Jennifer M. Suh

Professor of Mathematics Education
George Mason University
Curriculum Vitae

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EDUCATION

PH.D. in Education, May 2005
Specialization in Mathematics Education Leadership
George Mason University, Fairfax, Virginia

Suh, Jennifer M. (2005) *Third Graders' Mathematics Achievement and Representation Preference Using Virtual and Physical Manipulatives for Adding Fractions and Balancing Equations.*
Dissertation chair: Dr. Patricia Moyer-Packenham

Master of Teaching in Elementary Education, May 1994
University of Virginia, Charlottesville, Virginia

Bachelor of Art in Psychology, May 1994
Five Year Education Program, Certification K-8
University of Virginia, Charlottesville, Virginia

Professor of Mathematics Education in the Graduate School of Education, College of Education and Human Development, George Mason University. Dr. Suh teaches mathematics methods courses in the Elementary Education Program and mathematics leadership courses for the Mathematics Specialist Masters and PHD Programs.Her research focuses on: Implementing Lesson Study to develop pedagogical mathematics knowledge across the continuum from pre-service teachers to mathematics teacher leaders;Promoting equitable access to 21st century skills through problem-based learning encouraging culturally responsive math teaching through creativity, critical thinking, communication and collaboration for diverse student populations.

UNIVERSITY TEACHING EXPERIENCES

Professor, Mathematics Education (Fall 2018- Present)

College of Education & Human Development, George Mason University, Fairfax, Virginia

Associate Professor, Mathematics Education (Fall 2012- Spring 2018)
College of Education & Human Development, George Mason University, Fairfax, Virginia

Assistant Professor, Mathematics Education (Fall 2006-Spring 2012)
College of Education & Human Development, George Mason University, Fairfax, Virginia

Member of Mathematics Education faculty

Member of Elementary Education faculty

Responsibilities include teaching graduate courses in Elementary Education Programs and Mathematics Education Leadership, assisting in the development and implementation of programs for students, advising students within the program, and supervising graduate students in field placements for the professional development schools.

GMU and CEHD LEADERSHIP

Academic Program Coordinator for Mathematics Education Leadership- (2014-2016)

Responsibilities include recruiting mathematics specialist candidates and designing and offering courses that align to the Mathematics Specialists Endorsement requirements. Currently, GMU's Math Education Program is the only state approved licensing program with hybrid and online courses.

Director for a joint center between the College of Science and the College of Education and Human Development-COMPLETE, George Mason University

http://completemath.onmason.com/

COMPLETE: *Center for Outreach in Mathematics Professional Learning & Educational* is a mathematics partnership between George Mason University (GMU) and school divisions in Northern Virginia (Alexandria, Falls Church City, Fairfax County, Loudoun County, Manassas City and Prince William County) to provide professional development for mathematics teachers in grades K-8.

Affiliate Faculty for the Mathematics Education Center, George Mason University

The Center provides research opportunities for students interested in advanced degrees in Mathematics Education, Instructional Technology, and Educational Research. The Center's research activity serves as a laboratory where advanced graduate students enrolled in GMU programs participate in the ongoing research of the faculty. Students learn first-hand how to conduct educational research by participating in study design, instrument development, data collection, data analysis, manuscript preparation, and research presentations.

NATIONAL LEADERSHIP POSITIONS

AMTE BIPOC Mentoring Program-Leader (2024-Present)
MTE Early Career BIPOC Faculty Mentoring Program is a national mentoring initiative designed to support Black, Indigenous, and People of Color (BIPOC) faculty working in mathematics teacher education. The program provides structured, community-centered mentoring for early- and mid-career scholars as they navigate the demands of teaching, research, leadership, and service in higher education.

AMTE Collective Action to Support Math Teacher Educators CAST (2024-Present)
Task force focuses on building supportive professional networks, strengthening collaboration, and addressing challenges faced by mathematics teacher educators

AMTE, Vice President for Professional Learning (2020-2024)
Service to the research committee and providing professional learning for mathematics teacher educators for increasing their teaching and research productivity through the Association of Mathematics Teacher Educators

NCTM, Elected Board Member (2019-2023)
Service to the practitioner committee for the National Council of Teachers of Mathematics as a governing body responsible for guiding the nation's largest mathematics education organization and helping shape NCTM's strategic direction, policies, and national leadership in mathematics education.

AWARDS & RECOGNITIONS

Recipient of 2026 Sol Garfunkel Award, Consortium for Mathematics and Its Applications (COMAP) Recognizes individuals who demonstrate visionary leadership and significant contributions to improving mathematics education, reflecting the mission and legacy of COMAP's founder, Sol Garfunk

Recipient of 2022 National Technology Leadership Initiative through the Association of Mathematics Teacher Educators (AMTE) and the Society of Informational Technology and Teacher Education (SITE), February 2022. For the paper called Transformative Technology for Equity-centered Instruction (Suh, J., Roscioli, K., Leong, K. & Tate, H., 2022).

Recipient of 2018 Programs That Work Award, Virginia Mathematics and Science Coalition, Winter 2018

Virginia Commonwealth University on January 23, 2018.
Virginia Mathematics and Science Coalition recognized exemplary student and teacher educational programs in the State of Virginia that have shown evidence of a positive impact on student or teacher learning. "GMU COMPLETE MATH: Transforming Mathematics Instruction Through Mathematical Modeling, Algebraic Thinking and Proportional Reasoning: Teaching and Assessing Understanding".

Recipient of Claudia Balach Teachers Award, Spring 2018
American Educational Research Association, Professional Development Schools, Special Interest Group. New York, April 2018.
"Enhancing Mathematics Teaching and Learning for Social Justice Using Mathematical Modeling: Design Research through a Professional Development School-University Partnership"
Recipient: Suh, Britton, Burke, Matson, Ferguson

Recipient of Faculty Study Leave Awarded for Fall 2016
Office of Provost and Executive Vice President
Submitted in October 2015
Entitled "Creating the 'Multiplier Effect' for Research in Mathematics Education"

Recipient of Rising Star 2015, Mason Spirit Magazine
Featured in the Summer Issue of Mason Spirit as one of the newest generation of professors who stand out in their chosen field.

Recipient of 2012 Teacher of Distinction Award, George Mason University (Spring, 2012)
Center for Teaching Excellence
This award recognizes outstanding faculty for their educational contributions to enhancing student learning at the university.

Finalists for the Teaching Excellence Award, George Mason University (Fall, 2011)
Center for Teaching Excellence
This award recognizes outstanding faculty for their educational contributions to enhancing student learning at the university.

Nominee for Rising Star Award, George Mason University (Spring, 2011)
Center for Teaching Excellence
Rising Star Outstanding Faculty Award (OFA) sponsored by the State Council of Higher Education in Virginia (SCHEV). The OFA program recognizes and rewards excellence in teaching, research and scholarship and public service among Virginia Institutions.

Recipient of 2010 Programs That Work Award, Virginia Mathematics and Science Coalition Stuart C. Siegel Center, Virginia Commonwealth University on May 11, 2010.
Virginia Mathematics and Science Coalition recognized exemplary student and teacher educational programs in the State of Virginia that have shown evidence of a positive impact on student or teacher learning.

Recipient of 2005 Graduate School of Education Ph. D. Award Spring 2005.
College of Education and Human Development, George Mason University

Fairfax County Public Schools Teacher of the Year & Washington Post's Agnes Meyer Award Nominee- Nominated for 2000-2001 school year.

RESEARCH

- Promoting Equitable Teaching Practices through Culturally Responsive Modeling Tasks
- Designing STEM PBL to Promote 21st Century Skills
- Leading Research Practice Partnerships with Teachers as Designers and Researchers
- Learning Trajectory based curriculum through Lesson Study to Deepen Teacher Knowledge

Grants Funded

Suh, J.M. Co-Principal Investigator (August 2024-August 2027).
Collaborative Research: Fostering Mathematical Modeling Competencies through Collaborative Learning in a Large Language Model (LLM) Simulated
National Science Foundation. Research on Innovative Technologies for Enhanced Learning (RITEL).Award No. 2418580 George Mason University. Principal Investigator: Ziyu Yao. Funded. $578,047
Overall Objectives: Motivated by the need to increase middle school students' opportunities to engage in effective learning of mathematical modeling, and inspired by the promise of Large Language Models (LLMs). It will study building a virtual classroom containing multiple LLM-simulated student characters as peer collaborators for training (human) students' mathematical modeling skills. This is a high impact and multi-disciplinary research covering the areas of Natural Language Processing, Human-Computer Interaction, and Mathematics Education.

Suh, J.M. Principal Investigator (August 2024-August 2027: Terminated April 2025).
Collaborative Research: Framework for Integrating Technology for Equity
National Science Foundation. Innovative Technology Experiences for Students and Teachers (ITEST) Award No. 2342624). George Mason University. Co-Principal Investigator: Theresa Wills. Funded. $434,522.
Overall Objectives: Framework for Integrating Technology for Equity (FIT for Equity) is an exploratory project (Level II) in the teaching strand for elementary mathematics. FIT for Equity will develop teachers' capacity to use technology in transformative ways to advance equity, particularly for underserved student populations in the mathematics classroom.

Suh, J.M., *Principal Investigator*

*EQ STEMM:*Collaborative Research: Advancing Equity and Strengthening Teaching with Elementary Mathematical Modeling -
National Science Foundation- Duration: 5/15/20-4/30/2025 $698,030 (GMU's award)
This collaborative DRK12 grant with a targeted partnership between faculty from four institutions, GMU(Virginia), MSU (Montana), University of Arizona, University of Washington with school divisions, Fairfax County Public Schools (FCPS - VA).
Overall Objectives: The proposed work will engage elementary (grades K-8) mathematics teachers, special educators, and teachers of students with English Language Learners to develop Mathematical modeling concepts aligned with Common Core mathematics content, classroom strategies, and student assessment standards. Promoting equitable participation of diverse learners in mathematical modeling in the early grades is the focus of this grant.

Suh, J.M., *Principal Investigator*
Bridging for Math Strength- Virginia Department of Education.
Duration: 4/01/21-6/30/2022 $197,207
Overall Objectives: This project partnership with George Mason University and the Virginia Department of Education (VDOE) is to offer strength-based formative assessment and bridging activities to support instruction for K-8 students.We recruited teacher designers from across school districts in Virginia to codesign these modules. Teacher designers spent their summer designing these bridging activities and refined the modules by piloting them in their classrooms.

Suh, J.M., *Co-Principal Investigator*
Green STEAM: Building an outdoor sustainability program.
Institute for a Sustainable Earth, George Mason University
Duration: 07/31/2019 - 01/31/2021 $40,000
Overall Objectives: This grant funds professional development through a three-credit graduate course, taught by seasoned environmental education teachers, where teachers will meet monthly to design and reflect on curricular approaches. Project teachers will enact these Green STEM approaches with support from GMU pre-service teacher interns and will integrate curriculum that includes a daily outdoor component. In addition, family "STEAM night" events will facilitate parents on how to engage in STEAM related conversations and topics with their children.

Suh, J.M., *Principal Investigator*
IMMERSION: Integrating Mathematical Modeling, Experiential learning and Research through a Sustainable Infrastructure and an Online Network for Elementary Teachers National Science Foundation- Duration: 9/01/2014-8/31/2021 $1,299,959
Overall Objectives: This proposal is a STEM-C targeted partnership between faculty from three institutions, GMU(Virginia), HMC (California) and MSU (Montana), with school divisions, Fairfax County Public Schools (FCPS - VA), Pomona Unified School District (PUSD - CA) and Bozeman Public Schools (BSD- MT). The proposed work will engage elementary (grades K-8) mathematics teachers, special educators, and teachers of students with Limited English Proficiency (LEP) to develop Mathematical modeling concepts aligned with Common Core mathematics content, classroom strategies, and student assessment standards. Targeting 80 teachers and coaches in Fairfax County Public Schools

Suh, J.M., *Principal Investigator*
TRANSITIONS: Transforming Mathematics Instruction Through Best Teaching Practices.
Virginia Department of Education March 2017-September 2018 $402,870
Overall Objectives: This grant funds professional development of teachers in grades K-8 to focus on teaching practices and showcase their enactment of problem based learning tasks aligned to the 2016 SOL and demonstrates pictures of practices of the high leverage teaching practices.

Suh, J.M., *Principal Investigator*
SPARK STEM: Integrating Scientific and Mathematical Modeling in the Elementary Grades (Co-PIs: Dr. Andrew Gilbert & Dr. Padhu Seshaiyer)
State Council for Higher Education- Duration: 7/1/2017-9/30/18
$125,456.00
Overall Objectives: This grant is a STEM Teaching Initiative that aims to spark the interest of elementary students to the investigative and inquiry process of problem based learning. The project will involve 60 coaches and teachers in curriculum design of STEM PBLs that focus on scientific and mathematical modeling to solve real world problems.

Suh, J.M., *Principal Investigator*
TRANSITIONS: Transforming Mathematics Instruction Through Mathematical Modeling, Algebraic Thinking and Proportional Reasoning. Teaching
Virginia Department of Education March 2015-September 2018
Total: $711, 114 from the sponsor to support this MSP proposal: $243,218 (Year 1), $246, 233 (Year 2) and $221, 663 (Year 3). (Co-PI: Seshaiyer and Research Associate: Frank & Baker)
Overall Objectives: Mathematics Science Partnership between faculty from the COMPLETE Center at George Mason University (GMU) and nine school divisions that include *seven* continuing partners Arlington County, Frederick County, Fauquier County, Loudoun County, Manassas City, Prince William County, Virginia Council for Private Education, Manassas Park and Roanoke Public Schools. Targeting 90 teachers, 30 coaches and 15 administrators each year for a total of 405 educators over the three years with an average of twelve Lesson Studies per year.

