

School Science and Mathematics Association 2023

Annual Convention

Event Schedule

Thu, Oct 19, 2023

7:30 AM

Breakfast

🕒 7:30 AM - 8:45 AM, Oct 19

Misc

9:00 AM

Morning Sessions

🕒 9:00 AM - 9:50 AM, Oct 19

Regular

Research

5 Subsessions

● Studying Wicked Problems in Mathematics Education: Implications for Equity

🕒 9:00 AM - 9:50 AM, Oct 19

● Supporting Students' Geometric-Thinking and Modeling Practices through 3D Modeling Technology

🕒 9:00 AM - 9:50 AM, Oct 19

● Developing Mathematical Identities from Contributions of Historically Excluded Women in STEM

🕒 9:00 AM - 9:50 AM, Oct 19

● Facilitating Belonging and Retention in Underrepresented Undergraduate Students in STEM

🕒 9:00 AM - 9:50 AM, Oct 19

● Incorporating teaching word problem structure in educator preparation programs

🕒 9:00 AM - 9:50 AM, Oct 19

Workshops

🕒 9:00 AM - 10:15 AM, Oct 19

Workshop

1 Subsessions

● 3-D Science for a World of 8 Billion

🕒 9:00 AM - 10:15 AM, Oct 19

10:00 AM

Morning Sessions

🕒 10:00 AM - 10:25 AM, Oct 19

Research

Regular

5 Subsessions

- **Using Pickers for Fast Fun Assessment**
🕒 10:00 AM - 10:25 AM, Oct 19
- **Teacher Efficacy of 5th - 8th Grade Rural STEM Teachers Across Oklahoma**
🕒 10:00 AM - 10:25 AM, Oct 19
- **DO MATHEMATICS TEXTBOOKS PREPARE STUDENTS FOR THE UNIVERSITY ENTRANCE EXAM, ALGEBRA TASK**
🕒 10:00 AM - 10:25 AM, Oct 19
- **A STEM Teacher Goes Rogue after Professional Development with an Innovative Implementation of GIS**
🕒 10:00 AM - 10:25 AM, Oct 19
- **Implementing the Integrated STEM Practices in the Classroom**
🕒 10:00 AM - 10:25 AM, Oct 19

10:35 AM

Morning Sessions

🕒 10:35 AM - 11:00 AM, Oct 19

- Research
- Regular

5 Subsessions

- **Evaluating the Impact of an Artificial Intelligence Workforce Development Program**
🕒 10:35 AM - 11:00 AM, Oct 19
- **Using Interactive Word Walls for 3D Learning**
🕒 10:35 AM - 11:00 AM, Oct 19
- **Understanding Students' Identities in STEM Through Video Elicitation**
🕒 10:35 AM - 11:00 AM, Oct 19
- **Un-grading in a Math Methods Course**
🕒 10:35 AM - 11:00 AM, Oct 19
- **Where is the "M" in STEM**
🕒 10:35 AM - 11:00 AM, Oct 19

Workshops

🕒 10:35 AM - 11:45 AM, Oct 19

- Workshop

1 Subsessions

- **Collaborative Efforts to De-silo Prospective Teachers' Experiences in Secondary Methods Courses**
🕒 10:35 AM - 11:45 AM, Oct 19

11:10 AM

Morning Sessions

🕒 11:10 AM - 11:35 AM, Oct 19

- Research
- Regular

1 Subsessions

- **Preparing STEM Students to Become STEM Teachers: Reflections from a Noyce Project**
🕒 11:10 AM - 11:35 AM, Oct 19

Morning Sessions

🕒 11:10 AM - 12:00 PM, Oct 19

Regular

Research

4 Subsessions

● Integrating Learning Targets & Assessment Blueprints into Your Math Course

🕒 11:10 AM - 12:00 PM, Oct 19

● The Universal Screeners for Number Sense: an Open-Source Assessment Project for K-6

🕒 11:10 AM - 12:00 PM, Oct 19

● Enhancing Teaching and Learning through Interactive Digital Activities

🕒 11:10 AM - 12:00 PM, Oct 19

● Long-Term Professional Development to Develop Equitable Small-Group, Student-to-Student Discourse

🕒 11:10 AM - 12:00 PM, Oct 19

12:00 PM

Lunch

🕒 12:00 PM - 1:30 PM, Oct 19

Misc

1:45 PM

Afternoon Sessions

🕒 1:45 PM - 2:10 PM, Oct 19

Research

Regular

6 Subsessions

● Exploring the Thought Processes of Elementary Mathematics Dual Language Teachers

🕒 1:45 PM - 2:10 PM, Oct 19

● STEM Online Professional Development: Key Features for Success and Sustainability

🕒 1:45 PM - 2:10 PM, Oct 19

● Elementary pre-service teachers' perceptions of educational robotics

🕒 1:45 PM - 2:10 PM, Oct 19

● Do students approach mathematical creativity in the classroom individually, collectively or both?

