Event Agenda

51st Annual Conference of the Research Council on Mathematics Learning (RCML)

Thursday, February 29, 2024

Conference Registration

1:00 PM - 5:00 PM | Location: Lobby

REGISTRATION

Where's the Math? A Content-Analysis of Equity and NCTM Standards

3:30 PM – 5:00 PM

POSTER

We present a content analysis of how equity and access-related sessions align with mathematics content and process standards at the 2022 NCTM annual conference.

Speakers



Jamaal Young

Associate Professor | Texas A&M University and Aggie STEM



Nipah Onkananuwonk PHD Student | Texas A&M University

Thomas Hallmark Texas A&M University



Micayla Gooden

Graduate Student | Texas A&M University



Miriam Sanders

Graduate Student | Texas A&M University and AggieSTEM

6

Gradaute Student | Texas A&M University and AggieSTEM



Andre Thomas

Eric Rodriguez

Professor of Practice | Texas A&M University

Perceptions and Attitudes of Pre-Service Teachers Regarding Finger-Counting

3:30 PM - 5:00 PM



This study of pre-service teachers investigates perceptions and attitudes held toward students counting using fingers in k-12 mathematics education.

Speakers

KimAnn Brown

Graduate Research Assistant | Bowling Green State University



Gabriel Matney

Professor | Bowling Green State University

How Pre-Service Teacher's Confidence is Impacted by a Geometry Course

3:30 PM - 5:00 PM

POSTER

This study of secondary preservice teachers investigates their confidence levels of teaching geometry as they engage with a required geometry education course.



Stephanie Hastings

Graduate Research Assistant | Bowling Green State University

Gabriel Matney

Professor | Bowling Green State University

Introducing Lesson Study to Preservice Teachers using Simulation Technology

3:30 PM - 5:00 PM



This study of pre-service mathematics teachers analyzes the benefits and challenges of introducing lesson study using simulation technology.

Speakers



Ryan Griesmer

Graduate Student | Bowling Green State University

Gabriel Matney

Professor | Bowling Green State University

The Influence of Problem-Solving Discourse on Student Comprehension

3:30 PM - 5:00 PM

POSTER

We share research on student engagement in discourse through open problem-solving and analyze the mathematical connections being made.



Katilyn Solymosi

Graduate Research Assistant | Bowling Green State University



Gabriel Matney

Professor | Bowling Green State University

Image Use to Support Confidence in Test-Taking

3:30 PM – 5:00 PM

POSTER

This study attempts to find how representational and decorative images on test items affect student confidence.

Speakers



Research Assistant | Bowling Green State University



Gabriel Matney

Professor | Bowling Green State University

Exploring Student's Decision Making of Fairness in Mathematical Assessments

3:30 PM - 5:00 PM

POSTER

This poster will explore how students make decisions about fairness and bias related to math assessment items, specifically focusing on problem solving.

Speaker



Morgan McCracken

Bowling Green State University | Bowling Green State University

Exploring Innovative Pathways into the Teaching Profession

3:30 PM - 5:00 PM

POSTER

This poster highlights planning and implementation of a cohort-based, 18-month teacher residency program focused on the recruitment, preparation, and retention of teachers in rural communities.

George Roy

Professor of Mathematics Education | University of South Carolina

Kristin Harbour

Associate Professor of Mathematics Education | University of South Carolina



Jennifer Crooks-Monastra

Graduate Student | University of South Carolina

NCTM Presentations versus NCTM Principle and Standards: a Critical Analysis

3:30 PM - 5:00 PM

POSTER

We present the results of a content analysis of the 2022 NCTM conference alignment to principles and standards, focusing on workshop sessions.

Speakers



Nipah Onkananuwonk

PHD Student | Texas A&M University



Thomas Hallmark Texas A&M University

What do practitioners see? Addressing the Dissemination of Problem Solving

3:30 PM - 5:00 PM

POSTER

This content analysis aims to examine how the NCTM process standard, problem solving, is represented at the 2022 NCTM annual conference.