Suh, J.M., Research Faculty
Partnership for Greater Mathematics Success. (PI, Dr. Toya Frank, Democracy Prep Charter School). August 2016. District of Columbia Office of the State Superintendent of Education. Duration: 8/1/2016-9/30/2017. ($47,131) Targeting twenty teachers in Kindergarten through Fifth grade.

Suh, J.M., Co-Principal investigator (jointly with Dr. Seshaiyer- COS)
Developing Rational Numbers and Proportional Reasoning through Math Modeling and Performance Based Assessments: Teaching and Assessing Virginia's 2009 6-8 Mathematics Standards of Learning
Virginia Department of Education. March 1, 2014 through September 30, 2015 Funded Amount: $211,456

Suh, J.M., Co-Principal investigator (*jointly with Dr. Seshaiyer*- COS)
Building Number, Number Sense and Computational Fluency through Math Modeling and Performance Based Assessments: Teaching and Assessing Virginia's 2009 3-5 Mathematics Standards of Learning
Virginia Department of Education. March 1, 2014 through September 30, 2015 Funded Amount: $199,363

Suh, J.M., Co-Principal investigator (*jointly with Dr. Seshaiyer*- COS)
Developing Rational Numbers and Proportional Reasoning through Math Models and Performance Based Assessments: Teaching and Assessing Virginia's 6-8 Mathematics Standards of Learning
Virginia Department of Education. March 1, 2013 through September 30, 2014 Funded Amount: $246,696

Suh, J.M., Co-Principal investigator (*jointly with Dr. Seshaiyer*- COS)
Building Number and Number Sense through Math Models and Performance Based Assessment: Teaching and Assessing Virginia's 2009 K-2 Mathematical Standards of Learning
Virginia Department of Education March 1, 2013 through September 30, 2014 Funded Amount: $246,696

Suh, J.M., Principal Investigator
ESTEEM for 21st Century Skills for Problem-based Learning
Source of Support: State Council for Higher Education in VA
Total Award Amount: $175,000 Total Award Period: 07/01/2013 – 09/30/2014
Location of Project: George Mason University 1 Academic course release & 1 Summer
This grant will be used to fund a 2013-2043 NCLB project with four districts in Virginia focused on Problem-based STEM topics in mathematics that encourage 21st century skills: 4Cs Critical thinking, Creativity, Communication and Collaboration.

Suh, J.M., Co-Principal investigator (jointly with Dr. Seshaiyer COS) VA STEM CoNNECT
US Department of Education, March 1, 2013 through September 30, 2014 $39,852
This grant provided funds to collaborate with teachers as designers to create STEM lessons that focused on College and Career Readiness

Suh, J.M., co-Principal investigator (*jointly with Dr. Seshaiyer*- COS)
Designing Assessment in the Middle Grades: Geometry and Algebraic Thinking
Virginia Department of Education: Mathematics Science Partnership,
Source of Support: VA Department of Education Prime Source: US DoEducation
Total Award Amount: $222,040 Total Award Period: 04/01/2012 – 09/30/2013
Location of Project: George Mason University

Grant submitted

Suh, J.M., Principal Investigator
Collaborative Research: Phase I CAMEL-CN – Mapping Elementary Mathematical Modeling Thinking & Reasoning Through AI Learning: Math Modeling TRAIL
National Science Foundation (NSF 26-501), 2026–2029 Total Collaborative Award: $1,499,566
George Mason University (Lead Institution); Ziyu Yao, Co-PI, George Mason University Yixuan (Janice) Zhang, PI, William & Mary; Erin Turner, PI, University of Arizona
Multi-institutional project developing the first AI-ready, multimodal dataset capturing Grades 3–6 students' collaborative mathematical modeling processes. Integrates mathematics education, AI/NLP, and human-AI interaction to advance research on modeling pedagogy, student reasoning trajectories, and AI-supported instructional tools.

Suh, J.M., Co-Principal Investigator
Collaborative Research: Fraction Reasoning with AI to Cultivate Teaching and Learning (FRACTAL)
National Science Foundation Total Amount Requested: $146,531 July 2026 – June 2029.
This project develops three integrated modules to advance fraction reasoning using AI-supported instructional tools. Responsibilities include leading summer workshops for teacher educators, supporting implementation of grant resources, and contributing to data collection, institutional site coordination, and dissemination of research findings

Suh, J.M., Co-Principal Investigator
Collaborative Research: Fostering Mathematical Modeling Competencies via Collaborative Learning in Large Language Model–Simulated Virtual Classrooms
National Science Foundation Total Amount Requested: $138,000 May 2026 – May 2027
Submitted in response to the NSF DCL on "Expanding K–12 Resources for AI Education," this project extends the existing MathVC platform by developing an AI-powered teacher dashboard that provides real-time insights into students' collaborative mathematical problem-solving processes. The project focuses on improving instructional feedback loops and integrating AI-supported analytics into K–12 mathematics learning

REFEREED PUBLICATIONS

Book

Karp, K. S., Fennell, F. M., Kobett, B. M., Andrews, D. R., **Suh, J. M.**, & Knighten, L. D. (2025). *Proactive mathematics interventions, grades 2–5: Priming for success through engaging tasks and purposeful design*. Corwin.

Bay-Williams, J.M. , SanGiovianni, J. J., Martinie, S. M. **Suh, J.M.** (2022). Figuring Out Fluency - Addition and Subtraction With Fractions and Decimals: A Classroom Companion. Corwin Mathematics.

Bay-Williams, J.M. , SanGiovianni, J. J., Martinie, S. M. **Suh, J.M.** (2022). Figuring Out Fluency - Multiplication and Division With Fractions and Decimals: A Classroom Companion. Corwin Mathematics.

Suh, J. M., Wickstrom, L. & English (2021). *Exploring the Nature of Mathematical Modeling in the Early Grades*. Springer.

Suh, J.M. & Seshaiyer, P. (2017). *Modeling Mathematical Ideas: Developing Strategic Competence in Elementary and Middle School.* Lanham, MD: Rowman & Littlefield Education Publishing Group.

Peer-Reviewed Publications

Suh, J.M., Calabrese, S.C. (2025). Culturally responsive mathematics engagement through a family-inspired mathematizing routine. *Educational Studies in Mathematics,* https://doi.org/10.1007/s10649-025-10411-2

Suh, J. M., & Vora, M. (2025). Co-designing mathematics instruction with ChatGPT: Exploring mathematics teacher pedagogical expertise in culturally responsive and differentiated instruction. *Journal of Educational Research in Mathematics, 35*(3), 741–774. https://doi.org/10.29275/jerm.2025.35.3.74

Gilbert, A., **Suh, J.M.,** & Choudhry, F. (2025). Exploring the Development of Preservice Teachers' Visions of Equity through Science and Mathematics Integration. *International Journal of Science & Mathematics Education*, *23*(2), 489–514. https://doi-org.mutex.gmu.edu/10.1007/s10763-024-10467-1

Suh, J.M., Aguirre, J., Turner, E., Carlson, M. A., Fulton, E., Tate, H., & McVicar, E. (2024). Exploring Racial Justice with Culturally Responsive Mathematical Modeling in the Primary Grades: Cultivating Criticality in the Problem-Based Learning Space. *Interdisciplinary Journal of Problem-Based Learning*, *18*(1), 1–28. https://doi-org.mutex.gmu.edu/10.14434/ijpbl.v18i1.36976

Suh, J.M., Roscioli, K., & Maxwell, G. (2024). Technology as an equity lever: Applying the EqT-tech framework to center equitable integration of technology in the math classroom. *Journal of the Korean Society of Mathematical Education Series D: Research in Mathematical Education, 27*(3), 409–430. https://doi.org/10.7468/jksmed.2024.27.3.409

Suh, J.M., Yeo, S., & Lee, Y. (2024). Advancing teaching and learning of mathematics through transformative technology. *Journal of the Korean Society of Mathematical Education Series*

D: Research in Mathematical Education, 27(3), 253–265. https://doi.org/10.7468/jksmed.2024.27.3.253

Suh, J.M., Vora, M., & Moreau, D. (2024). Exploring the potential of ChatGPT as codesigners for culturally relevant and inquiry-based mathematics tasks. *AMTE Connections*, 33(5).

Suh, J.M., Maxwell, G., Roscioli, K., Tate, H., Seshaiyer, P., & Marttinen, R. (2023). Young Mathematicians Take Action Through Sport Clinics. *Mathematics Teacher: Learning and Teaching PK-12*, NCTM.

Tate, H., Anstett, S., Cooke, B., Hrabak, M. J., & **Suh, J.** (2024). Inclusive Playground Design. *Mathematics Teacher: Learning and Teaching PK-12*, *117*(8), 550-561. Retrieved Sep 16, 2024, from https://doi.org/10.5951/MTLT.2023.0285

Tate, H., **Suh, J.**, Christensen, A., Kaplewicz, K., Carlson, J., & Carter, J. (2024). Vertical lesson study to bring coherence in prioritizing student contribution and voice. *NCSM Journal of Mathematics Education Leadership (JMEL)*, 25(1) 6-23.

Gilbert, A., **Suh, J.** & Choudhry, F. (2024). Exploring the Development of Preservice Teachers' Visions of Equity through Science and Mathematics Integration. *International Journal of Math and Science Education.* https://doi.org/10.1007/s10763-024-10467-1
**Selected for inclusion in the SDG 4 Quality Education Collection*

Turner, E., Aguirre, J., Carlson, M. A., **Suh, J.M.,** & Fulton, E. (2023). Resisting marginalization with culturally responsive mathematical modeling in elementary classrooms. *ZDM – Mathematics Education*. https://doi.org/10.1007/s11858-023-01542-y

Turner, E., **Suh, J.M.,** Tate, H., Soltelo Ocampo, D., Carlson, M., Aguirre, J., & Fulton, E. (2023). Cultivating equity and empathy in community focused elementary math modeling. In M. Strutchens, G. Krause, D. Y. White, & J. Bay-Williams (Eds.), *Antiracist mathematics education: Stories of acknowledgement, action, and accountability.* TODOS Mathematics for All.

Suh, J. M., Tate, H., Rossbach, M., Green, S., Matson, K., Aguirre, J., Seshaiyer, P., & Steen, S. (2023). Dilemmas and Design Principles in Planning for Justice-Oriented Community-Based Mathematical Modeling Lessons. *Mathematics Teacher Educator*, *11*(3), 210-230. Retrieved Sep 17, 2023, from https://doi.org/10.5951/MTE.2022-0025

Roscioli, K., & **Suh, J.M.** (2023). Turning Trucks Into a Meaningful Geometry Exploration. *Mathematics Teacher: Learning and Teaching PK-12*, *116*(5), 330-340. Retrieved Sep 17, 2023, from https://doi.org/10.5951/MTLT.2022.0352

Sigmon, S. D., Halpin, K. Q., Ettere, D. J., & **Suh, J.M**. (2023). Same Task but Different Learning Goals. *Mathematics Teacher: Learning and Teaching PK-12*, *116*(1), 16-24. Retrieved Sep 17, 2023, from https://doi.org/10.5951/MTLT.2022.0129

Suh, J.M. & Roscioli, K. (2022). Learning Trajectory-Based Formative Assessment and Sequenced Digital Learning Activities in Math Class. Preparing Pre-Service Teachers to Integrate Technology in K-12 Classrooms (pp.271-294). IGI publication.

Tate, H., Proffitt,T., Christensen, A., Hunter, A., Stratton,D., Fleshman, E., Aguirre, J., **Suh, J.M.** (2022) Mathematizing Representation in Children's Libraries: An Antiracist Math Unit in Elementary Grades *Teaching For Excellence and Equity in Mathematics, 12*(2), 23-40.

Aguirre, J. M., **Suh, J.M.**, Tate, H., Carlson, M. A., Fulton, E. A., Turner, E. E. (2022). Leveraging Equity and Civic Empathy through Community-Based Mathematical Modeling. *Proceedings of the forty-fourth annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 331-340). Murfreesboro, TN: Middle Tennessee State University.

Suh, J. M. (2022). Intentionality in Using Learning Trajectories to "Reframe" Teacher Noticings Towards Anti-Deficit and Asset-Based Instruction. *Conference Papers -- Psychology of Mathematics & Education of North America*, 43–61.

Suh, J. M., Wills, T., Kirschner, S., Wearly, A., Vora, M. E., & Roscioli, K. (2022). Developing Asset-Based Instruction through Learning Trajectory-Based Curricular Design. *Conference Papers -- Psychology of Mathematics & Education of North America*, 215–223.

Suh, J.M., Roscioli, K., Leong, K. & Tate, H. (2022). Transformative Technology for Equity-centered Instruction. In E. Langran (Ed.), Proceedings of Society for Information Technology & Teacher Education International Conference (pp. 1559-1567). San Diego, CA, United States.