🕒 1:45 PM - 2:10 PM, Oct 19

● An Exploration of Equity Practice in STEM Education: Colleges of Education

🕒 1:45 PM - 2:10 PM, Oct 19

● Exploring Secondary Science Educators' Knowledge and Experiences with Place Based Education

🕒 1:45 PM - 2:10 PM, Oct 19

2:20 PM

Afternoon Sessions

🕒 2:20 PM - 3:10 PM, Oct 19

Regular

Research

5 Subsessions

● SSMA Mentoring Program Session

🕒 2:20 PM - 3:10 PM, Oct 19

● Learning in the field: Pre-service STEM teachers' experiences in secondary classroom internships

🕒 2:20 PM - 3:10 PM, Oct 19

● Teaching Online v 2.0 - Moving Beyond the Basics

🕒 2:20 PM - 3:10 PM, Oct 19

● Analyzing Science Picture Books Using the Justice, Equity, and Inclusion Checklist

🕒 2:20 PM - 3:10 PM, Oct 19

● Beliefs: A Case Study on Formation, Change, and Influence

🕒 2:20 PM - 3:10 PM, Oct 19

Workshops

🕒 2:20 PM - 3:35 PM, Oct 19

Workshop

1 Subsessions

● Integrating robotics into math and science

🕒 2:20 PM - 3:35 PM, Oct 19

3:20 PM

Afternoon Sessions

🕒 3:20 PM - 3:45 PM, Oct 19

Research

Regular

5 Subsessions

● Participant centered research in STEM education using photo elicitation and photovoice

🕒 3:20 PM - 3:45 PM, Oct 19

● Researchers' experiences with affective measures in a STEM workshop series for teachers

🕒 3:20 PM - 3:45 PM, Oct 19

● Foundational Math Model

🕒 3:20 PM - 3:45 PM, Oct 19

● Misconceptions that Influence Elementary Pre-Service Teachers' Assessments of a Task

🕒 3:20 PM - 3:45 PM, Oct 19

● Investigating the formal/informal binary of science education at the K-12 level

🕒 3:20 PM - 3:45 PM, Oct 19

4:00 PM

Afternoon Sessions

🕒 4:00 PM - 4:25 PM, Oct 19

Research

Regular

6 Subsessions

● Growth mindset in K-8 STEM education

🕒 4:00 PM - 4:25 PM, Oct 19

● Preservice Teachers' Perspectives of Integrating Outdoor Campus into Classroom Instruction

🕒 4:00 PM - 4:25 PM, Oct 19

● Equality as Balance: Unearthing Middle Grades PSTs' Misconceptions About the Equal Sign

🕒 4:00 PM - 4:25 PM, Oct 19

● Learning Beyond the Standards: Students' Internal and External Skill Development for STEM Success

🕒 4:00 PM - 4:25 PM, Oct 19

● MAT Impact Fellows' Developing Teachers and Emerging Teacher Leaders in Science and Mathematics

🕒 4:00 PM - 4:25 PM, Oct 19

● Examining the Impact of STEM Internships on Participant Growth of 21st Century Skills