Speakers

Micayla Gooden



Miriam Sanders

Graduate Student | Texas A&M University and AggieSTEM

Wilson Memorial Lecture

5:15 PM - 6:30 PM | Location: Grand Ballroom

KEYNOTE

Speaker



Jimmy Chao

Professor | University of South Carolina

Friday, March 01, 2024

Conference Registration

8:00 AM - 5:00 PM | Location: Lobby

REGISTRATION

Continental Breakfast 8:00 AM – 8:50 AM | Location: Ballroom Prefunction

BREAKFAST

Brave new world: Computer-adaptive, problem-solving tests

9:00 AM - 9:50 AM | Location: 2A

PAPER - PRESENTATION (50 MINUTES)

We will share research on mathematical problem-solving tests that are computer adaptive and may be used by researchers, evaluators, and school partners.

Speakers

Jonathan Bostic

Professor | Bowling Green State University

Gabriel Matney

Professor | Bowling Green State University

Toni May

Associate Professor | Drexel University



Kristin Koskey

Research Professor, Co-Director - The Methods Lab | Drexel University's School of Education



Gregory Stone

How Tracking Shapes Teacher's Instructional Decisions and Views of Students

9:00 AM - 9:50 AM | Location: 2B

PAPER - PRESENTATION (50 MINUTES)

We provide concrete examples of how tracking and the associated labels shape how secondary teachers plan for instruction and view their students.

Speakers



Erin Prins

Casey Hawthorne

Summer Mathematical Undergraduate Research Fellow | Furman University

Associate Professor | Furman University

Visual Representations Educators Produce to Support Rational Number Tasks

9:00 AM - 9:50 AM | Location: 2C

PAPER - PRESENTATION (50 MINUTES)

This research explores the variety, merits, and flaws of teacher produced representations that support student understanding of rational number tasks.

Speaker

Angela Just

Oklahoma State University-Stillwater

The Future of Education through the Lens of Disruptive Innovations

9:00 AM - 9:25 AM | Location: 1A

PAPER - RESEARCH BRIEF (25 MINUTES)

Recent technological developments will on schools and universities, and those changes will likely manifest not far into the future.

Speaker



Brian Evans Professor | Pace University

Where is the "M" in STEM

9:00 AM - 9:25 AM | Location: 1B

PAPER - RESEARCH BRIEF (25 MINUTES)

Mathematics learning benefits less than the other disciplines in programs claiming to focus on STEM integration. An overview on research examining the M in STEM will be presented.

Speaker



Sue Brown

Chair, Curriculum and Instruction | University of Houston-Clear Lake

The Mathematics Inquiry Project: The REACT Framework

9:00 AM - 9:25 AM | Location: 1C

PAPER - RESEARCH BRIEF (25 MINUTES)

In phase two of this study, investigators revised activities to highlight the pillars of the Mathematical Inquiry Project and Mathematical Understandings within the REACT framework.

Speakers



Lucas Foster

Associate Professor Of Mathematics | Northeastern State University

Karl Kruczek

Associate Professor of Mathematics | Northeastern State University

TRENDS IN ALTERNATE ROUTE TO LICENSURE SECONDARY STEM TEACHER PRACTICES

9:30 AM - 9:55 AM | Location: 1A

PAPER - RESEARCH BRIEF (25 MINUTES)

Five recommendations for teacher educators were gathered using classroom observations of secondary STEM ARL students enrolled in a methods course.

Speaker

Rachel Bower

Associate Professor of Mathematics Education | Nevada State University

Supporting the STEM Pathway at Appalachian State

9:30 AM - 9:55 AM | Location: 1B

PAPER - RESEARCH BRIEF (25 MINUTES)

Appalachian State supports students' access and success within the calculus sequence. Faculty will share the structure of placement and corequisites.

Speakers



Tracey Howell

Katherine Mawhinney

Assistant Professor, Mathematics | Appalachian State University



Professor | Appalachian State University

Katrina Palmer

Appalachian State University

Exploring Motivation and Math Apps: A Third Grader's Story

9:30 AM - 9:55 AM | Location: 1C

PAPER - RESEARCH BRIEF (25 MINUTES)

This ongoing case study investigates the relationship between a third-grade student, Aôs motivation and their use of mathematics apps.

Speaker



Micah Swartz

Doctoral Student | Texas State University

Advancing Preservice Teachers' Understanding of Modeling with Mathematics

10:00 AM - 10:50 AM | Location: 2A

PAPER - PRESENTATION (50 MINUTES)

This presentation shares information on a research study designed to advance elementary and middle preservice teachers, Åô (PSTs) understanding of modeling with mathematics (SMP4) through a mathematical modeling framework.

