

»» SCHOOL OF TEACHER EDUCATION AND LEADERSHIP ««

MATH TALKS

Mathematics Education and Leadership Newsletter



Top (Left to Right): Amy Lynn Kinder, Allison Roxburgh, KimberLeigh Hadfield, Lise Welch, Patricia Moyer-Packenham, Michael Leitch
Bottom (Left to Right): Katherine Vela, Beth MacDonald, Jill Harmon, Rachel Reeder

TOP NEWS OF THE SEMESTER

After a rigorous search led by Dr. Shumway, the Mathematics Education and Leadership concentration are welcoming two new faculty that will bring their diverse perspectives and research expertise to the School of Teacher Education and Leadership. Read more on page 3.

MATH ED WELCOMES TWO NEW FACULTY

RECORD NUMBER OF MATH ED DOCTORAL GRADUATES

Record-breaking achievement: Seven students in the Mathematics Education and Leadership concentration have successfully graduated with their PhD in Education at the May 2023 Graduation Ceremony, marking a significant milestone in our program's history. See page 6 for a list of graduates.

Two mathematics education faculty members have earned well-deserved recognition for their outstanding contributions to the university. Dr. Jessica Shumway was awarded the "Graduate Faculty Mentor of the Year" and Dr. Katherine Vela was awarded the "Faculty Teacher of the Year." Read more on page 7.

DUAL ACCOLADES FOR MATH ED FACULTY

EMERGING VOICES IN MATH ED: DOCTORAL SCHOLARS TAKE THE STAGE AT MULTIPLE CONFERENCES

PhD students in the Math Education and Leadership program produced over 20 conference presentations the past year, in addition to scholarly publications! **Kimberly Beck** presented at three conferences, including the National Council of Teachers of Mathematics Research Conference, Utah Council of Teachers of Mathematics Annual Conference, and National Council of Teachers of Mathematics Virtual Conference. Her presentations centered around integrating computer science, coding, and mathematics.

Michelle Parslow similarly had a productive year, with 16 conference presentations and two scholarly publications. Notably, Michelle presented at the European Science Education Research Association Conference in Cappadocia, Turkey. She presented at a variety of national and regional conference. In addition to conference presentations, Michelle co-authored two articles that were published in *Science Activities* and *Science Scope*.

Sandra Miles delivered dynamic presentations at four conferences, including the School Science and Math Annual Convention, the Utah Council of Teachers of Mathematics, the National Science Teachers Association National Conference, and the Utah State University Library Digital Humanities Symposium. **Douglas Weber** co-presented with Sandra and Michelle at the National Science Teachers Association National Conference.

Jason Hart delivered a presentation on success criteria and learning scales at the Utah Council of Teachers Mathematics Conference. Jason's presentation provided a strategy for assessing students' mathematical understanding with depth and rigor.

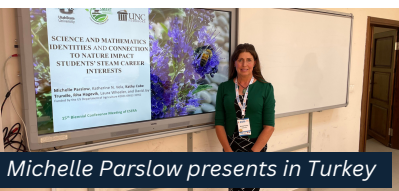
Finally, **Missy Barker** represented the Math Education and Leadership program by presenting on Thinking Classrooms at the Utah Council of Teachers of Mathematics Conference. Thinking Classrooms are a new, dynamic approach to instruction that emphasizes student thinking. Missy supported practicing teachers in developing new skills for teaching mathematics.

Wonderful job to our Math Education and Leadership Doctoral students!

SHARING KNOWLEDGE,
ONE SESSION AT A TIME
DOC STUDENTS PRESENT
OVER 20 SESSIONS
FILLED WITH INSIGHTS,
INNOVATION, AND
INSPIRATION.