🕒 4:00 PM - 4:25 PM, Oct 19

4:30 PM

Committee Meetings

🕒 4:30 PM - 5:00 PM, Oct 19

Misc

7 Subsessions

● Awards and Endowment

🕒 4:30 PM - 5:00 PM, Oct 19

● Conventions

🕒 4:30 PM - 5:00 PM, Oct 19

● Finance

🕒 4:30 PM - 5:00 PM, Oct 19

● Membership

🕒 4:30 PM - 5:00 PM, Oct 19

● Nomination and Election

🕒 4:30 PM - 5:00 PM, Oct 19

● Policy

🕒 4:30 PM - 5:00 PM, Oct 19

● Publications

🕒 4:30 PM - 5:00 PM, Oct 19

5:00 PM

Graduate Student Reception

🕒 5:00 PM - 6:30 PM, Oct 19

Misc

Fri, Oct 20, 2023

7:30 AM

Breakfast

🕒 7:30 AM - 8:45 AM, Oct 20

Misc

9:00 AM

Morning Sessions

🕒 9:00 AM - 9:50 AM, Oct 20

Regular

Research

4 Subsessions

● Presidential Panel

🕒 9:00 AM - 9:50 AM, Oct 20

● What can I use? A discussion of quantitative instruments for K-12 student and teacher contexts

🕒 9:00 AM - 9:50 AM, Oct 20

● A Decade of Changes to K-5 State Mathematics Standards

🕒 9:00 AM - 9:50 AM, Oct 20

● The Story Behind the Smile: Examining Preservice Elementary Teachers' Science Self-Efficacy

🕒 9:00 AM - 9:50 AM, Oct 20

10:00 AM

Morning Sessions

🕒 10:00 AM - 10:25 AM, Oct 20

Research

Regular

6 Subsessions

● Investigating College Students Motivations and Decisions in Planning Science Outreach

🕒 10:00 AM - 10:25 AM, Oct 20

● Math Coach's Mathematical Knowledge for Teaching Geometry

🕒 10:00 AM - 10:25 AM, Oct 20

● Using a Jigsaw Strategy to Practice the Facilitation of Student-Centered Discussions

🕒 10:00 AM - 10:25 AM, Oct 20

● C3: Lessons Learned and Takeaways

🕒 10:00 AM - 10:25 AM, Oct 20

● Multiple Strategies for Understanding Fundamental Mathematics in STEM Education

🕒 10:00 AM - 10:25 AM, Oct 20

● The Future of Math and Science Education through the Lens of Disruptive Innovations

🕒 10:00 AM - 10:25 AM, Oct 20

10:35 AM

Morning Sessions

🕒 10:35 AM - 11:00 AM, Oct 20

Research

Regular

6 Subsessions

● Interactions in a Multilingual Science Classroom in Lebanon

🕒 10:35 AM - 11:00 AM, Oct 20

● Bridging the gap: Enhancing the roles and impacts of pure STEM faculty in STEM teacher preparation

🕒 10:35 AM - 11:00 AM, Oct 20

● Giving Calculus Students the Power of Responsibility Through Flipping Calculus

🕒 10:35 AM - 11:00 AM, Oct 20

● Elementary PBL Teachers' Perceptions of Teacher-Student Relationships

🕒 10:35 AM - 11:00 AM, Oct 20

● Case Study of Racially Minoritized Engineering Majors interest to be STEM Teachers at HSI

🕒 10:35 AM - 11:00 AM, Oct 20

● Disrupting the School-to-Prison Pipeline through Abolitionist STEM and The Cultural Wealth Model

🕒 10:35 AM - 11:00 AM, Oct 20

11:10 AM

Morning Sessions

🕒 11:10 AM - 12:00 PM, Oct 20

Regular

Research

5 Subsessions

● **Potential and Implemented Levels of Cognitive Demand for Pre-Service Teachers' Tasks in the edTPA**

🕒 11:10 AM - 12:00 PM, Oct 20

● **Transdisciplinary Education: How to Support a Transdisciplinary Approach to Teacher Education**

🕒 11:10 AM - 12:00 PM, Oct 20

● **Launching Rising 5th Graders and Elementary Teachers in STEM+ Engagement through a Summer Camp**

🕒 11:10 AM - 12:00 PM, Oct 20

● **Diving Deeper into Culturally Relevant Tasks: Looking at a Framework to Critique Learning**

🕒 11:10 AM - 12:00 PM, Oct 20

● **Examining Preservice Teachers' Mathematical Problem-Solving Conceptualization and Performance**

🕒 11:10 AM - 12:00 PM, Oct 20

12:00 PM

Lunch; Keynote

🕒 12:00 PM - 1:30 PM, Oct 20

Misc

Keynote

1 Subsessions

● **The Beer Archaeologist**

🕒 12:00 PM - 1:30 PM, Oct 20

1:45 PM

Afternoon Sessions

🕒 1:45 PM - 2:10 PM, Oct 20

Research

Regular

6 Subsessions

● **Fifth through twelfth grade students' mathematics identity development**

🕒 1:45 PM - 2:10 PM, Oct 20

● **Demographic effects on middle grades student mathematics affect and identity**

