

**ON THE INSIDE:**

- Moyer-Packenham Makes Plans to Retire
- Math Educator Vela Provides Leadership for \$6.8 Million USDA Grant
- Celebrating Our Graduates
- A Productive Year of Conference Presentations for Math Education Doctoral Students



## We Welcome the 2022 Math Education Doctoral Cohort

In the fall of 2022, a new cohort of Mathematics Education and Leadership doctoral students began their PhD in Education program at Utah State University. These mathematics education leaders are the seventh cohort in the concentration, which started in 2010.

**Camille Lund** is a 5th Grade Teacher in Weber School District who is interested in studying equity in mathematics education. In her master's thesis, Camille created and implemented a number sense professional development course.

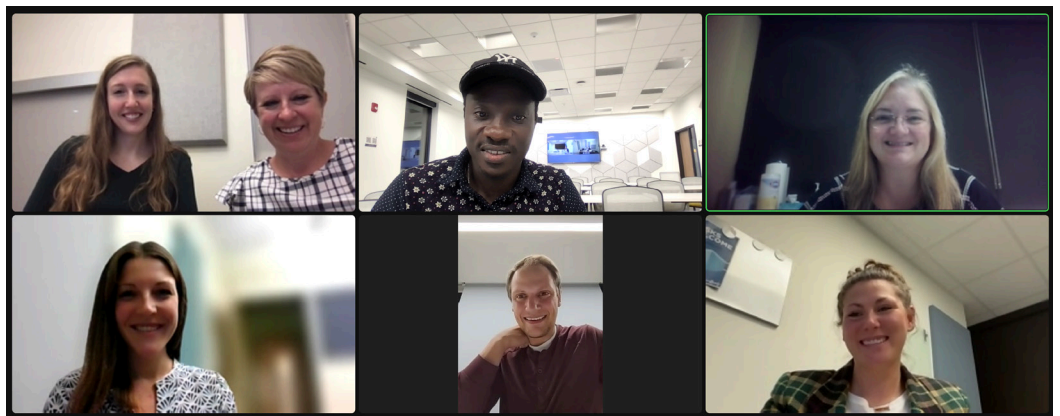
**Michelle Rich** is a Developmental Math Instructor at Weber State University where she also teaches business statistic courses. Michelle has taught at Weber for over 10 years and wants to study math anxiety and self-efficacy in college-age students.

**Patrick Ocran** received a Presidential Doctoral Research Fellowship (PDRF) to conduct research with Dr. Alyson Lavigne. This fall he is teaching middle school methods for preservice teachers for the School of Teacher Education and Leadership (TEAL). A former secondary teacher, Patrick is interested in teacher beliefs, mathematics curriculum, assessment practices, and student performance.

**Missy Barker** is a high school math teacher interested in STEM and applied mathematics education. Missy has a bachelor's degree in electronics engineering technology, and she loves integrating math with other fields. She received a PDRF with Dr. Colby Tofel-Grehl on STEM research and teach courses in TEAL.

**Molly Basham** is an Early Learning Mathematics Specialist at the Utah State Board of Education. A former elementary school teacher, Molly is interested in elementary teachers' math anxiety and its impact on their instructional practice. She is a TEAL Graduate Assistant, working with Dr. Jessica Shumway on research in technology in mathematics education and teaching elementary math methods for preservice teachers.

**Douglas Weber** is a high school mathematics teacher in Logan, Utah, and a Graduate Research Assistant for Drs. Katherine Vela and Kathy Trundle on STEM research called Smart Foodscapes. He is interested in research on math anxiety, data science, STEM, and technology in mathematics education.



From top left: Camille Lund, Michelle Rich, Patrick Ocran, & Missy Barker  
From bottom left: Molly Basham, Douglas Weber, & Jess Williamsen

## Moyer-Packenham Makes Plans to Retire



After almost 40 years in public education, Dr. Patricia Moyer-Packenham will retire from her position at Utah State University at the end of the 2022-2023 Academic Year. Moyer-Packenham began her career as a public school teacher where she spent 10 years teaching middle and elementary school

in Pennsylvania. While Moyer-Packenham earned her PhD, she worked her way through graduate school serving as a Graduate Teaching Assistant and as the Assistant Coordinator of the Mathematics and Science Education Network Pre-College Program in the Center for Mathematics and Science Education at the University of North Carolina at Chapel Hill. In 1997, Moyer-Packenham secured her first position in higher education as an Assistant Professor of Mathematics Education at the University of Alabama in Tuscaloosa, Alabama, where she worked for 3 years. Her career next took her to northern Virginia and George Mason University (GMU) where she served as a Professor of Mathematics Education for 8 years. While at GMU, she developed the Mathematics Education Leadership program and founded and directed a Mathematics Education Center where she secured a \$14.7 million grant from