Speaker

Reuben Asempapa

Associate Professor of Mathematics Education | Penn State Harrisburg

Launching: Setting the Stage for Mathematical Sensemaking

10:00 AM - 10:50 AM | Location: 2B

PAPER - PRESENTATION (50 MINUTES)

Our study identifies and illustrates common launching approaches that elementary school teachers used to set the stage for children, Åôs sensemaking during fraction problem solving.

Speakers



Katie Collins

UNCG

Victoria Jacobs

Susan Empson

Professor | University of North Carolina at Greensboro

Ø

Professor and Richard G. Miller Chair in mathematics education | Department of Learning, Teaching, and Curriculum, University...

Why Math Research Partnerships Matter: Moving from Abstract to Full-text

10:00 AM - 10:50 AM | Location: 2C

PAPER - PRESENTATION (50 MINUTES)

We share the progression from abstract reviews to full-text reviews for how research partnerships are characterized in mathematics education.

Speakers



Colleen Eddy

Associate Professor of Mathematics Education | University of North Texas

Tina Mitchell, Ed.D.

Trena Wilkerson

Director, Graduate Programs in Education | Delaware State University

Professor | Baylor University



Ph.D. Student of Mathematics Education | Clemson University



Megan Che

Associate Professor | Clemson University

Math Hair, Math There, Math Everywhere: YouTube Content Analysis

10:00 AM - 10:25 AM | Location: 1A

PAPER - RESEARCH BRIEF (25 MINUTES)

This session explores mathematical indicators present in several YouTube tutorial videos on how to prepare a person's hair for different traditionally Black hairstyles.

Speaker

Jessica Showell

Graduate Student | Georgia State University

Implementing differentiated activities and fluency games to advance equity

10:00 AM - 10:25 AM | Location: 1B

PAPER - RESEARCH BRIEF (25 MINUTES)

In this piece we critically examine two vignettes of how the design of instructional activities and can support teachers, Åô use of equitybased practices in mathematics.

Speakers



Christie Martin

Associate Professor | University of South Carolina, Columbia



Drew Polly University of North Carolina, Charlotte

Educational Video Games to have Pre-Service Teachers Master Mathematics

10:00 AM - 10:25 AM | Location: 1C

PAPER - RESEARCH BRIEF (25 MINUTES)

This study examines the use of an educational video game compared to traditional methods to help pre-service teacher master key mathematics concepts.

Speakers

Eric Rodriguez

Gradaute Student | Texas A&M University and AggieSTEM



Andre Thomas

Professor of Practice | Texas A&M University

Challenges in Measuring Student Multiplication Fluency

10:30 AM - 10:55 AM | Location: 1A

PAPER - RESEARCH BRIEF (25 MINUTES)

Measuring multiplication fluency in elementary students can be challenging and we will present an assessment that measures students, Åô accuracy, efficiency, and flexibility.

Speakers

Bridget Broome

Instructor | Oklahoma State University



Karen Zwanch

Assistant Professor of Mathematics Education | Oklahoma State University

History of Mathematics in the Classroom: A Focus on Cultures

10:30 AM - 10:55 AM | Location: 1B

PAPER - RESEARCH BRIEF (25 MINUTES), PAPER - PRESENTATION (50 MINUTES)

A brief overview in math history through various cultural contributions is given, and generates ideas for using math history to motivate students.

Speaker



Professor | Pace University

Investigating Affective Pedagogical Goals in Social Justice Mathematics

11:00 AM - 11:50 AM | Location: 2A

Brian Evans

PAPER - PRESENTATION (50 MINUTES)

This study examines social justice awareness in informal PD and mathematics educators' affective experiences with Social Justice Mathematics aligned with the United Nations 2030 agenda.

Speaker



Graduate Student | Purdue University

STUDENTS DIFFERING AFFILIATIONS WITH THEIR MATH CLASSROOM OBLIGATIONS

11:00 AM - 11:50 AM | Location: 2B

Rose Mbewe

PAPER - PRESENTATION (50 MINUTES)

In this presentation, I will present a case study depicting the way two secondary students affiliate with their perceived obligations during various segments of their mathematics classroom instruction. Using individual student interviews and lesson observations, I found that the students did not perceive the same obligations for all segments of the class and that they affiliated in different and interesting ways with their perceived obligations. I will discuss how these students' identity narratives could and should inform how educators structure classroom instruction.

