LAS VEGAS
NEVADA

FEBRUARY 10-12, 2022

Hilton Lake Las Vegas
Resort and Spa

TABLE OF CONTENTS

WELCOME

Dear AMTE Friends,

We would like to welcome each of you to the Twenty-sixth Annual Conference of the Association of Mathematics Teacher Educators (AMTE) in Henderson, NV at the Hilton Lake Las Vegas Resort and Spa. The 2021 conference was our first virtual conference and was a wonderful success, but we are excited to be back in person this year to reconnect, learn from each other, and share our own work. This year we have grown in many ways and new opportunities continue to be added. We hope you find community at this conference, including opportunities to listen, share, laugh, and learn. Our conference app offers opportunities to build on some of the features we discovered from last year's virtual conference. We hope you will engage in live chat at sessions, via social media, and by reaching out either electronically or in person to speakers who you found engaging and thought provoking. We would like to give you an idea of what to expect over the next few days:

INVITED SPEAKERS
Our opening keynote address *What are our responsibilities to mathematics teacher education in this moment?* takes place in the Thursday General Session at 8:15 am in Salon I-IV. Panel Members include:

- **Melissa Adams Corral,** California State University Stanislaus
- **Toya Frank,** George Mason University
- **Luis Leyva,** Vanderbilt University - Peabody College of Education & Human Development
- **Priya V. Prasad,** University of Texas at San Antonio
- **Jared Webb,** North Carolina A&T State University

Sandra Crespo gives the **Judith E. Jacobs Lecture** with a talk titled, *What Does It Mean and What Will Take to Be an Anti-Racist Mathematics Teacher Educator?* on Friday afternoon at 5:00 pm in Salon I-IV.

Tim Hendrix, recipient of the **Award for Excellence in Service in Mathematics Teacher Education,** will present a talk titled *Standing on Shoulders—and Lessons we have Learned* on Friday morning at 10:30 am in Salon i.

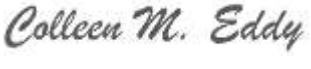
Lynsey Gibbons, recipient of the **2021 Early Career Award** will present a talk titled *Community and School University Partnerships: Reflecting on Our Work* on Friday morning at 9:15 am in Salon 1.

PROGRAM INFORMATION
There are 104 Individual Sessions, 36 Discussion Sessions, 55 Reports, 12 Extended Sessions, 10 Symposium Sessions, 31 Poster Presentations in the program. There are 447 speakers on this year's program. There were 427 proposals submitted for review. The program committee accepted 58% of the proposals for the program including presentations, discussions and extended sessions, reports, and posters. The program also includes 9 invited presentations, 3 award-winner sessions, and 3 sessions presented by AMTE Sponsors.

LEAD THE WAY
AMTE continues to grow and to explore ways to be more inclusive and impactful beyond the conference. However, the conference is a wonderful opportunity unlike any other. We would like to thank each of you for attending our conference and bringing your expertise, experiences, and energy. As AMTE members, you are the voice of the organization and can help us continue to support MTEs, MTs, and students.

Megan Burton, *AMTE President*

Julie Amador, *2022 AMTE AVP for Annual Conference Program*



Colleen Eddy, *AMTE AVP for Conference*

Shari Stockero*, AMTE Executive Director*

CONFERENCE SCHEDULE

2022 ANNUAL AMTE CONFERENCE
FEBRUARY 10-12, 2022

WEDNESDAY, FEBRUARY 9, 2022

4:30 PM – 7:30 PM	AMTE Registration Desk Open

THURSDAY, FEBRUARY 10, 2022

7:00 AM – 5:00 PM	AMTE Registration Desk Open
10:00 AM – 5:00 PM	Exhibits Open
8:00 AM – 10:00 AM	**Opening Session – Salon I-IV**
10:15 AM – 11:00 AM	Concurrent Sessions
11:15 AM – 12:00 PM	Concurrent Sessions
12:00 PM – 1:15 PM	Lunch – Salon I-IV
1:15 PM – 2:00 PM	Concurrent Sessions
2:15 PM – 3:15 PM	Concurrent Sessions
3:15 PM – 3:45 PM	Break
3:45 PM – 4:45 PM	Concurrent Sessions
5:00 PM – 5:45 PM	Concurrent Sessions
5:45 PM – 6:45 PM	Reception for Graduate Students & Early Career Faculty – Event Center Cafe

FRIDAY, FEBRUARY 11, 2022

6:45 AM – 7:45 AM	Breakfast – Salon I-II
6:45 AM – 7:45 AM	Advocacy and Emerging Issues Breakfast – Salon III
7:30 AM – 4:30 PM	AMTE Registration Desk Open
8:30 AM – 5:00 PM	Exhibits Open
8:15 AM – 9:00 AM	Concurrent Sessions
9:15 AM – 10:15 AM	Concurrent Sessions
10:30 AM – 11:30 AM	Concurrent Sessions
12:00 PM – 1:30 PM	Lunch – Salon I-II
1:30 PM – 2:15 PM	Poster Session – Event Center
2:30 PM – 3:15 PM	Concurrent Sessions
3:30 PM – 4:30 PM	Concurrent Sessions
4:30 PM – 5:00 PM	Break
5:00 PM – 6:30 PM	**Judith E. Jacobs Lecture – Salon I-IV**

SATURDAY, FEBRUARY 12, 2022

6:45 AM – 7:45 AM	Breakfast and Affiliate Meetings – Salon I-II
7:30 AM – 10:30 AM	AMTE Registration Desk Open
8:15 AM – 9:15 AM	Concurrent Sessions
9:30 AM – 10:30 AM	Concurrent Sessions
10:45 AM – 12:00 PM	Concurrent Sessions
12:00 PM – 1:30 PM	**Lunch and Business Meeting – Salon I-II**

CONFERENCE INFORMATION

FINDING THE CONFERENCE AREA

Conference session rooms are located on the Garden Level – 1st Floor and Lobby Level – 3rd Floor. Meals will be held in Salons I-IV on the Lobby Level. For your convenience, a map of the hotel conference area is printed on the back of the program book. For other questions about hotel facilities, please contact the volunteers at the AMTE Registration Desk, the members of the Conferences Committee, or hotel staff.

CONFERENCE REGISTRATION DESK

Please stop by the AMTE Registration Desk, located on the Lobby Level – 3rd Floor to the right past the elevators, to obtain your conference materials, including your nametag and the conference program, if you requested a print copy.

AMTE REGISTRATION DESK HOURS

WEDNESDAY	4:30 PM - 7:30 PM
THURSDAY	7:00 AM - 5:00 PM
FRIDAY	7:30 AM - 4:30 PM
SATURDAY	7:30 AM - 10:30 AM

CONFERENCE WEBSITE/APP INFORMATION

Use the free conference app to:

- View the conference program
- Organize your schedule
- Find more information about speakers and attendees
- Join informal Meet-Ups
- Share documents, participant in audience surveys, polls, and Q & A sessions
- Engage in discussions with other attendees during a session
- Engage attendees and colleagues around the world through social media

To access the app, please do the following:

1. Download Guidebook from the Apple App Store or Google Play.
2. Click **Find Guides** at the bottom of the main page of the app.
3. Select **"Have a passphrase?"**, enter **the passphrase you received by email**, and then select Continue.
4. Open the Conference Guide.

If you are unable to access the conference Guidebook, please contact amte-support@amte.net for assistance.

CANCELLATIONS AND PROGRAM CHANGES

For updated lists of cancellations and other program changes, visit https://amte.net/conferences/conf2022/updates or the conference app.

SPONSORS AND EXHIBITS

We appreciate the generous support of our sponsors and exhibitors. Please take an opportunity to thank them for their contributions to AMTE by visiting with them in the exhibit area located on the 3rd floor outside Salons I-III.

THURSDAY, FEBRUARY 10	10:00 AM – 5:00 PM
FRIDAY, FEBRUARY 11	8:30 AM – 5:00 PM

WIRELESS INTERNET ACCESS

Conference attendees who are staying at the Hilton Lake Las Vegas Resort & Spa receive complimentary internet access in individual guestrooms for the duration of the conference. Directions on how to access wireless and wired internet service can be found in each guestroom. Complimentary wireless internet access is provided in the conference/meeting area of the hotel for conference attendees and for AMTE usage throughout the conference. Using your laptop or mobile device, access the conference area network and login using **Username – amte2022** and **Password – amte2022** (case sensitive).

HOTEL PARKING INFORMATION
Complimentary self-parking at the Hilton Lake Las Vegas Resort & Spa is available for everyone attending the conference.

OPTIONS FOR DINNER
The Hilton Lake Las Vegas Resort offers the Firenze Lobby Lounge and the Medici Bistro & Patio serving meal and cocktail options each day. Several dining options are available in the Village within walking distance of the hotel. For information on additional restaurants, inquire with the Hotel Concierge, Conference App, or AMTE Registration Desk.

CONFERENCE PHOTOGRAPHS
Photographs are being taken during the conference for use on the AMTE website, newsletters, and brochures. These photographs will not be sold or distributed in any way beyond the promotion of AMTE and its conference. If you do not wish your likeness to be used in these ways, please contact AMTE Executive Director, Shari Stockero, at the conference or via email at executivedirector@amte.net. Thanks to Tyler Mahal for serving as conference photographer.

PERSONAL PROPERTY
Please note that the hotel is not responsible for the safekeeping of equipment such as laptop computers or personal LCD projectors, supplies, written materials, or any other items that are unattended or left in meeting rooms by conference attendees.

LOST AND FOUND
Please drop off any unclaimed found items at the AMTE Registration Desk. Or you can drop off items at the Manager-On-Duty desk located at the hotel front desk next to the bell stand. AMTE and the hotel are not responsible for items being left in the session rooms and in the conference area.

COMMITTEE MEETINGS
AMTE Committees will meet during the conference according to the schedule provided to committee leaders. These meetings will take place in the Event Center Meeting Room.

AFFILIATE MEETINGS
AMTE Affiliates will meet during breakfast on Saturday in Salons I-II. This is a great time to meet each other face-to-face and discuss a game plan for the upcoming year.

COLLABORATION SPACE
A space for collaboration and informal meetings among conference attendees will be available in the Event Center as well as in the Florentine Gardens and Tuscany Courtyard. Please take advantage of these areas to share your conference experiences and engage in productive discussions with other conference attendees.

THURSDAY	8:00 AM – 6:30 PM
FRIDAY	8:00 AM – 4:30 PM
SATURDAY	8:00 AM – 11:30 AM

SOCIAL MEDIA

LIKE AMTE ON FACEBOOK

facebook.com/AMTE.net

FOLLOW AMTE ON TWITTER

@AMTEnews

*USE **#AMTE2022** TO JOIN PUBLIC DISCUSSION AROUND THE CONFERENCE.*

AMTE 2021 Board of Directors

PRESIDENT
Megan Burton
Auburn University
Auburn, AL
meb0042@auburn.edu

PAST PRESIDENT
Michael D. Steele
National Science Foundation
mike@steelemathed.com

VICE-PRESIDENT OF MEMBERSHIP
Lisa Poling
Appalachian State University
Boone, NC
polingll@appstate.edu

VICE-PRESIDENT OF PROFESSIONAL LEARNING
Jennifer Suh
George Mason University
Fairfax, VA
jsuh4@gmu.edu

BOARD MEMBER-AT-LARGE
Enrique Galindo
Indiana University
Bloomington, IN
egalindo@indiana.edu

BOARD MEMBER-AT-LARGE
Marrielle Myers
Kennesaw State University
Kennesaw, GA
mmyers22@kennesaw.edu

BOARD MEMBER-AT-LARGE
Farshid Safi
University of Central Florida
Orlando, FL
farshid.safi@ucf.edu

EXECUTIVE DIRECTOR
Shari Stockero
Michigan Technological University
Houghton, MI
stockero@mtu.edu

VICE-PRESIDENT OF PUBLICATIONS
Babette Benken
California State University, Long Beach
Long Beach, CA
babette.benken@csulb.edu

SECRETARY
Cynthia Taylor
Millersville University
Millersville, PA
cynthia.taylor@millersville.edu

TREASURER
Sarah Quebec Fuentes
Texas Christian University
Fort Worth, TX
s.quebec.fuentes@tcu.edu

VICE-PRESIDENT OF COMMUNICATIONS & OUTREACH
Dustin Jones
Sam Houston State University
Huntsville, TX
dustinjones@shsu.edu

VICE-PRESIDENT OF ADVOCACY, EQUITY, & RESEARCH
Sarah van Ingen Lauer
University of South Florida
Tampa, FL
vaningen@usf.edu

Historical Listing of AMTE Presidents

PRESIDENT	TERM	PRESIDENT	TERM	PRESIDENT	TERM
Megan Burton	2021 – 2023	Marilyn Strutchens	2011 – 2013	Susan Gay	1999 – 2001
Mike Steele	2019 – 2021	Barbara Reys	2009 – 2011	Nadine Bezuk	1997 – 1999
Randolph Philipp	2017 – 2019	Jennifer Bay-Williams	2007 – 2009	Judith Jacobs	1995 – 1997
Christine Thomas	2015 – 2017	Sid Rachlin	2005 – 2007	Henry Kepner	1993 – 1995
Fran Arbaugh	2013 – 2015	Karen Karp	2003 – 2005	Mark Spikell	1991 – 1993
		Francis (Skip) Fennell	2001 – 2003		

History of the Judith E. Jacobs Lecture

The Judith E. Jacobs Lecture was established in 2003 to honor Dr. Judith E. Jacobs, one of the founding AMTE members. Dr. Jacobs was instrumental in developing AMTE into a national organization and in the development of the AMTE conference with its current structure and emphasis on interaction. Judith Jacobs is an active member who served as treasurer, president, and as the first executive director. The Judith E. Jacobs Lecture was established after Dr. Jacobs completed her tenure as AMTE Executive Director.

Dr. Jacobs gave the first lecture where she described what it means to be a mathematics teacher educator. She outlined how being a mathematics teacher educator is different from being a mathematics teacher, a career professional developer, or a researcher in mathematics education. Dr. Jacobs challenged us to recognize our roles as mathematics teacher educators and reminded us that, through the AMTE organization, an outlet has been created to share and learn from each other. For information on past Judith E. Jacobs Lectures, please visit the AMTE Conferences website at https://amte.net/about/awards/judith-jacobs-lecturer.

Year	Judith E. Jacobs Lecturer	Year	Judith E. Jacobs Lecturer
2022	Sandra Crespo	2012	Deborah Schifter
2021	Marta Civil	2011	Joan Ferrini-Mundy
2020	Paola Sztajn	2010	James Hiebert
2019	Denise A. Spangler	2009	Jeremy Kilpatrick
2018	Margaret (Peg) Smith	2008	Ed Silver
2017	Marilyn E. Strutchens	2007	Deborah Loewenberg Ball
2016	Francis (Skip) Fennell	2006	Judith Sowder
2015	Nadine Bezuk	2005	Glenda Lappan
2014	Barbara J. Reys	2004	Thomas J. Cooney
2013	Karen Karp	2003	Judith E. Jacobs

2022 ANNUAL AMTE CONFERENCE COMMITTEE

CONFERENCES COMMITTEE

If you have questions, comments, or concerns throughout the conference, please notify one of these members of the Conferences Committee. They will be happy to assist you.

Shari Stockero (AMTE Executive Director), Michigan Technological University, stockero@mtu.edu
Enrique Galindo (AMTE Board Liaison), Indiana University, egalindo@indiana.edu
Colleen Eddy (AVP for Conferences), University of North Texas, Colleen.Eddy@unt.edu
Julie James, (AVP for Conferences Designee), University of Mississippi, jjames1@olemiss.edu
Suzanne Harper, Miami University, harpersr@MiamiOH.edu
Lateefah Id-Deen, Kennesaw State University, liddeen@kennesaw.edu
Gabriel Matney, Bowling Green State University, gmatney@bgsu.edu
Gail Stewart, University of South Florida, gailstewart@usf.edu

LOCAL ARRANGEMENTS COMMITTEE

Jeff Shih (co-chair), University of Nevada, Las Vegas, jshih@unlv.nevada.edu
Travis Olson (co-chair), University of Nevada, Las Vegas, travis.olson@unlv.edu
Jonathan Bostic, Bowling Green State University
Timothy Folger, Bowling Green State University
Jonah Shulman, University of Nevada, Las Vegas
Bill Speer, University of Nevada, Las Vegas
Maria Stewart, University of Missouri

ANNUAL CONFERENCE PROGRAM COMMITTEE

Julie Amador (AVP for 2022 Annual Conference Program), University of Idaho, jamador@uidaho.edu
Rick Hudson (AVP for 2021 Annual Conference Program), University of Southern Indiana, rhudson@usi.edu
Jeremy Zelkowski (AVP for 2023 Annual Conference Program), University of Alabama, jzelkowski@ua.edu
Kelly Costner, Winthrop University, costnerk@winthrop.edu
Rebekah Elliott, Oregon State University, elliottr@science.oregonstate.edu
Carlos Nicolas Gomez, Clemson University, carlos@clemson.edu
Michelle Cirillo, University of Delaware, mcirillo@udel.edu
Jennifer Ward, Kennesaw State University, ward.jennifer.k@gmail.com
Robert Powers, University of Northern Colorado, robert.powers@unco.edu
Wendy Smith, University of Nebraska, wsmith5@unl.edu
Nirmala Naresh, University of North Texas, nirmala.naresh@unt.edu
Lisa Skultety, University of Central Arkansas, lskultety@uca.edu
Luke Reinke, University of Morth Carolina Charlotte, lreinke@uncc.edu
Stefanie Livers, Missouri State University, stefanielivers@missoristate.edu
Casey Hawthorne, Furman University, casey.hawthorne@furman.edu

CONFERENCE APP DEVELOPMENT TEAM

App Coordinator: Steve Rhine, AVP for Web Development, amte-support@amte.net
App Graphics Assets: Designotype Printers, Calumet, MI

AMTE AFFILIATES

AMTE is proud to welcome members of its 25 affiliated organizations:

AFFILIATE	ACRONYM	LOCATION
Illinois Mathematics Teacher Educators	IMTE	Illinois
Utah Association of Mathematics Teacher Educators	UAMTE	Utah
Florida Association of Mathematics Teacher Educators	FAMTE	Florida
California Association of Mathematics Teacher Educators	CAMTE	California
Association of Mathematics Teacher Educators of Connecticut	AMTEC	Connecticut
Georgia Association of Mathematics Teacher Educators	GAMTE	Georgia
Pennsylvania Association of Mathematics Teacher Educators	PAMTE	Pennsylvania
Tennessee Association of Mathematics Teacher Educators	TAMTE	Tennessee
Massachusetts Mathematics Association of Teacher Educators	MassMATE	Massachusetts
South Carolina Association of Mathematics Teacher Educators	SCAMTE	South Carolina
New Jersey Association of Mathematics Teacher Educators	NJAMTE	New Jersey
Association of Mathematics Teacher Educators of Alabama	AMTEA	Alabama
Teachers of Teachers of Mathematics, Oregon	TOTOM	Oregon
Association of Mathematics Teacher Educators in Texas	AMTE-TX	Texas
Mississippi Association of Mathematics Teacher Educators	MAMTE	Mississippi
Missouri Mathematics Association for Advancement of Teacher Training	(MAT)^2	Missouri
Iowa Association of Mathematics Teacher Educators	IOWA AMTE	Iowa
Association of Maryland Mathematics Teacher Educators	AMMTE	Maryland
Hoosier Association of Mathematics Teacher Educators	HAMTE	Indiana
Association of Mathematics Teacher Educators of North Carolina	AMTE-NC	North Carolina
Michigan Association of Mathematics Teacher Educators	MI-AMTE	Michigan
Virginia Association of Mathematics Teacher Educators	VA-AMTE	Virginia
Kentucky Association of Mathematics Teacher Educators	KAMTE	Kentucky
Wisconsin Association of Mathematics Teacher Educators	WI-AMTE	Wisconsin
Women and Mathematics Education	WME	National

The Association of Mathematics Teacher Educators is a member of the Conference Board of the Mathematical Sciences and is an Affiliated Group of the National Council of Teachers of Mathematics.

The work of AMTE is made possible by the efforts of its members through leadership roles, task forces, and committees. Please support the work of our committees by participating in conference sessions led by AMTE Committees. Information about those sessions are listed below and are designated throughout the program.

Advocacy Committee Session

MENTORING EARLY CAREER FACULTY OF COLOR
Session 53, Thursday, February 10, 3:45 PM – 4:45 PM, Monte Vista

In response to multiple calls for more effective mentoring for early career faculty of color, the Advocacy Committee will sponsor a panel discussion in the service of three goals: (1) To center mentoring early career faculty of color as a critical need and focus for AMTE; (2) To highlight the complexities that early career faculty of color face and how these experiences require targeted support and guidance from mentors; and (3) To share mentoring philosophies, ideas, and approaches in relation to ethical mentorship of faculty of color.

Affiliate Connections Committee Session

THE RELATIONSHIP BETWEEN AMTE NATIONAL AND AMTE AFFILIATES: A DICHOTOMY OF EXPECTATIONS AND PARTICIPANTS
Session 36, Thursday, February 10, 2:15 PM – 3:15 PM, Piazza

We will reflect on the delicate balancing act between the expectations of the members of AMTE affiliates at AMTE national and the participation of the members of AMTE national in AMTE affiliates.

Equity Committee Session

TROUBLING THE EQUITY WATERS: CONTINUED DISCUSSIONS WITH THE AMTE EQUITY COMMITTEE
Session 25, Thursday, February 10, 1:15 PM – 2:00 PM, Piazza

The Equity Committee is one of three committees under the Advocacy, Equity, and Research Division of AMTE. This session will highlight issues raised in the discussion by the committee at AMTE 2021 Conference. The mission of AMTE is to encourage all members to see themselves as contributing to the notion of promoting equity and justice in mathematics (teacher)education, not just those that overly identify this in their work and teaching philosophies. Therefore, this session aims to bring more participants into this work by facilitating a thoughtful discussion that examines complex issues of equity while also pushing our current understandings.

Professional Development Committee Session

I AM NEW TO MATHEMATICS TEACHER EDUCATION: SUPPORTS AROUND TEACHING, SCHOLARSHIP, AND SERVICE
Session 4, Thursday, February 10, 10:15 AM – 11:00 AM, Monte Vista

This session is designed to provide opportunity for novice mathematics teacher educators to interact with experienced mathematics teacher educators. The roundtable structure of the session allows small groups to discuss topics of interest around research, teaching, and service including Designing/implementing a methods course; designing/implementing a content course; navigating academia as an MTE of color; creating a network of support and mentorship; connecting with schools; managing work and life responsibilities; coping as the lone math educator in your department; and getting your research agenda off the ground through creating a research and publishing pipeline.