the National Science Foundation with collaborators from COSMOS Corp. and Brown University. For the past 15 years, Dr. Moyer-Packenham has served as Professor and Director of the Mathematics Education and Leadership program at Utah State University. While at USU, Moyer-Packenham worked with colleagues to develop and launch the PhD Math Education concentration (2010), Elementary Math Endorsement (2011) and Elementary Math Specialist Graduate Certificate (2020) programs. She has chaired or served on the committees of over 40 graduate students who have completed their PhDs and pursued careers in mathematics education. We thank Patricia for her years of service to mathematics education and we congratulate her on her retirement!

## Math Educator Vela Provides Leadership for \$6.8 Million USDA Grant

Dr. Katherine N. Vela, Assistant Professor for the School of Teacher Education and Leadership, serves as Co-PI on a \$6.8 million research grant from the USDA National Institute of Food and Agriculture. This project supports several school partnerships in the Logan and Price, Utah, areas. This collaborative grant project supports a diverse group of researchers, including Dr. Kathy Cabe Trundle and Aurora Villla (USU-TEAL), Drs. Rita Hagevik and Kaitlin Campbell (University of North Carolina-Pembroke), Dr. Lawrence Krissek (The Ohio State University), and Dr. William Boone (Miami University). This education research group is part of a larger interdisciplinary team involving faculty from across USU and around the globe. The overall goal of the project is to install “smart foodscapes” – islands of nutritionally dense and botanically diverse legumes and forbs to improve beef production while increasing biodiversity and

sustainability. The educational research component of the project includes collaborations with teacher partners at local schools to integrate garden-based learning and smart foodscapes into STEAM teaching and learning. The team will install school gardens (garden beds, greenhouses, and sheds) at six schools and co-develop STEAM garden-based curricula and online professional development modules. This past year, researchers worked with two elementary schools, Edith Bowen Lab School and Wellington Elementary. As part of a SEED grant Dr. Vela and her USU research partners received, the team worked with Wahlquist Junior High as a pilot school, where they partnered with teachers, Michelle Parslow (pictured) and David Joy. Michelle Parslow, a USU PhD student in Mathematics Education, was instrumental in the garden installation at Wahlquist. This school, along with another middle school in the Price area, will join the USDA project

in the upcoming year. Next year, the project will initiate collaboration with two high schools. Each of the school gardens will include six raised garden beds, and one of those beds will be dedicated as a smart foodscape island, which will connect the students and teachers with the scientific and extension aspects of the USDA project. This transdisciplinary team, lead by PI Juan Villalba (USU Wildland Resources), will collectively contribute to sustainable beef production while engaging and educating current and future generations in STEAM.



*Michelle Parslow with Students*

## Celebrating Our Graduates

The past few years, in the context of the COVID-19 pandemic, have made earning a PhD an uphill climb for many graduate students. Despite the obstacles, an outstanding group of Math Education students at Utah State University successfully defended their dissertations and completed their PhD programs during the pandemic. We celebrate the accomplishments of these former students. Dr. Samuel Gedeberg graduated in 2020 and his research focused on *Relationships between the Learning Environment, Student Motivation, and Course Persistence and Retention: Students' Perceptions of Online Developmental Mathematics Coursework*. Dr. Gedeberg is currently the Director of the Office of Teaching and Learning Lab and the Interim Senior Director of the Office of Teaching and Learning at Utah Valley University.

Drs. Thomas Mgonja and Jenny Nehring graduated in 2021. Dr.

Mgonja's dissertation was titled: *Examining the Use of Culturally Relevant Pedagogy in Undergraduate Mathematics Learning Modules with Students of Color*, for which he won the Dissertation of the Year Award. Dr. Mgonja is currently an Associate Professor of Mathematics at Utah Valley University. Dr. Nehring's dissertation was titled: *Relationships Between High School Students' Performance in ALEKS Placement, Preparation and Learning (PPL) Modules and Performance on the ALEKS College Mathematics Placement Exam*. Dr. Nehring is a Lecturer in the Dept. of Information Systems and Technology at Utah Valley University.

Drs. Carrie Bala, Danielle Divis, Angela Frabasilio, and Joseph Kozlowski graduated in 2022. Dr. Bala's dissertation focused on *The Influence of a Values Affirmation Intervention on Students' Mathematical, Social, and Epistemological Empowerment*.

