 Tm0 G[()] TJETQq0.00000912 0 612 792 reW* n n2(e)-5(a)-5(

PUBLICATION AND RESEARCH ACTIVITY:

Works published:

Articles in refereed journal:

Bharaj, P. K., **Simpson, A.**, Jacobson, E., Linder, S. (2023). Exploring the association of prospective teachers' beliefs with their prior experiences as mathematics learners. *Investigations in Mathematics Learning*. [Advanced Online Publication]. <https://doi.org/10.1080/19477503.2023.2224653>

Simpson, A., McCann, J., & Miroff, L. (2023). Learners' perspectives on ARCH + STEM: Integration of archaeology and Indigenous knowledges with western knowledges of STEM. *Education Sciences*, 23, Article 450. <https://doi.org/10.3390/educsci13050450>

Lesseig, K., Slavitt, D., & **Simpson, A.** (2023). Transdisciplinary STEM: Examples of student thinking within non-formal learning experiences. *Education Sciences*, 13, Article 435. <https://doi.org/10.3390/educsci13050435>

Simpson, A., Kastberg, S., & Williams-Pierce, C. (2023). Norms and collaboration in hybrid making spaces. *The Journal of Educational Research*, 116(3), 134-146. <https://doi.org/10.1080/00220671.2023.2207191>

Simpson, A., & Knox, P. N. (2022). Children's engineering identity development within an at-home engineering program during COVID-19. *Journal of Pre-College Engineering Education Research (J-PEER)*, 12(2), Article 2. <https://doi.org/10.7771/2157-9288.1345>

Knox, P., **Simpson, A.**, Yang, J., & Maltese, A. (2022). Exploring caregiver influence on child creativity and innovation in an out-of-school engineering program. *Thinking SYang, J TJETQ-o0 n3.1 0 (192 re7a32 reW*nBT/F1 12 Tf1 0 0 1 284.21 280.284.*

Childhood Education Journal. [Advanced online publication].
<https://doi.org/10.1007/s10643-021-01296-w>

Simpson, A., & Feyerabend, M. (2022). Tug-of-war: The pull of formal institutional practices and structures and the desire for personal change. *International Journal of Science and Mathematics Education*, 20, 149-168.

Anderson, A., Goeke, M., **Simpson, A.**, & Maltese, A. V. (2019). Where should learners struggle? *Connected Science Learning*, 1(12). Retrieved at <https://www.nsta.org/connected-science-learning/connected-science-learning-october-december-2019/where-should-learners>

Simpson, A., Anderson, A., & Maltese, A. V. (2019). Caught on camera: Youth an

Simpson, A., Bannister, N. & Matthews, G. (2017). Cracking her codes: Understanding shared technology resources as positioning artifacts for power and status in CSCL environments. *International Journal of Computer-Supported Collaborative Learning*, 12, 221-249. doi: 10.1007/s11412-017-9261-y [5-year Impact Factor: 4.966]

Simpson, A., & Haltiwanger, L. (2017). “This is the first time I’ve done this”: Exploring secondary preservice mathematics teachers’ noticing of students’ mathematical thinking. *Journal of Mathematics Teacher Education*, 20(4), 335-355. doi: 10.1007/s10857-016-9352-0 [5-year Impact Factor: 2.893]

Simpson, A.,

recipients in the United States. *Professional Development in Education*, 42(1), 123-149. doi: 10.1080/19415257.2014.978483 [2019 Impact Factor: 1.531]

Hall, A., **Simpson, A.**, Guo, Y., & Wang, S. (2015). Examining the effects of preschool writing instruction on emergent literacy skills: A systematic review of the literature. *Literacy Research and Instruction*, 54(2), 115-134. doi: 10.1080/19388071.2014.991883

Simpson, A., Mokalled, S., Ellenburg, L., & Che, S. M. (2015). A tool for

to build on children's mathematics. In J. Lo, K. R. Leatham, & L. R. Van Zoest (Eds.), *Research Trends in Mathematics Teacher Education*. New York, NY: Springer.