PUBLICATIONS DIVISION SESSIONS

REFLECTION ON PAST, PRESENT AND FUTURE: PAVING THE WAY FOR MATHEMATICS TEACHER EDUCATION'S FUTURE

Session 37, Thursday, February 10, 2:150 PM – 3:15 PM, Monte Vista

Come hear about AMTE's new Professional Book Series volume – a guide to move the field of mathematics teacher education forward. Handbook authors and Series Editor will be present to provide an overview of chapters, share insights, and answer questions.

PUBLISHING YOUR SCHOLARLY WORK IN AN AMTE PUBLICATION: OPPORTUNITIES EXPLORED AND QUESTIONS ANSWERED

Session 69, Thursday, February 10, 5:00 PM – 5:45 PM, Monte Vista

This session includes editors from each of AMTE's publications: *Mathematics Teacher Educator*, *Contemporary Issues in Technology and Teacher Education – Math*, and *Connections*. Focus will be on clarification of expectations, differences among venues, and breakout time for individual questions and feedback.

STAR PROGRAM COMMITTEE SESSION

LEARN ABOUT THE AMTE STAR PROGRAM

Session 122 – Poster Session P25, Friday, February 11, 1:30 PM – 2:15 PM, Event Center

We invite you to come learn about the AMTE Service, Teaching, and Research (STaR) program. STaR is an early-career induction program for faculty in the first or second year of their tenure track position.

TECHNOLOGY COMMITTEE SESSION

AMTE TECHNOLOGY COMMITTEE'S TOP TOOLS AND STRATEGIES

Session 16, Thursday, February 10, 11:15 AM – 12:00 PM, Monte Vista

In this session, the AMTE Technology Committee will address multiple topics relating to technology and mathematics teacher educators. We will share instructional technology tools that we use during our courses, as well as do a deeper dive into the tools that have been highlighted in the AMTE Tech Talk Blog. In addition, participants will have the opportunity to exchange ideas about technology integration as they engage more deeply with topics of their choosing during breakouts within the session.

The AMTE Board of Directors has established awards to recognize outstanding work in mathematics teacher education. Look for the call for nominations later this spring. For more information about AMTE awards or to nominate a colleague, visit our website at www.amte.net.

Early Career Award

The purpose of the Early Career award is to recognize a mathematics teacher educator who, while early in their career, has made distinguished contributions and shows exceptional potential for leadership in one or more areas of teaching, service, and/or scholarship. The AMTE Early Career Award is awarded annually.

2021 EARLY CAREER AWARD WINNER

Lynsey Gibbons, University of Delaware

Session Title: *Community and School University Partnerships: Reflecting on Our Work*

Location: Session 103, Salon I

Time: Friday, February 11, 9:15 AM – 10:15 AM

2022 EARLY CAREER AWARD WINNER

Cathery Yeh, Chapman University

Cathery has been invited to speak at the 2023 AMTE Annual Conference in New Orleans, LA.

Nadine Bezuk Excellence in Leadership & Service Award

The **Nadine Bezuk Excellence in Leadership and Service Award** is intended to recognize a colleague for a unique contribution in service that has made a significant and lasting contribution to mathematics teacher education, directly and indirectly. We define advocacy as the process of publicly supporting ideas or plans and/or influencing decisions. The next Nadine Bezuk Excellence in Leadership and Service Award will be awarded in 2025.

2022 NADINE BEZUK EXCELLENCE IN LEADERSHIP & SERVICE AWARD WINNER

Tim Hendrix, Meredith College

Session Title: *Standing on Shoulders – and Lessons We Have Learned*

Location: Session 117, Salon I

Time: Friday, February 11, 10:30 AM – 11:30 AM

THE NTLI AWARD

Since fall 2000, the Society for Information Technology and Teacher Education (SITE) has been collaborating with four teacher education associations representing the content areas of mathematics, science, English language arts, and social studies education through the National Technology Leadership Initiative (NTLI). The NTLI fellowships were established to recognize exemplary presentations related to integration of technology in core content areas at the annual meetings of each participating association. AMTE identifies the winner of its NTLI fellowship through a competitive process that includes the requirement of submitting a paper in advance of the conference. The winner of the award receives travel funding ($1200, made possible by a donation by Texas Instruments) for presenting at the annual conference of the SITE, and the paper is forwarded and recommended for publication in the CITE journal by the AMTE Technology Committee after additional review. For more information, visit the following website: site.aace.org/awards/awards-ntli.htm. Thanks to Texas Instruments for their ongoing support of this award. Look in the 2023 Call for Proposals for information on how to submit a paper for the 2023 AMTE NTLI Award.

2022 AMTE NTLI AWARD WINNERS

Jennifer Suh, George Mason University
Katherine Roscioli, George Mason University
Holly Tate, George Mason University
Kimberly Morrow-Leong, George Mason University

Session Title: *Transformative Technology for Equity-Centered Instruction*

Location: Session 74, Orchard

Time: Thursday, February 10, 5:00 PM – 5:45 PM

MTE OUTSTANDING REVIEWER AWARD

The purpose of the *Mathematics Teacher Educator* Outstanding Reviewer Award is to recognize a colleague who, through their service as a reviewer for *Mathematics Teacher Educator* journal, provided exemplary reviews of the highest quality and value for editorial review of submitted scholarly manuscripts.

2022 *MTE* OUTSTANDING REVIEWER AWARD WINNER

Carrie Lee, East Carolina University

SCHOLARSHIPS FOR ELEMENTARY MATHEMATICS SPECIALISTS

The purpose of this Elementary Mathematics Specialist (EMS) Scholarship is to provide the recipient with $2,000 of funding to enhance their mathematics knowledge, teaching, and leadership by enrolling in university coursework that will result in becoming a certified elementary mathematics specialist. Elementary mathematics specialists work as teachers, teacher leaders, or coaches and support effective mathematics instruction and student learning at the classroom, school, district, or state levels.

CONGRATULATIONS TO THE 2021 EMS SCHOLARSHIP RECIPIENTS!

Taylor Pierce, St. Louis, Missouri
Christie Lee, Hillsboro, Oregon
Carolyn Anderson, Gurnee, Illinois

Check amte.net/about/ems in the spring for information about the next round of EMS Scholarships.

AMTE would like to thank our founding sponsor of the EMS Scholarships: Maier Math Foundation

SUSAN GAY GRADUATE STUDENT CONFERENCE TRAVEL SCHOLARSHIP

The Susan Gay Graduate Student Conference Travel Scholarship was established to provide financial support to graduate students to attend the AMTE annual conference. This scholarship is named after Susan Gay in honor of her extraordinary service to AMTE over many years as conference director, president, secretary, and board member-at-large. To qualify for the scholarship, one must be a doctoral student making steady progress toward completion of a degree. Applications will be screened initially based on the content of the application and then placed into a lottery based on geographic location.

2022 SUSAN GAY GRADUATE STUDENT CONFERENCE TRAVEL SCHOLARSHIP RECIPIENTS

Mariya Rosenhammer, Auburn University
Jennifer A. Gonzales, Baylor University
Kristin Doherty, Michigan State University
Johana Thomas Zapata, Washington State University

ACKNOWLEDGEMENTS

The Twenty-Sixth Annual AMTE Conference would not be possible without the contributions and support of many individuals.

AMTE WISHES TO EXPRESS ITS SINCERE APPRECIATION TO THE FOLLOWING:

- All of the speakers who have contributed their time and expertise to make this conference a success;
- All of the AMTE members who volunteered to serve as proposal reviewers, Manuscript Review Group mentors, and Community Circles facilitators;
- The many individuals who make up the AMTE infrastructure – the AMTE Board of Directors, Executive Director, Program Committee, Conferences Committee, Local Arrangements Committee , and Headquarters staff for providing the time and effort necessary to organize all facets of the conference;
- Julie James and Gail Stewart of the Conferences Committee, Steve Rhine, AVP for Communications, and Designotype Printers, AMTE Graphic Designers, for their dedicated work on the conference program and materials; and
- Rachel Harlow, Administrative Assistant for AMTE Conferences Committee, for all of her hard work with organizing logistics and details for this year's conference.

When you see any of these individuals at our AMTE conference, we hope that you will take the time to express your own gratitude for their dedication to the organization and to the success of the 2022 conference.

SPONSORS

AMTE would like to express our appreciation to this year's Sponsors for providing invaluable support for our conference and for our organization's activities and initiatives.

CPM EDUCATIONAL PROGRAM — GOLD SPONSOR

CPM Educational Program (www.cpm.org) is a California nonprofit 501(c)(3) serving the secondary mathematics education community with curriculum, professional development, and leadership. CPM envisions a world where mathematics is viewed as intriguing and useful, and is appreciated by all; where powerful mathematical thinking is an essential, universal, and desirable trait; and where people are empowered by mathematical problem-solving and reasoning to solve the world's problems.

CPM Educational Program is pleased to support AMTE and its STaR program by matching AMTE funds for STaR fellows. The STaR program aligns with CPM's mission to empower mathematics students and foster expertise in teachers as it provides professional development for new math education faculty targeted to help them inspire the next wave of math teachers across the country.

MAIER MATH FOUNDATION — GOLD SPONSOR

The Maier Math Foundation was created by the Math Learning Center (www.mathlearningcenter.org), a non-profit with a shared mission to empower individuals to develop their mathematical confidence and ability. The foundation is named in honor of Math Learning Center co-founder, Professor Gene Maier, whose novel ideas, love for teaching, and engaging approach to math education inspired countless teachers and students as they embarked upon their life-long math journeys. With a focus on visual math models and inquiry-based, learner-focused educational practices, the Maier Math Foundation facilitates collaboration with researchers and other nonprofit organizations to pursue common objectives, including collaboration with AMTE on a Math Ed Scholarships program (www.mathlearningcenter.org/about/giving-back) and Math at Home (mathathome.mathlearningcenter.org/).

NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS SILVER SPONSOR

The National Council of Teachers of Mathematics is the public voice of mathematics education, supporting teachers to ensure equitable mathematics learning of the highest quality for all students. NCTM members belong to the largest community of mathematics educators committed to ensuring each and every student has access to the highest quality mathematics teaching and learning. Membership opens doors to classroom resources, professional development opportunities, advocacy, peer-reviewed journals and publications, and an extensive network of teachers and mentors. Learn more about NCTM and the benefits of membership at www.nctm.org.

Budapest Semesters in Mathematics Education

Bronze Sponsor

Budapest Semesters in Mathematics Education (BSME) is a study abroad program in Budapest, Hungary, designed for undergraduates, recent graduates, and inservice teachers interested in the learning and teaching of secondary mathematics. BSME was conceived by the founders of Budapest Semesters in Mathematics (BSM), and the two programs share a common goal—to experience the mathematical and general culture of Hungary. BSME is specifically intended for those who are not only passionate about mathematics, but also the teaching of mathematics.

Get More Math

Bronze Sponsor

Get More Math (GMM) is a digital application serving elementary and secondary educators and students nationally and globally. Get More Math is fully aware that teachers want their students to remember the math they teach. The problem is that students forget so quickly. As a team of educators and experts, Get More Math knows what it's like to watch that knowledge fade but be powerless to do anything. Made by a math teacher to empower fellow math teachers, Get More Math is a hyper-intelligent teacher's aid that creates daily personalized assignments and monitors students' growth. GMM builds math practice sessions for each student that include both new material and thorough review of old concepts and skills.

Get More Math wants EVERY student to reach their fullest potential and develop a passion for mathematics. Therefore, Get More Math is proud to partner with AMTE 2022 to ensure equity, growth, and increased achievement in mathematics. Get More Math is offering a COMPLIMENTARY 30-DAY TRIAL for new teachers and SCHOOL-YEAR CAMPUS PILOT PROGRAM* to all new-to-GMM schools with Admin approval/coordination. *Campus pilot program is unlimited, lasts through July 31, 2022 and includes online professional training as well as unmatched support! Please visit www.getmoremath.com or stop by the Get More Math® exhibit booth for a demo and details.

Information Age Publishing – IAP

Bronze Sponsor

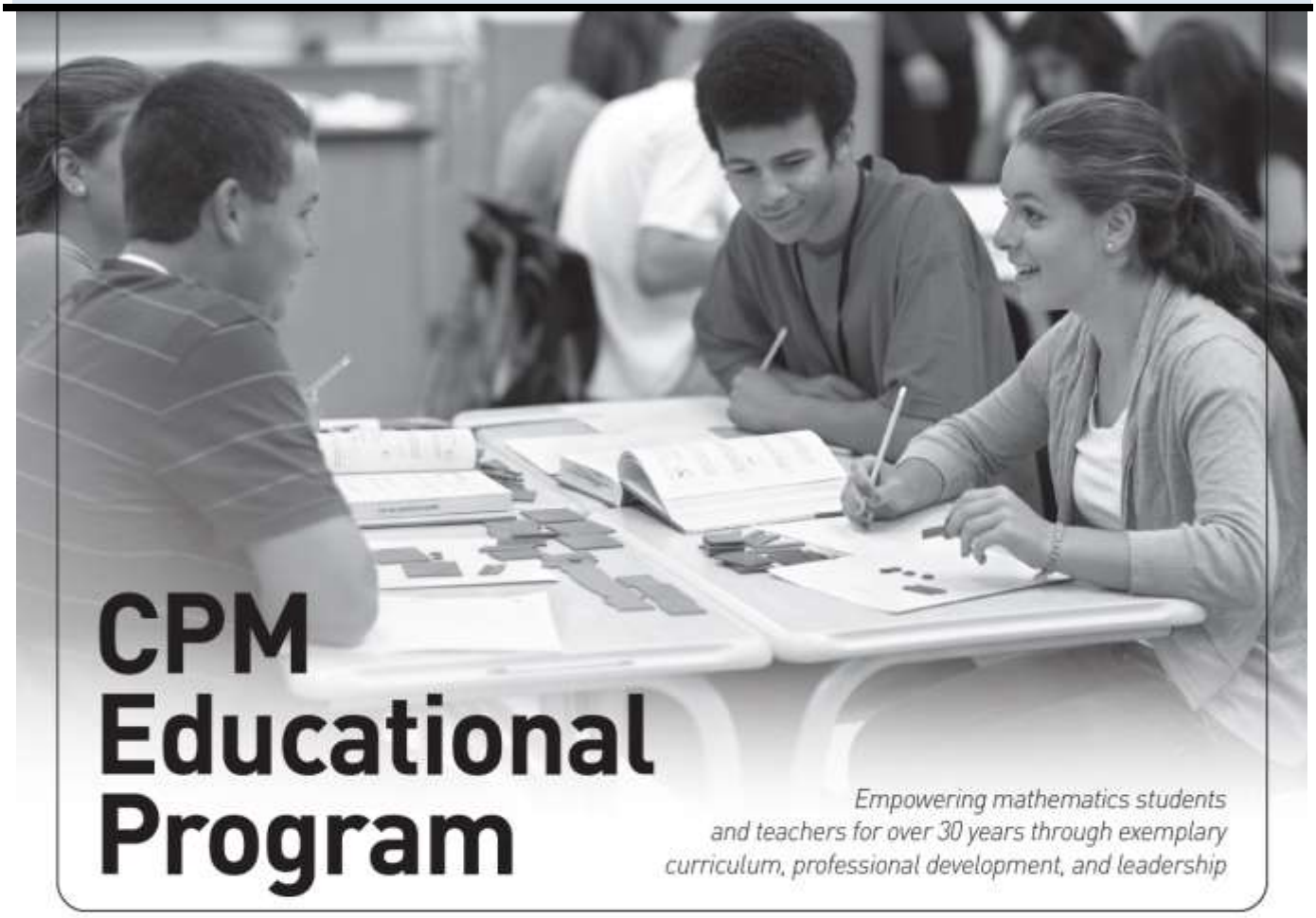
Information Age Publishing – IAP is a social science publisher of academic and scholarly book series, monographs, handbooks and journals. IAP's goal is to develop a comprehensive program of content that breaks down and defines specific niches in high-level research, in the fields of Education, Psychology, Management, Leadership, Mathematics, Educational Technology and Black Studies. AMTE is proud of our partnership with IAP as they continue to develop new books within the Association of Mathematics Teacher Educators (AMTE) Professional Book Series. IAP has also republished seven (7) monographs that were a part of the AMTE monograph series, as well as the AMTE Standards. They have an extensive list of products in the field of mathematics and look forward to adding yours to their program. Please visit their virtual bookstore (https://www.infoagepub.com/vc/amte2021) to browse their current mathematics publications, as well as, the AMTE monographs.

Mathematics Olympiads for Elementary & Middle Schools

Bronze Sponsor

Mathematical Olympiads for Elementary & Middle Schools (MOEMS®) MOEMS was established in 1979 and is one of the most influential and fun-filled math competition programs in the United States and throughout the world, with over 120,000 students from every state in the United States and 39 countries participating. The objectives of MOEMS are to teach multiple strategies for out-of-the-box problem solving, to develop mathematical flexibility in solving those problems, and foster mathematical creativity and ingenuity. Visit us at www.MOEMS.org.

GOLD SPONSOR: CPM EDUCATIONAL PROGRAM



CPM Educational Program

Empowering mathematics students and teachers for over 30 years through exemplary curriculum, professional development, and leadership

CPM's University Support Program

CPM provides complimentary access to our secondary mathematics curriculum to support math teacher educators and their students. Use CPM as a resource for teacher preparation coursework, student teaching, and for use in curriculum review and research.

Visit CPM.org/university

+ To request access for use in academic curriculum review and research
+ To request access for use in math education courses with teacher credentialing programs and student teachers

If you have further questions about university use of CPM's program or would like to request print materials for your curriculum library, please email research@cpm.org.

CPM Educational Program **MORE MATH FOR MORE PEOPLE** CPM

GOLD SPONSOR: MAIER MATH FOUNDATION

Maier Math Foundation

The Maier Math Foundation was created by the Math Learning Center, a non-profit with a shared mission to empower individuals to develop their mathematical confidence and ability.

The foundation is named in honor of Math Learning Center co-founder, Professor Gene Maier, whose novel ideas, love for teaching, and engaging approach to math education inspired countless teachers and students as they embarked upon their life-long math journeys.

With a focus on visual math models and inquiry-based, learner-focused educational practices, the Maier Math Foundation facilitates collaboration with researchers and other nonprofit organizations to pursue common objectives, including collaboration with AMTE on a Math Ed Scholarships program and Math at Home.

Learn More

Our mission is to empower individuals to develop their mathematical confidence and ability.

SILVER SPONSOR: NCTM

GREAT TITLES FROM NCTM PUBLICATIONS

Project-Based Learning in Elementary Classrooms: Making Mathematics Come Alive

Edited by Jean S. Lee and Enrique Galindo

Stock #: 16020 List Price: $39.95

This book presents an overview of the essentials of project-based learning (PBL) and the evidence that supports the use of PBL. It showcases PBL units addressing the Common Core State Standards for Mathematics for the purpose of demonstrating how PBL works and the learning that results.

One Hundred Problems Involving the Number 100

By G. Patrick Vennebush

Stock #: 16002 List price: $28.50

The problems in *One Hundred Problems Involving the Number 100* celebrate the "Goldilocks" charm of 100—a number not too small, not too large, but just right to challenge students without intimidating them. A range of mathematical topics from patterns, conversions, and sums and series to number theory, functions, probability and statistics, and geometry are covered.

5 Practices for Orchestrating Productive Mathematics Discussions, 2nd ed.

By Margaret (Peg) Smith and Mary Kay Stein

Stock #: 15397 List price: $30.95

Five Practices provides a model for facilitating discussions in mathematics classrooms based on the thinking of students. This new edition is situated within current educational contexts (e.g., *CCSSM* and *Principles to Actions*) and offers details on how to plan for and engage students in K–12 classrooms in discussions that advance the learning of all students in the classroom.

The Living Tree of Mathematics:

By Vera Sarina

Stock #: 16063 List Price: $39.95

Using the history of mathematics concepts of various cultures around the world, *The Living Tree of Mathematics* explores the key concepts of middle school mathematics such as fractions, negative numbers, arithmetical operations, variables, the coordinate plane, and measurement formulas. The book also highlights the rarely examined notions of the tree of mathematics and language of mathematics.

COMING SOON!

Becoming a Teacher of Mathematical Modeling

K–GRADE 5, GRADES 6–12

Learn to understand mathematical modeling and its place in classrooms. This series focuses on what teachers and students do while engaged in modeling in school classrooms and how their work reflects four big ideas about mathematical modeling that are based in the discipline of mathematics.

Taking Action Series

List price: $37.95

Are you ready to take your teaching to the next level? The Taking Action series offers a coherent set of professional learning experiences designed to foster teachers' understanding of the effective mathematics teaching practices and their ability to apply those practices in their own classrooms.

K–Grade 5
Stock #: 15187
Grades 6–8
Stock #: 15200
Grades 9–12
Stock #: 15201

Catalyzing Change Series

List price: $39.50

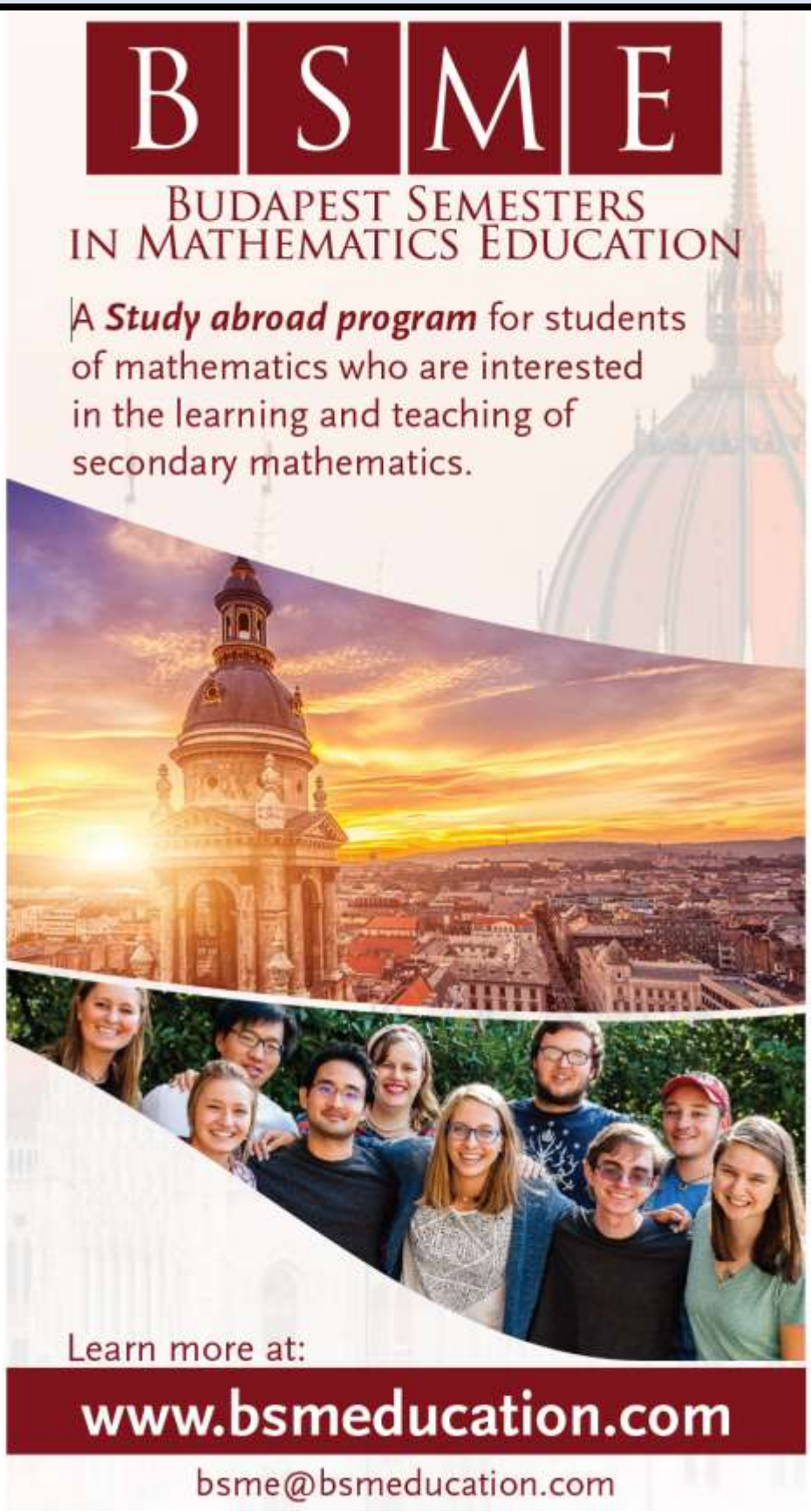
The Catalyzing Change series is a collection of three books intended to initiate the critical conversations on policies, practices, and issues that affect mathematics education. The series identifies the critical conversations necessary to address the serious challenges educators face, ensuring that each and every child has access to a high-quality mathematics education.