Suh, J. M. & Gallagher, M. & Capen, L. & Birkhead, S. (2021). Enhancing teachers' noticing around mathematics teaching practices through video-based lesson study with peer coaching. International Journal for Lesson & Learning Studies. ahead-of-print. 10.1108/IJLLS-09-2020-0073.

Suh, J.M., Matson, K., Birkhead, S., Green, S., Rossbach, M., Seshaiyer, P. & Jamieson, T.S. (2021). The Importance of Problem Formulation and Elementary Teachers as Designers of the Early Modeling Experiences for Elementary Students (113-145). In J.M Suh, M. Wickstrom & L. English (Eds.), Exploring the Nature of Mathematical Modeling in the Early Grades. Netherlands: Springer.

Suh, J. M., Tate, H., Rossbach, M., Green, S., Matson, K., Aguirre, J., Seshaiyer, P., & Steen, S. (2023). Dilemmas and Design Principles in Planning for Justice-Oriented Community-Based Mathematical Modeling Lessons. *Mathematics Teacher Educator*, *11*(3), 210-230. Retrieved Sep 17, 2023, from https://doi.org/10.5951/MTE.2022-0025

Suh, J.M., Birkhead, S., Galanti, T., Farmer, R., & Seshaiyer, P. (2019). The Use of Lesson Study to Unpack Learning Trajectories and Deepen Teachers' Horizon Knowledge (756-781). In R. Huang & Takahashi, A. (Eds.), *Theory and Practices of Lesson Study in Mathematics: An International Perspective*. Springer.

Suh, J. M., & Seshaiyer, P. (2019). Promoting ambitious teaching and learning through implementing mathematical modeling in a PBL environment: A case study. In M. Moallem, W. Hung, & N. Dabbagh (Eds.), *Innovations in instructional design, educational technology, and e-learning* (pp. 309-323). Wiley. https://doi.org/10.1002/9781119173243.ch23

Suh, J.M., Birkhead, S., Farmer, R. R., Galanti, T., Nietert, A., Bauer, T., & Seshaiyer, P. (2019). Split it! Unpacking the equipartitioning learning trajectory. Teaching Children Mathematics, 25(6), 362–369.

Suh, J. M., Burke, L., Britton, K., Matson, K., Ferguson, L., Jamieson, S., & Seshaiyer, P. (2018). Every Penny Counts: Promoting Community Engagement to Engage Students in Mathematical Modeling. In R. Gutierrez & Goffney, I. (Eds.), *Annual Perspectives in Mathematics Education:* Rehumanizing Mathematics for Students who are Black, Indigenous, and/or Latin@. (pp. 63-78). Reston, VA: National Council of Teachers of Mathematics.

Suh, J.M. & Gallagher, M.A. (2018). Preservice Teachers Decomposing Ambitious Mathematics Teaching: Video Analysis and Professional Learning Communities. In Polly, D. (Ed.) *Innovative Practices in Teacher Preparation and Graduate-Level Teacher Education Programs*. (pp. 37-47). IGI Global Publishing

Kim, S. & **Suh, J.M.** (2020). Transmodalising for Equitable Mathematics Instruction for Multilingual Classrooms. Special Issue on Multilingual Learners: Translanguaging. *Teaching for Excellence and Equity in Mathematics, 11*(2), 35-42.

Stokes, L. R., **Suh, J.M.**, & Curby, T.W. (2019): Examining the nature of teacher support during different iterations and modalities of lesson study implementation, *Professional Development in Education,* DOI: 10.1080/19415257.2019.1634623

Suh, J.M. & Dockery, K. (2019). Inspiring teachers across the professional continuum through collaborative coaching and Lesson Study. In Nancy Gallavan & Putney, L.G. (Eds.), ATE Yearbook *Building upon Inspiration and Aspirations with Hope, Courage, and Strength in Teacher Education*. (pp. 99-118). Lanham, MD: Rowman & Littlefield Education Publishing Group.

Suh, J. M., Burke, L., Britton, K., Matson, K., Ferguson, L., Jamieson, S., & Seshaiyer, P. (2018). Every Penny Counts: Promoting Community Engagement to Engage Students in Mathematical Modeling. In R. Gutierrez & Goffney, I. (Eds.), *Annual Perspectives in Mathematics Education:* Rehumanizing Mathematics for Students who are Black,

Indigenous, and/or Latin@. (pp. 63-78). Reston, VA: National Council of Teachers of Mathematics.

Gallagher, M. A., Parsons, S. A., Parker, A., Groth, L., Brown, E. L., Baker, C., **& Suh, J. M.** (2018). The importance of collaboration: Embedding courses in clinical practice. In K. Zenkov, & K. Pitash (Eds.), *Project-based clinical experiences* (pp. 49-70). Routledge.

Suh, J.M. & Gallagher, M.A. (2018). Preservice Teachers Decomposing Ambitious Mathematics Teaching: Video Analysis and Professional Learning Communities. In Polly, D. (Ed.) *Innovative Practices in Teacher Preparation and Graduate-Level Teacher Education Programs*. (pp. 37-47). IGI Global Publishing

Suh, J.M., Weiss, A., King, L., Fulginiti, K.& Parson, S. (2017). Implementing instructional rounds and Lesson Study to support the development of teacher candidates' Mathematics Knowledge for Teaching. In R. Flessner & D. Lecklider (Eds). *Case Studies of Clinical Preparation in Teacher Education.* (pp.145-166). Lanham, MD: Rowman & Littlefield Publishing.

Suh, J. M., Birkhead, S., Baker, C., Frank, T., & Seshaiyer, P. (2017). Leveraging Coach-Facilitated Professional Development to Create Teacher Social Networks for Enhancing Professional Practice. In M. Boston & L. West (Eds.), *Annual Perspectives in Mathematics Education: Reflective and Collaborative Processes to Improve Mathematics Teaching*. (pp. 89-100). Reston, VA: National Council of Teachers of Mathematics.

Suh, J.M., Matson, K. & Seshaiyer, P. (2017). Engaging Elementary Students in the Creative Process of Mathematizing Their World through Mathematical Modeling. *Education Sciences 7*(62) doi:10.3390/educsci7020062

Suh, J.M. (2016). Ambitious teaching: Designing practice-based assignments for integrating virtual manipulatives into mathematics lessons. In P. Moyer-Packenham (Ed.), *Mathematics Education Digital Era: International Perspectives on Teaching and Learning Mathematics with Virtual Manipulatives*. (pp. 301-321). Springer International Publishing.

Suh, J. M., Sprague, D.R. & Baker, C.K. (2016). Transforming mathematics teacher knowledge in the digital age through iterative design of course-based projects. In Niess, M., Driskell, S., & Hollenbrands, K. (Eds.), *Handbook of Research on Transforming Mathematics Teacher Education in the Digital Age,* (pp. 190-214). IGI Global Publications.

Suh, J. M., & Moyer-Packenham, P. S. (2016). How affordances and constraints of physical and virtual manipulatives support the development of procedural fluency and algorithmic thinking in mathematics. *International Journal for Research in Mathematics Education, 6*(2), 245-265.

Brown, B. L, **Suh, J.M.,** Parsons, S. A., Parker, A. K., & Ramirez, E.M. (2015). Documenting teacher candidates' professional growth through performance assessment. *Journal of Research in Education, 25* (1), 35-47.

Suh, J.M., King, L.A., & Weiss, A. (2014). Co-Development of professional practice at a professional development school through Instructional Rounds and Lesson Study. In D. Polly, Heafner, T., Chapman, M. & Spooner, M., (Ed.), *Professional Development Schools and Transformative Partnerships.* (pp. 177-189). IGI Global Publications.

Samaras, A. P., Karczmarczyk, D, Smith, L, Woodville, L, Harmon, L, Nasser, I., Parsons, S., Smith, T., Borne, K., Constantine, L., Roman Mendoza, E., **Suh, J.M.,** & Swanson, R. (2014). The shark in the vitrine: Experiencing our practice from the inside out with transdisciplinary lenses. *Journal of Transformative Education, 12*(4), 368-388.

Suh, J. M. & Seshaiyer, P. (2014). Examining teachers' understanding of the mathematical learning progression through vertical articulation during Lesson Study. *Journal of Mathematics Teacher Education*, *18*(3), 217-229.

Suh, J. M. & Seshaiyer, P. (2014). Developing strategic competence by teaching using the Common Core Mathematical Practices, *Annual Perspectives in Mathematics Education*, 77-87.

Samaras, A. P. with Karczmarczyk, D, Smith, L, Woodville, L, Harmon, L, Nasser, I., Parsons, S., Smith, T., Borne, K., Constantine, L., Roman Mendoza, E., **Suh, J.M.,** & Swanson, R., (2014). A pedagogy changer: Transdisciplinary faculty self-study. Perspectives in Education*, 32*(2), 117-135.

Suh, J.M., Seshaiyer, P., Moore, K., Green, M., Jewell, H., & Rice, I. (2013). Being an Environmentally Friendly Engineer. *Teaching Children Mathematics, 20*(4), 261-263.

Moyer-Packenham, P.S., Salkind, G., Bolyard, J.J., & **Suh, J.M**. (2013) Effective choices and practices: Knowledgeable and experienced teachers' uses of manipulatives to teach mathematics, *Online Journal of Educational Research, 2*(2), 18-33.

Smith, T. M., Seshaiyer, P., Peixoto, N., **Suh, J. M.,** Bagshaw, G., & Collins, L. K. (2013). Exploring slope with stairs & steps. *Mathematics Teaching in the Middle School*, *18*(6), 370–377.

Suh, J. M., & Fulginiti, K. (2012). "Situating the learning" of teaching: Implementing Lesson Study at a professional development school. *School-University Partnerships*, *5*(2), 24–37.

Suh, J. M. & Seshaiyer, P. (2012). Modeling ten-ness using technology. *Teaching Children Mathematics, 18*(9), 574-579.

Moyer-Packenham, P.S. & **Suh, J.M**. (2012). Learning mathematics with technology: The influence of virtual manipulatives on different achievement groups**.** *Journal of Computers in Mathematics and Science Teaching, 31*(1).

Seshaiyer, P., **Suh, J.M**. & Freeman, P.W. (2011). Unlocking the locker problem through technology. *Teaching Children Mathematics, 18*(5), 322-325.

Suh, J.M., Graham, S., Ferranone, T., Kopeinig, G. & Bertholet, B. (2011). Developing persistent and flexible problem solvers with a growth mindset. In D. J. Brahier, (Ed.), *Motivation and Disposition*: *Pathways to Learning Mathematics, NCTM* 2011 *Yearbook*, 169-184.

Suh, J. M. & Fulginiti, K.L. (2011). Using technology to understand the rate of change. *Teaching Children Mathematics, 18*(1), 56-58.

Suh, J.M. & Fulginiti, K.L. (2010). Developing mathematical potential in underrepresented populations through problem solving, math discourse and algebraic reasoning. In B. Sriraman & K. Lee (Eds.), *The Elements of Creativity and Giftedness in Mathematics. Sense Publication,* 67-79.

Suh, J.M. & Parker, J. (2010). Developing reflective practitioners through Lesson Study with pre-service and in-service teachers. *AMTE monograph. VII. Mathematics Teaching: Putting Research into Practice at All Levels. Associations of Mathematics Teacher Educators*, 125-140.

Suh, J.M. (2010). Leveraging cognitive technology tools to expand opportunities for critical thinking on data analysis and probability in elementary classrooms. *Journal of Computers in Mathematics and Science Teaching 29*(3), 289-302.

Suh, J. M. (2010). Tech-knowledgy for diverse learners [Technology Focus Issue]. *Mathematics Teaching in the Middle School in Mathematics Education, 15*(8), 440-447.

Suh, J. M., Johnston, C. & Doud, J. (2008). Enhancing mathematics learning in a technology rich environment. *Teaching Children Mathematics, 15*(4), 235-241.

Hjalmarson, M. & **Suh, J. M**. (2008). Developing mathematical pedagogical knowledge by evaluating instructional materials. *Inquiry into Mathematics Teacher Education. AMTE Monograph V,* 97-107.

Suh, J. M. & Jamieson, S. (2008). Collaborative mentoring: Establishing a mathematics teaching & learning community through Lesson Study. *NCTM's Empowering Mentors of Mathematics*, NCTM.

Suh, J. M., Johnston, C., Mills, M., & Jamieson, S. (2008). Promoting decimal number sense and representational fluency. *Mathematics Teaching in the Middle School, 14*(1), 44-50.

Suh, J. M. (2007). Developing "Algebra -'rithmetic" in the elementary grades. *Teaching Children Mathematics, 14*(4), 246- 250.

Suh, J. M. (2007). Tying it all together: Building mathematics proficiency for all students. *Teaching Children Mathematics, 14*(3), 163-169.

Scaptura, C., **Suh, J. M**., & McHaffey, G. (2007). Masterpieces to mathematics: Using art to teach fraction, decimal, and percent equivalents. *Mathematics Teaching in the Middle School, 13*(1), 24-28.

Suh, J. M., & Moyer-Packenham, P. S. (2007). Developing students' representational fluency using virtual and physical algebra balances. *Journal of Computers in Mathematics and Science Teaching.* 26 (2), 155-173.

Suh, J. M., Moyer, P.S., & Heo, H. J. (2005). Examining technology uses in the classroom: students developing fraction sense by using virtual manipulative concept tutorials, *Journal of Interactive Online Learning, 3*(4), 1-22.