Encyclopedia Entry:

Simpson, A., & Fridrich, M. (2023). Connecting play to STEM concepts, practices and processes: Review of research on play within STEM learning environments. In R. J. Tierney, F. Rizvi, & K. Erkican (Eds.), *International Encyclopedia of Education* (4th ed., pp. 164-176). Elsevier Inc.
<https://doi.org/10.1016/B978-0-12-818630-5.13060-X>

Conference Proceedings:

Simpson, A., & Knox, P. (2022). *A study of problem exploration heuristics of families*. Proceedings of the 129th meeting of the American Society for Engineering Education, Minneapolis, MN. <https://peer.asee.org/40414>

Simpson, A., Sun, J., & Yang, J. (2022). *Caregiver-child communication of STEM concepts with engineering design tasks*. Proceedings of the 129th meeting of the American Society for Engineering Education, Minneapolis, MN. <https://peer.asee.org/40648>

Knox, P., Paul, K., Kim, J., Yang, J., Werfelli, S., **Simpson, A.,** & Maltese, A. (2022). *Parental perspectives: Examining caregiver experiences and perceptions of growth and learning within an out-of-school elementary engineering program*. Proceedings of the 129th meeting of the American Society for Engineering Education, Minneapolis, MN. <https://peer.asee.org/41907>

Simpson, A., Williams-Pierce, C., Shokeen, E., Katirci, N., Soto, H., Baker, J., DeLiema, D., Kapur, M., Ellis, A., Lockwood, E., Plaxco, D., Alibali, M., & Ramirez, D. (2022). The nature(s) of embodied mathematical failure. In C. Chinn, E. Tan, C. Chan, & Y. Kali (Eds.), *Proceedings of the 16th International Conference of the Learning Sciences* (pp. 1787-1793). International Society of the Learning Sciences.

Knox, P., Werfall, S., & **Simpson, A.** (In Press). *Exploring child creative habits of mind in an out-of-school engineering program*. Proceedings of the American Society of Engineering Education St. Lawrence Section. ASEE.

Shokeen, E., **Simpson, A.,** Williams-Pierce, C., Katirci, N. (2021). *Use of zig-zag to represent mathematical thinking about angle*. In D. Olanoff, K. Johnson, & S. Spitzer (Eds.), Proceedings of the 43rd annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (pp. 323-324). Philadelphia, PA.

Simpson, A., Kim, J., & Yang, J. (2021). *Caregiver-child interactions: Informal ways of doing mathematics during engineering tasks.* In D. Olanoff, K. Johnson,

Satayam, V. R., **Simpson, A.**, DiNapoli, J., & Yao, X. (2020). *Building a robot: making mathematics visible in a non-formal STEM learning environment*. In Sacristan, A. I., Cortes-Zavala, J. C. & Ruiz-

Che, S. M., & **Simpson, A.** (2015). *Discursive acts of power: A critical analysis of single-sex and coeducational mathematics classes*. In K. Beswick, K. Muir, & J. Wells (Eds.), Proceedings of the 39th annual meeting of the International Group for the Psychology of Mathematics Education (Vol. 1, p. 153). Hobart, Australia.

Simpson, A., Kombe, D., Che, M., & Bridges, W. (2014). *Adolescent students' perceptions of mathematics and science as a gendered domain*. Proceedings of the 38th annual meeting of the International Group for the Psychology of Mathematics Education and the 36th annual conference of the North American Chapter of the Psychology of Mathematics Education. Vancouver, Canada.

Haltiwanger, L., & **Simpson, A.** (2014). *Secondary mathematics preservice teachers' noticing of students' mathematical thinking*. Proceedings of the 41st annual meeting of the Research Council on Mathematics Learning. San Antonio, TX.

Linder, S. M., & **Simpson, A.** (2013). *Student teaching experiences and early childhood mathematics pedagogical beliefs: Identifying barriers to success*. Proceedings of the 35th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. Chicago, IL: University of Illinois at Chicago.

Simpson, A., & Linder, S. (2013). *Investigating providers and recipients' perceptions of early childhood professional development in mathematics*. Proceedings of the 35th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. Chicago, IL: University of Illinois at Chicago.

Articles in non-refereed journals:

Simpson, A., & Knox, P. (2020). Getting kids – and their caregivers – to practice STEM at home. *The Conversation*

Boes, L., Stath, H., **Simpson, A.** (2018) Math by the month: Animals of the world. *Teaching Children Mathematics*, 24(4), 226-227.