Early Childhood and Elementary Mathematics
Stock #: 15928
Middle School Mathematics Stock #: 15929
High School Mathematics Stock #: 15637

Check out all of NCTM's publications at
www.nctm.org/store

NCTM | NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS

BRONZE SPONSOR: BSME



BRONZE SPONSOR: GET MORE MATH

Help Kids Remember Math!

Help your students
experience success in math!
You can save precious time!

Special offer: FREE SCHOOL YEAR PILOT PROGRAM*
FOR GRADES 3 - 11

Do your students remember the skills that were taught weeks or months ago? Every math teacher knows it is hard to help students to learn a new skill, but even harder to make sure it sticks.

get more math!

Get More Math provides **individualized** mixed review practice for students and real-time **actionable feedback** for teachers. GMM is compatible with **all curriculum** and is aligned to **state standards**.

Enjoy complimentary use until July 31 2022.*
(*FIRST TIME CUSTOMERS ONLY, NO OBLIGATION TO BUY)

TRY IT TODAY!

REQUEST PILOT

LEARN MORE

BRONZE SPONSOR: IAP

IAP
www.infoagepub.com

AMTE 2022 Annual Conference
Association of Mathematics Teacher Educators
February 10-12, 2022

Featured Series:

The Association of Mathematics Teacher Educators (AMTE) Professional Book Series
Series Editor: Babette M. Benken, *California State University, Long Beach*

The AMTE Monograph Series
Series Editor: AMTE

The Montana Mathematics Enthusiast - Monograph Series
Series Editor: Bharath Sriraman, *University of Montana*

Cognition, Equity & Society: International Perspectives Series
Series Editor: Bharath Sriraman, *University of Montana*

Research in Mathematics Education Series
Series Editors: Denisse R Thompson, *University of South Florida*; Mary Ann Huntley, *Cornell University*; and Christine Suurtamm, *University of Ottawa*

Featured Books:

$30 EACH PAPERBACK PLUS S/H
USE DISCOUNT **AMTE2021** AT
CHECKOUT **www.infoagepub.com**

BRONZE SPONSOR: MOEMS

Mathematical Olympiads for Elementary & Middle Schools (MOEMS®).

MOEMS was established in 1979 and is one of the most influential and fun-filled math competition programs in the United States and throughout the world, with over 120,000 students from every state in the United States and 39 countries participating. The objectives of MOEMS are to teach multiple strategies for out-of-the-box problem solving, to develop mathematical flexibility in solving those problems, and foster mathematical creativity and ingenuity.

www.MOEMS.org

Teams of up to 35 Students
Two Divisions: Grades 4-6, 6-8

www. facebook.com/moems.org
www.instagram.com/moems
www.twitter.com@tweetmoems

EXHIBITORS

AMTE appreciates this year's Exhibitors for providing support for our conference. Please take an opportunity to thank them for their contributions to AMTE by visiting with them in the exhibit area located on the 3rd floor outside Salons I-III.

EXHIBITOR	ABOUT THE EXHIBIT
BAYLOR UNIVERSITY SCHOOL OF EDUCATION	**Get More from your Ph.D. Degree from Baylor** Join the Mathematics Education Team in the School of Education at Baylor University! We are seeking applicants interested in earning a Ph.D. in Curriculum and Teaching with a focus in Mathematics Education. Earn this degree while working with our nationally-recognized faculty on innovative programs and significant research. Applicants are eligible for a graduate assistantship in the Department of Curriculum and Instruction which includes a competitive stipend and tuition for 27 semester hours per year for up to four years. To learn more, access the Ph.D. in Curriculum and Teaching website (www.baylor.edu/soe/ci then click on graduate programs) where you will find information regarding the vision and focus of the Ph.D. in C&T program. Come to the exhibit table during the conference to learn more about the specific opportunities by visiting with faculty, and current and former graduate students.
CLARK COUNTY BLACK CAUCUS	The Clark County Black Caucus is a nonpartisan, volunteer organization that provides a forum to discuss policy issues impacting the African American community in Nevada. The Education Committee hosts an annual African American Student Summit for 500 students each year that is student-driven and focused on empowerment and leadership. The CCBC also sponsors the Black Student Union Network which includes 29 high schools and 4 middle schools. Its primary mission is to help create a more inclusive and welcoming school site culture/climate where African American students (often feeling racially isolated) instead feel supported through relationship building with administrators, teachers and peers. The CCBC hosts the annual BSU Conference where approximately 800 students participate in team building activities and graduating seniors are celebrated. In April, 2022, after a pandemic hiatus, Nevada student delegates will again participate in the Freedom Ride Tour, following the path of various Freedom Riders in buses, visiting historical sites and learning about the civil rights movement. Next year's tour will focus on the youth led sit-ins and racial discrimination protests beginning in Nashville, TN and ending in New Orleans, LA.
CPM EDUCATIONAL PROGRAM	CPM Educational Program is a California nonprofit 501(c)(3) empowering mathematics students and teachers through exemplary curriculum, professional development, and leadership. We recognize and foster teacher expertise and leadership in mathematics education. We engage all students in learning mathematics through problem solving, reasoning, and communication. CPM's University Support Program provides complimentary curriculum materials to support preservice teacher candidates, mathematics teacher educators, and mathematics curriculum reviewers and researchers. Please visit booth.cpm.org to learn more about CPM Educational Program and cpm.org/university to request complimentary access to CPM materials.

GET MORE MATH

Get More Math provides state-standards aligned cumulative practice sessions uniquely tailored to each student's needs, supporting mastery of new skills and long-term retention for grades 3-8, Algebra 1 & 2, Geometry and Integrated Math I-III. Made by a math teacher to empower other math teachers, GMM is a hyper-intelligent teacher's aid that creates daily personalized assignments and monitors students' growth.

Get More Math is offering a COMPLIMENTARY 30-DAY TRIAL for new teachers and SCHOOL-YEAR CAMPUS PILOT PROGRAM* to all new-to-GMM schools with Admin approval/coordination. *Campus pilot program is unlimited, lasts through July 31, 2022 and includes online professional training as well as unmatched support! Stop by the AMTE 2022 Get More Math® exhibitor booth for a demo and details.

GREAT MINDS – EUREKA MATH

At Great Minds ®, it's about building knowledge and instilling confidence in every child. And now, the most celebrated math curriculum, Eureka Math, is exponentially greater with Eureka Math². Always made by teachers for teachers, Eureka Math² is a revolutionary program designed to ensure that students move beyond rote memorization to build enduring math knowledge. It takes everything you love about Eureka Math—consistent math models, rigor to support productive struggle, and coherence across lessons, modules, and grades—and adds a new level of flexibility, accessibility, and visibility into student understanding to make it exponentially more teachable and engaging. Eureka Math² is a complete solution—a K–9 curriculum, print materials, digital interactives and assessment, and professional development, making you and your students exponentially greater.

INFORMATION AGE PUBLISHING – IAP

Information Age Publishing – IAP is a social science publisher of academic and scholarly book series, monographs, handbooks and journals. IAP's goal is to develop a comprehensive program of content that breaks down and defines specific niches in high-level research, in the fields of Education, Psychology, Management, Leadership, Mathematics, Educational Technology and Black Studies. AMTE is proud of our partnership with IAP as they continue to develop new books within the Association of Mathematics Teacher Educators (AMTE) Professional Book Series. IAP has also republished seven (7) monographs that were a part of the AMTE monograph series, as well as the AMTE Standards. They have an extensive list of products in the field of mathematics and look forward to adding yours to their program. Please visit their virtual bookstore (https://www.infoagepub.com/vc/amte2021) to browse their current mathematics publications, as well as, the AMTE monographs.

MATHEMATICS OLYMPIADS FOR ELEMENTARY & MIDDLE SCHOOL

Mathematical Olympiads for Elementary & Middle Schools (MOEMS®) MOEMS was established in 1979 and is one of the most influential and fun-filled math competition programs in the United States and throughout the world, with over 120,000 students from every state in the United States and 39 countries participating. The objectives of MOEMS are to teach multiple strategies for out-of-the-box problem solving, to develop mathematical flexibility in solving those problems, and foster mathematical creativity and ingenuity. Visit us at www.MOEMS.org.

NCSM – Leadership in Mathematics Education

NCSM - Leadership in Mathematics Education is a mathematics education leadership organization that equips and empowers a diverse education community to engage in leadership that supports, sustains, and inspires high quality mathematics teaching and learning every day for each and every learner. Our bold leadership in the mathematics education community develops vision, ensures support, and guarantees that all students engage in equitable, high- quality mathematical experiences that lead to powerful, flexible uses of mathematical understanding to affect their lives and to improve the world. Stop by for more information about NCSM, our publications and resources to support mathematics leaders.

National Council of Teachers of Mathematics

The National Council of Teachers of Mathematics supports teachers at all levels and places on their journey towards equitable mathematics learning of the highest quality for each and every student. NCTM members are a community committed to supporting and uplifting each other as we work towards this shared goal in a wide range of settings. Visit www.nctm.org/join.

TODOS – Mathematics for ALL!

TODOS: Mathematics for ALL is a national professional organization that advocates for equity and excellence in mathematics education for ALL students - in particular, Latina/o students. TODOS advances educators' knowledge, develops and supports education leaders, generates and disseminates knowledge, informs the public, influences educational policies, and informs families about education policies and learning strategies. TODOS published the position statement, *The Mo(ve)ment to Prioritize Antiracist Mathematics: Planning for This and Every School Year* plus three additional statements, *Statement on Violence Against Asian Americans*, *Statement in Support of LGBTQ+ Persons*, and *Where is Manuel? A Rejection of 'Learning Loss"* in response to the current inequities and injustices. In addition, the NCSM and TODOS published *Positioning Multilingual Learners for Success in Mathematics* in Fall 2021. TODOS continues to advocate for a dual focus on social justice and excellence in mathematics. Visit todos-math.org to access these papers.

THURSDAY, FEBRUARY 10, 2022 7:00 AM - 8:00 AM

COFFEE & TEA

PRE-FUNCTION I

We invite you to enjoy a morning beverage and to join conversations to build and nurture our professional community.

THURSDAY, FEBRUARY 10, 2022 8:00 AM - 10:00 AM

OPENING SESSION

SALON I-IV

What are our Responsibilities to Mathematics Teacher Education in this Moment?

Melissa Adams Corral, California State University, Stanislaus
Toya Frank, George Mason University
Luis Leyva, Vanderbilt University
Priya V. Prasad, University of Texas at San Antonio
Jared Webb, North Carolina A&T State University

In this interactive session, a set of MTE panelists will facilitate a community-wide conversation focused on our individual and collective responsibilities to mathematics teacher education at this moment. Panelists will briefly share their work and relate it to the goals of AMTE to foster generative conversations with the MTE community in the spirit of moving toward racial and social justice within and beyond our organization.

OVERVIEW OF THURSDAY MORNING, FEBRUARY 10, 2022

	10:15 AM - 11:00 AM	11:15 AM - 12:00 PM
Montelago I	*1. Developing Preservice Teachers' Statistical Knowledge for Teaching Association with CODAP* - Hudson, Casey & Mojica	
Montelago II	*2. Supporting Teachers to Integrate Mathematical Mindset Practices Through an Evidence Based Teacher Reflection Tool* - LaMar, Leshin & Boaler	*14. Video Reflection Interventions: Mechanism for Developing Teachers' Mathematical Meanings and Image of Effective Teaching Practices* - Rocha
Piazza	*3. Incorporating Free PK–5 Curriculum Materials into Your Teacher Education Courses* - Drake	*15. University Support Program Offers Free CPM Curriculum and Professional Learning to Mathematics Teacher Educators and Students* - Rendon
Monte Vista	*4. I Am New to Mathematics Teacher Education: Supports Around Teaching, Scholarship, and Service* - AMTE Professional Development for Members Committee	*16. AMTE Technology Committee's Top Tools and Strategies* - AMTE Technology Committee
Deserto	*5. Preparing Special Educators to Anticipate Student Thinking* - Martin & Hunt	
Lago	*6. Facilitating Secondary Teachers' Understanding of Productive Mathematical Discourse and Task Development within Professional Development* - Watkins & Gatza	*17. Productive Disruption: Shifting Teachers' Feedback from Assessing Correctness Towards Thinking and Dialogue* - Silverman
Olive Grove	*7. Listening to Teachers of Mathematical Modeling: How They Learned to Do and Teach Modeling* - Zbiek, Peters & Galluzzo	*18. Identifying Errors in Multi-step Addition and Subtraction Problem Posing: A Task for Prospective K-8 Teachers* - Williams
Vineyard	*8. RTOP+ as an Instructional Framework in Teacher Preparation: Collaboration between Candidates, Mentors, Supervisors, and Programs* - Rakes, Stites, Viera Jr, Mohr-Schroeder, Ronau & Schmidt	*19. Technologies That Impact COVID-19 Instruction and Beyond* - Wheeler, Driskell, Harrington & Rhine
Orchard	*9. Using the Analysis of a Large Traffic Stop Dataset to Facilitate Conversations around Systemic Racism* - Fernandes & Simic-Muller	*20. Challenging the Status Quo: Preparing Mathematics Teacher Candidates to be Social Justice Advocates* - Wilburne & Franz
Tuscany	*10. Positioning Coaches as Mathematics Teacher Educators: Building School-based Capacity to Foreground Mathematics in Integrated STEM* - Baker & Galanti	*21. What's Missing in the Research Literature on Mathematics Teacher Educator Knowledge?* - Prasad, Olanoff & Castro Superfine
Siena*	*11. Modeling Equity: Mathematics Teacher Educators Use of Torres' Rights of the Learner in Methods Courses* - Montgomery & Eddy	*22. Preparation of Doctorates in Mathematics Education: Results from a National Conference* - Shih
Assisi	*12. Promoting Productive Dispositions toward Mathematics through Modeling* - Wickstrom, Jung & Greene	

*Siena is located across the Florentine Garden.

Session 1 **Montelago I**
Teaching and Learning with Technology
Individual Session

Developing Preservice Teachers' Statistical Knowledge for Teaching Association with CODAP

Rick A. Hudson, *University of Southern Indiana*
Stephanie Casey, *Eastern Michigan University*
Gemma Foust Mojica, *North Carolina State University*

Statistical association is a fundamental concept in statistics. Come learn how to develop preservice teachers' statistical knowledge for teaching this concept with the dynamic data tool CODAP!

Session 2 **Montelago II**
Professional Development
Individual Session

Supporting Teachers to Integrate Mathematical Mindset Practices Through an Evidence-Based Teacher Reflection Tool

Tanya LaMar, *Stanford University*
Miriam S. Leshin, *Stanford University*
Jo Boaler, *Stanford University*

Participants will learn about and engage with an evidence-based reflection tool that supports teachers to integrate Mathematical Mindset strategies into practice. The tool, which was developed through video analysis, can be used by teachers or in partnership with an MTE.

Session 3 **Piazza**
AMTE Sponsor Session

Incorporating Free PK–5 Curriculum Materials into Your Teacher Education Courses

Corey Drake, *The Math Learning Center*

Math Learning Center makes the content of Bridges in Mathematics PK–5 available free to educators of prospective teachers. Join The Math Learning Center's Senior Director of Academic Programs, Corey Drake, to learn how university instructors use Bridges materials to enhance their courses and field experiences.

Session 4 **Monte Vista**
AMTE Committee Session

I Am New to Mathematics Teacher Education: Supports Around Teaching, Scholarship, and Service

AMTE Professional Development for Members Committee

This session is designed to provide an opportunity for novice mathematics teacher educators to interact with experienced mathematics teacher educators. The roundtable structure of the session allows small groups to discuss topics of interest around research, teaching, and service including designing/implementing a methods course; designing/implementing a content course; navigating academia as an MTE of color; creating a network of support and mentorship; connecting with schools; managing work and life responsibilities; coping as the lone math educator in your department; and getting your research agenda off the ground through creating a research and publishing pipeline.

Session 5 **Deserto**
Equity, Social Justice, and Mathematics Teacher Education
Individual Session

Preparing Special Educators to Anticipate Student Thinking

Kristi Martin, *Sam Houston State University*
Jessica H. Hunt, *North Carolina State University*

The limited mathematics preparation special education teachers receive is linked to opportunity gaps students with learning disabilities experience. Increasing SPED preservice teachers' knowledge of students' thinking is important because it allows them to anticipate students' diverse thinking and respond during instruction.

Session 6 **Lago**
Professional Development
Individual Session

Facilitating Secondary Teachers' Understanding of Productive Mathematical Discourse and Task Development within Professional Development

Jonathan D. Watkins, *Ball State University*
Andrew Gatza, *Ball State University*

We will report on the design and implementation of a professional development program for secondary mathematics teachers that incorporates Smith and Stein's (2018) five practices for productive math discourse. Participants will engage in several activities from the PD program.

Session 7 **Olive Grove**
Mathematics Content and Curriculum
Individual Session

Listening to Teachers of Mathematical Modeling: How They Learned to Do and Teach Modeling

Rose Mary Zbiek, *Pennsylvania State University*
Susan Peters, *University of Louisville*
Benjamin Jason Galluzzo, *Clarkson University*

Current mathematical modeling teachers learned to do and teach modeling through a variety of experiences, starting before modeling gained prominence. We share tools from our retrospective study of successful teachers and show how the findings inform preservice and inservice programs.

Session 8 **Vineyard**
Collaborations and Partnerships
Featured MTEP Individual Session

RTOP+ as an Instructional Framework in Teacher Preparation: Collaboration between Candidates, Mentors, Supervisors, and Programs

Christopher Rakes, *University of Maryland, Baltimore County*
Michele Stites, *University of Maryland, Baltimore County*
Julian Viera Jr, *Berea College*
Margaret J. Mohr-Schroeder, *University of Kentucky*
Robert N. Ronau, *University of Louisville*
Ashley Schmidt, *University of Central Florida*

This session will describe how a preparation program used the Reformed Teaching Observation Protocol enhanced with performance descriptors (RTOP+) to facilitate discussions about effective mathematics teaching between mentor teachers and candidates. The instructional role of assessment tools will be discussed.

Session 9 **Orchard**
Equity, Social Justice, and Mathematics Teacher Education
Individual Session

Using the Analysis of a Large Traffic Stop Dataset to Facilitate Conversations around Systemic Racism

Anthony Fernandes, *University of North Carolina, Charlotte*
Ksenija Simic-Muller, *Pacific Lutheran University*

In this session, we will describe how mathematics preservice teachers engaged with a large traffic-stop dataset to investigate issues around racial bias in policing, with the purpose of increasing their awareness of structural racism.

Session 10 **Tuscany**
Development of Mathematics Teacher Educators
Individual Session

Positioning Coaches as Mathematics Teacher Educators: Building School-based Capacity to Foreground Mathematics in Integrated STEM

Courtney Baker, *George Mason University*
Terrie Galanti, *University of North Florida*

This session presents lessons learned from university-district professional development partnerships that foregrounded mathematics in elementary STEM integration. These experiences constitute an emerging vision for building the capacity of mathematics coaches to serve as mathematics teacher educators in the context of integrated STEM.

Session 11 **Siena**
Development of Mathematics Teacher Educators
Individual Session

Modeling Equity: Mathematics Teacher Educators Use of Torres' Rights of the Learner in Methods Courses

Mark Stephen Montgomery, *Stephen F. Austin State University*
Colleen McLean Eddy, *University of North Texas*

Have you considered your own professional growth in teaching equitably? Come engage with a collaborative group of mathematics teacher educators who used Lesson Study as a framework for developing equitable practices in elementary mathematics methods courses.

Session 12 **Assisi**
Mathematics Content and Curriculum
Individual Session

Promoting Productive Dispositions toward Mathematics through Modeling

Megan H. Wickstrom, *Montana State University*
Hyunyi Jung, *University of Florida*
Mary Philomena Greene, *Montana State University*

Part of our charge as MTEs is to foster teachers' mathematical identities and promote productive dispositions. In this session, we will share findings of engaging K-12 teachers in modeling tasks and how modeling challenges perceptions of self and the discipline.

Session 14 **Montelago II**
Professional Development
Individual Session

Video Reflection Interventions: Mechanism for Developing Teachers' Mathematical Meanings and Image of Effective Teaching Practices

Abby E. Rocha, *Arizona State University*

This proposal describes a professional development video intervention designed to advance instructors' mathematical meanings and teaching practices. We provide a description of the intervention, its goals and components, and how other PD leaders can use this intervention at their institutions.

Session 15 **Piazza**
AMTE Sponsor Session

University Support Program Offers Free CPM Curriculum and Professional Learning to Mathematics Teacher Educators and Students

Sharon Rendon, *CPM Educational Program*

This session overviews the design features of the CPM curriculum — student collaboration, problem solving, and practice over time — so that MTEs can decide if CPM is a good fit for their content, methods, and other courses.