Heo, H. J., **Suh, J. M**., & Moyer, P. S. (2004). Impacting student confidence: The effects of using virtual manipulatives and increasing fraction understanding. *The Journal of Educational Research in Mathematics, 14*(2), 207-219.

Suh, J. M., Moyer, P. S. & Sterling, D. (2003) Junior Architect: Designing your dream clubhouse using measurement and geometry, *Teaching Children Mathematics*, *10*(3), 170-174.

Refereed Conference Proceedings

Suh, J. M. & Wolfe, J. (2025, July). *EQT-Tech: Framework for integrating technology to advance math thinking and learning* [Conference presentation]. Topic Study Group 6-2, 9th ICMI-East Asia Regional Conference on Mathematics Education (EARCOME 9), Seoul National University, Siheung Campus, South Korea.

Chandler, K., Witt, N. E., **Suh, J. M.**, Hollebrands, K., McCulloch, A., Flavin, E., Panorkou, N., Joseph, M. P., & Yao, X. (2024, November). *Conceptualizing the role of technology in equitable mathematics classrooms (Math TechQuity)*. Working group presented at the 46th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA), Cleveland, OH, United States.

Suh, J., Tate, H., Turner, E., Aguirre, J., Carlson, M. A., & Fulton, E. (2024). *Culturally responsive mathematics teaching through justice-focused modeling: A first-grade case study*. Paper presented at the 2024 AERA Annual Meeting, Philadelphia, PA.

Suh, J., & Calabrese, S. (2024). Promoting Equitable School-Family Collaboration through a Culturally Responsive Math Routine. *Conference Papers -- Psychology of Mathematics & Education of North America*, 376–377.

Carlson, M. A., **Suh, J**., Turner, E., & Aguirre, J. (2023). Unpacking Equity-Oriented Teaching Dilemmas in Elementary Mathematical Modeling Lessons. *Conference Papers -- Psychology of Mathematics & Education of North America*, 181–189.

Turner, E., **Suh, J.**, McVicar, E., Carlson, M. A., Brown, J., Aguirre, J., & Greene, M. (2023). Teacher Practices for Culturally Responsive Math Modeling in Grades K-2. *Conference Papers -- Psychology of Mathematics & Education of North America*, 943–953.

Suh, J. M. (2022). Intentionality in Using Learning Trajectories to "Reframe" Teacher Noticings Towards Anti-Deficit and Asset-Based Instruction. *Conference Papers - Psychology of Mathematics & Education of North America*, 43–61.

Aguirre, J. M., **Suh, J.,** Tate, H., Carlson, M. A., Fulton, E., & Turner, E. E. (2022). Leveraging Equity and Civic Empathy through Community-Based Mathematical Modeling. *Conference Papers -- Psychology of Mathematics & Education of North America*, 331–340.

Suh, J. M., Wills, T., Kirschner, S., Wearly, A., Vora, M. E., & Roscioli, K. (2022). Developing Asset-Based Instruction through Learning Trajectory-Based Curricular Design. *Conference Papers -- Psychology of Mathematics & Education of North America*, 215–223.

Suh, J.M., Anhalt, C., Carlson, M. & Cortez, R. (May 2021). *Mathematical Modeling Across Cultures: Broadening Opportunities by Leveraging Social Justice, Local Knowledge, and Equitable Mathematics Instruction.* North American Chapter of the International Group for the Psychology of Mathematics Education. Virtual Conference.

Suh, J.M., Turner, E., Anhalt, C., Carlson, M. A., Wickstrom, M., McDuffie, A. R.,... & Lee, D. H. (2019). Exploring the Nature of mathematical modeling in the early grades. In S. Otten, A. G. Candela, Z. de Araujo, C. Haines, & C. Munter (Eds.), *Proceedings of the forty-first annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 1967-1978). St Louis, MO: University of Missouri.Organized a working group at the Psychology of Mathematics Education Conference-

Suh, J.M., & Anhalt, C. (2018). Core Practices in Mathematical Modeling. In Pedro Palhares (Ed.), Proceedings of the 71st annual meeting of the International Commission for the Study and Improvement of Mathematics Teaching (pp. 55-61). Braga, Portugal:Université du Minho.

Suh, J.M., & Matson, K., Carlson, M., Wickstrom, M., Levy, R., Jamieson, S., Roth-McDuffie, A., Turner, E., Seshaiyer, P., & Anhalt. C. (2018). Exploring the Nature of Mathematical Modeling in the Early Grades. In T.E. Hodges, G. J. Roy, & A. M. Tyminski, (Eds.), Proceedings of the 40th annual meeting of the North American Chapter of the International

Group for the Psychology of Mathematics Education (pp. 1478-1486). Greenville, SC: University of South Carolina & Clemson University

Suh, J.M., & Matson, K., & Seshaiyer, P. (2018). Mathematical Modeling Competencies Essential for Elementary Teachers. In T.E. Hodges, G. J. Roy, & A. M. Tyminski, (Eds.), Proceedings of the 40th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (pp. 1122-1125). Greenville, SC: University of South Carolina & Clemson University.

Suh, J.M., Britton, L., Burke, K. and Ferguson, L. (April, 2018). Enhancing Mathematics Teaching And Learning For Social Justice Using Mathematical Modeling. Paper published in the American Educational Research Association Online Repository, New York, New York.

Suh, J.M., Seshaiyer, P., Galanti, T., & Birkhead, S. (April, 2018). *The Use of Lesson Study to Unpack the Learning Trajectories and Deepen Teachers' Content Knowledge*. Paper published in the American Educational Research Association Online Repository, New York, New York.

Suh, J.M, Seshaiyer, P., & Birkhead, S. (April, 2018). *Examining Design-based Implementation of Lesson Study for Multiple Professional Development Contexts*. Paper published in the American Educational Research Association Online Repository, New York, New York.

Suh, J. M., Matson, K., Wickstrom, M., Carlson, M., Levy, R. & Seshaiyer, P. (October, 2017). Mapping the Learning Pathways for Early Mathematical Modeling. In Galindo, E., & Newton, J., (Eds.). Proceedings of the 39th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. Indianapolis, IN: Hoosier Association of Mathematics Teacher Educators.

Birkhead, S., **Suh, J. M.**, & Gerasimova, D. (October, 2017). Improving knowledge of the learning progressions. through professional learning in collaborative vertical teams. In Galindo, E., & Newton, J., (Eds.). Proceedings of the 39th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. Indianapolis, IN: Hoosier Association of Mathematics Teacher Educators.

Suh, J. M., Matson, K., Williams, M. & Seshaiyer, P. (October, 2016). Immersing elementary teachers in mathematical modeling as co-designers through Lesson Study. In M. B. Wood, E. E. Turner, M. Civil, & J. A. Eli (Eds.), Proceedings of the 38th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (pp. 417-420). Tucson, AZ: The University of Arizona. ISBN 978-0-692-62876-8

Suh, J. M.,& Gallagher, M. (October, 2016). Pre-Service Teachers Engaged in Team Teaching and Collective Observation Using the Mathematics Quality of Instruction. In M. B. Wood, E. E. Turner, M. Civil, & J. A. Eli (Eds.), Proceedings of the 38th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education

(pp. 965-966). Tucson, AZ: The University of Arizona. ISBN 978-0-692-62876-8

Baker, C., Galanti, T**., Suh, J.M.,** Seshaiyer, P. & Frank, T. (October, 2016). Identifying Barriers to Teacher Growth in Implementing Problem Solving by Reflecting on Lesson Study. In M. B. Wood, E. E. Turner, M. Civil, & J. A. Eli (Eds.), Proceedings of the 38th annual meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education (pp. 355-359). Tucson, AZ: The University of Arizona. ISBN 978-0-692-62876-8

Suh, J. & Seshaiyer, P. (June, 2016). The Role of Information Technology in Engaging Elementary Students in Mathematical Modeling. In G. Chamblee & L. Langub (Eds.), Proceedings of Society for Information Technology & Teacher Education International Conference 2016 (pp. 2576-2583). Chesapeake, VA: Association for the Advancement of Computing in Education (AACE).

Weiss, A., **Suh, J**., King, L., Hargrove, D., & Gallagher, M. (April, 2015). Assessing the use of a validated framework for observing and reflecting on mathematical teaching and learning in a professional development school. Paper published in the American Educational Research Association Online Repository, Chicago, IL.

Seshaiyer P., Suh, J.M., & Corcoran, M. (July, 2015). Conceptual Understanding of Proportional Reasoning via Poster Proofs in Teacher Professional Development, Paper published in the Proceedings of the 7th ICMI-East Asia Conference on Mathematics Education.

Suh, J. M. & Seshaiyer, P. (October, 2014). Sequencing the mathematical learning progression through vertical articulation during Lesson Study. In Liljedahl, P., Nicol, C., Oesterle, S., & Allan, D. (Eds.). (2014). *Proceedings of the Joint Meeting of PME 38 and PME-NA 36.*Vancouver, Canada: PME.

Suh, J. M., Rawding, M., Weiss, A., King, L. & Fulginiti, K. (April, 2014). Evaluating high leverage clinical practices at a professional development school to enhance mathematics teaching and learning. Paper published in the American Educational Research Association Online Repository, Philadelphia, PA.

Suh, J. M., & Seshaiyer, P. (April, 2014). Mapping teachers' understanding of the mathematical learning progression through vertical articulation during Lesson Study. Paper published in the American Educational Research Association Online Repository, Philadelphia, PA.

Suh, J. M., Peixoto, N., Seshaiyer, P., Lee, K.H. Suh, D., & Jung, Y. (2014, June). Using design thinking tools to promote innovation in engineering students. Paper presented at the Joint International Conference on Engineering Education & International Conference on Information Technology. ICEE/ICIT-June 2 - 6, 2014. Riga, Latvia

Peixoto, N., **Suh, J. M**., Seshaiyer, P., Lee, K.H. & Suh, D. (2014, June). An International Collaboration to Cultivate Global Innovators. Paper presented at the Joint International

Conference on Engineering Education & International Conference on Information Technology. ICEE/ICIT-June 2 - 6, 2014. Riga, Latvia

Suh, J. M., Fulginiti, K.L., & Weiss, A. (April, 2013). Implementing instructional rounds at professional development schools to enhance mathematics teaching practices. Paper published in the American Educational Research Association Online Repository, Vancouver, BC.

Samaras, A. P., Smith, L., Harmon, L., Nasser, I., Smith, T., Borne, K., Parsons, S., Woodville, L., Constantine, L., Roman-Mendoza, E., **Suh, J**., Swanson, R., & Karczmarczyk, D. (2012). Reforming in the first person plural: Explorations of a faculty self-study collaborative. In J.R. Young, L.B., Erickson & S. Pinnegar (Eds.). Extending inquiry communities: Illuminating teacher education through self-study. Proceedings of the Ninth International Conference on the Self-Study of Teacher Education Practices, East Sussex, England (pp. 251-255). Provo, UT: Brigham Young University

Suh, J.M., Seshaiyer, P., Leong, K., Freeman, P., Corcoran, M., Meints, K., & Wills, T. (November, 2012). Fostering strategic competence for teachers through modeling rational numbers problem tasks. In Van Zoest, L. R., Lo, J.H., & Kratky, J.L.(Eds.). *Proceedings of the 34th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education.* (pp. 474-481). Kalamazoo, MI.

Johnson, P. E., & **Suh, J.M**. (November, 2012). Learning to lead mathematically productive discussions. In Van Zoest, L. R., Lo, J.H., & Kratky, J.L.(Eds.). *Proceedings of the 34th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education.* (pp. 717-720). Kalamazoo, MI.

Leong, K., **Suh, J**. M., Freeman, P., Seshaiyer, P. (November, 2012). Mathematics specialists "Noticing": Identifying the role of "Noticing" in the development of strategic competence. In Wiest, L. R., & Lamberg, T. (Eds.). *Proceedings of the 34th Annual Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education.*

Suh, J.M. & Seshaiyer, P. (2012). Sustaining mathematics professional development partnerships: A self-study to examine the roles of school university partners**.** Paper presented at the annual meeting of the American Educational Research Association. Retrieved July 1, 2012, from the AERA Online Paper Repository.

Suh, J.M. & Fulginiti, K. (2012). Multi-tiered professional learning through Lesson Study at the PDS Sites. Paper presented at the annual meeting of the American Educational Research Association. Retrieved July 1, 2012, from the AERA Online Paper Repository.

Suh, J.M., Seshaiyer, P., & Freeman, P. & Jamieson, T.S. (2011). Developing teachers' representational fluency and algebraic connections. In Wiest, L. R., & Lamberg, T. (Eds.). *Proceedings of the 33rd Annual Meeting of the North American Chapter of the International*

Group for the Psychology of Mathematics Education. 738-746.

Suh, J.M. & Fulginiti, K. (2011). Using Lesson Study at a professional development school to develop reflective practitioners. Paper presented at the annual meeting of the American Educational Research Association. Retrieved July 1, 2011, from the AERA Online Paper Repository.

Suh, J. M., & Fulginiti, K. (2009). Building collective knowledge using pedagogical content tools and problem solving. *Proceedings of the International Group for the Psychology of Mathematics Education,* 5:177-184. ISBN# 972-960-243-652-3.

Suh, J. M. & Moyer, P. S. (2008). Scaffolding special needs students' learning of fraction equivalence using virtual manipulatives. *Proceedings of the International Group for the Psychology of Mathematics Education* (pp. 4-297-304). ISSN# 0771-100X.