Dr. Bala is currently an Assistant Professor in the Dept. of Mathematics at Utah State University. Dr. Divis conducted research on *The Role of Music Context in High School Students' Translations Among Representations in Algebra*. She is currently a stay-at-home mother of two children seeking a university position. Dr. Angela Frabasilio's dissertation was titled: *Relationships Between Middle School Students' Adaptive Reasoning When Creating Learner-Generated Drawings and Partner Talk During Inquiry-Based Mathematical Tasks*. Dr. Frabasilio is a Learning Coach for the Washington County School District. Dr. Kozlowski's dissertation was titled: *Children's Mathematical Engagement Based on Their Awareness of Different Coding Toys' Design Features*. He is currently a second-grade teacher at Edith Bowen Lab School on the campus of Utah State University.



Dr. Samuel Gedeberg



Drs. Jenny Nehring & Thomas Mgonja



Drs. Joseph Kozlowski, Angela Frabasilio, Carrie Bala, & Danielle Divis

# A Productive Year of Conference Presentations for Math Education Doctoral Students

Mathematics Education and Leadership (MEL) doctoral students made an impressive showing at a wide range of mathematics education conferences this year! Doctoral students presented research at national and regional conferences. **Sandra Miles** and Dr. Katherine Vela presented research titled *Asking for Help is a Key to Success: The Relationship Between Student Help Seeking Skills and Mathematics Self-Efficacy* at the Southwest Educational Research Association. **Kimberly Beck** presented research with the Cache Code Math research group on using expansive framing theory to conduct a qualitative analysis at the 2022 National Council of Teachers of Mathematics Research Conference. **Lise Welch** presented research on kindergarten students' multimodal strategies for solving computational thinking tasks with her Coding in Kindergarten research group at the American Educational Research Association

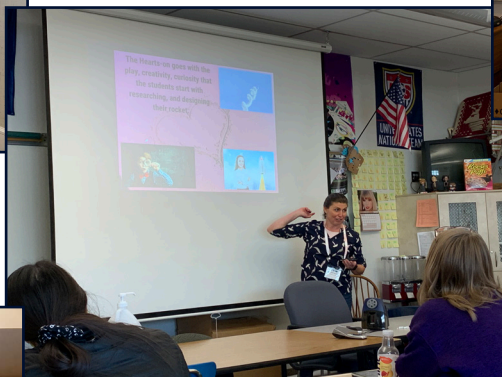
and at the International Conference of the Learning Sciences. **Allison Roxburgh** presented two sessions related to her dissertation research on preservice teachers' beliefs about design features and academic language features in digital math games at the Society for Information Technology and Teacher Education conference. **Jameson Hardy** presented *Puzzling Teaching Methods: Crossing Disciplines with the Rubik's Cube* at the MAA Intermountain Section Meeting with colleague, Dr. McKay Sullivan. **Joseph Kozlowski** presented math education research with colleagues at conferences for the International Society for the Learning Sciences and American Educational Research Association and at the USU Research Symposium.

Five USU MEL doctoral students shared their expertise with teachers

at the Utah Council of Teachers of Mathematics Conference in February 2022. **Kimberly Beck** presented work from her graduate research assistantship called *Mathematics from Scratch: Learning with Coding*. **Michelle Parslow** presented a STEAM project about how to make and launch compressed air rockets. **Lise Welch** presented *Merging Math and Coding* with Katelyn Childers and Drs. Jessica Shumway and Jody Clarke-Midura. **Amy Kinder** presented about joy, engagement, and math talk. **Jason Hart** presented ways to use success criteria to develop students' metacognitive skills in math classrooms. Conferences are a way to disseminate research findings and bridge research and practice. It was an incredibly productive year for this kind of work among doctoral students in Mathematics Education and Leadership.



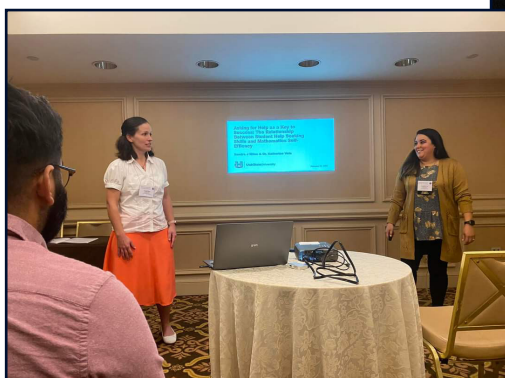
Allison Roxburgh



Michelle Parslow



Lise Welch & Katelyn Childers



Sandra Miles & Katherine Vela



Kimberly Beck



**UtahStateUniversity**

2605 Old Main Hill  
Logan, UT 84322-2605



## 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!

### **Patricia Moyer-Packenham, PhD**

Mathematics Education and Leadership Program Director  
patricia.moyer-packenham@usu.edu · (435) 797-2597