Simpson, A., Monroe, J., & Raquet, J. (2015). Math by the month: Board game frenzy. *Teaching Children Mathematics*, 22(2), 74-75.

Simpson, A. (2015). Math by the month: Working with wheels!. *Teaching Children Mathematics*, 21(9), 528-529.

Simpson, A., & Short, A. (2014). Math by the Month: Described by numbers. *Teaching Children Mathematics*, 21(2), 82-83.

GRANTS

Funded Grants

Funding Agency: Institute for Justice & Well-being

Title: MAKEngineering Kits: Professional Growth in Elementary Engineering Education

Role: Principal Investigator

Amount Awarded: \$10,000
Submitted: April 2019

Funding Agency: Binghamton University Organized Research Center
Title: Center for Information Assurance and Cybersecurity (CIAC)
Role: Faculty Participant
Amount Awarded: \$60,000
Submitted: April 2019

Funding Agency: Institute of Museum and Library Services
Title: MAKEngineering Bags: A library program to engage families in making activities
Role: Co-Principal Investigator
Collaborator: Dr. Adam Maltese, Indiana University
Amount Awarded: \$24,999
Submitted: January 2017

Funding Agency: National Science Foundation: Early-concept Grants for Exploratory Research (EAGER) program
Title: Collaborative Research: EAGER: MAKER: Studying the Role of Failure in Design and Making
Role: Co-Principal Investigator
Collaborators: Dr. Adam Maltese, Indiana University; Alice Anderson, Minneapolis Institute of Art
Amount Awarded: \$186,412
Submitted: January 2016

PRESENTATIONS:

Peer-Reviewed International Conference Presentations:

Penney, L., Paul, K., Sun, J., Maltese, A., & **Simpson, A.** (2023). At-home engineering: Caregivers' support during problem-solving. Presentation at the 17th annual meeting of the Internal Society of Learning Sciences: Montreal, Canada.

Shokeen, E., **Simpson, A.**, Katirci, N., & Williams-Pierce, C. (2023). Youth embodied communication and collaboration in making. Presentation at the 17th annual meeting of the Internal Society of Learning Sciences: Montreal, Canada.

Simpson, A., Williams-Pierce, C., Shokeen, E., Katirci, N., Soto, H., Baker, J., DeLiema, D., Kapur, M., Ellis, A., Lockwood, E., Plaxco, D., Alibali, M., & Ramirez, D. (2022). The nature(s) of embodied mathematical failure. Symposium at the 16th annual meeting of the Internal Society of Learning Sciences: Hiroshima, Japan.*

Simpson, A., Katirci, N., Shokeen, E., Bih, J., Williams-Pierce, C. (2021).
Representational fluency of angle during an educational robotics task. 15th

Tan, J., **Simpson, A.**, Knox, P., Werfelli, S., Maltese, A. V. (2023). *Developing habits of mind through family engineering at home*. Paper to be presented at the 130th meeting of the American Society for Engineering Education, Baltimore, MD.

Knox, P., **Simpson, A.**, & Maltese, A. V. (2023). *Fortitude in frustration, failure: Exploring emotional responses within an at-home elementary engineering program*. Paper presented at the 130th meeting of the American Society for

Simpson, A., Kastberg, S., & Tyminski, A. (2022). *Seeing and representing our world through data and drawings*. Burst presentation at the annual meeting and exhibition of the National Council of Teachers of Mathematics: Los Angeles, CA.

Kastberg, S., **Simpson, A.,** & Tyminski, A. (2022). *Representing and solving addition and subtraction story problems in PK-grade 2*. Workshop presentation at the annual meeting and exhibition of the National Council of Teachers of Mathematics: Los Angeles, CA.

Kastberg, S., Tyminski, A., & **Simpson, A.** (2022). *Creating, describing, and defining patterns to support visuospatial reasoning*. Burst presentation at the annual meeting and exhibition of the National Council of Teachers of Mathematics: Los Angeles, CA.

Tyminski, A., Kastberg, S., & **Simpson, A.** (2022). *Activities for developing place value and base-10 understanding in PK-2*. Workshop presentation at the annual meeting and exhibition of the National Council of Teachers of Mathematics: Los Angeles, CA.