Session 16 **Monte Vista**
AMTE Committee Session

AMTE Technology Committee's Top Tools and Strategies

AMTE Technology Committee

In this session, the AMTE Technology Committee will address multiple topics relating to technology and mathematics teacher educators. We will share instructional technology tools that we use during our courses, as well as do a deeper dive into the tools that have been highlighted in the AMTE Tech Talk Blog. In addition, participants will have the opportunity to exchange ideas about technology integration as they engage more deeply with topics of their choosing during breakouts within the session.

Session 17 **Lago**
Professional Development
Individual Session

Productive Disruption: Shifting Teachers' Feedback from Assessing Correctness Towards Thinking and Dialogue

Jason Silverman, *Drexel University*

We will report on our work to support practicing teachers as they shift their instructional interactions with students from the assessment of the "products" of student work toward a more process-oriented approach involving generative dialogue with students.

Session 18 **Olive Grove**
Mathematics Content and Curriculum
Individual Session

Identifying Errors in Multi-step Addition and Subtraction Problem Posing: A Task for Prospective K-8 Teachers

Ashley M. Williams, *Texas A&M University*

We will discuss the design and implementation of an error analysis task constructed to support the development of K-8 prospective teachers' problem posing skills by helping them gain awareness of common error patterns in two-step word problems posed by learners.

Session 19 **Vineyard**
Teaching and Learning with Technology
Individual Session

Technologies That Impact COVID-19 Instruction and Beyond

Ann Wheeler, *Texas Woman's University*
Shannon O. S. Driskell, *University of Dayton*
Rachel Harrington, *Western Oregon University*
Steve Rhine, *Pacific University*

Based on survey data from AMTE members, researchers will detail technologies used throughout the COVID-19 instruction, as well as what technology utilized by the researchers still persists today. Participants will discuss findings and changes in their technology use since COVID-19.

Session 20 **Orchard**
Equity, Social Justice, and Mathematics Teacher Education
Individual Session

Challenging the Status Quo: Preparing Mathematics Teacher Candidates to be Social Justice Advocates

Jane M. Wilburne, *Penn State Harrisburg*
Dana P. Franz, *Mississippi State University*

Our session will describe how two university mathematics education programs teamed up to design a curriculum activity aimed at increasing teacher candidates' self-awareness of how to see themselves as change agents for equity and social justice in mathematics education.

Session 21 **Tuscany**
Development of Mathematics Teacher Educators
Individual Session

What's Missing in the Research Literature on Mathematics Teacher Educator Knowledge?

Priya Vinata Prasad, *University of Texas at San Antonio*
Dana Olanoff, *Widener University*
Alison Castro Superfine, *University of Illinois at Chicago*

We update the AMTE community on the results of a review of research in order to understand the existing research base addressing the nature and development of the knowledge and practices of mathematics teacher educators and discuss three missing dimensions.

Session 22 **Siena**
Development of Mathematics Teacher Educators
Discussion Session

Preparation of Doctorates in Mathematics Education: Results from a National Conference

Jeffrey Shih, *University of Nevada, Las Vegas*

This session will focus on sharing the results from an NSF funded national conference on doctoral programs in mathematics education, including updates on ideas and written materials from previous conferences.

THURSDAY, FEBRUARY 10, 2022 12:00 PM - 1:15 PM

LUNCH — SALON I-IV

AMTE provides a buffet lunch for registered conference attendees. Please join your colleagues for lunch and good conversation before the Thursday afternoon sessions.

OVERVIEW OF THURSDAY AFTERNOON, FEBRUARY 10, 2022

	1:15 PM – 2:00 PM	2:15 PM – 3:15 PM	3:45 PM – 4:45 PM	5:00 PM – 5:45 PM
Montelago I	*23. Exploring the Openness of Tasks from an Anti-racist and Culturally Relevant Perspective* – Ellis, Wrightsman & Thanheiser	*34. Reflecting on Implicit Biases and Participation Patterns* – Bondurant & Rivera	*50. Supporting Equitable Participation and Access in Mathematics Classrooms through Actionable, Effective Practices* – Wilson, Wilhelm, Walkowiak & Pruitt-Britton	*66. Three Spaces for Teachers and Parents to Dialogue about Mathematics Teaching and Learning* – Civil, Quintos & Salazar
Montelago II	*24. Online Video Clubs for Coaches: Using Technology to Support the Development of Mathematics Coaches' Noticing* – Gillespie, Kruger & Martin	*35. Supporting Preservice Teachers in Attending to Relational and Disciplinary Aspects of Teaching in Lesson Plans* – Orr, Bieda & Luczak	*51. Using Mathematics to Build With and Strengthen Community-Based Problem-Solving Practices* – Carlson & Peck	*67. Humanizing Co-Creatorship: Exploring Preservice Teachers Tensions between Content and Humanizing Pedagogies* – Orr
Piazza	*25. Troubling the Equity Waters: Continued Discussions with the AMTE Equity Committee* – AMTE Equity Committee	*36. The Relationship Between AMTE National and AMTE Affiliates: A Dichotomy of Expectations and Participations* – AMTE Affiliate Connections Committee	*52. Teacher Designed Instructional Tools: Material and Relational Resources for Mathematics Instructional Improvement* – Elliott, Stoddard & Brunner	*68. Self-Study as a Tool in the Development of Mathematics Teacher Educators* – Galindo, Duarte Mejia, Lee, Valero & Jeon
Monte Vista		*37. Reflection on Past, Present and Future: Paving the Way for Mathematics Teacher Education's Future* – AMTE Publications Division	*53. Mentoring Early Career Faculty of Color* – AMTE Advocacy Committee	*69. Publishing Your Scholarly Work in an AMTE Publication: Opportunities Explored and Questions Answered* – AMTE Publications Division
Deserto	*26. Well-Being Beyond the Curriculum: Strategies Mathematics Teacher Educators Can Provide to Reduce Stress and Anxiety through Mindfulness* – Welder, Burton & Eisenreich	*38. Developing the Mathematical Literacy of Prospective Secondary Mathematics Teachers Through Interdisciplinary and Relevant Contexts* – Harper, Cox, Abel, Alyami, Desai, Glassmeyer, Safi & Knurek	*54. Exploring Productive Struggle: Making Teacher and Student Actions Visible and Valued in Mathematics Content Courses* – Berry & Sutherland	*70. Engaging Prospective Teachers in Defining Mutuality* – Boyce & Pyzdrowski
Lago	*27. Elementary Mathematics Endorsement Completers as University Supervisors: An Innovative Model Bridging Theory and Practice* – Friedrich, Lee, Mensinger & Swann	*39. Problems of Practice in Learning to Facilitate Argumentation Based Discussions* – Cordero-Siy & Alapala	*55. High Quality Professional Development to Support and Nurture Lesson Study* – Nazelli, Hardamon & Ozgun-Koca	*71. Scripting Tasks Centered in Discretionary Spaces: Approximations at the Intersections of Practice- and Justice-Based Learning* – Karr
Olive Grove	*28. Exploring Mathematical Knowledge for Leading in the Context of a Research Practice Partnership* – Castro Superfine	*40. Dismantling Hierarchies of Competence as an Antiracist Practice* – Jilk	*56. Using a Written Vignette as a Tool to Build Prospective Teachers' Equitable Noticing* – Buchheister & Taylor	*72. Universal Design for Learning Math: A Framework to Include Students with Disabilities in Meaningful Mathematics* – Lambert & McNiff

	1:15 PM – 2:00 PM	2:15 PM – 3:15 PM	3:45 PM – 4:45 PM	5:00 PM – 5:45 PM
Vineyard	*29. Identifying and Addressing Challenges Related to Communicating Mathematics During Small Groupwork in Synchronous Online Classrooms* – Cirillo & Berk	*41. Purposefully Addressing Preservice Teachers' Mathematics Wounds in Elementary Education Programs* – Gerardo, Skultety, Saclarides, Bajwa & Brown-Tess	*57. Focusing Mathematical Coursework on Developing Practice: An Exploration of Pedagogical Mathematical Practices* – Wasserman	*73. Supporting Mathematics Coaches in Identifying and Negotiating Productive Instructional Improvement Goals* – Kochmanski
Orchard	*30. Examining Application Processes for Mathematics Teacher Education from an Equity and Content Perspective* – Slavit & Roth McDuffie	*42. Professional Learning Through Collaborative Interrogation: Amplifying Equity and Justice in Elementary Mathematics Teaching* – Willey & Livers	*58. LGBTQ+ Teacher Mentors: Creating a Social Safety Net for LGBTQ+ Preservice Teachers* – Whipple	*74. Transformative Technology for Equity Centered Instruction* – Suh, Roscioli & Tate 2022 AMTE NTLI Award Winner
Tuscany	*31. Planning Rich Mathematics Instruction for Prospective Teachers Using Transformative Learning Theory as a Tool* – Johnson & Olanoff	*43. Collaborations Among Faculty to Support Preservice Elementary Teachers' Development* – Max & Suazo-Flores	*59. Conversations about Building and Sustaining Participatory Research Partnerships in Mathematics Education* – Mitchell, Eddy & Wilkerson	*75. Engaging and Preparing Educators to Teach Statistics and Data Science* – Peters, Bargagliotti & Franklin
Siena*	*32. Mathematics Teacher Education Partnership: Collaborating to Address Common Challenges* – Franz & Bondurant	*44. From Surviving to Thriving: A Journey in Academia* – Lee	*60. Supporting Productive Discussions of Mathematics Teaching Pedagogy: Intentionally Scaffolding for Discussion to Learn About Teaching* – Kastberg, Lischka & Hillman	*76. DeCyphering Mathematics: Conceptualizing Mathematics Teachers' Potential in Curating Space for Black Youth and Discourse* – Ortiz
Salon I		*45. Using 360 Video in Mathematics Teacher Education Methods Courses and Field Experiences* – Weston, Kosko & Amador	*61. Using Video to Develop Mathematics Teachers' Knowledge* – Mojica, Thrasher & Hudson	*77. Diversifying Teacher Preparation Pathways* – Harbour
Salon II		*46. The Role of Instructional Resources in Prospective Secondary Teachers Planning* – Quigley, Zhou & Males	*62. Reports: Teacher Noticing*	*78. Supporting the Recording of Student Thinking in a Mathematics Discussion* – Garcia & Shaughnessy
Salon III		*47. Reports: Resources and Experiences*	*63. Reports: Noticing and Learning*	*79. Learning to Elicit Student Thinking in An Early Field Experience* – Bieda, Tyburski, Arbaugh & Cirillo
Salon IV		*48. Designing and Implementing Rehearsals in Mathematics Teacher Education* – Freeburn, Graysay, Konuk, Van Zoest, Stockero, Baldinger & Campbell	*64. Integrating Mathematics and Computational Thinking for All: Preparing Preservice Elementary Mathematics Teachers* – Barlow & Barlow	*80. Leveraging Mixed Reality Simulation Technology to Grow Teachers' Discussion Practices* – Woods & Wilhelm
Assisi	*33. Preservice Teachers Revising Rough Drafts to Learn Mathematics Online* – Rathouz, Cengiz-Phillips & Krebs	*49. Teachers' Care Influence Curricular Decisions* – Haiduc	*65. Responding to Increasing Availability of Tasks Online: How Are We Preparing Preservice Teachers to Choose Tasks?* – Raymond	*81. Leveraging the Role of an Instructional Coach to Close Middle School Math Teachers' Knowing-Doing Gap* – Gonzales

*Siena is located across the Florentine Garden.

Session 23 **Montelago I**
Equity, Social Justice, and Mathematics Teacher Education
Individual Session

Exploring the Openness of Tasks from an Anti-racist and Culturally Relevant Perspective

Brittney Ellis, *Portland State University*
Elizabeth Wrightsman, *Texas State University*
Eva Thanheiser, *Portland State University*

We present the case of one 4th grade classroom that exemplifies how the enactment of open tasks without a critical perspective can engender racial ideologies and perpetuate an implicit culture of exclusion with respect to Black children.

Session 24 **Montelago II**
Teaching and Learning with Technology
Individual Session

Online Video Clubs for Coaches: Using Technology to Support the Development of Mathematics Coaches' Noticing

Ryan Gillespie, *University of Idaho*
Jennifer Kruger, *University of Rochester*
Stephanie Martin, *University of Rochester*

We share our model of synchronous online video clubs for coaches. Inspired by experiences with video clubs for teachers, we created these video clubs to improve coaches' abilities to notice the thinking of mathematics teachers during coaching cycle conversations.

Session 25 **Piazza**
AMTE Committee Session

Troubling the Equity Waters: Continued Discussions with the AMTE Equity Committee

AMTE Equity Committee

The Equity Committee is one of three committees under the Advocacy, Equity, and Research Division of AMTE. This session will highlight issues raised in the discussion by the committee at AMTE 2021 Conference. The mission of AMTE is to encourage all members to see themselves as contributing to the notion of promoting equity and justice in mathematics (teacher) education, not just those that overly identify this in their work and teaching philosophies. Therefore, this session aims to bring more participants into this work by facilitating a thoughtful discussion that examines complex issues of equity while also pushing our current understandings.

Session 26 **Deserto**
Development of Mathematics Teacher Educators
Individual Session

Well-Being Beyond the Curriculum: Strategies Mathematics Teacher Educators Can Provide to Reduce Stress and Anxiety through Mindfulness

Rachael M. Welder, *Texas A&M University*
Megan Burton, *Auburn University*
Heidi Eisenreich, *Georgia Southern University*

Explore ways mathematics teacher educators can support teachers with mindfulness strategies, backed by findings from a mindfulness-based intervention implemented in mathematics education courses. Participants will engage in mindfulness practices and identify ways to integrate mindfulness into work with teachers and teacher educators.

Session 27 **Lago**
Practice-Based Experiences for Prospective Teachers
Individual Session

Elementary Mathematics Endorsement Completers as University Supervisors: An Innovative Model Bridging Theory and Practice

Jami Friedrich, *Mercer University*
Ashlee Nicole Lee, *Mercer University*
Tiara Mensinger, *Mercer University*
Brittany Swann, *Mercer University*

We share an innovative model that engages K-5 mathematics endorsement completers (ECs) as university supervisors. The goal is to support ECs in implementing theories and practices from our endorsement program while also guiding elementary preservice teachers through virtual field supervision.

Session 28 **Olive Grove**
Professional Development
Individual Session

Exploring Mathematical Knowledge for Leading in the Context of a Research Practice Partnership

Alison Castro Superfine, *University of Illinois at Chicago*

In this session, we will describe our collaborative efforts as part of two district-level mathematics leadership teams in their first year, and the ways in which this context supported the development of mathematical knowledge for leading.

Session 29 **Vineyard**
Teaching and Learning with Technology
Individual Session

Identifying and Addressing Challenges Related to Communicating Mathematics During Small Groupwork in Synchronous Online Classrooms

Michelle Cirillo, *University of Delaware*
Dawn Berk, *University of Delaware*

Communicating mathematics online can be challenging because mathematics is multi-semiotic. We identify issues encountered when preservice secondary teachers facilitated communication during groupwork in an online synchronous classroom. We aim to stimulate discussions around supporting teachers to facilitate online communication.

Session 30 **Orchard**
Equity, Social Justice, and Mathematics Teacher Education
Individual Session

Examining Application Processes for Mathematics Teacher Education from an Equity and Content Perspective

David Slavit, *Washington State University, Vancouver*
Amy Roth McDuffie, *Washington State University*

We examine the admissions processes of 18 teacher education programs, with a focus on equity/justice issues and mathematical content knowledge. MTEs will reflect on admissions decisions and how equitable processes can support a more diverse teaching workforce and educational justice.

Session 31 **Tuscany**
Mathematics Content and Curriculum
Individual Session

Planning Rich Mathematics Instruction for Prospective Teachers Using Transformative Learning Theory as a Tool

Kim Johnson, *West Chester University of Pennsylvania*
Dana Olanoff, *Widener University*

This presentation will introduce participants to the 4-step implementation cycle for Transformative Learning Theory and show how it can be utilized in planning mathematics content courses. Participants will use the cycle to create tasks to address PTs' procedural understandings.

Session 32 **Siena**
Collaborations and Partnerships
Featured MTEP Individual Session

Mathematics Teacher Education Partnership: Collaborating to Address Common Challenges

Dana P. Franz, *Mississippi State University*
Liza Bondurant, *Delta State University*

The purpose of this interactive session is to engage participants in focused discussion about how mathematics education stakeholders in our state collaborated to address common challenges. Our partnership focused on common problems related to equity and recruitment/retention.

Session 33 **Assisi**
Mathematics Content and Curriculum
Individual Session

Preservice Teachers Revising Rough Drafts to Learn Mathematics Online

Margaret Rathouz, *University of Michigan, Dearborn*
Nesrin Cengiz-Phillips, *University of Michigan, Dearborn*
Angela Krebs, *University of Michigan, Dearborn*

In this interactive presentation, we will share our experiences using collaborative Google documents and Canvas discussion boards to encourage preservice teachers to revise and refine their initial rough draft thinking to learn mathematics in online content courses.

Session 34 **Montelago I**
Equity, Social Justice, and Mathematics Teacher Education
Individual Session

Reflecting on Implicit Biases and Participation Patterns

Liza Bondurant, *Delta State University*
Seema Rivera, *Clarkson University*

In this session, we will discuss the design and implementation of a professional development (PD) cycle to help high school math teachers create more equitable discourse patterns in their classrooms.

Session 35 **Montelago II**
Practice-Based Experiences for Prospective Teachers
Discussion Session

Supporting Preservice Teachers in Attending to Relational and Disciplinary Aspects of Teaching in Lesson Plans

Sheila Orr, *Michigan State University*
Kristen N. Bieda, *Michigan State University*
Rileigh Luczak, *Michigan State University*

Lesson planning literature often focuses on the mathematical aspects of teaching. In this session, participants will engage in conversations with others around lesson planning practices that also support preservice teachers in attending to the relational aspects of a lesson.

Session 36 **Piazza**
AMTE Committee Session

The Relationship Between AMTE National and AMTE Affiliates: A Dichotomy of Expectations and Participations

AMTE Affiliate Connections Committee

We will reflect on the delicate balancing act between the expectations of the members of AMTE affiliates at AMTE national and the participation of the members of AMTE national in AMTE affiliates.

Session 37 **Monte Vista**
AMTE Committee Session

Reflection on Past, Present and Future: Paving the Way for Mathematics Teacher Education's Future

AMTE Publications Division

Come hear about AMTE's new Professional Book Series volume – a guide to move the field of mathematics teacher education forward. Handbook authors and Series Editor will be present to provide an overview of chapters, share insights, and answer questions.

Session 38 **Deserto**
Mathematics Content and Curriculum
Symposium

Developing the Mathematical Literacy of Prospective Secondary Mathematics Teachers Through Interdisciplinary and Relevant Contexts

Suzanne R. Harper, *Miami University*
Dana Christine Cox, *Miami University*
Todd Abel, *University of Central Arkansas*
Hanan Alyami, *Purdue University*
Siddhi Desai, *University of Central Florida*
David Glassmeyer, *Kennesaw State University*
Farshid Safi, *University of Central Florida*
Robert Knurek, *University of Colorado Denver*

We will explore transdisciplinary tasks that develop various "literacies" through powerful and relevant contexts suitable for PSMTs. We invite discussion about methods to facilitate conversations among inservice and PSMTs as they interpret tasks to build mathematical opportunities for students.

Session 39 **Lago**
Professional Development
Discussion Session

Problems of Practice in Learning to Facilitate Argumentation Based Discussions

Eric Cordero-Siy, *University of Wisconsin, Madison*
Burcu Alapala, *University of Wisconsin, Madison*

In this session, we will share how we structured PD to support the examination of problems of practice (PoPs) around facilitating argumentation-based discussions, what PoPs emerged based on teachers' contexts, and how teachers recontextualized the PoPs to their practice.

Session 40 **Olive Grove**
Equity, Social Justice, and Mathematics Teacher Education
Discussion Session

Dismantling Hierarchies of Competence as an Antiracist Practice

Lisa M. Jilk, *TODOS*

Participants will consider how social hierarchies of competence impact beliefs about who is capable of successfully learning mathematics and permeate educational institutions, policies and practices. We will explore how local communities reproduce these hierarchies and discuss how to dismantle them.

Session 41 **Vineyard**
Mathematics Education Policy and Program Issues
Discussion Session

Purposefully Addressing Preservice Teachers' Mathematics Wounds in Elementary Education Programs

Juan M. Gerardo, *University of Cincinnati*
Lisa Skultety, *University of Central Arkansas*
Evthokia Stephanie Saclarides, *University of Cincinnati*
Neet Priya Bajwa, *Illinois State University*
Karie C. Brown-Tess, *University of Illinois, Urbana-Champaign*

Many preservice teachers enter our programs mathematically wounded from their prior K-12 schooling experiences. In this session, we propose a framework for noticing and addressing these wounds to support future teachers of mathematics.

Session 42 **Orchard**
Development of Mathematics Teacher Educators
Discussion Session

Professional Learning Through Collaborative Interrogation: Amplifying Equity and Justice in Elementary Mathematics Teaching

Craig Willey, *Indiana University-Purdue University Indianapolis*
Stefanie Denise Livers, *Missouri State University*

A cohort of six mathematics teacher educators created a critical, professional collaboration. The collective goal was to lean on each other as critical friends and examine the impact of our practices, with the ultimate aim of teaching for equity and justice.

Session 43 **Tuscany**
Collaborations and Partnerships
Discussion Session

Collaborations Among Faculty to Support Preservice Elementary Teachers' Development

Brooke Max, *Purdue University*
Elizabeth Suazo-Flores, *Purdue University*

Interdisciplinary collaborations among mathematics teacher education and mathematics departments can strengthen preservice teacher education programs. In this discussion, faculty will share their experiences creating an interdisciplinary collaboration and support participants in identifying mechanisms to aid in their own interdisciplinary collaborations.

Session 44 **Siena**
Development of Mathematics Teacher Educators
Discussion Session

From Surviving to Thriving: A Journey in Academia

Jean S. Lee, *University of Indianapolis*

In this session, the presenter and collaborators open up a conversation on how to enjoy academia instead of surviving. Participants share strategies and resources with the goal to inform, unite, and create networks of support for doctoral through late career academics.

Session 45 **Salon I**
Teaching and Learning with Technology
Discussion Session

Using 360 Video in Mathematics Teacher Education Methods Courses and Field Experiences

Tracy L. Weston, *Middlebury College*
Karl W. Kosko, *Kent State University*
Julie Amador, *University of Idaho*

Participants will use and discuss 360 video in mathematics teacher education. Following an interactive overview, participants will discuss various uses of 360 video and teacher educator pedagogy in both methods and field settings, and examine connections with AMTE standards.

Session 46 **Salon II**
Mathematics Pedagogy
Individual Session

The Role of Instructional Resources in Prospective Secondary Teachers Planning

Kelsey Quigley, *University of Nebraska, Lincoln*
Zhenji Jiangang Zhou, *University of Nebraska, Lincoln*
Lorraine Marie Males, *University of Nebraska, Lincoln*

Prospective teachers' learning to plan is important to effective instruction. We discuss two prospective teachers planning and the role that curriculum materials and other instructional resources played in their planning. We discuss implications for teacher education.