Speaker



University of Missouri

Using Video Club to Engage PSTs Noticing during Instruction

11:00 AM - 11:50 AM | Location: 2C

PAPER - PRESENTATION (50 MINUTES)

This session will focus on the implementation of video clubs within a mathematics methods course to engage elementary preservice teachers (PSTs) in teacher noticing.



Margeaux Smith

PhD Candidate | Baylor University



Andrea Martinez Baylor

Sandi Cooper

Professor and Associate Dean of Undergraduate Education | Baylor University

Developing a Calculus Concepts Assessment: Area and Integrals

11:00 AM - 11:25 AM | Location: 1A

PAPER - RESEARCH BRIEF (25 MINUTES)

Our session details the initiation of the development phase of a new instrument to assess student understanding of central concepts in Calculus I.

Speakers



Beth Cory

Associate Professor of Mathematics Education | Sam Houston State University



Associate Professor of Mathematics | Sam Houston State University



Vicki Sealey

Associate Professor | West Virginia University

Toni Hall

Graduate Student

The joy and brilliance of Black Language in Mathematics Discourse

11:00 AM - 11:25 AM | Location: 1C

PAPER - RESEARCH BRIEF (25 MINUTES)

I am planning and producing a documentary focused on the way some Black people explain their mathematical thinking through a sociolinguistic analysis of their explanations.

Speaker



Nickolaus Ortiz

Assistant Professor of Mathematics Education | Georgia State University

Taking Up Space: Fraction Learning Opportunities During Instruction

11:30 AM - 11:55 AM | Location: 1A

PAPER - RESEARCH BRIEF (25 MINUTES)

Using the construct taking up space, I examine the quality of children, Äôs opportunities to learn fractions in one-on-one circulating conversations.

Speaker



Heather Lindfors-Navarro

Assistant Professor | Northern Arizona University

Utilizing Scripting to Examine Questions Posed by Pre-service Teachers

11:30 AM - 11:55 AM | Location: 1B

PAPER - RESEARCH BRIEF (25 MINUTES)

Questioning is a key practice of educators. I argue that PSTs questioning in scripting contexts draws from both funds of knowledge and pedagogical knowledge.

Speaker



Valparaiso University

Jelena Byers

The Importance of Understanding Quantities in College Algebra

PAPER - RESEARCH BRIEF (25 MINUTES)

We inverstigate the impact of students' understanding of quantities, a measurable attribute of an object, on their success in a College Algebra course.

Speaker



Lacey Campbell

Research Assistant II | Brigham Young University

Lunch and RCML Business Meeting

12:00 PM - 1:50 PM | Location: Oakwood Ballroom



Inclusive and Joyful Play in the Elementary Mathematics Classroom

2:00 PM - 2:50 PM | Location: 2A

PAPER - PRESENTATION (50 MINUTES)

Centering picture books storying the experiences of disabled and neurodivergent children, we explore creating inclusive and joyful mathematics games.

Speakers



Amy Rae Johnson

PhD Student - STEM Education | University of Texas at Austin



Alexandra Aguilar The University of Texas at Austin

Representation Translation Fluency: Teacher Beliefs and Practices

2:00 PM - 2:50 PM | Location: 2B

PAPER - PRESENTATION (50 MINUTES)

Students perennially demonstrate difficulty translating mathematical ideas across multiple representations (e.g., verbal, tabular, graphical, and algebraic). The session reports on the results of a study that investigated how the dimension of teacher beliefs and instructional practices with respect to mathematical translations impact student representation translation fluency.

Speaker



East Carolina University

Virtual Manipulatives Interpretive Framework

2:00 PM - 2:50 PM | Location: 2C

Kwaku Adu

PAPER - PRESENTATION (50 MINUTES)

Adaptation of the concrete, pictorial and abstract model by adding virtual-concrete, virtual-pictorial and virtual-abstract levels to analyze virtual-manipulatives, and research implications.