Tyminski, A., Kastberg, S., & **Simpson, A.** (2022). *Developing ideas of length in PK-grade 2: Ideas and activities*. Burst presentation at the annual meeting and exhibition of the National Council of Teachers of Mathematics: Los Angeles, CA.

Simpson, A., & Knox, P. (2022). *A study of problem exploration heuristics of families*. Paper presented at the 129th meeting of the American Society for Engineering Education, Minneapolis, MN.

Simpson, A., Sun, J., & Yang, J. (2022). *Caregiver-child communication of STEM concepts with engineering design tasks*. Paper presented at the 129th meeting of the American Society for Engineering Education, Minneapolis, MN.

Knox, P., Paul, K., Kim, J., Yang, J., Werfelli, S., **Simpson, A.,** & Maltese, A. (2022). *Parental perspectives: Examining caregiver experiences and perceptions of growth and learning within an out-of-school elementary engineering program*. Poster presentation at the 129th meeting of the American Society for Engineering Education, Minneapolis, MN.

Knox, P., **Simpson, A.,** Bertolone-Smith, C., & Dsouza, N. F. (2022). *Exploring familial influence and engagement through joint activity in an at-home engineering program*. Paper presentation presented at the annual research meeting of the American Educational Research Association: San Diego, CA.

Shokeen, E., Katirci, N., **Simpson, A.,** & Williams-Pierce, C. (2022). *Embodied communication and collaboration within making activities*. Poster presentation at the annual research meeting of the American Educational Research Association: San Diego, CA.

Katirci, N., Shokeen, E., **Simpson, A.**, & Williams-Pierce, C. (2022). *Attending to the missing role of gestures in representational fluency*. Roundtable presentation presented at the annual research meeting of the American Educational Research Association: San Diego, CA.

Knox, P., & **Simpson, A.** (2022). *Research adaptation and adjustments in an informal engineering learning program*. Paper presentation presented at the annual research meeting of the American Educational Research Association: San Diego, CA.

Maltese, A., & **Simpson, A.** (2022). *Innovative approaches to theorizing and studying family STEM learning*. Symposium presentation at the annual research meeting of the National Association for Research and Science Teaching: Vancouver, BC.

Miroff, L. E. **Simpson, A.**, Versaggi, N., Carroll, L., & Kida, L. (2022). *Multidisciplinary STEM learning through archaeology*. Roundtable presentation presented at the annual Association for Science Teacher Education (ASTE) conference: Greenville, SC.

Shokeen, E., **Simpson, A.**, Williams-Pierce, C., Katirci, N. (2021). *Use of zig-zag to represent mathematical thinking about angle*. Poster presentation presented at the 43rd annual North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA): Philadelphia, PA.

Simpson, A., Kim, J., & Yang, J. (2021). *Caregiver-child interactions: Informal ways of doing mathematics during engineering tasks*. Research brief presentation

Simpson, A., Maltese, A., Yang, J., Kim, J., Knox, P., D'Souza, N. F., & Kim, S. H. (2021). *Insights from engineering a community-family partnership project*. Poster presented at the annual American Society for Engineering Education virtual conference: Long Beach, CA.

the 42nd annual meeting of the Psychology of Mathematics Education – North American Chapter: Mazatlán, Mexico.

Satyam, V. R., **Simpson, A.**, DiNapoli, J., Yao, X. (2020). *Building a robot: Making mathematics visible in a non-formal STEM learning environment*. Poster presentation at the 42nd annual meeting of the Psychology of Mathematics Education – North American Chapter: Mazatlán, Mexico.

Simpson, A., & Feyerabend, M. (2020). *In transition: A self-study of instructional practices as an informal educator*. Roundtable presentation at the annual research meeting of the American Educational Research Association: San Francisco, CA.*

Aqazade, M., Bofferding, L. C., Richardson, S. E., **Simpson, A.** (2020). *Promoting curiosity and wonder through family mathematics and science nights*. Individual session presentation at the annual research meeting of the Association of Mathematics Teacher Educators: Phoenix, AZ.

Williams-Pierce, C., Plaxco, D., Reimer, P. N., **Simpson, A.**, Orrill, C. H., Burke, J., . . . Dogan, M. F. (2019). *Mathematical play: Across ages, context, and content*. Working group presentation at the annual research conference of the Psychology of Mathematics Education – North American Chapter: St. Louis, MS.