Session 47 **Salon III**
Reports: *Resources and Experiences*

Navigating Tensions in Practice: Resources that Preservice and Inservice Teachers Share in a Teaching Collaboration

Cody L. Patterson, *Texas State University*
Hiroko K. Warshauer, *Texas State University*

We share vignettes from collaborative teaching discussions that illustrate how preservice and inservice teachers manage tensions between principles of equity-oriented pedagogy and systemic constraints on teaching practice. We discuss implications for how clinical experiences can prepare reflective and equity-focused practitioners.

Supporting Stem Teacher Candidates to Learn from Teaching Through Continuous Improvement

Jenifer Hummer, *West Chester University of Pennsylvania*

This study investigated how we can support teacher candidates to utilize continuous improvement through lab assignments in their methods coursework. For each lab assignment candidates worked to improve a teaching method (e.g., anticipating student responses) through continuous improvement cycles.

The Role of Clinical Experiences in Knowledge Acquisition and Use: A First Look

Matthew Winsor, *Illinois State University*
David Barker, *Illinois State University*
J. Vince Kirwan, *Kennesaw State University*

We will present data and findings focused on the knowledge preservice teachers gain from their clinical experiences, how that knowledge was used, and the ways that knowledge might be incorporated into a methods course.

Session 48 **Salon IV**
Practice-Based Experiences for Prospective Teachers Symposium

Designing and Implementing Rehearsals in Mathematics Teacher Education

Benjamin Freeburn, *Western Michigan University*
Duane Graysay, *Syracuse University*
Nursen Konuk, *Metropolitan State University of Denver*
Laura Van Zoest, *Western Michigan University*
Shari L. Stockero, *Michigan Technological University*
Erin E. Baldinger, *University of Minnesota*
Matthew P. Campbell, *West Virginia University*

In this symposium, teacher educators will learn about three perspectives on key design considerations for rehearsals of instruction and will consider the implications of those choices for designing and integrating rehearsals in their own context.

Session 49 **Assisi**
Mathematics Content and Curriculum
Individual Session

Teachers' Care Influence Curricular Decisions

Ana-Maria Haiduc, *Purdue University*

Teachers engage with the curriculum to respond to students' mathematical needs. Analyzing the dimensions of teachers' care helps us understand how sophisticated teachers interact with curricula to respond to the students' needs.

THURSDAY, FEBRUARY 10, 2022 3:15 PM - 3:45 PM

AFTERNOON BREAK

PRE-FUNCTION

This is a great time to stretch, network with colleagues, and visit the exhibitors.

Session 50 **Montelago I**
Equity, Social Justice, and Mathematics Teacher Education
Individual Session

Supporting Equitable Participation and Access in Mathematics Classrooms through Actionable, Effective Practices

Jonee Wilson, *North Carolina State University*
Anne Garrison Wilhelm, *Southern Methodist University*
Temple A. Walkowiak, *North Carolina State University*
Tiffini S. Pruitt-Britton, *Southern Methodist University*

This session focuses on the critical issue of taking the theory outlined in research literature about "humanizing" mathematics instruction that is equitable and connecting it with the practice of supporting actual teachers in developing instructional practices that demonstrate this theory.

Session 51 **Montelago II**
Equity, Social Justice, and Mathematics Teacher Education
Individual Session

Using Mathematics to Build With and Strengthen Community-Based Problem-Solving Practices

Mary Alice Carlson, *Montana State University*
Frederick Peck, *University of Montana*

In this session, we challenge deficit views of rurality by exploring relationships between rural community-based problem-solving practices and mathematical practice. We share a framework to support developing and analyzing mathematics tasks that build with and strengthen community-based knowledge and practice.

Session 52 **Piazza**
Mathematics Pedagogy
Individual Session

Teacher Designed Instructional Tools: Material and Relational Resources for Mathematics Instructional Improvement

Rebekah Elliott, *Oregon State University*
Elyssa Stoddard, *Oregon State University*
Megan Brunner, *Oregon State University*

We investigate the ways that teacher-designed mathematical modeling and data analysis instructional tools serve as resources for a team of high-school mathematics teachers' instructional improvement across activity systems of classrooms and professional development.

Session 53 **Monte Vista**
AMTE Committee Session

Mentoring Early Career Faculty of Color

AMTE Advocacy Committee

In response to multiple calls for more effective mentoring for early career faculty of color, the Advocacy Committee will sponsor a panel discussion in the service of three goals: (1) To center mentoring early career faculty of color as a critical need and focus for AMTE; (2) To highlight the complexities that early career faculty of color face and how these experiences require targeted support and guidance from mentors; and (3) To share mentoring philosophies, ideas, and approaches in relation to ethical mentorship of faculty of color.

Session 54 **Deserto**
Mathematics Content and Curriculum
Discussion Session

Exploring Productive Struggle: Making Teacher and Student Actions Visible and Valued in Mathematics Content Courses

Betsy Berry, *Purdue University Fort Wayne*
Melissa Sutherland, *Purdue University*

In this session, we will share our collaborative research project investigating students' productive struggle in mathematics content courses for preservice elementary teachers and the instructional moves that support it. We will discuss our progress and seek input from participants.

Session 55 **Lago**
Professional Development
Individual Session

High Quality Professional Development to Support and Nurture Lesson Study

Christopher Dennis Nazelli, *Wayne State University*
Kaili Hardamon, *Detroit Public Schools Community District*
S. Asli Ozgun-Koca, *Wayne State University*

Learn how lesson study facilitators use NCTM's characteristics of high-quality mathematics professional development to support improvement of K-12 mathematics instruction through lesson study cycles that support teachers' collaborative planning of research lessons by developing teachers' mindsets, pedagogy, and mathematical content.

Session 56 **Olive Grove**
Equity, Social Justice, and Mathematics Teacher Education
Individual Session

Using a Written Vignette as a Tool to Build Prospective Teachers' Equitable Noticing

Kelley Buchheister, *University of Nebraska, Lincoln*
Cynthia Taylor, *Millersville University of Pennsylvania*

Teaching expertise requires the ability to notice and interpret classroom events. In this session, we examine what prospective teachers attend to in a written classroom vignette and analyze their responses in order to identify cultural, racial, and economic biases.

Session 57 **Vineyard**
Mathematics Content and Curriculum
Discussion Session

Focusing Mathematical Coursework on Developing Practice: An Exploration of Pedagogical Mathematical Practices

Nicholas Wasserman, *Columbia University*

University mathematics courses are important in teacher preparation, but often perceived by prospective teachers as not professionally relevant. This discussion session explores an emphasis on developing 'practices' (not 'knowledge') in such coursework, and ways this might accomplish teacher education aims.

Session 58 **Orchard**
Equity, Social Justice, and Mathematics Teacher Education
Discussion Session

LGBTQ+ Teacher Mentors: Creating a Social Safety Net for LGBTQ+ Preservice Teachers

Kyle S. Whipple, *University of Wisconsin, Eau Claire*

This session will focus on creating a social safety net for LGBTQ+ preservice teachers to assist them on their path from college students to inservice teachers. The mentoring group is composed of inservice teachers, student teachers, and preservice teachers.

Session 59 **Tuscany**
Collaborations and Partnerships
Discussion Session

Conversations about Building and Sustaining Participatory Research Partnerships in Mathematics Education

Tina L. Mitchell, *Delaware State University*
Colleen McLean Eddy, *University of North Texas*
Trena L. Wilkerson, *Baylor University*

What does it mean to develop an authentic participatory research partnership with researchers, practitioners, school leaders, students, families, and communities? Let's engage in conversations about research designs and common components that lead to successful, sustaining, participatory research partnerships.

Session 60 **Siena**
Mathematics Pedagogy
Discussion Session

Supporting Productive Discussions of Mathematics Teaching Pedagogy: Intentionally Scaffolding for Discussion to Learn About Teaching

Signe Kastberg, *Purdue University*
Alyson E. Lischka, *Middle Tennessee State University*
Susan L. Hillman, *Saginaw Valley State University*

This session focuses on supporting productive pedagogical discussions through scaffolding, anticipation of preservice teachers' thinking, and layering of course activities. Examples focus on teacher educators' intentional work to prepare productive discussions of pedagogy for learning to teach mathematics.

Session 61 **Salon I**
Mathematics Pedagogy
Individual Session

Using Video to Develop Mathematics Teachers' Knowledge

Gemma Foust Mojica, *North Carolina State University*
Emily Thrasher, *North Carolina State University*
Rick A. Hudson, *University of Southern Indiana*

Consider how different types of videos can be utilized to develop teachers' knowledge. We will also share approaches for supporting learning through the use of video as a reflective tool. Access to free, web-based teacher education materials will be provided.

Session 62 **Salon II**
Reports: ***Teacher Noticing***

Opportunities to Notice: An Important Component of Teacher Noticing

Darl Rassi*, Olivet Nazarene University*
David Barker*, Illinois State University*

Having the opportunity to notice is critical to teacher noticing. We report on the opportunities available to four secondary preservice teachers including differences in quality and factors that appeared to promote opportunities where more in-depth student thinking was present.

"Student Thinking," "Understanding," and "Confusion": What Do Secondary Mathematics Preservice Teachers Notice?

Amy Brass*, Pennsylvania State University*
Emily Amanda Mainzer*, Pennsylvania State University*
Andrea McCloskey*, Pennsylvania State University*
Fran Arbaugh*, Pennsylvania State University*

Based on secondary mathematics preservice teachers' written classroom observation notes, we will share findings about their in-the-moment noticing of student thinking. Our study explored what preservice teachers qualified as "student thinking" as well as how they interpreted "understanding" and "confusion."

Where and What Preservice Teachers Report They Notice When Watching 360 Video

Karl W. Kosko*, Kent State University*
Maryam Zolfaghari*, Kent State University*

This session seeks to engage mathematics teacher educators in discussion regarding how to scaffold preservice teachers' professional noticing when engaged in virtual reality (360 videos).

Session 63 **Salon III**
Reports: ***Noticing and Learning***

Professional Noticing Coherence: Exploring Relationships between Component Processes

Jonathan Thomas*, University of Kentucky*
Molly Fisher*, University of Kentucky*

We investigate how the interrelated component processes of professional noticing (e.g., attending, interpreting, and deciding) can be thematically connected, or their coherence. We find a complex interplay between the creation and continuation of themes within noticing enactment.

Prospective Teachers' Noticing of Resources to Support Productive Struggle through Analysis of Video Episodes

Hiroko K. Warshauer*, Texas State University*

This presentation aims to describe three video episodes used to develop prospective teachers' noticing of resources to support productive struggle through writing assignments and how these video episodes were integrated into a mathematics content course for prospective teachers.

Synchronous Online Professional Learning for Mathematics Coaches: Description of a Three-Part Model

Julie Amador*, University of Idaho*
Jennifer Kruger*, University of Rochester*
Ryan Gillespie*, University of Idaho*
Cynthia H. Callard*, University of Rochester*
Adam Hanan*, University of Idaho*

In this session, we will describe the professional development aspects of an innovative online three-part model to support the development of coaches as mathematics teacher educators, and share reflections and lessons learned for professional development of coaches in online contexts.

Session 64 **Salon IV**
Practice-Based Experiences for Prospective Teachers
Individual Session

Integrating Mathematics and Computational Thinking for All: Preparing Preservice Elementary Mathematics Teachers

Angela T. Barlow, *University of Central Arkansas*
Elizabeth Kathryn Barlow, *Auburn University*

Computational thinking represents a cross-curricular skillset with natural connections to mathematics. Presenters will feature an online simulation used to engage preservice teachers in considering issues of equity and computational thinking. Implications for mathematics teacher preparation will be discussed.

Session 65 **Assisi**
Mathematics Pedagogy
Individual Session

Responding to Increasing Availability of Tasks Online: How Are We Preparing Preservice Teachers to Choose Tasks?

Kate M. Raymond, *University of Oklahoma*

Teachers of mathematics are increasingly using tasks that they find online. How are teachers being prepared to analyze and choose the task they will adapt and implement in their classrooms? This session examines preservice teachers' work with tasks in methods courses.

Session 66 **Montelago I**
Equity, Social Justice, and Mathematics Teacher Education
Individual Session

Three Spaces for Teachers and Parents to Dialogue about Mathematics Teaching and Learning

Marta Civil, *The University of Arizona*
Beatriz Quintos, *University of Maryland*
Fany Salazar, *The University of Arizona*

This presentation discusses implications for mathematics teacher education grounded on decades of work with Mexican American families. Participants will engage with three research and practice-based approaches to support teachers' learning from the mathematical resources in families from non-dominant communities.

Session 67 **Montelago II**
Equity, Social Justice, and Mathematics Teacher Education
Individual Session

Humanizing Co-Creatorship: Exploring Preservice Teachers Tensions between Content and Humanizing Pedagogies

Sheila Orr, *Michigan State University*

In this interactive session, participants will hear about how preservice teachers expressed tension in trying to balance the content and implement humanizing pedagogies and explore how to mitigate some of the tensions in their own courses.

Session 68 **Piazza**
Development of Mathematics Teacher Educators
Individual Session

Self-Study as a Tool in the Development of Mathematics Teacher Educators

Enrique Galindo, *Indiana University*
Iris Mariela Duarte Mejia, *Indiana University*
Hyunjeong Lee, *Indiana University*
Jonathan Valero, *Indiana University*
Mihyun Jeon, *Indiana University*

We share highlights from self-studies in which the presenters engaged, as well as insights gained from them. We propose that self-studies can be a component of the preparation of mathematics teacher educators and share strategies for their design and implementation.

Session 69 **Monte Vista**
AMTE Committee Session

Publishing Your Scholarly Work in an AMTE Publication: Opportunities Explored and Questions Answered

AMTE Publications Division

This session includes editors from each of AMTE's publications: *Mathematics Teacher Educator*, *Contemporary Issues in Technology and Teacher Education – Math*, and *Connections*. Focus will be on clarification of expectations, differences among venues, and breakout time for individual questions and feedback.

Session 70 **Deserto**
Mathematics Content and Curriculum
Individual Session

Engaging Prospective Teachers in Defining Mutuality

Steven Boyce, *Portland State University*
Laura J. Pyzdrowski, *West Virginia University*

This session regards a collaboratively-developed activity for college geometry courses in which preservice teachers learned about Adinkra symbols of the Akan people of Ghana and engaged in formulating a definition for the aesthetic of a particular symbol extending normative meanings for symmetry.

Session 71 **Lago**
Practice-Based Experiences for Prospective Teachers
Individual Session

Scripting Tasks Centered in Discretionary Spaces: Approximations at the Intersections of Practice- and Justice-Based Learning

Joshua Karr, *West Virginia University*

This session explores using discretionary spaces of teaching as the subject matter of scripting tasks – seeking ways to develop secondary mathematics teacher candidates at the intersections of practice- and justice-based learning.

Session 72 **Olive Grove**
Equity, Social Justice, and Mathematics Teacher Education
Individual Session

Universal Design for Learning Math: A Framework to Include Students with Disabilities in Meaningful Mathematics

Rachel Lambert, *University of California, Santa Barbara*
Avery McNiff, *University of California, Santa Barbara*

Based on our research in math and disability studies, we present Universal Design for Learning Math, an approach aligned with inquiry-based mathematics. Activities will develop understanding of Universal Design for Learning Math as well as analyze barriers in math class.

Session 73 **Vineyard**
Professional Development
Individual Session

Supporting Mathematics Coaches in Identifying and Negotiating Productive Instructional Improvement Goals

Nicholas Kochmanski, *University of North Carolina, Greensboro*

In this session, we will share findings from a professional development design study aimed at supporting middle-grades mathematics coaches in (1) identifying productive goals for teachers' instructional improvement and (2) negotiating those goals successfully with teachers.

Session 74 **Orchard**
2022 AMTE NTLI Award Winner

Transformative Technology for Equity Centered Instruction

Jennifer M. Suh, *George Mason University*
Kate Roscioli, *George Mason University*
Holly Tate, *George Mason University*

This presentation offers MTEs to consider digital tools to transform their teaching to be more inquiry-centered through our Transformative Digital Technology for Equity analysis tool that focuses on access, identity, formative assessment, collective thinking, and amplification of mathematical thinking processes.

Session 75 **Tuscany**
Mathematics Content and Curriculum
Individual Session

Engaging and Preparing Educators to Teach Statistics and Data Science

Susan Peters, *University of Louisville*
Anna E. Bargagliotti, *Loyola Marymount University*
Christine Franklin, *American Statistical Association*

The data revolution prompted changes in recommendations for PreK-12 students' data education such as those reflected in *Guidelines for Assessment and Instruction in Statistical Education II*. We share PreK-12 data science recommendations and activities and consider implications for teacher education.

Session 76 **Siena**
Mathematics Pedagogy
Individual Session

DeCyphering Mathematics: Conceptualizing Mathematics Teachers' Potential in Curating Space for Black Youth and Discourse

Nickolaus A. Ortiz, *Georgia State University*

We facilitated a space for Black youth who identify as Hip Hop artists to share their mathematical understandings. We assert that mathematics discourse can be accomplished through skills inherent to Hip Hop if teachers are intentional about constructing this space.

Session 77 **Salon I**
Mathematics Education Policy and Program Issues
Individual Session

Diversifying Teacher Preparation Pathways

Kristin E. Harbour, *University of South Carolina*

Challenges with enrollment in mathematics teacher preparation programs necessitates innovative approaches to diversifying pathways and creating new ways of professional learning. We present how one university has engaged in efforts to both diversify pathways and candidates within those pathways.

Session 78 **Salon II**
Professional Development
Individual Session

Supporting the Recording of Student Thinking in a Mathematics Discussion

Nicole Garcia, *University of Michigan*
Meghan Shaughnessy, *Boston University*

In this session, we share a set of principles for recording student thinking to support teachers in improving their practice. Participants will engage in a professional development activity that can be used with novice or practicing teachers.

Session 79 **Salon III**
Practice-Based Experiences for Prospective Teachers
Individual Session

Learning to Elicit Student Thinking in An Early Field Experience

Kristen N. Bieda, *Michigan State University*
Brady Tyburski, *Michigan State University*
Fran Arbaugh, *Pennsylvania State University*
Michelle Cirillo, *University of Delaware*

Presenters will share a framework for analyzing aspects of prospective teachers' eliciting student thinking in practice-based field experiences. Attendees will have an opportunity to try out the framework and envision its use in research and in methods courses.

Session 80 **Salon IV**
Practice-Based Experiences for Prospective Teachers
Individual Session

Leveraging Mixed Reality Simulation Technology to Grow Teachers' Discussion Practices

Dawn Woods, *Oakland University*
Anne Garrison Wilhelm, *Southern Methodist University*

In this session, we describe how mixed-reality simulations (MRS) support teachers in learning from practice. We utilize group analysis of transcripts to give MTEs a feel for teacher learning. Finally, we facilitate a discussion about MRSs and brainstorm alternate designs.

Session 81 **Assisi**
Mathematics Pedagogy
Individual Session

Leveraging the Role of an Instructional Coach to Close Middle School Math Teachers' Knowing-Doing Gap

Jennifer Ann Gonzales, *Baylor University*

This session explores a study related to the use of instructional coaches in mathematics to address the complicated relationship between mathematics teachers' knowledge, beliefs, and the implementation of effective teaching practices by focusing on ongoing and specific teacher support.

THURSDAY, FEBRUARY 10, 2022 — 5:45 PM - 6:45 PM

AMTE

EVENT CENTER CAFÉ

RECEPTION FOR GRADUATE STUDENTS & EARLY CAREER FACULTY

Graduate Students and early career faculty in their first three years are invited to join the AMTE Board of Directors and leadership in the Event Center Café for a reception. Refreshments will be served.

FRIDAY, FEBRUARY 11, 2022 — 6:45 AM - 7:45 AM

AMTE

ADVOCACY & EMERGING ISSUES BREAKFAST — SALON III

The Advocacy & Emerging Issues Breakfast is a long-standing AMTE tradition in which speakers are invited to share their insights on advocacy in mathematics education.

BREAKFAST — SALON I & II

Join colleagues for breakfast and informal conversation.