🕒 1:45 PM - 2:10 PM, Oct 20

● **Promoting teachers' advocacy and agency for equity in STEM education through research and reflection**

🕒 1:45 PM - 2:10 PM, Oct 20

● **Year-long Teaching Residency for STEM Teacher Candidates: Program Planning and Implementation**

🕒 1:45 PM - 2:10 PM, Oct 20

● **Teenagers' criteria and strategies to assess online scientific information trustworthiness**

🕒 1:45 PM - 2:10 PM, Oct 20

● **Math posters as a tool for curricular noticing: Implementation of a structured field experience**

🕒 1:45 PM - 2:10 PM, Oct 20

2:20 PM

Afternoon Sessions

🕒 2:20 PM - 3:10 PM, Oct 20

Regular

Research

4 Subsessions

● A Framework for Mathematics Support Courses that Centers Equity, Engagement, & Effectiveness

🕒 2:20 PM - 3:10 PM, Oct 20

● Teaching engineering through empathy using novel studies

🕒 2:20 PM - 3:10 PM, Oct 20

● Redefining and Disrupting Science Class with Virtual Reality

🕒 2:20 PM - 3:10 PM, Oct 20

● History of Mathematics in the Classroom: A Focus on Cultures

🕒 2:20 PM - 3:10 PM, Oct 20

Workshops

🕒 2:20 PM - 3:35 PM, Oct 20

Workshop

1 Subsessions

● Getting Started: Implementing computer science education in elementary science/STEM methods courses

🕒 2:20 PM - 3:35 PM, Oct 20

Three-Minute Thesis

🕒 2:20 PM - 3:10 PM, Oct 20

Three-Minute Th...

3 Subsessions

● Science Teacher Narratives on Professional Development

🕒 2:20 PM - 3:10 PM, Oct 20

● Pre-Service Teachers' Systems Thinking about the Nervous System

🕒 2:20 PM - 3:10 PM, Oct 20

● STEM Identity Theory: A (Re)Conceptual Framework

🕒 2:20 PM - 3:10 PM, Oct 20

3:20 PM

Afternoon Sessions

🕒 3:20 PM - 3:45 PM, Oct 20

Research

Regular

5 Subsessions

● Preservice Teachers' Attitudes on Studying Word Problem Semantic Structure

🕒 3:20 PM - 3:45 PM, Oct 20

● Teacher Dispositions to Support Underrepresented Scholars in STEM

🕒 3:20 PM - 3:45 PM, Oct 20

● Developing relational concepts through the exploration of balanced and unbalanced

🕒 3:20 PM - 3:45 PM, Oct 20

● Siri Create a Lesson Plan: Student Teachers' Interactions with ChatGPT for Lesson Planning

🕒 3:20 PM - 3:45 PM, Oct 20

● K-8 Preservice Teachers' Number Sense: Foundations of Numbers and Operations Course Analysis

🕒 3:20 PM - 3:45 PM, Oct 20

4:00 PM

Afternoon Sessions

🕒 4:00 PM - 4:25 PM, Oct 20

Research

Regular

6 Subsessions

● Centering Students in Transdisciplinary STEAM Using Positioning Theory

🕒 4:00 PM - 4:25 PM, Oct 20

● Development of a Survey Instrument to Assess Science Teacher Preferences of Professional Development

🕒 4:00 PM - 4:25 PM, Oct 20

● A Culturally Relevant Summer Camp at Choctaw Nation of OK with NASA SciAct Native Earth | Native Sky

🕒 4:00 PM - 4:25 PM, Oct 20

● Teaching Community-Based Engineering in a Rural School District

🕒 4:00 PM - 4:25 PM, Oct 20

● Explicating the conception of mathematical promise

🕒 4:00 PM - 4:25 PM, Oct 20

● Affordances and Constraints of a Hybrid Online/In-Person Science Methods Course

🕒 4:00 PM - 4:25 PM, Oct 20

5:00 PM

Business Meeting

🕒 5:00 PM - 7:00 PM, Oct 20

Misc

5:45 PM

Poster Session and Reception

🕒 5:45 PM - 7:00 PM, Oct 20

Poster Session

Misc

4 Subsessions

● Designing an Experiential Learning Trip Utilizing National Park and Mountain Coaster Contexts