Anderson, A., Goeke, M., Maltese, A., **Simpson, A.**, & Sung, E. (2019). *Studying the role of failure in making and design*. Video presentation at the 2019 STEM for All Video Showcase. Retrievable at:
<https://stemforall2019.videohall.com/presentations/1436>

Morales Collazo, J., **Simpson, A.**, Zilvinskis, J., & Maltese, A. (2019). *A landscape of how professionals identify themselves in STEM fields*. Roundtable presentation presented at the annual research meeting of the American Educational Research Association: Toronto, Canada.

Bouhafa, Y., & **Simpson, A.** (2019). *Youths' and Adults' Identity in STEM and the Learning Environment: A Systematic Review*. Paper presented at the annual research meeting of the American Educational Research Association: Toronto, Canada.

Anderson, A., **Simpson, A.**, & Maltese, A. (2019). *Are students emotional when they fail during making? Evidence from various settings*. Structured poster presentation presented at the annual research meeting of the American Educational Research Association: Toronto, Canada.

Maltese, A., Ryoo, J., **Simpson, A.**, Qian, M., Paul, K., Anderson, A., & Brahms, L. (2019). *MakEval: Mixed-methods approaches to evaluating making in schools*.

Symposium presentation presented at the annual research meeting of the American Educational Research Association: Toronto, Canada.

Maltese, A., **Simpson, A.**, & Anderson, A. (2019). *Learning while failing during maker activities*. Structured poster presentation presented at the annual research meeting of the American Educational Research Association: Toronto, Canada.

Simpson, A., Burris, A., & Maltese, A. (2018). *Youth's engagement as mathematicians in an afterschool making program*. Poster presentation presented at the 40th annual meeting of PME-NA: Greenville, SC.

Li, Y., Gumbiner, L. M., Wilkins-Yel, K. G., Cheng, J., **Simpson, A.** (2018). *Examining factors in promoting STEM interest and persistence among women of color in STEM*. Poster Presentation at the annual research convention of the American Psychology Association, San Francisco, CA.

Maltese, A., **Simpson, A.**, Ryoo, J., Anderson, A., & Qian, M. (2018). *MakEval: Developing a set of tools to evaluate the benefits of making*. In structured poster presentation entitled "Measuring Making: Methods, Tools, and Strategies for Capturing Learning, Participation, and Engagement in Maker Activities" at the annual research meeting of the American Educational Research Association, New York City, NY.

Jacobson, E. D., Willey, C. J., & **Simpson, A.** (2018). *Noticing bias: Teachers' attribution of mathematical competence and instructional response relative to perceived student identity*. Paper to be presented at the annual research meeting of the American Educational Research Association, New York City, NY.

Wilkins-Yel, K., G., Sparks, P., & **Simpson, A.** (2018). *Resilient coping strategies among women in engineering*. Paper to be presented at the annual research meeting of the American Educational Research Association, New York City, NY.

Simpson, A., Anderson, A., & Maltese, A. (2018). *Caught on camera: Adolescent and educator's noticing of and response to failure within making contexts*. Paper to be presented at the annual research meeting of the American Educational Research Association, New York City, NY.

Maltese, A. V., & **Simpson, A.** (2018). *Ending the search for triggers of STEM interest*. Poster presented at the annual research meeting of the American Educational Research Association, New York City, NY.

Simpson, A., & Maltese A. V. (2018). *How to develop a low-cost MAKEngineering kit*. Presentation at the How-to Festival of the annual meeting of

Bannister, N., Arbaugh, F., & **Simpson, A.** (2016). *Pressing methodological*

accepted for the annual meeting of the American Educational Research Association. Chicago, IL.

Simpson, A. & Linder, S. M. (2015). *The indirect effect of children's gender on early childhood educators' mathematical talk*. Paper accepted for the annual meeting of the American Educational Research Association. Chicago, IL.

Stecker, P. M., **Simpson, A.**, Lyons, R., Genareo, V., & Foegen, A. (2015). *Teacher use and satisfaction with online professional development for algebra progress monitoring*. Poster presented at the annual meeting of the Pacific Coast Research Conference. Coronado, CA.