OVERVIEW OF FRIDAY MORNING, FEBRUARY 11, 2022

	8:15 AM - 9:00 AM	9:15 AM - 10:15 AM	10:30 AM - 11:30 AM
Montelago I	*82. The Affordances of Video Annotation Tools in Video Clubs* - Walkoe, Walton, Moon & Carlan		*106. Using Representations of Teaching Practice in Content Courses: Opportunities for Developing Mathematical Knowledge for Teaching* - Lischka, Casey & Anhalt
Montelago II	*83. Learning to Notice: A Study on Preservice Teachers' Noticing During an Early Childhood Field Experience* - Donham, Cooper & Ritter	*98. Promoting Preservice Teachers' Images and Interpretations of Student Mathematical Thinking Through Scaffolded Focused Video Analysis* - Switzer & Teuscher	*107. Reports: Equity and Elementary*
Piazza	*84. Using Data Investigations to Interrogate Systemic Issues in Representation in Congress and School Discipline* - Weiland		*108. Teaching Equity Pedagogy in a Geometry and Algebra Methods Course for Beginning Middle Grades Preservice Teachers* - Sundrani & Chauvot
Monte Vista	*85. Mathematics Teacher Educators' Professional Development on Self-Based Methodologies* - Suazo-Flores, Kastberg & Grant		*109. Supporting Beginning Teachers' Mathematics Curriculum Use in Their First Three Years* - Pak & Drake
Deserto	*86. Mathematics Curriculum Recommendations for Elementary Teacher Preparation* - Corven, Long & DiNapoli		*110. Using Prospective Teachers' Decimal Models to Explore Conceptual Understanding of Place Value* - Starks
Lago	*87. Knowledge for Teaching High School Geometry: Student Learning Objectives of the Undergraduate Geometry Course* - Brown, Herbst, Miller, An, Krupa, Vestal & Pyzdrowski		*111. Leveraging Community and International Perspectives to Maximize Mathematics Teacher Educator Development* - Willey & Burrill
Olive Grove	*88. A Networked Improvement Community for Secondary Mathematics Teacher Preparation: All Change Is Local (and Global)* - Martin, Strutchens & Uy		*112. Reflections on Teaching Prospective Mathematics Teachers in Covid Times: What's Worth Keeping?* - Stoehr, Ruef & Ahearn
Vineyard	*89. Equity Through Innovation: Exploring Teachers Candidates' Number Talk Experiences with Virtual Mixed Reality Simulation* - Cutler, Burris & Culpepper	*99. What is Sustainable in Mathematics Professional Development?* - Sztajn	*113. Collaborating Across Disciplines to Impact Teacher Candidates' Beliefs about Teaching STEM, Science and Mathematics* - Burton, Maiorca & Roberts

	8:15 AM - 9:00 AM	9:15 AM - 10:15 AM	10:30 AM - 11:30 AM
Orchard	*90. Designing Mathematics Methods Courses for Humanity and Connection* - Baldinger & Scott	*100. Interrogating and Dismantling White Supremacy: Strategies for Moving beyond Colorblindness and Color-evasiveness in Teacher Learning* - Reinholz, Litke, Dunleavy & Yeh	*114. Focusing Teachers on Cultivating Positive Mathematics Identities Working Group* - Bay-Williams, Johnson, Morris & Waddell
Tuscany	*91. Translating Research on Improving Algebra Teaching into a Tool for Teachers' Professional Learning* - Litke	*101. A Partnership in Practice: Building a University-School Partnership* - Edwards & Lawler	*115. Lessons from the Field: Teaching Data Science in Math* - Drozda, Schanzer, Machado, Stigler & Boaler
Siena*	*92. Comparing Fraction Versus Decimal Instruction in Upper Elementary Classrooms* - Walkowiak, Yova, Womack-Adams & Jacobson	*102. Looking Back and Looking Forward: Mathematics Teacher Educators' Reflections on their Practices During the Pandemic* - Magiera, Hansen, Merighi, Park & Zambak	*116. Mathematics Teacher Educators' Promoting Alternative Views of Mathematics* - Zhou & Richardson
Salon I	*93. Elementary and Secondary Teachers' Questioning Patterns during Number Talks* - Conner, McMillan & Joswick	*103. Community and School University Partnerships: Reflecting on Our Work* – Gibbons 2021 AMTE Early Career Award Winner	*117. Standing on Shoulders—and Lessons We Have Learned* - Hendrix 2022 Nadine Bezuk Excellence in Leadership & Service Award Winner
Salon II	*94. Supporting Mentor Teacher Professional Development: Co-Learning Equity Focused Pedagogy in the Clinical Experience* - Kulow & Heaton	*104. LGBTQ+ (Micro)Aggressions in Mathematics Teacher Education* - Whipple, Koestler, Garner, Foster & Bailey	*118. Reports: Pedagogy and Content*
Salon III	*95. Implementing Rich Tasks and Math Discussions in Synchronous Online Classrooms* - Wills		*119. Using Rehearsals to Support Mathematics Teacher Leader Learning about Just Practice* - Rigelman, Baker & Knapp
Salon IV	*96. Problematizing the Notion of Rights and Responsibilities in Mathematics Teacher Education* - Hintz, Prasad, Kazemi & Tyson		*120. Humanizing Mathematics: A Framework for Planning Lessons that Apply Math to Social Justice Issues* - Ellis
Assisi	*97. Integrating Computer Science Credentialing into Secondary Mathematics Education Programs* - Zelkowski	*105. Joining the Community: From Preservice Teacher to Engaged Mathematics Education Professional* - Borowski & Rupe	*121. Mismatched Conceptualizations of Equity: Teachers' Action Research in a Professional Development* - Bartell, Westby & Jackson

*Siena is located across the Florentine Garden.
Note: Extended session descriptions will follow regular session descriptions with the same start time.

Session 83 **Montelago II**
Practice-Based Experiences for Prospective Teachers
Individual Session

Learning to Notice: A Study on Preservice Teachers' Noticing During an Early Childhood Field Experience

Melissa Donham, *Baylor University*
Sandi Cooper, *Baylor University*
Kenley Bailey Ritter, *Baylor University*

This session reports on a study analyzing the development of preservice teacher noticing during a summer mathematics academy for early learners. The authors share the analysis of data collected during this varied field experience and implications for teacher education.

Session 89 **Vineyard**
Practice-Based Experiences for Prospective Teachers
Individual Session

Equity Through Innovation: Exploring Teachers Candidates' Number Talk Experiences with Virtual Mixed Reality Simulation

Carrie S. Cutler, *University of Houston*
Justin T. Burris, *University of Houston*
Shea Culpepper, *University of Houston*

Virtual mixed reality simulations (VMRS) used at different stages in the learning cycle equitably situate teacher candidates in diverse classrooms. We share ways we applied VMRS to number talks and involve attendees in simulated examples.

Session 90 **Orchard**
Equity, Social Justice, and Mathematics Teacher Education
Individual Session

Designing Mathematics Methods Courses for Humanity and Connection

Evra Baldinger, *San Francisco State University*
Mallika H. Scott, *California State University, Fullerton*

We present an in-process approach to designing mathematics methods courses in connecting and humane ways and we share responses from students. We invite participants to discuss the possibilities and challenges of designing to counter dehumanizing and isolating aspects of institutions.

Session 91 **Tuscany**
Professional Development
Individual Session

Translating Research on Improving Algebra Teaching into a Tool for Teachers' Professional Learning

Erica Litke, *University of Delaware*

We share a research based, practitioner-focused tool designed for improving algebra instruction grounded in an incremental approach. We describe the research translation process, share the tool, report on pilot teachers' implementation, and discuss how mathematics teacher educators might use the tool.

Session 92 **Siena**
Mathematics Content and Curriculum
Individual Session

Comparing Fraction Versus Decimal Instruction in Upper Elementary Classrooms

Temple A. Walkowiak, *North Carolina State University*
Frederique Yova, *North Carolina State University*
Kelly Womack-Adams, *North Carolina State University*
Erik D. Jacobson, *Indiana University*

We will present the results of multi-level model analyses comparing fraction lessons to decimal lessons in fourth and fifth-grade classrooms; engage participants in examining lesson vignettes to highlight lesson differences; and facilitate discussion about implications for mathematics teacher educators.

Session 93 **Salon I**
Mathematics Pedagogy
Individual Session

Elementary and Secondary Teachers' Questioning Patterns during Number Talks

Kimberly Conner, *University of Northern Iowa*
Brandon McMillan, *Brigham Young University*
Candace Joswick, *The University of Texas at Arlington*

This session highlights three teachers' questioning patterns while facilitating Number Talks with elementary and secondary students. We will engage in discussion around how to leverage teachers' questioning during Number Talks as a way of developing high level teaching practices.

Session 94 **Salon II**
Professional Development
Individual Session

Supporting Mentor Teacher Professional Development: Co-Learning Equity Focused Pedagogy in the Clinical Experience

Torrey Kulow, *Portland State University*
Ruth M. Heaton, *Teachers Development Group*

This session explores how the clinical experience can be a professional development experience for mentor teachers. It provides a theoretical model and a practical tool for supporting mentor teachers and teacher candidates co-learning equity-based mathematics instruction.

Session 97 **Assisi**
Mathematics Education Policy and Program Issues
Individual Session

Integrating Computer Science Credentialing into Secondary Mathematics Education Programs

Jeremy Zelkowski, *The University of Alabama*

This session will focus on a three-year NSF project that dually certified secondary math teacher candidates to also gain computer science certification. Program design and results are presented.

Session 82 **Montelago I**
Teaching and Learning with Technology
Extended Session

The Affordances of Video Annotation Tools in Video Clubs

Janet Dawn Kim Walkoe, *University of Maryland*
Margaret Walton, *University of Maryland*
Peter F. Moon, *University of Maryland*
Veronica Carlan, *University of Maryland*

Participants will engage in a video club session using a new video annotation tool. We will share various aspects of our work with the annotation tool and ways we are thinking about teacher education using video tagging.

Session 84 **Piazza**
Mathematics Content and Curriculum
Extended Session

Using Data Investigations to Interrogate Systemic Issues in Representation in Congress and School Discipline

Travis Weiland, *University of Houston*

This workshop will engage participants in practical and justice-oriented applications of the four-step statistical investigative process aimed at preparing mathematics teachers to teach statistics concepts. Student work will be presented, and participants will discuss the implications of each task.

Session 85 **Monte Vista**
Development of Mathematics Teacher Educators
Extended Session

Mathematics Teacher Educators' Professional Development on Self-Based Methodologies

Elizabeth Suazo-Flores, *Purdue University*
Signe Kastberg, *Purdue University*
Melva R. Grant, *Old Dominion University*

This is a professional development space where MTEs will share their experiences using self-based methodologies. We invite MTEs to join our Extended Session to learn about MTEs' experiences conducting self-based methodology studies and benefit from discussions to support MTEs' writing.

Session 86 **Deserto**
Mathematics Education Policy and Program Issues
Extended Session

Mathematics Curriculum Recommendations for Elementary Teacher Preparation

Julien Corven, *University of Delaware*
Valerie Nicole Long, *Indiana University of Pennsylvania*
Joseph DiNapoli, *Montclair State University*

This working group will discuss challenges to ensuring elementary preservice teachers are well-prepared to teach mathematics that AMTE members are facing. We will collaborate to form research-based recommendations for the content and structure of elementary mathematics content and methods courses.

Session 87 **Lago**
Mathematics Content and Curriculum
Extended Session

Knowledge for Teaching High School Geometry: Student Learning Objectives of the Undergraduate Geometry Course

Amanda Marie Brown, *University of Michigan*
Patricio Guillermo Herbst, *University of Michigan*
Nathaniel Miller, *University of Northern Colorado*
Tuyin An, *Georgia Southern University*
Erin Krupa, *North Carolina State University*
Sharon Vestal, *South Dakota State University*
Laura J. Pyzdrowski, *West Virginia University*

In this working group session, we share and seek feedback on ongoing efforts of an inter-institutional community to develop and assess a common set of core student learning objectives (SLOs) for the GeT course.

Session 88 **Olive Grove**
Collaborations and Partnerships
Featured MTEP Extended Session

A Networked Improvement Community for Secondary Mathematics Teacher Preparation: All Change Is Local (and Global)

W. Gary Martin, *Auburn University*
Marilyn Elaine Strutchens, *Auburn University*
Frederick L. Uy, *California State University*

Participants will engage with data from a national collaboration of 43 secondary mathematics teacher preparation programs to explore how networked improvement communities can engage programs in cycles of transformation toward the AMTE standards and in learning from each other.

Session 95 **Salon III**
Teaching and Learning with Technology
Extended Session

Implementing Rich Tasks and Math Discussions in Synchronous Online Classrooms

Theresa E. Wills, *George Mason University*

Engage in a rich task and productive mathematics discussion through interactive slides in a synchronous online classroom. Get more participation, student voice, and representations while increasing your technological knowledge to elicit multiple student representations and conduct a dynamic math-talk.

Session 96 **Salon IV**
Equity, Social Justice, and Mathematics Teacher Education
Extended Session

Problematizing the Notion of Rights and Responsibilities in Mathematics Teacher Education

Allison Hintz, *University of Washington*
Priya Vinata Prasad, *University of Texas at San Antonio*
Elham Kazemi, *University of Washington*
Kersti Tyson, *Los Alamos National Laboratory Foundation*

The extended session will ask participants to engage in the ideas of the Torres' Rights of the Learner in the context of the notion of responsibilities. This session is inclusive for all mathematics teacher educators and teachers in K-12 settings.

Session 98 **Montelago II**
Practice-Based Experiences for Prospective Teachers
Individual Session

Promoting Preservice Teachers' Images and Interpretations of Student Mathematical Thinking Through Scaffolded Focused Video Analysis

John Matt Switzer, *Texas Christian University*
Dawn Teuscher, *Brigham Young University*

We share a focused video analysis assignment to scaffold and support our secondary preservice teachers' recognizing student mathematical thinking and engage participants in criteria for creating similar assignments to promote preservice teachers' ability to implement research-based practices.

Session 99 **Vineyard**
Professional Development
Individual Session

What is Sustainable in Mathematics Professional Development?

Paola Sztajn, *North Carolina State University*

We report findings from a sustainability study that collected data at the conclusion of the professional development program and then one year later. We engage participants in a discussion about different aspects of professional development that are sustained or not.

Session 100 **Orchard**
Equity, Social Justice, and Mathematics Teacher Education
Discussion Session

Interrogating and Dismantling White Supremacy: Strategies for Moving beyond Colorblindness and Color-evasiveness in Teacher Learning

Daniel Lee Reinholz, *San Diego State University*
Erica Litke, *University of Delaware*
Teresa K. Dunleavy, *Antioch University Seattle*
Cathery Yeh, *Chapman University*

This session will engage participants in discussion through a variety of methods that will allow us to name, notice and act upon white supremacy culture, colorblindness, and color-evasiveness in professional development and teacher education.

Session 101 **Tuscany**
Collaborations and Partnerships
Featured MTEP Discussion Session

A Partnership in Practice: Building a University-School Partnership

Belinda Edwards, *Kennesaw State University*
Brian R. Lawler, *Kennesaw State University*

We describe efforts to develop a university-school partnership that enables secondary mathematics preservice teachers to develop contextualized knowledge of teaching and learning. We share specific activities to enhance a yearlong methods course taught at the partner school with classroom-based field experiences.

Session 102 **Siena**
Development of Mathematics Teacher Educators
Discussion Session

Looking Back and Looking Forward: Mathematics Teacher Educators' Reflections on their Practices During the Pandemic

Marta T. Magiera, *Marquette University*
Heidi Hansen, *Bemidji State University*
Caroline Julia Merighi, *Marquette University*
Hyejin Park, *James Madison University*
Vecihi Serbay Zambak, *Monmouth University*

Session participants will engage in critical reflection on practices and challenges related to mathematics teacher preparation in virtual learning settings and generate forward-looking ideas about the preparation of mathematics teachers for classroom environments of the uncertain future.

Session 103 **Salon I**
2021 AMTE Early Career Award Winner

Community and School University Partnerships: Reflecting on Our Work

Lynsey Gibbons, *University of Delaware*

There is a growing interest in the promise of partnerships. Many value the partnerships that are forged between community-university and/or school-university partnerships, which allow us to learn alongside each other and engage in important work together. Establishing and sustaining effective partnerships is challenging. This session will provide opportunities to hear from AMTE members and their partners about relationship and capacity building, challenges experienced and how they have overcome them, surfacing different forms of expertise, involvement of practitioners in research activities, and more.

Session 104 **Salon II**
Equity, Social Justice, and Mathematics Teacher Education
Discussion Session

LGBTQ+ (Micro)Aggressions in Mathematics Teacher Education

Kyle S. Whipple, *University of Wisconsin, Eau Claire*
Courtney Koestler, *The Ohio State University*
Brette Garner, *University of Denver*
Jonathan Kyle Foster, *University of Georgia*
Nina Gabrielle Bailey, *University of North Carolina, Charlotte*

To more fully address AMTE's vision of equity, we present narratives illustrating LGBTQ+ MTEs' experiences of (micro)aggressions in mathematics teacher education and provide space for participants to reflect ways to address, respond to, and strengthen their work.

Session 105 **Assisi**
Collaborations and Partnerships
Discussion Session

Joining the Community: From Preservice Teacher to Engaged Mathematics Education Professional

Rebecca S. Borowski, *Western Washington University*
Kathryn Mary Rupe, *Western Washington University*

Membership in a mathematics education community rejuvenates practice. How do preservice teachers enter these communities? Presenters will share how attending virtual conferences impacted preservice teachers. We'll seek strategies for overcoming barriers to participation and ways to strengthen preservice teachers' identities as mathematics educators.

Session 106 **Montelago I**
Mathematics Content and Curriculum
Featured MTEP Discussion Session

Using Representations of Teaching Practice in Content Courses: Opportunities for Developing Mathematical Knowledge for Teaching

Alyson E. Lischka, *Middle Tennessee State University*
Stephanie Casey, *Eastern Michigan University*
Cynthia Oropesa Anhalt, *The University of Arizona*

Mathematics educators and mathematicians will explore mathematically-intensive representations of practice that help develop secondary teachers' content and pedagogical knowledge. Participants will examine the foundations of such tasks, consider secondary teachers' responses, and discuss characteristics of effective feedback to PSMTs.

Session 107 **Montelago II**
Reports: *Equity and Elementary*

Acknowledging Competence for Racial Equity: A Study of Elementary Teacher Candidates' Learning Trajectories

Rosalie DeFino*, University of Michigan*

This presentation reports on a longitudinal study of elementary teacher candidates' uptake of an equity-oriented practice called acknowledging competence. Particular attention is paid to teacher candidates' engagement with issues of race and racism as they take up the practice.

Elementary Preservice Teachers' Evolving Orientations Towards Racial Justice in Mathematics Teaching and Learning

Karisma Morton*, University of North Texas*

In this brief report, we will present findings from a research study that investigates the ways preservice teachers' views towards racial inequity in mathematics education evolve during their enrollment in an elementary math methods course.

The Unintentional Reinforcement of the "Learning Style" Myth in Elementary Content Courses

Lisa Skultety*, University of Central Arkansas*

This report discusses how the instruction in mathematics content courses highlighting number lines, arrays, manipulatives, and other "visual" models can perpetuate the common myth of "learning types." Considerations to explicitly debunk "learning types" in content courses will be discussed.

Session 108 **Piazza**
Equity, Social Justice, and Mathematics Teacher Education
Individual Session

Teaching Equity Pedagogy in a Geometry and Algebra Methods Course for Beginning Middle Grades Preservice Teachers

Anita Sundrani, *University of Houston*
Jennifer Chauvot, *University of Houston*

We will share our curriculum and learning outcomes that represent our intentionally-sequenced course activities to intertwine our content, pedagogical content knowledge and equity pedagogy goals. We hope to engage with others about meeting equity pedagogy goals in their teaching.

Session 109 **Monte Vista**
Mathematics Content and Curriculum
Individual Session

Supporting Beginning Teachers' Mathematics Curriculum Use in Their First Three Years

Byungeun Pak, *Dixie State University*
Corey Drake, *Michigan State University*

Preparing teachers to use curriculum materials is a challenge given the wide range of available materials and contexts. We present findings about eight teachers' curriculum use in their first three years of teaching to consider implications for supporting novice teachers.

Session 110 **Deserto**
Mathematics Content and Curriculum
Individual Session

Using Prospective Teachers' Decimal Models to Explore Conceptual Understanding of Place Value

Rachel Noelle Starks, *Boston University*

Participants will learn about a study on the relationships between preservice teachers' decimal models and their place value knowledge. Preservice teachers in this study used the same curriculum designed by the Elementary Mathematics Project. Session participants will also explore decimal lessons.

Session 111 **Lago**
Development of Mathematics Teacher Educators Symposium

Leveraging Community and International Perspectives to Maximize Mathematics Teacher Educator Development

Craig Willey, *Indiana University-Purdue University Indianapolis*
Gail Burrill, *Michigan State University*

The session reports on efforts to engage practitioners and scholars from the U.S. in the International Congress of Mathematics Education as they examine and improve systems and practices in the U.S.

Session 112 **Olive Grove**
Mathematics Pedagogy
Discussion Session

Reflections on Teaching Prospective Mathematics Teachers in Covid Times: What's Worth Keeping?

Kathleen Jablon Stoehr, *Santa Clara University*
Jennifer Ruef, *University of Oregon*
Madeline Ahearn, *University of Oregon*

This session focuses on the reflections from four mathematics teacher educators who examined how preparing prospective elementary and secondary teacher candidates during the Covid pandemic has shaped their teaching practices. Discussions from participants and their experiences will also be explored.

Session 113 **Vineyard**
Collaborations and Partnerships
Individual Session

Collaborating Across Disciplines to Impact Teacher Candidates' Beliefs about Teaching STEM, Science and Mathematics

Megan Burton, *Auburn University*
Cathrine Maiorca, *California State University, Long Beach*
Thomas Roberts, *Bowling Green State University*

This session explores how science and mathematics teacher educators engaged elementary teacher candidates in a virtual elementary STEM experience. Participants will explore the pedagogical similarities, differences, and connections noted by teacher candidates about teaching STEM, science, and mathematics.

Session 114 **Orchard**
Equity, Social Justice, and Mathematics Teacher Education
Discussion Session

Focusing Teachers on Cultivating Positive Mathematics Identities Working Group

Jennifer Bay-Williams, *University of Louisville*
Cheryll Crowe Johnson, *Asbury University*
Samantha Morris, *University of Louisville*
Glenn Waddell, *University of Nevada, Reno*

Teachers must cultivate positive mathematics identities with their students (AMTE Standard C.4.2). With this standard as our guide, we briefly share tasks we have implemented to focus discussions on how to ensure teachers attend to their roles as identity-makers.

Session 115 **Tuscany**
Mathematics Content and Curriculum
Symposium

Lessons from the Field: Teaching Data Science in Math

Zarek Drozda, *University of Chicago*
Emmanuel Schanzer, *Brown University*
Suyen Machado, *University of California, Los Angeles*
Jim Stigler, *University of California, Los Angeles*
Jo Boaler, *Stanford University*

Data science is an emerging field in K-12. This session will spotlight four statistics & data science programs, share lessons from their implementation and educator training, and seek input from AMTE members on barriers and needs for training future data educators.

Session 116 **Siena**
Mathematics Pedagogy
Discussion Session

Mathematics Teacher Educators' Promoting Alternative Views of Mathematics

Lili Zhou, *Purdue University*
Sue Ellen Richardson, *Purdue University*

In this session, first, we will report our recent case study of two women's constructions of their images of mathematics. Then, we will engage our audience in a group activity to explore mathematics in the activity. Finally, we will facilitate discussion on mathematics activities and pedagogical practices that promote alternative views of mathematics.

Session 117 **Salon I**
2022 Nadine Bezuk Excellence in Leadership & Service Award Winner

Standing on Shoulders—and Lessons We Have Learned

Timothy M. Hendrix, *Meredith College*

Isaac Newton asserted that each generation stands on the shoulders of giants to see more clearly the landscape of scientific advancement. On whose shoulders have we learned about service and leadership in mathematics teacher education? I will share what I have learned from talking with mathematics educators about their philosophy of service and leadership, and ways this might help us see further into the future of mathematics teacher education. What do we see? And are we willing to offer our own shoulders upon which other mathematics teacher educators might stand to envision and work towards a new landscape?

Session 118 **Salon II**
Reports: *Pedagogy and Content*

Apprenticeship of Observation: Developing Effective Pedagogical Practices by Participating in a Mathematics Content Course

James Drimalla*, University of Georgia*
AnnaMarie Conner*, University of Georgia*

This report documents prospective teachers' gradual taking up of their instructor's practice of asking particular kinds of questions and suggests the prospective teachers' affective responses provide evidence of their awareness of their use of the instructor's questioning strategies.

Micro-teaching in a Mathematics Content Course: An Analysis of Preservice Teachers' Learning

Sayonita Ghosh Hajra*, California State University, Sacramento*
Zareen Gul Rahman*, James Madison University*

This presentation shares opportunities for elementary prospective teachers' learning in a content course engaged in micro-teaching. This session is related to standards C.2. and P.3. describing opportunities for prospective teachers' learning about mathematical and pedagogical content knowledge for teaching mathematics.

Using Mathematical Authority as a Lens to Reflect on and Improve Classroom Instruction

Michael Hamilton*, University of Georgia*

In this report, I provide a new definition of mathematical authority and illustrate how teacher educators can use this definition as they educate prospective and practicing teachers, specifically as they encourage teachers to reflect on their instructional practice.