Sandra, Michelle, Kim, and Jason present at UCTM



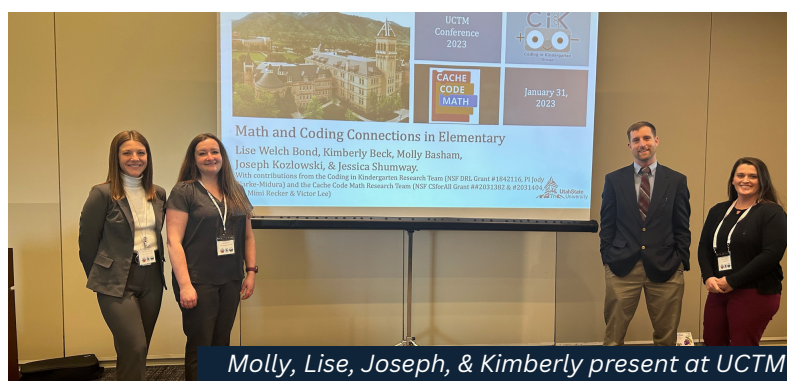
Michelle Parslow presents in Turkey



Math Ed has a large presence at UCTM



Kimberly presents at NCTM



Molly, Lise, Joseph, & Kimberly present at UCTM

DOUBLING DOWN ON MATH ED EXCELLENCE: TWO NEW FACULTY JOIN OUR RANKS

In Fall 2023, Drs. Tye Campbell and Michelle Frierson joined the Mathematics Education and Leadership faculty.



➤➤➤ **DR. TYE CAMPBELL,**
ASSISTANT PROFESSOR

Prior to this post, Dr. Campbell was as an assistant professor at Crandall University in New Brunswick, Canada. He earned his PhD in Curriculum & Instruction with an emphasis in Mathematics Education from The University of Alabama in Tuscaloosa, AL.

Dr. Campbell's research interests include group work in mathematics, mathematical flourishing, teacher and student noticing, and proof and argumentation. In one of his recent projects, Dr. Campbell explored how hands-on STEM projects influenced elementary students' propensities to flourish. He created a novel conceptual framework of STEM flourishing that consisted of four pillars: positive emotions in STEM, engagement in STEM, perceived competence in STEM, and community in STEM. Then, he used this conceptual framework as a lens of analysis to explore elementary students' flourishing. He found that a yearlong intervention centered around hands-on STEM projects seemed to support elementary students' propensities to flourish in STEM. These findings are important because they promote continued dialogue on promotive teaching practices that enhance students' affective relationships with STEM.

Prior to earning his PhD, Dr. Campbell worked as a middle school and high school teacher in Alabama and Colorado. He has experience working in urban and rural schools, and he has taught nearly every subject in middle/high school mathematics. Personally, Dr. Campbell has a wife (Caitie) and two daughters (Sevy and Shailaja). They enjoy snow skiing/boarding, biking, and just being together. They are settling into Logan and enjoying the beautiful sites.

Dr. Michelle Frierson holds a Bachelor's degree in Elementary Education and a Master's degree in Mathematics Curriculum and Instruction. In the spring of 2023, Michelle earned a PhD in Mathematics Curriculum and Instruction with specialization in the areas of equity and Black joy. Her academic journey has been complemented by six years of teaching experience in various educational settings, including public, charter, and international schools.

Dr. Frierson's research focus is rooted in her commitment to addressing the underrepresentation of Black youth and educators in STEM spaces. Her doctoral dissertation centered on empowering Black youth to reauthor their experiences in STEM education, shedding light on the nuances of Black joy and its presence, constraints, and surveillance within K-12 classrooms.

Her current role as an assistant professor at Utah State University marks the next phase of her journey. She hopes to continue advocating for equity in STEM education and centering joy in STEM. In her spare time, Dr. Frierson enjoys working on music and art. She also loves reality television and her cat, Murphy, who can be found modeling on Instagram.



➤➤➤ **DR. MICHELLE FRIERSON,**
ASSISTANT PROFESSOR

BREAKING BOUNDARIES: FULBRIGHT AWARD OPENS DOORS IN BRAZIL

DR. JESSICA SHUMWAY

Dr. Jessica Shumway, Associate Professor for Mathematics Education and Leadership, received a Fulbright Scholar Award for a teaching and research exchange at Universidade Estadual Paulista (UNESP) in Rio Claro, Brazil during April to July 2023. Shumway was hosted by Dr. Marcelo de Carvalho Borba, coordinator of the Grupo de Pesquisa em Informática, outras Mídias e Educação Matemática (Research Group in Informatics, other Media and Mathematics Education). Shumway and Borba are conducting research on humans-with-media thinking collectives that emerge when students communicate mathematics and produce knowledge with digital mathematics videos. Shumway and Borba co-taught a course for UNESP master's and doctoral students about theories and methodologies for research in mathematics education and technologies for mathematics learning. Shumway returned to Brazil in September 2023 for the IV Simpósio Internacional de Tecnologias em Educação Matemática, where she was a keynote speaker and part of an international panel of scholars that study technology in mathematics education.