Haltiwanger, H., & **Simpson, A.** (2015). *Developing secondary mathematics preservice teachers abilities to interpret and respond to students' mathematical thinking*. Paper presented at the annual meeting of the Association of Mathematics Teacher Educators. Orlando, FL.

Knox, P., Werfall, S., & **Simpson, A.** (2022). *Exploring child creative habits of mind in an out-of-school engineering program*. Presentation at the St. Lawrence Region of the American Society for Engineering Education. Syracuse, NY.

Colquhoun, A., & **Simpson, A.** (2021). *Unplugged activities: Building the seeds of algebraic thinking*. Presentation at the Association of Mathematics Teachers of New York State virtual conference.

Anderson, E., Lee, Y., & **Simpson, A.** (2019). *Preparing the next generation of school professionals through community-university partnerships*. Presentation at Central/Western Region Community-School Technical Assistant Center. Binghamton, NY.

Simpson, A., & Maltese, A. (2017). *Youth and educators' response to FAILURES within STEM activities*. Presentation at the third annual Indiana STEM Education Conference. West Lafayette, IN.

Maltese, A., & **Simpson, A.** (2016). *Promoting STEM-related practices with a focus on the engineering design process*. Presentations accepted at the Indiana STEM Education Conference. West Lafayette, IN.

Simpson, A., & Haltiwanger, L. (2014). *Developing an equitable lens for teaching mathematics*. Presentation at annual meeting of the South Carolina Council of Teachers of Mathematics. Myrtle Beach, SC.

Haltiwanger, L., & **Simpson, A.** (2014). *Making sense of students' work: Looking for understanding*. Presentation at annual meeting of the South Carolina Council of Teachers of Mathematics. Myrtle Beach, SC.

Local Conference Presentation:

Katirci, N., Shokeen, E., Simpson, A., & Williams-Pierce, C. (2022). *Attending to the missing role of gestures in representational fluency*. Lightning talk and poster presented at the 2022 Human-Computer Interaction Lab Symposium. University of Maryland, College Park.

Simpson, A. (2018). *Panel: Success and challenges in engagement/outreach*. Binghamton University Community-Engaged Research and Outreach Conference. Binghamton, NY.

PROFESSIONAL/SERVICE ACTIVITIES:

PROFESSIONAL/ACADEMIC ACTIVITIES:

Research participant and Field tester, Boston University National Science Foundation grant (DUE-1625784), The Elementary Pre-service Teachers Mathematics Project (EMP), Summer 2018 – Spring 2020

Service, Teaching, & Research (STaR) Fellow, Funded through the Association of Mathematics Teacher Educators, 2019

Binghamton University I-Corps: NSF Innovative Corps Program, September 2022-December 2022

TEACHING:

Courses Taught:

Undergraduate

Proposal review, North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA) Research Conference, 2013-present

Proposal review, Research Council on Mathematics Learning (RCML) Research Conference, 2013-present

Proposal review, Association of Mathematics Teacher Educators (AMTE) Conference, 2013-Present

Proposal review, American Education Research Association (AERA) Conference, 2017-Present

Program committee, Psychology of Mathematics Education-North American Chapter 2017 annual conference, Indianapolis, IN

Strand leader, Inservice Teacher Education & Professional Development, Psychology of Mathematics Education-North American Chapter 2017 annual conference, Indianapolis, IN

Strand leader, Curriculum and Related Factors, Psychology of Mathematics Education-North American Chapter 2018 annual conference, Greenville, SC

Proposal review, FabLearn Conference, 2019

Proposal review, American Society for Engineering Education (ASEE) Conference, 2021

Proposal review, International Society of the Learning Sciences (ISLS) Conference, 2021-present