Suh, J. M. & Moyer, P. S. (2007). The Application of dual coding theory in multi-representational virtual mathematics environments. *Proceedings of the International Group for the Psychology of Mathematics Education.* Vol 4, pp. 209-216. Seoul: PME.

Invited Book chapters

Suh, J. M. (2010). Using the unique features of virtual manipulatives to design lessons. In P.S. Moyer-Packenham (Ed.), Teaching mathematics with virtual manipulatives, 20-27. Rowley, VA: Didax.

Suh, J.M., Moyer-Packenham, P.S. & Bolyard, J. J. (2010) Virtual manipulatives in classroom research In P.S. Moyer-Packenham (Ed.), Teaching mathematics with virtual manipulatives , 26-44. Rowley, MA: Didax.

Technical Reports

Suh, J.M. & Seshaiyer, P. (2014, September). Final Report for COMPLETE: Center for Outreach in Mathematics Professional Development and Educational Technology. Richmond, VA: Virginia Department of Education.

Suh, J.M. & Seshaiyer, P. (2011, September). Final Report for IMPACT: Improving Mathematical Practices through Algebraic Connections and Technology. Richmond, VA: State Council of Higher Education.

Suh, J.M. & Seshaiyer, P. (2009, September). Final Report for ACT NOW: Algebraic Connections and Technology. Richmond, VA: State Council of Higher Education.

NATIONAL AND INTERNATIONAL* PRESENTATIONS AND WORKSHOPS
*International conferences and workshop

Suh, J. M. (2025, July). *Tech-Knowledgy and diverse learners* [Webinar]. MTLT Teacher Talk, National Council of Teachers of Mathematics. https://www.nctm.org/online-learning/Webinars/Details/728

Suh, J. M., Aguirre, J. M., & Carlson, M. A. (2025, April). *Designing and studying teaching to advance equity and foster students' mathematical identity* [Symposium presentation]. American Educational Research Association Annual Meeting, Denver, CO.

Suh, J., & Calabrese, S. (2024, October). Promoting Equitable School-Family Collaboration through a Culturally Responsive Math Routine. *Conference Papers -- Psychology of Mathematics & Education of North America*, 376–377.

Kwun, N., Yeh, C., & **Suh, J.M.** (2024, September). *Elevating Asian American studies in mathematics education for community building and cross-racial solidarity* [Conference session]. NCTM Annual Meeting & Exposition, Marquette Room, Chicago, IL.

Suh, J., Roscioli, K., &Calabrese, S.(2024, September). *Inspiring mathematics teachers in designing community-based mathematical modeling tasks*. NCTM Annual Meeting & Exposition, Williford B, Chicago, IL.

Suh, J. (2024, September). *Interactive burst workshop: Photo eliciting and centering equity in early mathematics*. NCSM Annual Conference, McCormick Place Room 504a, Chicago, IL.

Suh, J., Keffer, E., Stratford, J., & Penley, J**.** (2024, September). *Enacting culturally responsive math teaching practices and building collective knowledge through lesson study*. NCTM Annual Meeting & Exposition, McCormick Place Room 502a, Chicago, IL.

Suh, J., & Maxwell, G. (2024, September). *Planning a sports clinic: Contexts that make measures of center matter* [Conference session]. NCTM Annual Meeting & Exposition, Hyde Park Room, Chicago, IL.

Aguirre, J., Carlson, M. A., Fulton, E., Hunter, J., Leach, G., Miller, J., Suh, J., & Turner, E. (2024, July). *Culturally responsive teaching and learning in elementary mathematics (International perspectives)*. Workshop presented at the 15th International Congress on Mathematical Education, Sydney, Australia.

Aguirre, J., Andrà, C., Beswick, K., Coles, A., Digan, S., Geiger, V., Hunter, J., Siller, S., Solares, A., Suh, J., Thanheiser, E., Unshelm, N., & Wagner, D. (2024, July). *Critical mathematical thinking for sustainable futures*. Working Group at the International Group for the Psychology of Mathematics Education, Auckland, New Zealand.

Suh, J.M. & Aguirre, J.M. (2024, July). Cultivating Civic Empathy and Equity with Culturally Responsive Mathematical Modeling. Keynote at the Teacher Professional Development Day at the International Group for the Psychology of Mathematics Education, Auckland, New

Zealand.

Suh, J. M., Tate, H., & Roscioli, K. (2024, April). *Lesson study facilitators' and teachers' role in co-designing and enacting justice-oriented community-based mathematical modeling tasks (Poster 7)*. Poster session presented at the 2024 AERA Annual Meeting, Philadelphia, PA.

Suh, J.M., Aguirre, J.M., Turner, E., Senia, L., McVicar, E., Carlson, M.A. (2023, June). Learn from Everybody's Strengths": Developing Confident Math Modelers through Routines and Formative Assessment. TODOS, Albuquerque, NM.

Aguirre, J., **Suh, J.M.,** Tate, H., Sotelo, Ocampo, D., Tuner, E., McVivar, E., Carlson, M.A. (2023, June). Cultivating empathy, equity and community connection with culturally responsive mathematical modeling in elementary grades. TODOS, Albuquerque, NM.

Suh, J.M. (2023, June). Cultivating Joy, Wonder and Power through Community-based Math Modeling. Canadian Mathematics Education Study Group, Regina, Saskatchewan.

Suh, J. M., Tate, H., & Roscioli, K. (2023, April). Lesson Study Facilitator's Role in Co-designing and Enacting Justice Oriented Community-based Mathematical Modeling Tasks. American Educational Research Association Virtual Conference.

Turner, E., Carlson, M.A. **Suh, J.M.**, & Aguirre, J. (2023, February). Understanding Equity Oriented Teaching Dilemmas in Elementary Mathematical Modeling Lessons. Association of Mathematics Teacher Educators, New Orleans, Louisiana.

Suh, J. M., Aguirre, J. & Tate, H. (2022, July) Connecting Early Community-based Mathematical Modeling with Culturally Responsive Math Teaching. Psychology of Mathematics Education. Alicante, Spain, Universidad de Alicante.

Suh, J.M. (2022, April). Engaging in Learning Trajectory-based Lesson Study and Formative Assessment to Promote Asset-based Instruction. American Educational Research Association Virtual Conference.

Suh, J.M., Roscoli, K.M., Tate, H., & Leong, K.(2022, February). Transformative Technology for Equity-Centered Instruction. Association of Mathematics Teacher Educators, Las Vegas, NV.

Turner, E., Aguirre, J., Carlson, M.A. & **Suh, J.M.** (2022, February). Centering Equity in Blended Learning Professional Development with Elementary Mathematical Modeling. Association of Mathematics Teacher Educators, Las Vegas, NV.

Suh, J.M. & Martinie, S. (2022, February). Fluency Practice with Fractions and Decimals = More than a Worksheet. NCTM Regional Conference. New Orleans, Louisiana.

Suh, J.M., & Birkhead, S. (2021, May). Developing an Asset-based View of Students' Mathematical Competencies through Learning Trajectory-based Lesson Study. North

American Chapter of the International Group for the Psychology of Mathematics Education. Virtual Conference.

Suh, J.M., Anhalt, C., Carlson, M. & Cortez, R. (2021, May). Mathematical Modeling Across Cultures: Broadening Opportunities by Leveraging Social Justice, Local Knowledge, and Equitable Mathematics Instruction.. North American Chapter of the International Group for the Psychology of Mathematics Education. Virtual Conference.

Suh, J.M., & Birkhead, S., Bradley, J., & Kirshner, S. (2021, April). Instructional and Contextual Elements That Support Teachers Engaged in Problem Formulation for Mathematical Modeling in Elementary Grades. Presented at the annual meeting of the American Educational Research Association Virtual Conference.

Suh, J.M., & Birkhead, S., Bradley, J., & Kirshner, S. (2021, April). Leveraging Key Developmental Understanding of Early Proportional Reasoning Learning Trajectory Research in Modeling for Mooncakes. Presented at the annual meeting of the American Educational Research Association Virtual Conference.

Suh, J.M., Turner, E., Roth McDuffie, A., Aguirre, J. & Birkhead, S.(2020 February). Defining Core Practices for Mathematical Modeling for Elementary Mathematics Teachers. Association of Mathematics Teacher Education. Phoenix, AZ.

Capen, L., Birkhead, S.& **Suh, J. M. (**2020, February). Going Beyond the Comfort Zone: Transitioning to Ambitious Teaching Practices through Video Peer Coaching. Association of Mathematics Teacher Education. Phoenix, AZ.

***Suh, J.M**., & Anhalt, C. (2019, July). Core Practices in Mathematical Modeling. Annual meeting of the International Commission for the Study and Improvement of Mathematics Teaching. Braga, Portugal:Université du Minho.

*Aguirre, J., Anhalt, C. & **Suh, J.M**. (2019, July). Flint Water Crisis: Social Justice through Mathematical Modeling. Annual meeting of the International Commission for the Study and Improvement of Mathematics Teaching. Braga, Portugal:Université du Minho.

Suh, J.M., Gilbert, A., Birkhead, S., Bradley, J., & Kirshner, S. (2019, April). Pedagogical Courage: A Collective Faculty Self-Study on STEM Teaching and Learning. Presented at the annual meeting of the American Educational Research Association Conference, Toronto, Canada.

Suh, J.M., & Birkhead, S. (2018, November). Unpacking a Geometric Learning Trajectory Through the Analysis of a Mathematical Task and Students' Strategies. North American Chapter of the International Group for the Psychology of Mathematics Education. Greenville, SC: University of South Carolina & Clemson University.

***Suh, J. M**. (2018, August). Mathematical Modeling: Experiencing Wonder, Joy and Empowerment. (Plenary Lecture) at Busan & Daejeon, Korea.

Suh, J.M., Seshaiyer, P., Galanti, T., & Birkhead, S. (2018, April). Unpacking Learning Trajectories during Coach-Facilitated Lesson Study. NCTM National Council for Teachers of Mathematics Research Conference. Washington, D.C.

Birkhead, S. & **Suh, J.M**. (2018, April).” What Is Right with Wrong Answers? Leveraging the Success in Student "Failure”. National Council for Teachers of Mathematics. Washington, D.C.

Jamieson, T. S., **Suh, J.M**., & Matson, K. (2018, April). Mathematical Modeling: Creating Students, Teachers, and Schools for the Future. National Council for Supervisors of Mathematics. Washington, D.C.

Suh, J.M., Birkhead, S. & Freeman, P.W. (2018, April). ”Futuring” PD through Video Coaching: Exploring tools to Take on Ambitious Mathematics Instruction. National Council for Supervisors of Mathematics. Washington, D.C.

Galanti, T., **Suh, J.M**. & Birkhead, S. (2018, April). From Fair Share to Non-unit Fractions: Using Vertical Articulation to Unpack Learning Trajectories During a Coach-facilitated Lesson Study. National Council of Supervisors of Mathematics. Washington, D.C.

Birkhead, S. & **Suh, J.M.** (2018, February). Using Vertical Articulation to Unpack Learning Trajectories during a Coach-Facilitated Lesson Study. Association of Mathematics Teacher Education. Houston, TX.

Matson, K., Jamieson, T.S., & **Suh, J.M**. (2018, February). Mathematical Modeling as an Equitable Teaching Practice – Using Math to Impact our Communities. Association of Mathematics Teacher Education. Houston, TX.

Seshaiyer, P., **Suh, J.M.,** Levy, R. Carlson, M.A., Jamieson, S. & Hunt, M. (2018, February). Guiding Teaching Principles to Implementing Mathematical Modeling in the Elementary Grades. Association of Mathematics Teacher Education. Houston, TX.

Suh, J. M., Matson, K., Wickstrom, M., Carlson, M., Levy, R. & Seshaiyer, P. (2017, October). Mapping the Learning Pathways for Early Mathematical Modeling. Presented at the conference for the International Group for the Psychology of Mathematics Education.Tucson, IN: Purdue University.

Birkhead, S., **Suh, J. M.**, & Gerasimova, D. (2017, October). Improving knowledge of the learning progressions. through professional learning in collaborative vertical teams.

Presented at the conference for the International Group for the Psychology of Mathematics Education.Tucson, IN: Purdue University.

Suh, J.M., Birkhead, S., Baker, C., Frank, T., Seshaiyer, P. (2017, April) Examining Coaching Structures that Supported Mathematics Teacher Learning. Presented at Research Conference for the National Council of Teachers of Mathematics, San Antonio, TX.

Suh, J.M., & Matson, K. (April, 2017). Mobilizing Teachers as Researchers to Promote an Innovative Classroom Practice of Implementing Mathematical Modeling in the Elementary Grades. Presented at the annual meeting of the American Educational Research Association Conference, San Antonio, TX.

Gallagher, M.A. & **Suh, J.M.** (2017, April) Learning to Notice Ambitious Mathematics Instruction Through Cycles of Structured Observation and Reflection. AERA, San Antonio, TX.

Suh, J. M., Matson, K., Williams, M. & Seshaiyer, P. (2016, November). Immersing elementary teachers in mathematical modeling as co-designers through Lesson Study. Presented at the conference for the International Group for the Psychology of Mathematics Education.Tucson, AZ: The University of Arizona.