FULFILLING A FULBRIGHT DREAM IN VIBRANT BRAZIL: A REMARKABLE OPPORTUNITY TO EXPLORE, LEARN, AND CONNECT ACROSS CULTURES.

Key aims of the Fulbright Scholar Program are to increase mutual understanding between nations and advance knowledge across communities. The Fulbright Award provided Shumway with a launching point for long-term collaborations with Brazilian colleagues. This international experience afforded her with new perspectives, ways of researching, and collaborations invaluable to her scholarly work, teaching, mentorship, and leadership.



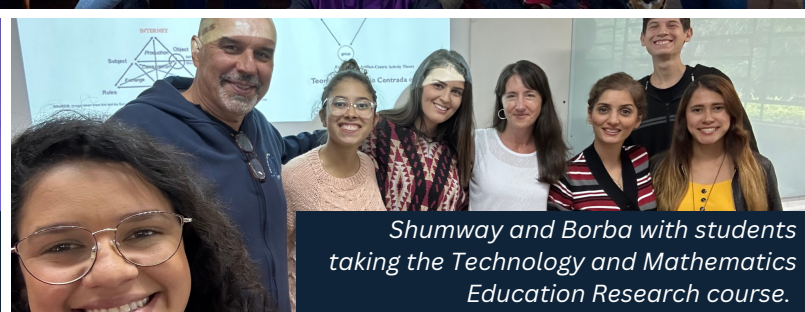
Shumway, 3rd Grade Teacher Rosemeire Archangelo, and School Director Ana Carolina Zuchini



Shumway and Borba with participants at Shumway's seminar on Technology in Elementary Mathematics Education.



Shumway, Jhony Alexander Villa-Ochoa (Colombia), and Monica Villarreal (Argentina) at the IV Simpósio Internacional de Tecnologias em Educação Matemática (Rio Claro, Brasil).



Shumway and Borba with students taking the Technology and Mathematics Education Research course.

»»» DR. SHERYL RUSHTON



»»» **USU GRADUATION 2014**

Dr. Sheryl J. Rushton is an accomplished academic and educator with a wealth of experience and expertise in the field of mathematics education. In 2014, she earned her PhD in Education with a specialization in Curriculum and Instruction, emphasizing Mathematics Education and Leadership, from Utah State University. Currently holding the position of Associate Professor at Weber State University, she plays a pivotal role as the Director of Assessment and Accreditation and serves as the Elementary Math Methods professor.



»»» **DR. SHERYL RUSHTON,
ASSOCIATE PROFESSOR
WEBER STATE UNIVERSITY**

Dr. Rushton's dedication to service and her contributions to university faculty governance have earned her numerous awards and accolades. She

has made a significant impact through her involvement as the secretary of the Utah Association of Mathematics Teachers (UATME), her role as the higher education representative on the Utah Council for Teachers of Mathematics (UCTM) board, and as a member of the Licensing Applauds Guidance Group (LAGG) for the Utah State Board of Education (USBE). One of the most rewarding aspects of Dr. Rushton's service has been her active participation in the International Society for Teacher Education (ISfTE), where she served as the treasurer for six years and currently holds the position of Secretary General. This global engagement has taken her to various countries, including South Africa, Japan, Brazil, Denmark, the United States, Canada, and Bhutan, for ISfTE events.

Dr. Rushton's research journey is equally impressive, with her dissertation, "The Impact of Computer-Adaptive Benchmark Data and Assessment Literacy on Student Achievement and Motivation in Mathematics," focusing on the effects of benchmark assessments and assessment literacy training on summative assessments and student motivation. More recently, her research has delved into error analysis and knowledge retention, demonstrating her commitment to improving mathematics education and advancing the field.



Rushton presenting at King's College, Cambridge University England



Rushton presenting at the International Society for Teacher Education (ISfTE) seminar in Bhutan with some Bhutanese delegates.

CONGRATULATIONS GRADUATES!