Manuscript Reviews

Manuscript review, *Cognition and Instruction*, 2021
Manuscript review, *Visitor Studies*, 2021
Manuscript review, *Journal for STEM Education Research*, 2021
Manuscript review, *International Journal of STEM Education*, 2021
Manuscript review, *International Journal of Science and Mathematics Education*, 2021
Manuscript review, *Mathematics Teacher: Learning and Teaching Pre-K-12*, 2022
Manuscript review, *Research in Science Education*, 2022
Manuscript review, *Science Education*, 2022
Manuscript review, *Journal for STEM Education Research*, 2022
Manuscript review, *The High School Journal*, 2022
Manuscript review, *Frontiers in Psychology*, 2022
Manuscript review, *International Journal of Science and Mathematics Education*, 2022
Manuscript review, *Journal of Women and Minorities in Science and Engineering*, 2022
Manuscript review, *International Journal of Qualitative Methods*, 2022
Manuscript review, *TESOL Quarterly*, 2022
Manuscript review, *Journal for STEM Education Research*, 2022
Manuscript review, *Canadian Journal of Education*, 2022
Manuscript review, *Journal for STEM Education Research*, 2022
Manuscript review, *Frontiers in Psychology*, 2023
Manuscript review, *Research in Science Education*, 2023
Manuscript review, *Educational Technology Research and Development*, 2023
Manuscript review, *Early Childhood Education Journal*, 2023
Manuscript review, *Frontiers in Education*, 2023
Manuscript review, *Frontiers in Education*, 2023
Manuscript review, *Education Sciences*, 2023
Manuscript review, *Frontiers in Psychology*, 2023
Manuscript review, *Early Childhood Education Journal*, 2023

COMMUNITY SERVICE:

Professional Development:

Binghamton University Campus Preschool, *Making22.2982-3g0 (Ma)3(nusc)3(5 225.77 Tm0 g0 G)J*

- Binghamton University – Master Teacher Program, *Thinking differently of mathematics through making and tinkering*, 2019
- Union-Endicott Teacher Center, *How do we interact with kids?: Responding to failure*, 2019
- Binghamton University – Master Teacher Program, *Developing and implementing rich mathematical tasks*, 2019
- Binghamton University – Master Teacher Program, *Whole number operations: Addition*, 2019
- Binghamton University – Master Teacher Program, *Whole number operations: Subtraction*, 2019
- Binghamton University – Master Teacher Program, *Whole number operations: Multiplication*, 2019
- Binghamton University – Master Teacher Program, *Whole number operations: Division*, 2019
- Binghamton University – Master Teacher Program, *Two-dimensional shapes: Attributes*, 2020
- Binghamton University – Master Teacher Program, *Two-dimensional shapes: Angles, area, and perimeter*, 2020
- Binghamton University – Master Teacher Program, *Three-dimensional shapes*, 2020
- Binghamton University – Master Teacher Program, *Measurement*, 2020
- Binghamton University – Master Teacher Program, *Mathematical technologies to promote conceptual understanding*, 2020
- Binghamton University – Master Teacher Program, *Caregivers as mathematical partners*, 2020
- Binghamton University – Master Teacher Program, *Social justice mathematics lessons*, 2020
- Binghamton University – Master Teacher Program, *Interpretation and equivalence of fractions*, 2021
- Binghamton University – Master Teacher Program, *Fraction addition and subtraction*, 2021
- Binghamton University – Master Teacher Program, *Fraction multiplication*, 2021
- Binghamton University – Master Teacher Program, *Fraction division*, 2021
- Binghamton University – Master Teacher Program, *Engaging in research practices*, 2021

Science, Technology, Engineering, and Mathematics (STEM) Events:

- Fenton Free Library, *Family STEAM Nights*, January 2018 – July 2018
- Vestal Hills Elementary School, *Making and tinkering internship*, February 2018 – May 2018
- Boland Park in Binghamton, *Math & movement*, September 2018
- Vestal Hills Elementary School, *Family STEAM night*, October 2018
- Seton Catholic School, *Seton Catholic STEAM night*, February 2019
- Vestal Hills Elementary School, *Family reading – STEAM night*, February 2019
- Lee Barta Community Center, *Spring break STEM*, April 2019

Vestal Hills Elementary School, *Family STEAM night*, April 2019
Sci Girls Conference, *Make & take session*, April 2019
W.A. Olmstead Elementary School, *Spring fling*, May 2019
Vestal Hills Elementary School, *Maker Mondays*, February – May 2019
Your Home Library, *Fall into STEAM*, September 2019
Your Home Library, *Family engineering design challenge*, November 2019
Your Home Library, *Winter STEAM Projects*, December 2019
Lee Bartle Community Center, *Resourceful STEAM program*, October –
December 2019
Elderwood Assisted Living Community, *Play with Robots*, January 2020
Binghamton University Virtual Girl Scouts Event, *Build a Crane*, September
2020
Caryl E. Adams Primary School