Session 119 **Salon III**
Equity, Social Justice, and Mathematics Teacher Education
Individual Session

Using Rehearsals to Support Mathematics Teacher Leader Learning about Just Practice

Nicole Rigelman, *Portland State University*
Courtney Baker, *George Mason University*
Melinda Knapp, *Oregon State University, Cascades*

Building on existing rehearsal-focused research, these mathematics teacher leader (MTL) teacher educators enact and extend the learning potential of MTL rehearsals to attend to equitable structures and practices. We share our learning about rehearsals as a vehicle to support advocacy.

Session 120 **Salon IV**
Mathematics Pedagogy
Discussion Session

Humanizing Mathematics: A Framework for Planning Lessons that Apply Math to Social Justice Issues

Mark Ellis, *California State University, Fullerton*

Student engagement in math is greater when they see its relevance. We will explore a framework for planning lessons that apply math to social justice issues and share examples of how preservice/inservice teachers put these into practice.

Session 121 **Assisi**
Professional Development
Individual Session

Mismatched Conceptualizations of Equity: Teachers' Action Research in a Professional Development

Tonya Bartell, *Michigan State University*
Kathryn R. Westby, *Michigan State University*
Brent Jackson, *Michigan State University*

This session explores the tensions involved with the development, deployment, and refinement of teacher action research projects in relation to differences in PD facilitators' and teachers' conceptions of equity.

FRIDAY, FEBRUARY 11, 2022 12:00 PM - 1:15 PM

LUNCH — SALON I-II

AMTE provides a buffet lunch for registered conference attendees. Please join your colleagues for lunch and good conversation before the Friday afternoon sessions.

FRIDAY, FEBRUARY 11, 2022 1:30 PM - 2:15 PM

POSTER SESSION — EVENT CENTER

Session 122
Join us for the 7th Annual AMTE Poster Session. The Poster Session is intended to facilitate sharing information and research through a visual display of material This session allows an opportunity for informal discussions and interactions between the presenter(s) and the audience. Please note the set-up, viewing, and take-down times outlined below.

9:00 AM – 11:30 AM	Presenters set up posters
11:30 AM – 1:30 PM	Posters available for viewing
1:30 PM – 2:15 PM	**Poster presentations**
2:15 PM – 3:00 PM	Presenters remove posters

OVERVIEW OF POSTER SESSION, FRIDAY, FEBRUARY 11, 2022

	1:30 PM - 2:15 PM	
Event Center	*P01. Bridging Mathematics Education and Special Education Practices* - LaValley, James, Steimle & Priest	*P15. Not the Same Old Story: Shifting Mathematics Identities* - Jennings
	P02. Comparing Multiplication Explanations: How Teachers from Different Regions Explain the Same Concept - Womack-Adams	*P16. On Becoming a Mathematics Teacher Educator: Learning Through Inquiry* - Lamb, Philipp, LaTona-Tequida, Zelt, & Benak
	P03. Critical Equity Oriented Experiences for Emerging Teacher Leaders - LaTona-Tequida & Nickerson	*P17. Peer Feedback as a Tool for Preservice Teacher Reflection* – Sherman & Miller
	P04. Defining High-Quality Mentoring: Perspectives of Lasallian Teacher Candidates and Their Mentors - Kwiatkowski-Egizio	*P18. Preservice Secondary Mathematics and Science Teachers' Dispositions towards Multiculturalism* - Edenfield
	P05. Developing Individual and Collective Identity in the Mathematics Classroom - Santana De Tice	*P19. Preservice Secondary Math Teachers' Implementation of Universal Design for Learning in edTPA Lessons* - McNiff
	P06. Developing Preservice Teachers' Mathematical Argumentation and Discourse-Based Pedagogy - Lloyd	*P20. Preservice Teachers' Noticing of Students' Mathematical Thinking: A Case Study in Turkey* - Arslan
	P07. Elementary Mathematics Teachers' Feedback Practices: The Need for More - Hartland	*P21. Promoting a Productive Disposition Toward Teaching Mathematics by Examining Mathematics Autobiographies and Teacher Efficacy* - Amidon, Winfun-Cook & Monroe
	P08. Examining Preservice Teachers' Final Learning Projects - Kebreab	*P22. Supporting Math Teacher Learning to Address Societal Problems with Data Science* - Staples
	P09. Exploring Factors that Influence Teaching Moves and Rationales of Preservice Elementary School Teachers of Mathematics - Rhodes & Smithey	*P23. Supporting Preservice Elementary Teachers in Transitioning from Learners of Mathematics to Future Mathematics Teachers* - King
	P10. How Productive is the Productive Struggle? Lessons Learned from a Scoping Review - Sanders & Bevan	*P24. Task Analysis Promotes Meaningful Interactions among Preservice Teachers and Secondary Students in Virtual Tutoring Sessions* - Apraiz & Evans
	P11. "I Did Not Know What I Was Doing": Mathematics Teachers' Learning About Curriculum - Park	*P25. Learn About the AMTE STaR Program* - AMTE STaR Program Committee
	P12. "I Don't Have to Be Locked in This Box": Black Women Mathematics Teachers' Retention - Harris	*P26. Teaching Prospective Teacher Leaders How to Generate Evidence of Their Students' Thinking* - Philipp, Lamb, Stuart, Wylie, Addy, Connell, Garcia, Phan, Pruitt, & Roberts
	P13. Lessons Learned from an Elementary and Middle School Mathematics Graduate Program - Timmerman, Lewis & Sorrell	*P27. The Impact of Teacher Residency Programs on STEM Teacher Outcomes* - Lee & Yau
	P14. Nature of Mathematics: Does it Matter? - Watson	*P28. Using Strength Based Instructional Design and Classroom Embedded Professional Development to Promote Deeper Learning of Mathematics* - Kent
		P29. Utilizing the Teaching for Robust Understanding (TRU) Framework to Analyze Video Coaching Cycles - Hanan & Carson

Session 122 **Event Center**
AMTE Poster Session

P01. Bridging Mathematics Education and Special Education Practices

Bethany LaValley, *University of Mississippi*
Julie James, *University of Mississippi*
Alice Steimle, *University of Mississippi*
Shannon Priest, *University of Mississippi*

MathMATES is a yearlong content and collaboration focused academy for inservice elementary mathematics and special education teaching teams designed to leverage the strengths and expertise of each teacher, regarding research based practices of the disciplines, to positively impact exceptional students.

P02. Comparing Multiplication Explanations: How Teachers from Different Regions Explain the Same Concept

Kelly Womack-Adams, *North Carolina State University*

I will present the results from a qualitative study about the use of dialect specific words in the explanations of multiplication provided by elementary teachers from two distinct dialect regions of a single state in a poster session.

P03. Critical Equity Oriented Experiences for Emerging Teacher Leaders

Talia LaTona-Tequida, *San Diego State University*
Susan Nickerson, *San Diego State University*

We investigate how experiences of Noyce Master Teaching Fellows with urban school consultants provide opportunities to enrich conceptions of equity on the critical axis and report on how mathematics teacher educators can support emerging teacher leaders.

P04. Defining High-Quality Mentoring: Perspectives of Lasallian Teacher Candidates and Their Mentors

Erica Kwiatkowski-Egizio, *Lewis University*

The current study provides definitions of mentoring from the perspective of Lasallian teacher candidates and their mentors, and it examines the successes and challenges of mentoring during student teaching.

P05. Developing Individual and Collective Identity in the Mathematics Classroom

Paula Santana De Tice, *University of Central Florida*

This poster provides examples and suggestions on how to develop collective identity into mathematics teaching by leveraging students' knowledge assets to develop a deep conceptual understanding that will expand their career opportunities and their mathematical identity and agency.

P06. Developing Preservice Teachers' Mathematical Argumentation and Discourse-Based Pedagogy

Gwendolyn Lloyd, *Penn State University*

In this presentation, we report findings from our ongoing project aimed at enhancing mathematics teacher educators' capacity to support preservice teachers in developing pedagogical knowledge and skills through reasoning-intensive mathematics discussions.

P07. Elementary Mathematics Teachers' Feedback Practices: The Need for More

Kristin Hartland, *University of Alabama Huntsville*

Feedback is essential for helping students move forward in their learning. However, the ways in which teachers provide feedback during mathematics instruction and their own implicit beliefs are often overlooked as contributors to the types of feedback they provide.

P08. Examining Preservice Teachers' Final Learning Projects

Lybrya L. Kebreab, *University of Central Florida*

This study uses the AMTE's Mathematics TPACK Framework to examine preservice teachers' Final Learning Projects to unveil the significant factors, themes and ideas about learner perceptions of learning gains in an elementary teaching mathematics content course.

P09. Exploring Factors that Influence Teaching Moves and Rationales of Preservice Elementary School Teachers of Mathematics

Sam R. Rhodes, *Georgia Southern University*
Montana Smithey, *Georgia Southern University*

This poster shares the results of an exploratory mixed-methods study that sought to better understand factors that impact the decisions that preservice teachers make when engaging with students. Implications for preservice teacher preparation are shared.

P10. How Productive is the Productive Struggle? Lessons Learned from a Scoping Review

Miriam Marie Sanders, *Texas A&M University*
Danielle Bevan, *Texas A&M University*

The productive struggle is arguably one of the most important yet least operationalized constructs within mathematics education. This session presents the results of a scoping review that helps to increase the nexus between the theoretical and practical application of productive struggle.

P11. "I Did Not Know What I Was Doing": Mathematics Teachers' Learning About Curriculum

Sunyoung Park, *Michigan State University*

This empirical study concerns how middle school mathematics teachers engage in a problem-based curriculum during lesson planning. Applying the curricular noticing framework, how problem solving activities from a student perspective can influence teachers' interaction with curriculum materials is investigated.

P12. "I Don't Have to Be Locked in This Box": Black Women Mathematics Teachers' Retention

Micaela Harris, *Vanderbilt University*

I report findings from the analysis of 8 Black women secondary math teachers: how their experiences shape their retention, what obstacles they navigate (and possible solutions they have), and their ideas for improving the Black mathematics teacher pipeline.

P13. Lessons Learned from an Elementary and Middle School Mathematics Graduate Program

Maria Ann Timmerman, *Longwood University*
Virginia Vimpeny Lewis, *Longwood University*
Toni P. Sorrell, *Longwood University*

Longwood University's Master of Science in Education prepares current teachers to become mathematics teacher educators and leaders. After more than fifteen years, our program ended in Summer 2021. Program design information will be shared as well as program successes and challenges.

P14. Nature of Mathematics: Does it Matter?

Lucy Watson, *Belmont University*

We provide results from a year-long study of elementary preservice teachers who reflected on the nature of mathematics in two consecutive content courses.

P15. Not the Same Old Story: Shifting Mathematics Identities

Sidney Jennings, *University of Wisconsin, Madison*

The stories preservice teachers tell about their lived mathematical experiences often collide with reform-oriented learning experiences in mathematics content and methods courses in teacher education programs. How do preservice teachers renegotiate their narrative identities in light of new experiences?

P16. On Becoming a Mathematics Teacher Educator: Learning Through Inquiry

Lisa Lamb, *San Diego State University*
Randolph Philipp, *San Diego State University*
Talia LaTona-Tequida, *San Diego State University*
Jean Marie Zelt, *San Diego State University*
Staci Benak, *San Diego State University*

Participants will engage with emerging mathematics educators on how the process of inquiry has influenced their development. These emerging mathematics educators are practicing secondary mathematics teachers and so they will highlight their journey from teacher to teacher leader.

P17. Peer Feedback as a Tool for Preservice Teacher Reflection

Diana Sherman, *Saint Anselm College*
Emily Miller, *West Chester University of Pennsylvania*

This poster depicts a case study analysis of preservice elementary teachers' interpretation and uptake of peer-feedback received during mathematics teaching rehearsals. Implications for teacher preparation, use of reflection to support socially just teaching, and development of adaptive expertise are described.

P18. Preservice Secondary Mathematics and Science Teachers' Dispositions towards Multiculturalism

Kelly Edenfield, *University of Georgia*

We will present results of and engage in dialogue about an ongoing examination of efforts to develop experiences to better prepare our preservice secondary mathematics and science teachers to work with students from varied backgrounds.

P19. Preservice Secondary Math Teachers' Implementation of Universal Design for Learning in edTPA Lessons

Avery McNiff, *University of California, Santa Barbara*

This presentation looks at how preservice secondary math teachers, who have received instruction in Universal Design for Learning (UDL), integrate UDL into their lesson planning, with a specific focus on executive function supports.

P20. Preservice Teachers' Noticing of Students' Mathematical Thinking: A Case Study in Turkey

Zeynep Arslan, *Trabzon University*

We share our research on noticing skills of preservice teachers in Turkey. We focus on what they attended to in written artifacts of students' work, how they interpreted student solutions, and on determining the foci of preservice teachers' responses.

P21. Promoting a Productive Disposition Toward Teaching Mathematics by Examining Mathematics Autobiographies and Teacher Efficacy

Joel Amidon, *University of Mississippi*
Candies N. Winfun-Cook, *University of Mississippi*
Ann Monroe, *University of Mississippi*

Mathematics autobiographies of prospective teachers of elementary mathematics are analyzed using the shame-pride axis as a primary lens of investigation. Results are then compared to measures of teacher efficacy. Implications for teacher education are also considered.

P22. Supporting Math Teacher Learning to Address Societal Problems with Data Science

Megan Staples, *University of Connecticut*

We share activities and outcomes of a grant-funded project working in collaboration across math education and computer science to support mathematics teacher learning and develop high-school accessible lessons to address societal problems with big data.

P23. Supporting Preservice Elementary Teachers in Transitioning from Learners of Mathematics to Future Mathematics Teachers

Michelle King, *Western Colorado University*

To support their students' in transitioning from learners to future teachers of mathematics, the presenter implemented a journaling project during the semester-long content course. This poster will present information about this intervention as well as examples and data from students.

P24. Task Analysis Promotes Meaningful Interactions among Preservice Teachers and Secondary Students in Virtual Tutoring Sessions

Kristen Apraiz, *University of Florida*
Gayle N. Evans, *University of Florida*

A mathematical and science task analysis assignment was used as an intervention to scaffold preservice teachers in content-based conversations with middle and high school students in online weekly tutoring sessions as part of a secondary mathematics and science methods course.

P25. Learn about the AMTE STaR Program

AMTE STaR Program Committee

We invite you to come learn about the AMTE Service, Teaching, and Research (STaR) program. STaR is an early-career induction program for faculty in the first or second year of their tenure track position

P26. Teaching Prospective Teacher Leaders How to Generate Evidence of Their Students' Thinking

Randolph Philipp, *San Diego State University*
Lisa Lamb, *San Diego State University*
Will Stuart, *San Diego State University*
Lenelle Christine Wylie, *San Diego State University*
Savannah Addy, *San Diego State University*
Aidan Grace Connell, *San Diego State University*
Wendy Garcia, *San Diego State University*
Doan Stephen Phan, *San Diego State University*
Claudia A. Pruitt, *San Diego State University*
Stacy Roberts, *San Diego State University*

This poster will highlight efforts to make students' thinking a focus of discussion during professional development sessions for Noyce Master Teaching Fellows. Efforts included focusing on task design and redesign, interventions, teacher professional noticing, and lesson study.

P27. The Impact of Teacher Residency Programs on STEM Teacher Outcomes

Ji Yun Lee, *University of California, Berkeley*
Wendy Yau, *Trellis Education*

The purpose of the study was to identify emerging differences between STEM teachers in residency programs and teachers from other pathways. The findings suggest that there are significant differences between teachers in a residency program and their counterparts.

P28. Using Strength Based Instructional Design and Classroom Embedded Professional Development to Promote Deeper Learning of Mathematics

Laura Brinker Kent, *University of Arkansas*

This session presents results from a professional development program that emphasizes strength-based instructional design. Middle school teachers participated in lesson study style sessions in which students' work was observed, collected, and analyzed for mathematical thinking and contributions to classroom discussions.

P29. Utilizing the Teaching for Robust Understanding (TRU) Framework to Analyze Video Coaching Cycles

Adam Hanan, *University of Idaho*
Cynthia D. Carson, *University of Rochester*

To measure the effectiveness of professional development, researchers have continuously developed and employed lesson observation tools to quantify effective teaching. Our poster articulates the use of the TRU framework to analyze teachers' practices as they participated in coaching cycles.

OVERVIEW OF FRIDAY AFTERNOON, FEBRUARY 11, 2022

	2:30 PM - 3:15 PM	3:30 PM - 4:30 PM
Montelago I	*123. Centering Social Justice through Problem Solving* - Rhodes & Taylor	
Montelago II	*124. Lessons from the Pandemic: Leveraging Unique Teaching Experiences to Inform Mathematics Secondary Clinical Practice* - Schinck-Mikel & Paulding	*139. District-Wide K-5 Lesson Study Focused on Student Access and Agency* - Roth McDuffie, Blake, Graham & Thomas-Zapata
Piazza	*125. Leveraging the Five Practices and Teacher Noticing in Preparing Secondary Teachers to Teach with Technology* - Cayton, McCulloch, Yalman Ozen, Bailey, Fletcher & Sanei	
Monte Vista	*126. Improving Secondary Clinical Practice* - Wieman, Perry, Leatham, Conway, Strutchens & Liebars	
Deserto	*127. Where is Equity and Justice in the GAISE II Report? Implications for Mathematics Teacher Education* - Simic-Muller & Weiland	
Lago	*128. Designing and Enacting Culturally Responsive Mathematical Modeling Tasks* - Jung & Wickstrom	
Olive Grove	*129. Collaborations Between University Mentor Teachers Supervising Teacher Candidates in a Noyce Master Teaching Fellowship* - Thomas, Zelkowski, Gooden & Smith	*140. Developing Justice-Focused Mathematics Teacher Leaders through a University-District Microcredentialing Partnership* - Steele & Sagrillo
Vineyard	*130. Math Task Filter: Developing Preservice Teachers' Task Selection to Envision Equitable Instruction* - Ahearn & Ruef	*141. Supporting Synchronous and Asynchronous Study of Secondary Mathematics Lessons among Colleagues: Designs, Technologies, and Facilitation* - Herbst, Brown, Huhn & Strickland

	2:30 PM - 3:15 PM	3:30 PM - 4:30 PM
Orchard	*131. Developing Preservice Teachers' Proportional Reasoning through Online Discussions* - Rathouz, Krebs & Cengiz-Phillips	*142. Counterstorytelling: An Avenue for Grappling with Racial In/Justice in Methods Courses* - Jones, Gomez Marchant & Gargroetzi
Tuscany	*132. Creating an Alternative Pathway for Middle-Level Mathematics Endorsement* - James, Steimle, Priest & LaValley	*143. Beyond Keywords: Applying Systemic Functional Linguistics to Unpack the Language of Additive Word Problems* - Welder & Williams
Siena*	*133. Mathematics Teacher Educators Cultivating Race Conversations in Online Spaces* - Gonzalez & Moldavan	*144. Aligning Rich Mathematics Tasks with Learning Goals: Development of a Rubric* - Menke
Salon I	*134. Reports: Mathematics Content*	*145. Leading Culturally Relevant Instruction in Mathematics* - Gray
Salon II	*135. Reports: Teacher Learning*	*146. Classifying Curricular Reasoning: A Leveled Framework to Examine Teachers' Curricular Decisions* - Dingman, Teuscher & Olson
Salon III	*136. The Integration of Data Science into K-12 Mathematics Education* - LaMar	*147. De-siloing Prospective Teachers' Experiences in Secondary Methods Courses* - Safi, Andreasen, Bush, Desai, Schmidt, Amick, Rakes & Abbaspour Tazehkand
Salon IV	*137. Addressing Status During Small-Group Work in an Online Calculus Classroom* - Roman & Robinson	*148. Reports: Equity*
Assisi	*138. Proportional Reasoning and School Ratings: Developing Political Knowledge and Mathematical Knowledge in a Content Course* - Lee-Hassan	*149. Supporting Preservice Teachers' Understanding of Building Procedural Fluency from Conceptual Understanding Through Curricular Noticing* - Frazee & Miller

*Siena is located across the Florentine Garden.
Note: Extended session descriptions will follow regular session descriptions with the same start time.

Session 124 **Montelago II**
Development of Mathematics Teacher Educators
Individual Session

Lessons from the Pandemic: Leveraging Unique Teaching Experiences to Inform Mathematics Secondary Clinical Practice

Amelie Schinck-Mikel, *California Polytechnic State University, San Luis Obispo*
Katie Paulding, *California Polytechnic State University, San Luis Obispo*

In this session, we will share what we have learned about supporting secondary teacher candidates in online and in-person clinical practice experiences during the pandemic and beyond. Aimed at all secondary mathematics teacher educators.

Session 129 **Olive Grove**
Collaborations and Partnerships
Featured MTEP Individual Session

Collaborations Between University Mentor Teachers Supervising Teacher Candidates in a Noyce Master Teaching Fellowship

Casedy Ann Thomas, *The University of Alabama*
Jeremy Zelkowski, *The University of Alabama*
Chalandra Gooden, *The University of Alabama*
Felicia Smith, *The University of Alabama*

We will share two-years of results and engage participants in two activities to generate program ideas for establishing partnerships between mentor teachers, university faculty, and completing the triad for teacher candidate development resulting in improved triad practices.

Session 130 **Vineyard**
Practice-Based Experiences for Prospective Teachers
Individual Session

Math Task Filter: Developing Preservice Teachers' Task Selection to Envision Equitable Instruction

Madeline Ahearn, *University of Oregon*
Jennifer Ruef, *University of Oregon*

Participants will engage in components of the Math Task Filter assignment, a reflective exercise focused on task selection, followed by discussion of modifications and considerations of the task for math teacher educators interested in supporting preservice teachers' abilities to select tasks.

Session 131 **Orchard**
Mathematics Content and Curriculum
Individual Session

Developing Preservice Teachers' Proportional Reasoning through Online Discussions

Margaret Rathouz, *University of Michigan, Dearborn*
Angela Krebs, *University of Michigan, Dearborn*
Nesrin Cengiz-Phillips, *University of Michigan, Dearborn*

In this interactive presentation, we will engage teacher educators in conversations about ratio and proportional thinking of preservice teachers and ways to support rough draft discussion, representations, revision, and reflection of learning in an online course in this content area.

Session 132 **Tuscany**
Mathematics Education Policy and Program Issues
Individual Session

Creating an Alternative Pathway for Middle-Level Mathematics Endorsement

Julie James, *University of Mississippi*
Alice Steimle, *University of Mississippi*
Shannon Priest, *University of Mississippi*
Bethany LaValley, *University of Mississippi*

Addressing the shortage of qualified mathematics teachers, we coordinated with the state department of education to establish an alternative pathway for current educators to add a middle-level mathematics endorsement. We will share the history, process, and components of this program.