Speaker

Enrique Ortiz

Professor | University of Central Florida

FIDESSOF OTIVETSILY OF CERTIAL FIDINA

Preservice Teacher's Explore Their Math Experiences: An Equity Perspective

2:00 PM - 2:25 PM | Location: 1A

PAPER - RESEARCH BRIEF (25 MINUTES)

Preservice elementary teachers' interpretations of their P-20 math learning experiences through an equity, power, and privilege lens.

Speaker

Tina Mitchell, Ed.D.

Director, Graduate Programs in Education | Delaware State University

Analyzing Teacher's Curricular Reasoning through the Lens of Care Ethics

2:00 PM - 2:25 PM | Location: 1B

PAPER - RESEARCH BRIEF (25 MINUTES)

Teachers have well-defined purposes when making curricular decisions. The lens of ethics of care explores their reasoning. Two inservice teachers prioritize the classroom elements differently.

Speaker

Ana-Maria Haiduc

PhD candidate | Purdue University West Lafayette

The impact of an online application on students, Äô problem solving.

2:00 PM - 2:25 PM | Location: 1C

PAPER - RESEARCH BRIEF (25 MINUTES)

This quantitative study investigated the impact of a problem solving intervention on mathematical problem solving proficiency in middle school students; results showed significant gains.

Speakers



Sam Rhodes

Rick Brvck

Assistant Professor of Elementary Mathematics Education | Georgia Southern University



Senior Director | Landmark College

Embedding Clinical Experiences within a Mathematics Methods Course

2:30 PM - 2:55 PM | Location: 1A

PAPER - RESEARCH BRIEF (25 MINUTES)

Through focus on knowledge, pedagogy, and partnerships, we present models that address the disparity between the theory to practice divide between teacher preparation and schools.

Speakers

Stefanie Livers

Assistant Professor | Bowling Green State University



Kristin Harbour

Associate Professor of Mathematics Education | University of South Carolina

Improvement in Math Problem Solving are Moderated by Working Memory

2:30 PM - 2:55 PM | Location: 1B

PAPER - RESEARCH BRIEF (25 MINUTES)

Middle school students using a math application with embedded executive function scaffolds showed gains in math problem solving, moderated by their initial working memory capacity.

Speakers



Rick Bryck

Senior Director | Landmark College

Sam Rhodes

Assistant Professor of Elementary Mathematics Education | Georgia Southern University

An Intervention Program to Build Elementary Student's Computational Fluency

2:30 PM - 2:55 PM | Location: 1C

PAPER - RESEARCH BRIEF (25 MINUTES)

This session presents the results of a study documenting a tier two mathematics intervention program designed to develop students, Åô computational fluency and its impact.

Speakers



Associate Professor | University of Hawaii, Manoa

Linda Venenciano Professor | Pacific University

Children's Choice and Use of Tools While Solving Problems

PAPER - PRESENTATION (50 MINUTES)

We will share how four children solved word problems and how their use of strategies and tools changed from Kindergarten to Grade 2.

Speakers

Amanda Cullen

Associate Professor | Illinois State University

Jennifer Talbot

Instructional Assistant Professor and Doctoral Student | Illinois State University

Well, Here We Are: The Case of Algebra II Teachers

3:00 PM - 3:50 PM | Location: 2B

PAPER - PRESENTATION (50 MINUTES)

From our experiences developing real-word connections for introductory-level college mathematics classes, we present a new opportunity for us: high school Algebra II classes!

Speakers



Ryan Fox

Associate Professor of Mathematics Education | Belmont University

Huntir Bass

Mathematics Teacher | Bishop Moore Catholic High School

Preservice teachers' moves in mathematics discussions after problem-solving

3:00 PM - 3:50 PM | Location: 2C

PAPER - PRESENTATION (50 MINUTES)

Using empirical evidence from a mixed-reality custom simulation, we describe PSTs, Äô mathematics discussion subskills of framing and orchestrating.

Speakers

Signe Kastberg

Melva Grant

Professor | Purdue University

Professor of Mathematics Education | Old Dominion University

Sezai Kocabas

PhD Student | Purdue University

Elementary PSTs' thinking about teaching numbers and the number line

3:00 PM - 3:25 PM | Location: 1A

PAPER - RESEARCH BRIEF (25 MINUTES)

In this session we will share outcomes from our approaches to develop PSTs,Äô knowledge about number concepts and the number line.