🕒 5:45 PM - 7:00 PM, Oct 20

● A Blended Teaching Internship to Improve Preservice STEM Teachers' Pedagogical Knowledge

🕒 5:45 PM - 7:00 PM, Oct 20

● Retrieval practice and reflective test corrections to reduce math anxiety and improve self efficacy

🕒 5:45 PM - 7:00 PM, Oct 20

● K-8 Preservice Teachers' Numeracy (Number Sense) Knowledge: Content Analysis

🕒 5:45 PM - 7:00 PM, Oct 20

Sat, Oct 21, 2023

7:30 AM

Breakfast

🕒 7:30 AM - 8:45 AM, Oct 21

Misc

9:00 AM

Morning Sessions

🕒 9:00 AM - 9:50 AM, Oct 21

Regular

Research

Workshop

4 Subsessions

● Teaching the evaluation of the trustworthiness of online scientific information

🕒 9:00 AM - 9:50 AM, Oct 21

● Connecting with Students Virtually in Face-to-Face Classes: Integrating Google Suite

🕒 9:00 AM - 9:50 AM, Oct 21

● How Pre-service Teachers Attend to Mathematical Teaching Practice during Number Talks

🕒 9:00 AM - 9:50 AM, Oct 21

● Exploring the Validity of The Mathematics Teaching Efficacy Beliefs Instrument for Teachers

🕒 9:00 AM - 9:50 AM, Oct 21

10:00 AM

Morning Sessions

🕒 10:00 AM - 10:25 AM, Oct 21

Research

Regular

6 Subsessions

● Leveraging Networked Improvement Communities as a Pathway for Collaborative Practitioner Inquiry

🕒 10:00 AM - 10:25 AM, Oct 21

● Preservice teachers' perceptions of their readiness to teach math using multiple representations

🕒 10:00 AM - 10:25 AM, Oct 21

● Preservice Teachers' Earth Science Understandings: Then and Now

🕒 10:00 AM - 10:25 AM, Oct 21

● Using Mathematical Modeling to Impact Students' Ability to Distinguish Misinformation

🕒 10:00 AM - 10:25 AM, Oct 21

● Legacy of the New Math: A reflection on curriculum reform

🕒 10:00 AM - 10:25 AM, Oct 21

● Exploring Mathematics Preservice Teachers' Experiences in a Summer Field Experience

🕒 10:00 AM - 10:25 AM, Oct 21

10:35 AM

Morning Sessions

🕒 10:35 AM - 11:00 AM, Oct 21

Research

Regular

4 Subsessions

● Tracking Lebanese Students' Reasoning about Immune Concepts from Grades 8 to 12

🕒 10:35 AM - 11:00 AM, Oct 21

● Student STEM Learning Experiences and Beliefs in an Urban School Setting

🕒 10:35 AM - 11:00 AM, Oct 21

● Mathematical Connection and Mathematical Creativity

🕒 10:35 AM - 11:00 AM, Oct 21

● Angles in the Air: The Practical Applications of Geometric and Trigonometric Concepts by Pilots

🕒 10:35 AM - 11:00 AM, Oct 21

11:10 AM

Morning Sessions

🕒 11:10 AM - 11:35 AM, Oct 21

Regular

Research

6 Subsessions

● **Supporting Elementary Teachers as They Implement STEM Investigations**

🕒 11:10 AM - 11:35 AM, Oct 21

● **Connecting Experiences in Mathematics and Math Trauma**

🕒 11:10 AM - 11:35 AM, Oct 21

● **Understanding Pre-service Teachers' Perceptions of Authentic Mathematics**

🕒 11:10 AM - 11:35 AM, Oct 21

● **Putting NGSS Into Play: An Elementary Schools' Implementation Story**

🕒 11:10 AM - 11:35 AM, Oct 21

● **Teacher Tools: Data Analysis Skills Needed for the Next Generation of STEM Teachers**

🕒 11:10 AM - 11:35 AM, Oct 21

● **K-8 Prospective Teachers' Views of Learning and Teaching Mathematics Using Programming and Robotics**

🕒 11:10 AM - 11:35 AM, Oct 21