Suh, J. M.,& Gallagher, M. (2016, November). Pre-Service Teachers Engaged in Team Teaching and Collective Observation Using the Mathematics Quality of Instruction. Presented at the conference for the International Group for the Psychology of Mathematics Education.Tucson, AZ: The University of Arizona.

Baker, C., Galanti, T., **Suh, J.M.,** Seshaiyer, P. & Frank, T. (2016, November). Identifying Barriers to Teacher Growth in Implementing Problem Solving by Reflecting on Lesson Study. Presented at the conference for the International Group for the Psychology of Mathematics Education.Tucson, AZ: The University of Arizona.

Suh, J. M., Matson, K., Williams, M. & Seshaiyer, P. (2016, October). Implementing Math Modeling in the Elementary Grades and Beyond. Presented at the SIAM Education Conference. Philadelphia, PA.

Gallagher, M., Parson, S. & **Suh, J.M.** (2016, April). "We Saw It!" Bridging Theory and Practice at Professional Development Schools Through Structured Observations. Presented at the annual meeting of the American Educational Research Association Conference, Washington, DC.

King, L., Gallagher, M. & **Suh, J.M.** (2016, April). The Richness of Mathematics According to Preservice Teachers in a Professional Development School Model. Presented at the annual meeting of the American Educational Research Association Conference, Washington, DC.

Suh, J.M., Seshaiyer, P., Levy, R. & Burrough, B. (2016, February). Math Modeling in the Elementary Grades through School University Partnership. Association of Mathematics Teacher Education. Irvine, CA.

Suh, J. M., Seshaiyer, P., William, M., Gerasimova, D., King, L.A., Matson, K., & Petillo, A. (2015, November). Implementing the core teaching practices to make mathematical thinking visible using student-generated models. Presented at the annual meeting PME-NA 37.East Lansing, MI.

Weiss, A., **Suh, J.M.,** King, L., Hargrove, D., & Gallagher, M. (2015, April). Assessing the use of a validated framework for observing and reflecting on mathematical teaching and learning in a professional development school. Presented at the annual meeting of the American Educational Research Association Conference, Chicago, IL.

King, L.A. & **Suh, J.M**. (2015, March) A school-based professional learning model for teacher candidates to enrich mathematical practices with diverse learners. Presented at the annual meeting of the National Association for Professional Development Schools. Atlanta, GA.

Parker, A. K., Parsons, S. A, Groth, L. A., Sell, C., & **Suh, J.M.** (2015, January). Teacher educators' discussions and reflections on teacher candidates' video recorded lessons: Our experiences with video coding technology. Presented at the annual meeting of the Association of Teacher Educators, Phoenix, AZ.

Suh, J. M. & Seshaiyer, P. (2014, October). Sequencing the mathematical learning progression through vertical articulation during Lesson Study. Presented at the Joint Meeting of PME 38 and PME-NA 36.Vancouver, Canada: PME.

Moyer-Packenham, P., & **Suh, J.M**. (2014, October). Work Session on Virtual Manipulatives and Emerging Technology in Mathematics Education. In Liljedahl, P., Nicol, C., Oesterle, S., & Allan, D. (Eds.). (2014). *Proceedings of the Joint Meeting of PME 38 and PME-NA 36.*Vancouver, Canada: PME.

Peixoto, N., **Suh, J. M**., Seshaiyer, P., Lee, K.H. & Suh, D. (2014, June). An International Collaboration to Cultivate Global Innovators. Paper presented at the Joint International Conference on Engineering Education & International Conference on Information Technology. ICEE/ICIT-June 2 - 6, 2014. Riga, Latvia

Suh, J. M., Peixoto, N., Seshaiyer, P., Lee, K.H. Suh, D., & Jung, Y. (2014, June). Using Design Thinking Tools to Promote Innovation in Engineering Students. Paper presented at the Joint International Conference on Engineering Education & International Conference on Information Technology. ICEE/ICIT-June 2 - 6, 2014. Riga, Latvia

Suh, J. M., Rawding, M., Weiss, A., King, L. & Fulginiti, K. (2014, April). Evaluating high leverage clinical practices at a professional development school to enhance mathematics

teaching and learning. Paper presented at the annual meeting of the American Educational Research Association, Philadelphia, PA.

Suh, J. M., & Seshaiyer, P. (2014, April). Mapping Teachers' Understanding of the Mathematical Learning Progression Through Vertical Articulation During Lesson Study. Paper presented at the Division K Round Tables at the annual meeting of the American Educational Research Association, Philadelphia, PA.

Suh, J. M., Fulginiti, K.L., & Weiss, A. (2013, April). Implementing Instructional Rounds at Professional Development Schools to Enhance Mathematics Teaching Practices. Paper presented at the annual meeting of the American Educational Research Association. San Francisco, CA.

Suh, J.M., Seshaiyer, P., Leong, K., Freeman, P., Corcoran, M., Meints, K., & Wills, T. (2012, November). *Fostering strategic competence for teachers through modeling rational numbers problem tasks.* Paper presented at the Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. Kalamazoo, MI.

Johnson, P. E., & **Suh, J.M**. (2012, November). Learning to Lead Mathematically Productive Discussions. Paper presented at the Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. Kalamazoo, MI.

Leong, K., **Suh, J. M.,** Freeman, P., Seshaiyer, P. (2012, November). Mathematics Specialists "Noticing": Identifying the Role of "Noticing" in the Development of Strategic Competence. Paper presented at the Meeting of the North American Chapter of the International Group for the Psychology of Mathematics Education. Kalamazoo, MI.

Suh, JM. (2012, July). *Multi-tiered Professional Development: Situating Lesson Study in a Professional Development School.* Presented at the International Congress of Mathematics Education, Seoul, Korea.

Suh, J.M. & Fulginiti, K.L. (2012, April). *Situated learning for teaching: Implementing Lesson Study at a Professional Development School to develop reflective practitioners.* Presenting at the American Educational Research Association, Vancouver, British Columbia, Canada.

Parson, S., Samaras, A. Nasser, I., Smith, T. & **Suh, J.M**. (2012, April). *Scholars of Studying Teaching Collaborative (SOSTC): A Cross-Disciplinary Initiative to Improve our Practice As University Instructors.* Presenting at the American Educational Research Association, Vancouver, British Columbia, Canada.

Parson, S., **Suh, J.M**., Schrum, L. Burrowbridge, S.C. (2012, January). *School-University Partnerships: Enhancing Teaching and Learning in Diverse Elementary Schools.* Global Summit on Childhood, Washington, D.C.

Suh, J.M., & Freeman, P. (2011, October). *The development of elementary and middle school teachers' algebraic connections through vertical articulation and Lesson Study.* Presenting

Research Report in the Psychology of Mathematics Education Conference Proceedings, Reno, Nevada.

Suh, J.M. (2011, April). *Developing Reflective Practitioners through Lesson Study at Professional Development Schools*. Presented at the American Educational Research Association, New Orleans, Louisiana.

Suh, J.M., Seshaiyer, P. & Freeman, P. (2011, April). *Developing representational fluency through problem solving.* Presented at the National Council of Teachers of Mathematics, Indianapolis, Indiana.

Suh, J.M., Seshaiyer, P. & Freeman, P. (2011, January*). Sustaining professional development through Lesson Study*. Presented at the Association of Mathematics Teachers Educator, Irvine, California.

Suh, J.M. & Baker, C. (2011, January). *Content-focused coaching with pre-service teachers through the summer lab school.* Presented at the Association of Mathematics Teachers Educator, Irvine, California.

***Suh, J.M**. (2009, December). *Developing mathematical potential of underrepresented groups through problem solving and algebraic reasoning.* Presented at the Joint Meeting of the Korean Mathematical Society and the American Mathematical Society in Ewha Womans University, Seoul, Korea.

Suh, J.M. (2009, July). *Building collective knowledge using pedagogical content tools and problem solving.* Paper Presented at the International Conference on Psychology of Mathematics Education (Research report), Thessaloniki, Greece.

Suh, J.M. (2009, April). *Developing collective teacher efficacy in a professional development school*, Paper presented at the American Educational Research Association, San Diego, California.

Suh, J.M. (2009, April). *Let's talk math: Engaging all learners in meaningful mathematical discourse***.** Presented at the Annual Conference for the National Council for Teachers of Mathematics**,** Washington, DC.

Suh, J.M. (2008, October). *Preparing pre-service teachers to teach mathematics with Tech-knowledgy*. Presented at the North American Chapter of Psychology of Mathematics Education, Lake Tahoe, Nevada.

Suh, J.M. (2008, July). *Scaffolding special needs students' learning of fraction equivalence using virtual manipulatives* Paper presented at the International Conference on Psychology of Mathematics Education (Research report), Morelia, Mexico.

Suh, J.M. (2008, April). *I can solve it! Developing persistent flexible problem solvers.* Presented at the National Council for Teachers of Mathematics, Salt Lake City, Utah.

Suh, J.M. (2008, January). *Teachers build mathematics knowledge side by- side through collaborative planning.* Presented at the Association of Mathematics Teacher Educators, Tulsa, Oklahoma.

Suh, J.M. (2007, July). *The application of dual coding theory in multi-representational virtual mathematics environments*. Paper presented at the International Conference on Psychology of Mathematics Education (Research report) Seoul, Korea.

Suh, J.M. (2007, July). *Building mathematical knowledge for teaching using Tech-Knowledgy.* Poster presented at the International Conference on Psychology of Mathematics Education, Seoul Korea.

Suh, J.M. (2007, June). *Modeling and investigating mathematics concepts using interactive math applets and virtual manipulatives in elementary grades.* Presented at the National Educational Computing Conference ISTE, Atlanta, Georgia.

Suh, J.M. (2007, April). *Third graders' mathematics achievement using virtual and physical manipulatives for adding fractions and balancing equations*. Poster presented at the American Educational Research Association (Poster presentation), Chicago, Illinois.

Suh, J.M. (2007, January). *Modeling mathematics concepts meaningfully using technology.* Presented at the Association of Mathematics Teacher Educators, Irvine, California.

Suh, J.M. (2006, July). *Introduction to Lesson Study.* Presented at the National Council for Teachers of Mathematics Workshop, Reston, Virginia.

Suh, J.M. (2006, March). *Third graders' achievement and representation preference using virtual and physical manipulatives in adding fractions and balancing equations in algebra*. Presented at the International Consortium for Research in Science and Mathematics Education, Nassau, Bahamas.

Suh, J.M. (2006, January and February). *Implementing the algebra standard in Grades 3–5.* National Council of Teachers of Mathematics e-workshops, Reston, Virginia

Suh, J.M (2005, January). *Technology used in the mathematics classroom: Understanding fractions using virtual manipulatives concept tutorials.* Presented at the Hawaii International Conference on Education, Honolulu, Hawaii.

Suh, J.M. (2003, April). *Junior Architect: Design your clubhouse using Measurement and Geometry.* Presented at the National Council for Teachers of Mathematics, San Antonio,

Texas.

STATE PRESENTATIONS

Roscioli, K., & **Suh, J. M.** (June, 2025). *Lesson study as a tool for equity-centered technology integration*. Presentation at the Virginia Council of Teachers of Mathematics Annual Conference, Virginia Beach, VA, United States.

Suh, J.M., Matson, K., Rossbach, M., Green, S., Jamieson, S. & Seshaiyer, P. (Sept., 2017). Mathematical Modeling: Nurturing Strategic Thinkers Empowered by Math. Presented at the Virginia Council of Mathematics Specialists Conference. Stafford, VA.

Suh, J.M., Birkhead, S., Galanti, T., Freeman, P., Gillen, L., Baker, C., Frank, T., & Seshaiyer, P. (Sept., 2017). Coaching for Powerful Math Classrooms using Problems to Unpack the Learning Trajectories. Presented at the Virginia Council of Mathematics Specialists Conference. Stafford, VA.

Suh, J.M., Seshaiyer, P., Freeman, P., & Gillen, L. (March, 2017). Modeling Mathematics Ideas to Enhance Productive Disposition towards Mathematics. Presented at the Virginia Council of Teachers of Mathematics. Harrisonburg, VA.

Suh, J. M., Baker, C.K., King,L., Galanti, T., Birkhead, S., Frank, T. & Seshaiyer, P. (June, 2016). Differentiating PD for Mathematics Specialists through Lesson Study Collaborative Networks and Video Coaching, Presented at the conference for the Virginia Mathematics Specialists Institute. Richmond, VA.

INVITED KEYNOTE and WORKSHOP

Suh, J. M. (2025, July). *Empowering students as mathematicians through community-based mathematical modeling* [Invited lecture]. 9th ICMI-East Asia Regional Conference on Mathematics Education (EARCOME 9), Seoul National University, Siheung Campus, South Korea.

Yue, M., Lyu, W., Mifdal, W., Zhang, Y., Suh, J., & Yao, Z. (2025). *MathVC: An LLM-simulated multi-character virtual classroom for mathematics education* (Invited presentation at Wolfram Research LLM Agent Colloquium). AAAI AI4Edu Workshop. https://arxiv.org/abs/2404.06711

Suh, J.M. & Aguirre, J.M. (2024, July). Cultivating Civic Empathy and Equity with Culturally Responsive Mathematical Modeling. Keynote at the Teacher Professional Development Day at the International Group for the Psychology of Mathematics Education, Auckland, New Zealand.