Speakers



Linda Venenciano

Professor | Pacific University

Seanyelle Yagi

Associate Professor | University of Hawaii, Manoa

Balancing the Equation: Equitable AI Use in the Mathematics Classroom

3:00 PM - 3:25 PM | Location: 1B

PAPER - RESEARCH BRIEF (25 MINUTES)

In this session, AI's role in mathematics education in lesson planning and assessment by preservice elementary teachers is explored. We will also discuss equitable use and adaptation of AI in the mathematics classroom.

Speakers



Jacob Martin

Doctoral Candidate | Oklahoma State University

Cat Maiorca

Assistant Professor | California State University, Northridge

Associate Dean For Academic Programs and Student Services | Oklahoma State University

Megan Burton

Adrienne Sanogo

Elementary STEM/ Mathematics Education | Professor

Learning Strategies: Math Growth Mindset, Self-Regulation and Performance

3:00 PM - 3:25 PM | Location: 1C

PAPER - RESEARCH BRIEF (25 MINUTES)

We investigate the effectiveness of integrating learning strategies within mathematics courses for fostering math growth mindset, selfregulated learning, and performance.

Speakers



Sayed Mostafa

Assistant Professor | North Carolina Agricultural and Technical State University



Katrina Nelson

Teaching Associate Professor | North Carolina A&T State University

Tamer Elbayoumi

Kalynda Smith

Assistant Professor | North Carolina Agricultural and Technical State University



North Carolina A&T State University



Guoqing Tang

Professor/Department Chairperson

Identifying Teacher Tensions through Curricular Reasoning to Induce Growth

3:30 PM - 3:55 PM | Location: 1A

PAPER - RESEARCH BRIEF (25 MINUTES)

As teachers make curricular decisions, they often choose between different instructional options that may cause tension, but can facilitate growth. Come learn with us!

Speakers

Porter Nielsen

Research Assistant | Brigham Young University

Dawn Teuscher

Professor | Brigham Young University

Jonathan Bostic

Professor | Bowling Green State University

Number and Operations: Vocabulary Alignment for Preservice Teacher Success

3:30 PM - 3:55 PM | Location: 1B

PAPER - RESEARCH BRIEF (25 MINUTES)

This session highlights a trajectory connecting PSTs, Äô vocabulary in a first content course to future students, Äô high-stakes mathematics assessments.

Speakers



Julie Herron

Director of Curriculum and Course Design | U.S. Air Force Academy

Mary B. Swarthout

Associate Professor Of Mathematics Education | Sam Houston State University





The Rebranding of Common Core Standards

4:00 PM - 4:50 PM | Location: 2A

PAPER - PRESENTATION (50 MINUTES)

Are we in a post-Common Core era? In this session, findings from a qualitative study examining changes to K-5 standards from 2012-2022 will be shared.

Speaker



Ashley Schmidt

Assistant Professor | University of Wisconsin- Milwaukee

Equitable Teaching To Engage Students via Technology Integration

4:00 PM - 4:50 PM | Location: 2B

PAPER - PRESENTATION (50 MINUTES)

During this session participants engage in exploring socially-relevant tasks leveraging technological tools to highlight equitable teaching practices to showcase students, Äô brilliance and lived experiences.

Speakers



Farshid Safi

Associate Professor of K-12 Mathematics Education | University of Central Florida



Maral Karimi

PhD Student and Graduate Teaching Assistant | University of Central Florida

Postsecondary Mathematics Teaching Methods and Practices: A National Report

4:00 PM - 4:25 PM | Location: 1A

PAPER - RESEARCH BRIEF (25 MINUTES)

The researcher will share the results of a national study that explores teaching methods and practices being utilized by faculty of introductory college-level mathematics courses.

Speaker



Molly Bowen

Adjunct Lecturer in Mathematics | Baylor University

Considerations for Lesson Plan Decision Making When Using Al

4:00 PM - 4:25 PM | Location: 1B

PAPER - RESEARCH BRIEF (25 MINUTES)

Al technology poses lesson planning implications. We expand the use of the Mathematics Lesson Planning Protocol (MLP2) to help process Al lesson plan results.