- **Dr. KimberLeigh Hadfield**, Utah State University
 - Dissertation: *The Impact of Formative Assessment Cycles on Students' Attitudes and Achievement in a Large-Enrollment Undergraduate Introductory Statistics Course*
- **Dr. Jill Harmon**
 - Dissertation: *Relationships Between School, Teacher, and Feature Characteristics and Teachers' Access to Features Within Digital Curriculum Resources for Mathematics Instruction*
- **Dr. Amy Lynn Kinder**, K-12 Math Administrator for Jordan School District
 - Dissertation: *A Mixed-Methods Study Investigating How a Video Club Professional Development Relates to Teachers' Mindsets, Beliefs, and Reflections on Instructional Practices*
- **Dr. Michael Leitch**, Academy of Art
 - Dissertation: *Teachers' Learning of Fraction Division With Area Models*
- **Dr. Rachel Reeder**
 - Dissertation: *Investigating K-3 Spanish Dual Language Immersion Teachers' Conceptions About Mathematics-Focused Content-Based Language Teaching*
- **Dr. Allison Roxburgh**, Idaho State University
 - Dissertation: *How Preservice Teachers Develop Awareness and Beliefs About Design Features and Academic Language Features When Choosing and Evaluating Digital Math Games for English Language Learners*
- **Dr. Lise Welch**, Ogden School District Math Specialist
 - Dissertation: *Connections Between Mathematics and Computational Thinking: Kindergarten Students' Demonstration of Mathematics Knowledge in a Computational Thinking Assessment*



Dr. Jill Harmon



Drs. Patricia Moyer-Packenham, Katherine Vela, Lise Welch, & Beth MacDonald



Drs. Katherine Vela & KimberLeigh Hadfield



Drs. Beth MacDonald, Amy Lynn Kinder, & Michael Leitch



DR. JESSICA SHUMWAY
GRADUATE FACULTY
MENTOR OF THE YEAR



DR. KATHERINE VELA
FACULTY TEACHER
OF THE YEAR

EXCELLENCE IN EDUCATION: DUAL ACCOLADES FOR MATH ED FACULTY

In a heartwarming celebration of dedication and excellence in mathematics education, two distinguished faculty members have earned well-deserved recognition for their outstanding contributions to the university. Dr. Jessica Shumway was awarded the "Graduate Faculty Mentor of the Year." Dr. Shumway's tireless efforts in guiding and inspiring aspiring mathematics education leaders have left an indelible mark on countless students. Her passion for imparting mathematical knowledge, coupled with her unwavering support, has helped many young educators find their path and flourish in the challenging world of mathematics education. Dr. Katherine Vela was named "Faculty Teacher of the Year." Her dedication to fostering a deep understanding

of mathematics, combined with her ability to ignite a love for the subject, has set her apart as a beacon of inspiration in the mathematics education community. These awards not only celebrate the outstanding accomplishments of Drs. Shumway and Vela but also serve as a reminder of the crucial role that educators play in shaping the future. Their passion, commitment, and expertise have not only enriched the lives of their students but have also elevated the standards of mathematics education in our institution. As we applaud their achievements, we also extend our heartfelt gratitude to Drs. Shumway and Vela for their unwavering dedication to the field of mathematics education. Their impact will continue to resonate for generations, inspiring countless educators and students to explore the beauty and importance of mathematics.



**UtahState
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ABOUT US

The Mathematics Education and Leadership Programs in the School of Teacher Education and Leadership in the Emma Eccles Jones College of Education and Human Services provide students with a variety of advanced study options in mathematics education at the graduate level. Students can select the Mathematics Education and Leadership Concentration in the PhD program, the Elementary Mathematics Endorsement emphasis in the Master of Education Degree in Elementary Education, professional development credit in the online Elementary Mathematics Teachers Academy, or the Secondary Mathematics Emphasis in the Master of Education Degree in Secondary Education. The Mathematics Education and Leadership Programs at Utah State University provide students with opportunities to focus on enhancing their mathematics education expertise and develop leadership skills for positions at all levels of mathematics teaching, learning, supervision, and research. Contact the director today to begin your graduate work in Mathematics Education and Leadership at Utah State University!

Dr. Jessica Shumway, PhD
Mathematics Education and Leadership Program Director
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Interested in writing a piece for the newsletter or have an idea for a story? Reach out to Katherine Vela - katherine.vela@usu.edu