Suh, J. M. (October 2018). Lead Workshop Facilitator, Enhancing Student Learning through Mathematical Modeling (Grades 3-8), Virginia School Consortium for Learning, Charlottesville, Va.

Suh, J. M. (August 2018) Wonder and Joy of Mathematical Modeling. Invited by the Ministry of Education, Seoul, Korea.

Suh, J. M., Birkhead, S. & Matson, K. (2017, September). Designing rich mathematics problem tasks. (Invited workshop) at Seoul National University, Seoul, Korea.

Suh, J. M., Birkhead, S. & Matson, K. (2017, September). Mathematical modeling to promote 21st century Skills (Invited workshop) at Kyungnam Education, Busan, Korea.

Suh, J. M. & Seshaiyer, P. (2014, December). Problem Solving and Creativity in the Mathematics Classroom (Invited Keynote) at Korean National University Education, Cheongju, Korea.

Suh, J. M, Peixoto, N. & Seshaiyer, P. (2014, December). Design Thinking and Creative Problem Solving for STEM students. Ten-day Workshop at Pohang Institute of Science and Technology. Pohang, Korea.

Suh, J. M. (Nov. 2017) Lead Workshop Facilitator, Breaking Barriers: Actionable approaches to reach each and every learner in mathematics, INNOV8, National Council for Teachers of Mathematics. Las Vegas, Nevada.

Suh, J. M. (Sept. 2017). Inspiring Creativity through Math Modeling and STEM integration: Paradigm Shift in Teaching and Learning Mathematics. Invited to the National Assembly. Seoul, Korea.

Suh, J. M., Birkhead, S. & Matson, K. (Sept. 2017). Integrating STEM Contexts and Math Modeling to Engage in Three Dimensional Learning. Invited Workshop at Seoul National University. Seoul, Korea.

Suh, J. M. (July, 2017). Lead Workshop Facilitator, Supporting Students' Productive Struggle, NCTM Institute, National Council for Teachers of Mathematics, Baltimore, MD.

Suh, J. M. (Oct., 2016). Creating the Multiplier Effect through Teacher Research Presented at the 25th Annual Teacher Researcher Conference. Fairfax,VA.

Suh, J.M. & Seshaiyer, P. (Nov., 2016). Enhancing student learning through mathematical modeling. Presented at the Virginia School University Partnership Institute. Charlottesville, VA.

Suh, J. M. (Nov. 2016). Lead Workshop Facilitator, Engaging the Struggling Learner, INNOV8, National Council for Teachers of Mathematics. St. Louis, MO.

Suh, J. M. (July, 2016). Lead Workshop Facilitator, Number and Operations Institute (Pk-5), NCTM Institute, National Council for Teachers of Mathematics, July 21–23, 2016. Denver, CO.

Suh, J. M. (April 2016). Math Modeling to Engage Diverse Learners. Invited Workshop at Seoul National University. Seoul, Korea.

Suh, J. M. (July, 2015). Lead Workshop Facilitator, Connecting Numbers and Operations in the Classroom for Pre-K - Grade 5, NCTM Institute, National Council for Teachers of Mathematics. Chicago, IL.

Suh, J. M. (July, 2014). Lead Workshop Facilitator, Connecting Numbers and Operations in the Classroom for Pre-K - Grade 5, NCTM Institute, National Council for Teachers of Mathematics. San Diego, CA.

TEACHING

UNIVERSITY TEACHING EXPERIENCES
Professor, Mathematics Education (Fall 2018-Present)
Associate Professor, Mathematics Education (Fall 2012-Spring 2018)
Assistant Professor, Mathematics Education (Fall 2006-Spring 2012)
College of Education & Human Development, George Mason University, Fairfax, Virginia

- ➢ Member of Mathematics Education faculty
- ➢ Member of Elementary Education faculty

Responsibilities include teaching graduate courses in Elementary Education Programs and Mathematics Education Leadership, assisting in the development and implementation of programs for students, advising students within the program, and supervising graduate students in field placements for the professional development schools. Currently, I am the dissertation chair for four doctoral students.

Academic Program Coordinator for Mathematics Education Leadership- (2014-2016)
Responsibilities include recruiting mathematics specialists candidates and designing and offering courses that align to the Mathematics Specialists Endorsement requirements. Currently, GMU's Math Education Program is the only state approved licensing program with hybrid and online courses.

Co-Director for a joint center between the College of Science and the College of Education and Human Development-COMPLETE, George Mason University
COMPLETE: *Center for Outreach in Mathematics Professional Learning & Educational* is a mathematics partnership between George Mason University (GMU) and school divisions in Northern Virginia (Alexandria, Falls Church City, Fairfax County, Loudoun County, Manassas

City and Prince William County) to provide professional development for mathematics teachers in grades K-8.

Contributing Faculty for the Mathematics Education Center, George Mason University
The Center provides research opportunities for students interested in advanced degrees in Mathematics Education, Instructional Technology, and Educational Research. The Center's research activity serves as a laboratory where advanced graduate students enrolled in GMU programs participate in the ongoing research of the faculty. Students learn first-hand how to conduct educational research by participating in study design, instrument development, data collection, data analysis, manuscript preparation, and research presentations.

Courses taught in Master and Doctoral Programs

EDUC 896- Current Issues in Mathematics and STEM Education Research
The course is to introduce MEL students to contemporary issues in mathematics and STEM education; (2) to support students in critically reading research in mathematics and STEM education; and (3) to develop skills related to writing literature reviews and designing research.

EDCI 856- Mathematics Curriculum Development and Research (Doctoral Level course)
Designed to enable mathematics education leaders to evaluate and develop mathematics curriculum materials appropriate for school mathematics.

EDCI 858-Mathematics Education Research Design and Evaluation (Doctoral Level course)
Review methods of research appropriate for mathematics education settings and develop a theoretical framework and action plan for conducting a research project.

EDCI 857-Preparation and Professional Development of Mathematics Teachers (Doctoral Level course). Examine critical components of effective professional development and design of mathematics methods courses for teachers. Students design a professional development project with evaluation measures.

EDCI 725-National and International Topics in Mathematics Education (Doctoral Level course)
Study research on mathematics teaching and learning, including current issues and trends in mathematics education leadership at the national and international levels.

EDCI 552 – Mathematics Methods for the Elementary Classroom (Pre-service teacher education). An introduction to methods for teaching all children developmentally appropriate topics in number and operations, geometry, algebra, and data analysis. Students work with manipulatives and technologies to explore mathematics, solve problems, and learn ways to teach mathematics content to children.

EDCI 666- Research in Mathematics Education (Mathematics Specialists Leader Program)
Students survey the most current research literature in mathematics education and engage in research, study, and discussion of teaching and learning mathematics in school settings.

EDCI 645-Mathematics Learning and Assessment in K-8 (Mathematics Specialists Leader Program). Focuses on mathematics curricular standards and processes and a variety strategies for assessing student understanding in mathematics.

EDCI 646- Mathematics Education Leadership for School Change
Surveys current literature and large-scale studies in mathematics education and engages students in research, study, and discussion of factors that impact teaching and learning of mathematics in school settings.

EDCI 633 -Advanced Mathematics Methods for the Elementary Classroom
Focuses on teaching all children problem solving and higher order thinking skills based on state and national mathematics standards.

EDCI 790 - Internship in Education (Pre-service teacher education)
Graduate interns are supervised in a Professional Development School placement setting that includes observations and seminar experiences

EDCI 680-Teaching Mathematics for Diverse Populations
Mathematics specialists focus on characteristics of students with diverse learning and cultural needs and how to teach mathematics content using a variety of instructional materials, assessment tools, strategies, and techniques for teaching mathematics. Emphasis on supporting the power and complexity of students' mathematical thinking.

MATH 613-Algebraic Connections and Technology in the Middle Grades (Mathematics Specialists Leader Program) The course provides opportunities for the growth of middle grades mathematics teachers understanding of algebra as a study of patterns, symbolic language, a tool for problem solving, a study of functions, as it relates to proportional reasoning, generalized arithmetic, and as a way of modeling physical situations.

MATH 610: Number Systems & Number Theory for K-8 Teachers
This course is designed to develop a comprehensive understanding of our number system and how its structure is related to computation and problem solving.

MATH 614: Rational Numbers and Proportional Reasoning
This class enhances middle school teacher knowledge of rational numbers, ratios and proportional reasoning.

Other University Teaching Experience

University Supervisor (2004-2012)
Elementary Education Program, George Mason University, Fairfax Virginia.
Supervise pre-service elementary internship at Westlawn Elementary, Fall Church, Virginia

Adjunct Professor (Fall 2004-Spring 2006)
George Mason University, Fairfax, Virginia

Adjunct Professor (2003-2004)
Marymount University Arlington, Virginia

PUBLIC SCHOOL TEACHING EXPERIENCES (10 years)
Third - Fifth Grade Mathematics Teacher, Little River Elementary School, Loudoun, Virginia
Gifted Education Teacher, Willow Springs Elementary School, Fairfax, Virginia
Multiage Elementary Teacher, Lemon Road Elementary School, Falls Church, Virginia
Korean Immersion Elementary Teacher, Seoul American Elementary School, Seoul, Korea

Creative Endeavors in Publication- Mathematics Curriculum Textbook Series

Bay- Williams, J., Berry, R., Caldwell, J. , Champain, Z., Charles, R., Copely, J., Crown, W., Fennel, F. S., Karp, K., Murphy, S., Schielack, J., **Suh, J. M**., & Wray, J. (2018). enVision math 2.0. Pearson. NY. (alphabetically listed) P*rogram Author for the enVisionmath2.0 curriculum for grades K-6 math curriculum for Common Core to support print, blended, and 1:1 digital learning experiences.*

RESEARCH SUPERVISION

PHD Dissertation Chair
Laurie Capen, Chair, Mathematics Educational Leadership (completed 2025)
Sara Birkhead, Chair, Mathematics Educational Leadership (completed 2025)
Kim Fair, Chair, Mathematics Educational Leadership (completed 2025)
Holly Tate, Chair, Mathematics Educational Leadership (completed 2024)
Stephanie Sigmon, Chair, Mathematics Educational Leadership(Completed 2024)
Michael Briscoe, Member (Completed 2024)
Sara Kirshner, Chair, Mathematics Educational Leadership (completed 2023)
Katherine Meints, Chair, Mathematics Educational Leadership (completed 2019)
Kim Leong, Chair Mathematics Educational Leadership (completed 2019)
Kathleen Matson, Chair, Mathematics Educational Leadership (completed 2018)
Mimi Corcoran, Chair, Mathematics Educational Leadership (completed 2017)
Alice Petillo, Chair, Mathematics Educational Leadership (completed 2016)
Melissa Gallagher, Member, Mathematics Educational Leadership (completed 2016)
Theresa Wills, Chair, Mathematics Educational Leadership (completed 2015)
Courtney Baker, Member, Mathematics Educational Leadership (completed 2015)
Spencer Jamieson, Member (completed 2015)
Dori Hargrove, Member (completed 2015)
Pam Bailey, Member, Mathematics Educational Leadership (completed 2015)
Wendy Schudmak, Chair, Mathematics Educational Leadership (completed 2014)
Molly Rawding, Chair, Mathematics Educational Leadership (completed 2013)
Chris Johnston, Chair, Mathematics Educational Leadership (completed 2009)
Gwenanne Salkind - Mathematics Educational Leadership (completed 2009)

PhD Dissertation Committee

Erin Miller (Chair)

PhD Portfolio (Doctoral Advising Committee (Pre-dissertation Committee)

Maureen Vora, Chair
Stephanie Calabrese, Member

Mathematics Curriculum Websites

Family of Problems- (http://completecenter.gmu.edu/familyofproblems.html)
Resources created from hundreds of Lesson studies for teachers . One of the most exciting collaborative endeavors in the teaching of mathematics was developing a website called the Family of Problems. This website is a collection of co designed research lessons from previous Lesson Study where I was able to engage teachers in mini-teaching experiments. I am most excited to share this publicly with VA teachers and beyond because of my belief that teachers need to become more empowered as professionals who can be designers of instructional resources and teachers as researchers.

Video from the Association for Supervision and Curriculum Development (ASCD) and NCTM, *Meaningful Mathematics: Leading Students Toward Understanding and Application released in 2007*.

Professional Development Resources designed and published on the World Wide Web:
Developing Video Clip Library of research lessons
http://completecenter.gmu.edu/middle.html

- Developing Mathematical Proficiency - Math Teaching Resources
- Improving Mathematical Practices through Algebraic Connections
  IMPACT MATH: Algebraic Connections and
  Technologyhttp://actmath.blogsite.org:9999/
- Math Bridges: K-8 On-line resources for technology and mathematics (2007)
  http://mason.gmu.edu/~jsuh4/mathbridges/index.htmlhttp://mason.gmu.edu/~jsuh4/mathbridges/index.html
- Junior Architects- Illumination Lesson Plans-Developed geometry and measurement lessons for NCTM's Illumination website.
  http://illuminations.nctm.org/LessonDetail.aspx?ID=L653
- Our ClubHouse Curriculum development for Gifted math program
  Enrichment for primary students using real life problem solving.
  http://mason.gmu.edu/~jsuh4/clubhouse/index.htm

SERVICE

NATIONAL AND INTERNATIONAL LEADERSHIP AND SERVICE

National Level Service

Lead Member of the Collective Action in Support of Teachers & Mathematics Teacher Educators (*CAST MTE Task force)* as part of the Association of Math Teacher Educators (AMTE), to support mathematics teacher educators (MTEs), including graduate students and international scholars, who have been impacted by the termination of state and federal funding functioning as a collaborative hub for organizing, supporting, and amplifying the voices of affected educators; planning and hosting webinars, publishing commentary pieces, securing external funding, and developing community circles and virtual events. I feel proud to be leading this task force and also seeks to elevate humanizing narratives, promote professional development, and mobilize collective action to preserve and advance mathematics education research and teacher preparation.