Speakers

Stefanie Livers

Assistant Professor | Bowling Green State University

Victoria Miller Bennett

Educational Programs Specialist | The Collaborative for Teaching and Learning

Listening Through Technology: Using Tools to Monitor Student Thinking

4:00 PM - 4:25 PM | Location: 1C

PAPER - RESEARCH BRIEF (25 MINUTES)

In this study I investigated what tools and in what ways math teachers use technology (Dick & Hollebrands, 2011) to listen to students and monitor their thinking (Eddy & Harrell, 2014; Wiliam & Thompson, 2008). I connected findings with research on formative assessment to show how epistemological underpinnings which inform teachers, Äô decisions to choose specific technology tools for instruction.

Speaker



Mathematics for Social Justice: Mathematics Teacher Educator Perspectives

4:30 PM - 4:55 PM | Location: 1A

PAPER - RESEARCH BRIEF (25 MINUTES)

This session presents the findings of 66 current and future mathematics teacher educators' perspectives on what it means to teach mathematics for social justice.

Speaker



Queshonda Kudaisi

Assistant Professor of Mathematics Education | University of North Texas

Expanding Secondary Mathematics Teacher's Knowledge of Content and Pedagogy

4:30 PM - 4:55 PM | Location: 1B

PAPER - RESEARCH BRIEF (25 MINUTES)

This study examines prospective secondary teachers, Äô perceptions of the effectiveness of an online tool to expand their understandings of math content and pedagogy.

Speaker

Babette Benken

Richard D. Green Professor & Director | California State University, Long Beach

Elementary Teachers' Dispositions through Integrated STEM Practice MEAs

4:30 PM - 4:55 PM | Location: 1C

PAPER - RESEARCH BRIEF (25 MINUTES)

This session explores elementary mathematics teachers' dispositions towards STEM after a summer graduate course that introduced teachers to model-eliciting activities and integrated STEM practices.

Speakers

Cat Maiorca

Assistant Professor of Mathematics Education | Oklahoma State University



Jacob Martin

Doctoral Candidate | Oklahoma State University

Megan Burton

Octavia Tripp

Elementary STEM/ Mathematics Education | Professor

\bigcirc

Associate Professor | Auburn University

Networking Break

4:45 PM - 5:00 PM | Location: Ballroom Prefunction

BREAK

Founders Lecture

5:00 PM - 6:00 PM

KEYNOTE

Micro-allyship and micro-accompliceship: Seizing disruptive and subversive agency in the furtherance of more affirming mathematics learning environments

In this talk, I discuss a variety micro-power moves (micro-aggressions, micro-allyship, and micro-accompliceship) arising from lived experiences of students and teachers to illustrate the potential for agency even or especially in times of macro-contestations over personal liberties, freedoms, and fundamental identities. We will also interrogate the connections linking micro-power moves to mathematics classroom learning dynamics.

Speaker



Megan Che Associate Professor | Clemson University

Conference Registration

8:00 AM - 11:00 AM | Location: Lobby

REGISTRATION

Continental Breakfast

8:00 AM - 8:50 AM | Location: Ballroom Prefunction

BREAKFAST

Research Training for a Mathematics Education Doctoral Student

9:00 AM - 9:25 AM | Location: 1A

PAPER - RESEARCH BRIEF (25 MINUTES)

We discuss the collaborative and mentoring relationship between a doctoral student and faculty member in mathematics education, and highlight implications for further doctoral student training.

Speakers

Lateisha Andrews

Doctoral student | Georgia State University



Nickolaus Ortiz

Assistant Professor of Mathematics Education | Georgia State University

Expanding Consciousness For Our Field And Beyond

9:00 AM - 9:25 AM | Location: 1B

PAPER - RESEARCH BRIEF (25 MINUTES)

This presentation will provide an overview of my current understandings of where mathematics education research overlaps with other research investigating notions of consciousness.

Speaker



Travis Olson

Professor | University of Nevada, Las Vegas

How graduate student instructors navigate active learning

9:00 AM - 9:25 AM | Location: 1C

PAPER - RESEARCH BRIEF (25 MINUTES), PAPER - PRESENTATION (50 MINUTES)

This qualitative multiple case study explores three graduate students, Åô experiences with implementing active learning in undergraduate precalculus and describes challenges and supports from their perspective.

Speaker

Jennifer Crooks-Monastra

Graduate Student | University of South Carolina

Leveraging a Cultural Immersion Experience in Mathematics Teacher Education

9:30 AM - 9:55 AM | Location: 1A

PAPER - RESEARCH BRIEF (25 MINUTES)

This study reports on preservice teachers leveraging cultural immersion experiences to study mathematics as a cultural practice in their communities.

Speaker



Alesia Moldavan

Assistant Professor | Georgia Southern University

Raising the bar: Accelerate English learner's mathematics achievement

9:30 AM - 9:55 AM | Location: 1C

PAPER - RESEARCH BRIEF (25 MINUTES), PAPER - PRESENTATION (50 MINUTES)

This longitudinal experimental study examines the effects of curricular intervention on the math achievement of English learners from grade K to 2.



Differences in Teaching Fractions: High School vs Middle School

10:00 AM - 10:25 AM | Location: 1A

PAPER - RESEARCH BRIEF (25 MINUTES)

An examination of differences between how a middle school teacher and a high school teacher explain fraction operations.

Speakers



Austin Beard

Graduate Student | Oklahoma State University

Karen Zwanch

Assistant Professor of Mathematics Education | Oklahoma State University

Student Reasoning: Insights into Trigonometric Relationships

10:00 AM - 10:25 AM | Location: 1B

PAPER - RESEARCH BRIEF (25 MINUTES), PAPER - PRESENTATION (50 MINUTES)

We explore preservice secondary math teachers' reasoning when investigating relationships between and among trigonometric functions using geometric definitions.

Speakers



Lawrence Ssebaggala

Assistant Professor | Dalton State College

Craig Cullen

Professor | Illinois State University

Teaching Angles Dynamically Through Quantitative Reasoning

10:00 AM - 10:25 AM | Location: 1C

PAPER - RESEARCH BRIEF (25 MINUTES), PAPER - PRESENTATION (50 MINUTES), POSTER

This presentation shows how students in third grade used quantitative reasoning to construct their robust understanding of dynamic angles.

Speaker



Erell Germia Assistant Professor | Kean University

Developing geometric concept definitions for tangent and secant

10:30 AM - 10:55 AM | Location: 1A

Craig Cullen

Tami Martin

PAPER - RESEARCH BRIEF (25 MINUTES), PAPER - PRESENTATION (50 MINUTES)

We examined preservice secondary mathematics teachers, Äô reasoning as they developed geometric concept definitions for the tangent and secant functions.

Speakers



Professor | Illinois State University



Professor | Illinois State University



Oscar Chavez

Associate Professor | Illinois State University Full-time

Kyle Kimball

PhD student and high school mathematics teacher

Developing high-dosage tutors for a university-school partnership

10:30 AM - 10:55 AM | Location: 1B

Undergraduates engage in development for high-dosage tutoring through university-school partnerships. We share ways that tutors, Äô reflections of strategies, strengths, and challenges reflect coaching' strategies.

Speakers

Kristyn Sartin

University Of Oklahoma

Mandy Howell

Doctoral Candidate | University of Oklahoma

The Social Emotional Learning Math Project

10:30 AM - 10:55 AM | Location: 1C

PAPER - RESEARCH BRIEF (25 MINUTES)

Students who enter teacher education programs too often have weak preparation in mathematics. These preservice teachers may struggle to see themselves as capable and competent mathematics learners, or to see mathematics as relevant to their lived experiences. The Social Emotional Learning Math project aims to support early childhood preservice teachers as they progress through their mathematics teacher preparation program. The project, which is housed at an HBCU, focuses on the redesign of the Mathematics for Teachers of Young Children curriculum to include transformative social and emotional learning pedagogies. The project provides a response to calls to both strengthen the humanizing social element in mathematics education and to make mathematics more accessible to diverse populations. Transformative Social Emotional Learning is emphasized as a practice that transforms inequitable settings and systems, and promotes justice-oriented engagement. The aims of the project include strengthening preservice teachers' mathematical proficiencies, advancing positive and productive mathematics identities, and developing interpersonal and intrapersonal skills needed for success in school, their future teaching, and beyond. Preliminary results of the project are discussed.

Speaker



Delayne Johnson

Associate Professor, Mathematics Education | Delaware State University

Lunch and Closing

11:00 AM – 12:00 PM | Location: Ballroom Prefunction

LUNCH