NCTM Elected Board Member 2020-2024
NCTM Mentoring: Mentoring early career teachers with their conference proposals to elevate classroom teachers. National Council of Teachers of Mathematics.

AMTE BIPOC Scholar: Supported two untenured faculty in our field with research and teaching. Association of Mathematics Teacher Educators.

CEHD Level

PhD Committee: Volunteered to review PhD course change requests to streamline the doctoral program and presented at the first PhD forum to discuss research advice for doctoral students. George Mason University, College of Education and Human Development

Program Level Service

MEL Advisory Board Organizer (On going) Coordinate biannual advisory board member meetings for MEL, conducting review for CAEP accreditation. George Mason University, College of Education and Human Development

ELEM Support (On going) Supporting info sessions and adjuncts with teaching. George Mason University, College of Education and Human Development.

AMTE Vice President of Professional Learning 2020-2024
As an appointed leader, I led strategic planning and implementation of AMTE's professional learning initiatives; Oversaw the development and coordination of webinars, virtual institutes, and leadership development programs; Collaborated with AMTE committees to align professional learning with organizational goals and member needs; Supported early career and experienced mathematics teacher educators through targeted learning opportunities; Facilitated

cross-institutional collaboration and knowledge sharing within the mathematics education community; Contributed to the advancement of equity-focused and research-informed professional development.

Emerging Issues committee AMTE 2019-2020
AMTE Emerging Issues Committee Appointment (2019-2022) Explores and examines issues that emerge either from outside of AMTE or its leadership that impact mathematics teacher education. The committee responds to the issues as needed or identifies AMTE members who have the expertise to review and respond to the issues, and then recommends actions to the President and Board.

Centennial Conference Planning Committee, NCTM 2018-2020
Member, NCTM 2020 Conference Planning committee (2018-2020) As a conference planner, the committee met at the NCTM headquarters to decide on themes, events, keynotes, reviewed hundreds of proposals and scheduled the conference sessions.

SIAM/ NCTM Liaison Member 2020-2024
Fostered collaboration between the Society for Industrial and Applied Mathematics (SIAM) and the National Council of Teachers of Mathematics (NCTM); Promoted interdisciplinary connections between applied mathematics and K–12 mathematics education; Facilitated joint initiatives, including conference sessions, publications, and outreach activities; Advocated for the integration of mathematical modeling and real-world problem solving in school

STEM Advisory Council- Children Science Center. 2017-continuing
This advisory board meets quarterly to advise staff members at the center about curriculum, outreach, research and connecting formal and informal learning. My service to this council is a way to be an advocate of informal learning in STEM. At the last council meeting, teams of experts from multidisciplinary fields collaborated on providing lesson ideas for the center staff.

Appointed Representative for the Professional Development Committee for the National Council for Teachers of Mathematics (2015-2019)
Serve as a professional development committee member that will spearhead the new PD initiatives. This was an honor because I was able to work with the key mathematics educators who lead the national organization and working with NCTM's initiatives also provides me with the recognition at the National level.

Elementary Math Expert in NCTM's Classroom Resources Development Team for the National Council for Teachers of Mathematics (2015-2018)
Serve as an Elementary Mathematics Expert on the Classroom Resources Development Team of NCTM to create teaching resources that support implementation of the eight effective teaching

practices in Principles to Actions. In addition, I was invited to teach the summer institute for NCTM's Number Institute.

NCATE trained reviewer (2016- current)
Serve as the CAEP program reviewers and review a program report submitted by an institution, and make a judgment as to whether the program met standards and qualified for national recognition.

Secretary and Treasurer for AERA's Professional Development Schools-Special Interest Group (April 2013 –April 2016) Served as a secretary and treasurer for the PDS SIG, I am working with the leadership team at AERA to disseminate the research and opportunities for collaboration among PDS research groups across school-university partnerships.

Editorial Panel for School University Partnership (2013-Present)
Working directly with the Journal Editor Kristien Zenkov to review high quality manuscripts to push the PDS research agenda forward.

Curriculum Writer for Envision Mathematics Curriculum Development (2013-Present)
My contribution to the curriculum writing project is to develop a meaningful Common Core State Standards (CCSS) aligned mathematics curriculum that will be used in schools.

Editorial Panel Member for the National Council of Teachers of Mathematics Journal –Teaching Children Mathematics (Service Period.August 2010-2013).
Served as an editorial panel member and a digital content editor for National Council of Teachers of Mathematics (NCTM)'s journal, Teaching Children Mathematics for three years.

Technology Department Editor for the National Council of Teachers of Mathematics Journal –Teaching Children Mathematics (Service Period.August 2010-2013).

Reviewer for Research Grants, National Science Foundation, (2010-2017)
Continue to serve as a panel member for different NSF grants and in turn learning more about grant writing, the evaluation and review process.

Illumination Advisory Group and BrainingCamp Project for the National Council of Teachers of Mathematics (March, 2008-ongoing). Served as a member of an advisory group for the research and development of NCTM's Illumination Project and BrainingCamp Project.

Reviewer for the International Group for Psychology of Mathematics Education (IGPME) (2007-present)
Reviewed submitted conference research reports and gave feedback for acceptance/rejection.

Reviewer for Association of Mathematics Teacher Educators journal TE-MAT (2006-present). Teacher Education Materials Project provides descriptions of professional development materials for mathematics teachers.

Instructor for National Council of Teachers of Mathematics Lesson Study Course (Summer 2006 & 2007)

Content Expert Reviewer (2007). Technology Integration in the Content Areas. Thomson Publishing

SERVICE TO COLLEGE AND UNIVERSITY

Committee Membership and Service Highlights

TTARC committee member, (2025-2026)

Ph.D. Representative, Mathematics Education Leadership (2023-2025)

Faculty Evaluation committee member (2018-2021)

Promotion and Tenure committee member (2017-2019)

Ph.D. Representative, Mathematics Education Leadership (2017-2019)

Academic Program Director, Mathematics Education Leadership Program (Fall 2014-2016)

Member, Mathematics Education Leadership Program Committee (Fall 2006-present)
Recent Highlights: 2014 Math Specialists Institute, Lead Speaker for Workshop on Working with Diverse Student Populations.

Member, Elementary Teacher Preparation Program Committee (Fall 2006-present)
Recent Highlights: Organizing the 2013 Math Enrichment PDS Lab School Westlawn Elementary, Falls Church, Virginia.

Co-Chair, Tenure Track Annual Review Committee-TTARC (Fall 2015-2016)

Member, Tenure Track Annual Review Committee-TTARC (Fall 2014-2016)

Chair, Professional Development Committee –PDC (Fall 2013-2015)

Member, Professional Development Committee –PDC (Fall 2013-Spring 2014)

Provost- Charged Task Force on Textbook Affordability (Fall 2012-Spring 2013)

Program Assessment Committee (Fall 2010-2012)

PHD Committee (Fall 2008-Spring 2011)

STEM Advisory Committee Inter-college committee (Spring 2011)

Professional Development Schools University Facilitators (Fall 2006-2011)
Westlawn Elementary School, FCPS, VA (2004-2011) and
Colin Powell Elementary School, FCPS, VA (2009-2010)

STATE AND LOCAL OUTREACH FOR SCHOOLS

Reviewer on the Virginia Standards of Learning Review Committee, Spring 2022
The State Math Coordinator, Tina Mazzacane invited me to be on a team of reviewers for the new State Math Standards that are being implemented in 2024. This work is really important because the state standards guide mathematics instruction. The work was intense as we had to review each of the grade level standards and map the learning progressions so that we ensured there was no gap in the learning path.

Reviewer on the Virginia Standards of Learning Review Committee, Spring 2016
The State Math Coordinator, Michael Bolling invited me to be on a team of reviewers for the new State Math Standards that are being implemented in 2018.

Organizer for the COMPLETE MATH Booth at the USA Science Engineering Festival, DC -April 2015
A creative endeavor that stemmed from working with teachers on mathematical modeling through Lesson Study was our presence at the USA SCIENCE ENGINEERING Festival in Washington DC. We had a chance to share with thousands of attendees the meaningful ways children can immerse in math modeling by solving everyday life problems using mathematics. This venue allowed us to come together as a community of math educators, teacher leaders, and elementary students to share our learning from the IMMERSION Math Modeling project. (https://www.youtube.com/watch?v=KUguqpYO29o)

Math4All-An Outreach Service
Mission: Creating Opportunities for All Students to Enjoy Math by Providing Service for Schools, Parents who want more for their students. Working with Pre-K educators in Arlington County Public Schools (2014-2015)

E=MC2: Enrichment in Mathematics, Computing and Creativity for Young Scholars
Math Professional Development for Preservice Elementary Teachers & Clinical Faculty in Numbers and Rational Numbers for K-8 teachers
Two week summer math camp for primary and upper elementary students identified as Young Scholars participated in a GMU sponsored summer institute/camp. July of 2011 (Westlawn ES),

2012 (Annandale ES), 2013 (Westlawn ES, Fairfax Villa), 2014 (Fairfax Villa & Providence ES) 2017, (Centreville ES)

Math Professional Development for k-8 Teachers-Numbers & Rational Numbers
Elementary/middle school teachers from 6 districts participated in a GMU sponsored VDOE funded summer institute. July 18-22, 2011 George Mason University

Math Professional Development for Elementary Teachers-Number and Number System for K-8
120 elementary teachers from 6 districts participated in a GMU sponsored VDOE funded summer institute. August 3-7, 2010- George Mason University

Math Professional Development for Middle School Teachers-Rational Numbers for k-8
90 middle school teachers from 6 districts participated in a GMU sponsored VDOE funded summer institute. August 9-13, 2010 George Mason University

Lesson Study Professional Development for Elementary & Middle School Teachers
90 middle school teachers from 5 districts participated in a GMU sponsored SCHEV funded school-based Lesson Study during the Spring of 2010 in Fairfax, Prince William, Norfolk, Petersburg and Hopewell.

Invited Presenter Advanced Academics Conference (August Sessions, 2010, 2011, 2012, 2013, 2014) *Enhancing critical thinking and algebraic reasoning among diverse learners*

Building Collective Mathematical Knowledge through Pedagogical Content Tools
Presented instructional strategies that promoted collective mathematical knowledge in a problem-based classroom.

Consultant for Professional Development for Lesson Study for DC Charter School.
E.L. Haynes District of Columbia Public Schools (Spring 2008).
Provided long term professional development for teachers in establishing a Lesson Study community.

Consultant and Instructor for Teacher Leadership Grant. Westlawn Elementary
Falls Church, Virginia (Summers 2006, 2007 & 2008).
Collaborated (in kind) on a grant for Developing Teacher Leadership for Summer Institutes. Planned and taught professional development workshop for a three week summer institute for Westlawn Elementary School in Falls Church, Virginia

Instructor for Westlawn Labschool MATH 411: Falls Church, Virginia (Summer 2008).
Taught problem solving in mathematics (in context of their own community) to rising 4-6th grade students from a Title One Elementary School.

Lead Instructor (3-4). MATH BRIDGES II Project: Concepts and Connections

in the K-8 Standards. (2002-2004). Two week course with four follow-up classes
No Child Left Behind Grant. Professional Development Program, Virginia

Dwight D. Eisenhower Professional Development Program, Virginia ($65,347). Project goal: Provide professional development in the use of concrete and virtual manipulatives for 60 K-8 teachers in the Loudoun County Public School System.

MEMBERSHIP IN PROFESSIONAL SOCIETIES
American Educational Research Association
Association for the Psychology of Mathematics Education, North American Chapter and International member
National Council for Teachers of Mathematics
National Council for Supervisors of Mathematics
Association for Supervision and Curriculum Development
Association for Mathematics Teacher Educators

Project Websites Created to Share with the Broader Mathematics Education Community

Advancing Equity and Strengthening Teaching with Elementary Mathematical Modeling is a teacher PD project focused on strengthening K-5 teaching with mathematics modeling. Building on previous foundational work around mathematics modeling and equity, this project will bring together equity oriented teaching practices and mathematical modeling to design and research the impact of a blended PD program on teacher practice. www.eqstemm.org

Equity-centered Transformative Technology (EQT-tech) Lesson Analysis Tool builds on the seminal work on technology, pedagogy, and content knowledge (TPACK, Koehler et al., 2011; Mishra et al., 2006) and considers how technology can support equitable teaching practices (NCTM, 2019; Aguirre et al., 2013). The goal of the tool is to develop teachers' awareness and action to bring equity to the forefront in the use of technology in the mathematics classroom. www.eqttech.org

Learn about SPARK STEM: Sparking a Sense of Wonder in STEM
http://sparkstem.onmason.com/

FAMILY OF PROBLEMS

Learn about our Family of Problems
http://completemath.onmason.com/family-of-problems

MATH HAPPENINGS

Learn about Math Happenings
http://mathhappenings.onmason.com