Session 133 **Siena**
Development of Mathematics Teacher Educators
Discussion Session

Mathematics Teacher Educators Cultivating Race Conversations in Online Spaces

Monica Gonzalez, *East Carolina University*
Alesia Mickle Moldavan, *Fordham University*

Participants in this session will discuss the use of cases to engage prospective teachers in race conversations during online mathematics methods courses. Opportunities will be made to collaboratively develop new cases and take away these shared resources for future use.

Session 134 **Salon I**
Reports: *Mathematics Content*

Beyond Measuring Angles: Protractor Placement Tasks for Encouraging Reflection, Promoting Reasoning, and Foreshadowing Geometric Theorems

Hamilton Hardison*, Texas State University*

We share Protractor Placement Tasks, which we designed and implemented with prospective teachers to promote reflection on how protractors can be used to measure angles, provide opportunities for reasoning geometrically, and foreshadow particular geometric theorems and their proofs.

Mathematics Teachers Applying Cognitive Science in the Classroom

Valerie Nicole Long*, Indiana University of Pennsylvania*

This session describes a newly developed graduate course meant to familiarize K-12 teachers with cognitive science research for learning mathematics. Motivation for course creation, its overall design, select assignments, and research regarding teachers' application of cognitive science in the classroom.

Why Does That Work? Teachers' Impact on Kinds of Warrants in Mathematics and Coding Arguments

AnnaMarie Conner*, University of Georgia*
Claire Miller*, University of Georgia*
Jenna Menke*, University of Georgia*

In this report, we share the types of warrants that occurred in elementary school mathematics and coding arguments and how teachers' presence, supportive actions, or lack thereof, affected the types and frequency of warrants contributed in class.

Session 135 **Salon II**
Reports: *Teacher Learning*

Facilitating Productive Struggle in an Online Mathematics Methods Course: Experiences of Secondary Education Preservice Teachers'

Shelli L. Casler-Failing*, Georgia Southern University*

This session will share findings of research conducted with secondary mathematics preservice teachers regarding their experiences learning about productive struggle in an online environment and how the experience created understanding of the benefit of productive struggle for student learning.

Japanese Teacher Instructional Circles

Matthew Melville*, University of Delaware*

Japanese teacher instructional circles provide a new idea for a teacher led professional learning opportunity where teachers can increase their mathematical knowledge for teaching. This study describes this new professional learning opportunity through the lens of effective professional development features

.

Session 136 **Salon III**
Mathematics Education Policy and Program Issues
Individual Session

The Integration of Data Science into K-12 Mathematics Education

Tanya LaMar, *Stanford University*

Data Science initiatives are on the rise across K-12 including micro-credentials and high school mathematics course offerings. This session covers the Data Science Education movement and the implications for equity, mathematics teacher education, and the future of mathematics education.

Session 137 **Salon IV**
Mathematics Pedagogy
Individual Session

Addressing Status During Small-Group Work in an Online Calculus Classroom

Christopher Orlando Roman, *Portland State University*
Molly Robinson, *Portland State University*

This session focuses on how issues of status can be addressed during small-group work in an online Calculus II classroom by assigning group roles and using Google Slides as the main platform for students to communicate their thinking.

Session 138 **Assisi**
Mathematics Content and Curriculum
Individual Session

Proportional Reasoning and School Ratings: Developing Political Knowledge and Mathematical Knowledge in a Content Course

Alexa Lee-Hassan, *University of Illinois at Chicago*

This session will engage participants in a discussion of preservice teachers' mathematical and political challenges and discoveries during a unit on school ratings and proportional reasoning and initiate exploration of other opportunities to develop political conocimiento in math content courses.

Session 123 **Montelago I**
Equity, Social Justice, and Mathematics Teacher Education
Extended Session

Centering Social Justice through Problem Solving

Sam R. Rhodes, *Georgia Southern University*
Curtis A. Taylor, *High Tech High Graduate School of Education*

This session explores how mathematical problems can serve as catalysts to engage preservice teachers in conversations about social justice. Join us in solving and creating cognitively demanding and culturally responsive tasks, exploring rubrics, and discussing social justice.

Session 125 **Piazza**
Teaching and Learning with Technology
Extended Session

Leveraging the Five Practices and Teacher Noticing in Preparing Secondary Teachers to Teach with Technology

Charity Cayton, *East Carolina University*
Allison McCulloch, *University of North Carolina, Charlotte*
Demet Yalman Ozen, *Middle Tennessee State University*
Nina Gabrielle Bailey, *University of North Carolina, Charlotte*
Samantha Fletcher, *Middle Tennessee State University*
Hamid Reza Sanei, *North Carolina State University*

We share materials designed to support prospective secondary mathematics teachers (PSMTs) learning to teach mathematics with technology. The materials develop PSMTs' pedagogical skills (e.g. noticing students' mathematical thinking, selecting & sequencing) through engaging with video artifacts of secondary students' work.

Session 126 **Monte Vista**
Practice-Based Experiences for Prospective Teachers
Featured MTEP Extended Session

Improving Secondary Clinical Practice

Rob Wieman, *Rowan University*
Jill Perry, *Rowan University*
Keith R. Leatham, *Brigham Young University*
Basil M. Conway, *Columbus State University*
Marilyn Elaine Strutchens, *Auburn University*
Cathy S. Liebars, *The College of New Jersey*

Student teaching has long been plagued by a lack of coherence and sustained institutional and research support. In this working group, participants will identify challenges and share strategies to support efforts to improve secondary mathematics clinical practice.

Session 127 **Deserto**
Mathematics Education Policy and Program Issues
Discussion Session

Where is Equity and Justice in the GAISE II Report? Implications for Mathematics Teacher Education

Ksenija Simic-Muller, *Pacific Lutheran University*
Travis Weiland, *University of Houston*

In this discussion session, participants will interrogate issues of equity/justice in the *GAISE II* report, consider implications of the report for teacher educators, and discuss how teacher educators can incorporate issues of equity/justice into the statistical education of teachers.

Session 128 **Lago**
Mathematics Content and Curriculum
Extended Session

Designing and Enacting Culturally Responsive Mathematical Modeling Tasks

Hyunyi Jung, *University of Florida*
Megan H. Wickstrom, *Montana State University*

In this working group, we will facilitate discussion around culturally responsive mathematical modeling tasks that invite teachers as mathematical modelers. We will share findings from several rounds of designing and enacting relevant tasks with teachers across two universities.

Session 139 **Montelago II**
Professional Development
Individual Session

District-Wide K-5 Lesson Study Focused on Student Access and Agency

Amy Roth McDuffie, *Washington State University*
Nicole District Blake, *Richland School District*
Melissa Graham, *Eastern Washington University*
Johana Elizabeth Thomas-Zapata, *Washington State University*

We discuss findings from a district-wide lesson study aimed developing teachers' knowledge and practices while engaging in a mathematics curriculum adoption process. We focus on how lesson study and curriculum materials supported teachers in improving K-5 students' access and agency.

Session 140 **Olive Grove**
Collaborations and Partnerships
Individual Session

Developing Justice-Focused Mathematics Teacher Leaders through a University-District Microcredentialing Partnership

Mike Steele, *National Science Foundation*
Jenny Sagrillo, *University of Wisconsin, Milwaukee*

We report the results of a five-year teacher professional development project focusing on learning content, pedagogy, and leadership. In particular, we profile three high school math teachers as they developed year-long teacher leadership projects alongside learning about antiracist mathematics pedagogy.

Session 141 **Vineyard**
Professional Development
Individual Session

Supporting Synchronous and Asynchronous Study of Secondary Mathematics Lessons among Colleagues: Designs, Technologies, and Facilitation

Patricio Guillermo Herbst, *University of Michigan*
Amanda Marie Brown, *University of Michigan*
Craig Huhn, *University of Michigan*
Sharon Kay Strickland, *Texas State University*

We report on StoryCircles, an approach to teacher professional development that engages practitioners in technology-mediated inquiry on the opportunities and demands of a lesson. Our presentation showcases artifacts generated by practitioners in their exploration of four problem-based lessons.

Session 142 **Orchard**
Equity, Social Justice, and Mathematics Teacher Education
Discussion Session

Counterstorytelling: An Avenue for Grappling with Racial In/Justice in Methods Courses

Stacy R. Jones, *The University of Texas at Austin*
Carlos Nicolas Gomez Marchant, *The University of Texas at Austin*
Emma Gargroetzi, *The University of Texas at Austin*

Together we'll explore counterstorytelling as a tool to raise racial consciousness, validate experiences from Raza learners, and work towards racial justice. Participants will discuss issues of race and language that emerge through counterstories and implementation of counterstorytelling in methods courses.

Session 143 **Tuscany**
Mathematics Content and Curriculum
Individual Session

Beyond Keywords: Applying Systemic Functional Linguistics to Unpack the Language of Additive Word Problems

Rachael M. Welder, *Texas A&M University*
Ashley M. Williams, *Texas A&M University*

We will examine the linguistic patterns of one-step additive word problem types, and discuss how linguistic analysis might be applied to support preservice elementary teachers in making sense of the semantic and structural differences in these problem types.

Session 144 **Siena**
Mathematics Pedagogy
Individual Session

Aligning Rich Mathematics Tasks with Learning Goals: Development of a Rubric

Jenna Menke, *University of Georgia*

Teacher candidates learn to craft learning goals and select rich mathematical tasks. Aligning tasks with goals is considered less frequently. In this session, attendees will engage with and critique a rubric designed to assess aligning mathematical tasks with learning goals.

Session 145 **Salon I**
NCSM Presidential Exchange Session

Leading Culturally Relevant Instruction in Mathematics

Paul Gray, *National Council of Supervisors of Mathematics*

Culturally relevant instruction empowers students to see themselves and other cultures in the mathematics they are learning. As teachers, we can modify our instructional tasks to be more culturally relevant to our students. As leaders, there are ways we can guide teachers through this process. Let's study some tools to do just that!

Session 146 **Salon II**
Mathematics Content and Curriculum
Individual Session

Classifying Curricular Reasoning: A Leveled Framework to Examine Teachers' Curricular Decisions

Shannon Wayne Dingman, *University of Arkansas*
Dawn Teuscher, *Brigham Young University*
Travis Austin Olson, *University of Nevada, Las Vegas*

We share the Instructional Pyramid model for curriculum reasoning that illustrates how teachers reason while making curricular decisions. We also propose a six-level framework to classify teachers' CR in terms of its sophistication.

Session 147 **Salon III**
Mathematics Pedagogy
Featured MTEP Individual Session

De-siloing Prospective Teachers' Experiences in Secondary Methods Courses

Farshid Safi, *University of Central Florida*
Janet Andreasen, *University of Central Florida*
Sarah B. Bush, *University of Central Florida*
Siddhi Desai, *University of Central Florida*
Ashley Schmidt, *University of Central Florida*
Lisa Amick, *University of Kentucky*
Christopher Rakes, *University of Maryland, Baltimore County*
Shahabeddin Abbaspour Tazehkand, *University of Central Florida*

This session will share a multi-institutional effort towards connecting prospective teachers' experiences in secondary methods courses demonstrating AMTE's Standards for Preparing Teachers of Mathematics recommendations and program characteristics. Focus will involve integrating discussions on methods, equity & technology supporting learning.

Session 148 **Salon IV**
Reports: *Equity*

Preservice Teachers' Work with Nonprofit on Social Emotional Learning – Year One

Jenna R. O'Dell*, Bemidji State University*
Todd Frauenholtz*, Bemidji State University*

This report will share our first year collaborating with a local non-profit to help prepare preservice mathematics teachers to teach all students, especially those from high need backgrounds that include trauma and toxic stress.

Preservice Teachers' Experience Developing Culturally Responsive Mathematics Lessons in a Middle School Mathematics Methods Course

Zareen Gul Rahman*, James Madison University*

The proposed presentation describes preservice teachers' experience developing culturally responsive mathematics lessons in their middle school mathematics methods course. One mathematics teacher educator guided the preservice teachers in developing and implementing lessons as they engaged in micro-teaching episodes.

Working with Mathematics Teacher Candidates to Dismantle Typical Patterns of Power, Privilege, and Oppression

Teresa K. Dunleavy*, Antioch University Seattle*

Practices challenging power, privilege and oppression in mathematics are becoming more common, but we still need to understand how these practices work together. In this session, we share perspectives and analyses of our teacher candidates engaging in four such practices.

Session 149 **Assisi**
Mathematics Pedagogy
Individual Session

Supporting Preservice Teachers' Understanding of Building Procedural Fluency from Conceptual Understanding Through Curricular Noticing

Leah M. Frazee, *Central Connecticut State University*
Katherine Miller, *University of Massachusetts, Lowell*

In this session, we share our teaching tools for curricular noticing to help preservice elementary and secondary teachers develop the NCTM Mathematics Teaching Practice of building procedural fluency from conceptual understanding through analysis of lesson and curricular resources.

FRIDAY, FEBRUARY 11, 2022 4:30 PM - 5:00 PM

AFTERNOON BREAK

PRE-FUNCTION I

This is a great time to stretch, network with colleagues, and visit the exhibitors.

FRIDAY, FEBRUARY 11, 2022 5:00 PM - 6:30 PM

JUDITH E. JACOBS LECTURE

SALON I-IV

What Does It Mean and What Will It Take to Be An Anti-Racist Mathematics Teacher Educator?

Sandra Crespo, Michigan State University

In this presentation, I share what I think it means to be an anti-racist mathematics teacher educator and why I believe we all have work to do to earn the trust and the privilege of being taken seriously as educators committed to racial justice. To do so, I reflect on the past, present, and future of my career-long commitments to equity and anti-oppressive mathematics education. I critically audit the theoretical and practice frameworks that have informed my own scholarship for areas where I have hit and missed the opportunity to center race and de-center whiteness. I invite our community of mathematics teacher educators to consider not just how to reframe our work so that it fits within an anti-racist framework but also highlight the critical work each of us needs to do to authentically claim we are taking an anti-racist approach in mathematics teacher education.

SATURDAY, FEBRUARY 12, 2022 6:45 AM - 7:45 AM

AMTE BREAKFAST & AFFILIATE MEETINGS

SALON I & II

Tables will be designated for AMTE Affiliate groups to meet during Saturday morning's breakfast.

OVERVIEW OF SATURDAY, FEBRUARY 12, 2022

	8:15 AM - 9:15 AM	9:30 AM - 10:30 AM	10:45 AM - 12:00 PM
Montelago I	*150. Side by Side Coaching: Embedding Teacher Learning in Practice* - Baldinger & Munson	*166. Centering Equity in Blended Learning Professional Development with Elementary Mathematical Modeling* - Turner, Aguirre, Carlson & Suh	*181. Examining Mathematics Instructional Coaching: Frames, Practices, Structures, and Learning* - Gibbons, Baldinger, Munson, Saclarides & Rigelman
Montelago II	*151. Learning to Make Teaching Practices Visible: Novice Teacher Educators Develop Adaptive Expertise Through Learning Cycles* - Goldsmith-Markey	*167. Coaching Online: Coaching Practices of Online Mathematics Coaches* - Carson & Callard	*182. Using Public Records to Support Class Discussion* - Peterson, Leatham, Stockero, Van Zoest, DeLeeuw, Hicks, Koehne, Thanheiser & Bui
Piazza	*152. Systems of Authority in Elementary Mathematics: The Teacher's Role in How Students Complete Mathematical Tasks* - Edelen, Bush & Andreasen	*168. Reconstructing African American Preservice Teachers Mathematics Evolving Identities and Visions of Mathematics Teaching for Equity* - Webb, Harper, Davis-Nathaniel & Childs	*183. Teacher Candidates' Reflections on Mediated Field Experiences' Impact on their Knowledge and Dispositions for Teaching* - Swartz, Knapp, Billings, Lynch & Pinter
Monte Vista	*153. Valuing Multiple Perspectives: Examining Teachers' Algebraic Reasoning Through a Discourse Lens* - Wrightsman & Patterson	*169. Unpacking Noticing and Wondering and its Impact on Instruction* - Silverman, Klein & Matranga	*184. Building Capacity for Teaching Mathematical Modeling Through Data: Implications for the Preparation of Teachers* - Burrill & Dick
Deserto	*154. (Re)Humanizing the Assessment Process: (Up)grading and a Focus on Feedback* - Livers, Harbour & Sullivan	*170. Planning for Mathematically Coherent Instruction: Four 'Foreshadowing' Practices* - Wasserman	
Lago	*155. Analyzing Student Work Using Perusall: An Online Annotation Platform* - Disney & Eisenreich	*171. Mathematics Teacher Leader Program Impacts: A Multi Program Analysis* - Yow	*185. Choose Your Instruments Wisely: Supporting Mathematics Teacher Educators' Research and Practice* - Bostic, Gallagher, Folger, Carney & Engledowl
Olive Grove	*156. Do Fraction Diagrams on Standardized Tests Assess Deep Understanding?* - Hawthorne & Druken	*172. Bringing Humanity to the Forefront in our Mathematics Courses: Incorporating Mathematics for Human Flourishing* - Grosser-Clarkson	*186. Othering in the Name of Inclusivity: Teaching Mathematics and Science to Culturally Diverse Students* - Henley, Franco & White
Vineyard	*157. Who Writes and What is Written? Teachers' Display Actions Supporting Argumentation in Secondary Mathematics Classrooms* - Park, Foster & Zhuang	*173. What Counts as Good? Analyzing Teachers' Rationales for Their Evaluations of Students' Mathematical Arguments* - Cavanna & Staples	*187. Designing Approximations of Practice for Learning to Teach with Technology* - McCulloch & Meyer

	8:15 AM - 9:15 AM	9:30 AM - 10:30 AM	10:45 AM - 12:00 PM
Orchard	*158. Gatekeeping in Social Justice Mathematics: What Counts and Who Decides?* - Lolkus & Cordero-Siy	*174. Reports: Equity and Content*	*188. Reports: Tasks and Routines*
Tuscany	*159. Articulating the AMTE Standards: Building a Comprehensive, Justice-Oriented Secondary Mathematics Teacher Preparation Program* - Anderson, Edgington, Lawler, Males, Carman & Sundrani		*189. Reports: Equity and Language*
Siena*	*160. Reports: Reflecting and Connections*	*175. Reports: Pedagogy and Problem Solving*	*190. Reports: Equity and Culture*
Salon I	*161. Advocacy in Mathematics Education: An Essential Element in the Preparation of Teachers of Mathematics* - Wilkerson	*176. Make an Impact by Opening Doors through Mathematics* - Watkins	
Salon II	*162. Reports: Conceptual Understanding*	*177. Reports: Technology*	
Salon III	*163. Theoretical Frameworks: Where Do We Get Them? How Do We Use Them?* - Fortune	*178. Reports: Rehearsals and Practice*	*191. Reports: Discourse*
Salon IV	*164. Teaching Online Mathematics Methods While Staying True to Your Teaching Philosophy* - Moss, Bertolone-Smith, Boyce, MacDonald & Roman	*179. Equitably Attending to and Interpreting Multilingual Learners' Mathematical Thinking: Resources for Teacher Educators* - Gallagher & Jensen	*192. Stories from the Field: Mathematics Teacher Educator Learning Via Implementation of a Video-Based Intervention* - Cavey, Totorica, DuCloux, Gine, Gerstenschlager, Hopkins, Magiera, Naresh & Roberson
Assisi	*165. Supporting Students' Thinking when Using Math Action Tools: A Framework for Evaluating and Designing Tasks* - Chandler & Cayton	*180. Formative Assessments in Secondary Mathematics: Moving Theory to Recommendations for Evidence-Based Practice* - Kenney & Lolkus	*193. Examining Chocolate Chip Cookie Bakeoff Task Reports: Finding a Sweet Spot for Preparing Ambitious Teachers* - Lee & Bachman

*Siena is located across the Florentine Garden.

Session 150 **Montelago I**
Professional Development
Individual Session

Side by Side Coaching: Embedding Teacher Learning in Practice

Erin E. Baldinger, *University of Minnesota*
Jen Munson, *Northwestern University*

Practice embedded teacher learning creates opportunities for teachers to simultaneously support their own and their students' learning. We share our analysis of side by side coaching, finding five patterns of teacher coach collaboration that support teachers in enacting ambitious practice.

Session 151 **Montelago II**
Development of Mathematics Teacher Educators
Individual Session

Learning to Make Teaching Practices Visible: Novice Teacher Educators Develop Adaptive Expertise Through Learning Cycles

Lindsay Thompson Goldsmith-Markey, *University of Pennsylvania*

Novice teacher educators who engage teachers as learners of mathematics must learn to make their teaching practices visible (MTPV) in order to influence teachers' pedagogy. This session offers a framework defining dimensions of MTPV and ways to support its development.

Session 152 **Piazza**
Equity, Social Justice, and Mathematics Teacher Education
Individual Session

Systems of Authority in Elementary Mathematics: The Teacher's Role in How Students Complete Mathematical Tasks

Daniel Edelen, *University of Central Florida*
Sarah B. Bush, *University of Central Florida*
Janet Andreasen, *University of Central Florida*

This session presents research findings from an ethnographic study of third, fourth, and fifth-grade classrooms focused on the influences of classroom-based authority structures on how students complete mathematical tasks. Implications for mathematics teacher education will be shared.

Session 153 **Monte Vista**
Mathematics Content and Curriculum
Individual Session

Valuing Multiple Perspectives: Examining Teachers' Algebraic Reasoning Through a Discourse Lens

Cody L. Patterson, *Texas State University*
Elizabeth Wrightsman, *Texas State University*

In this interactive session, participants will explore with colleagues how teachers' discourse can influence students' algebraic reasoning. Participants will examine their own thinking and consider the potential benefits of teachers valuing and incorporating multiple discursive perspectives to communicate algebraic reasoning.

Session 154 **Deserto**
Mathematics Pedagogy
Individual Session

(Re)Humanizing the Assessment Process: (Up)grading and a Focus on Feedback

Stefanie Denise Livers, *Missouri State University*
Kristin E. Harbour, *University of South Carolina*
Patrick L. Sullivan, *Missouri State University*

Four MTEs approached assessment with a focus on bringing a more humanistic process that values student voice through (Up)grading. Context matters in how we approach (Up)grading. Themes that have emerged are the impact and the tensions experienced by the students.

Session 155 **Lago**
Teaching and Learning with Technology
Individual Session

Analyzing Student Work Using Perusall: An Online Annotation Platform

Andria Disney, *Utah Valley University*
Heidi Eisenreich, *Georgia Southern University*

Participants will use Perusall, a social learning platform, to analyze student work and consider how to use this tool with their preservice teachers. We will share benefits, challenges, and lessons learned from using it in our mathematics content and methods instruction.

Session 156 **Olive Grove**
Mathematics Content and Curriculum
Discussion Session

Do Fraction Diagrams on Standardized Tests Assess Deep Understanding?

Casey Hawthorne, *Furman University*
Bridget Kinsella Druken, *California State University, Fullerton*

Many standardized tests have expanded to incorporate more non-symbolic representations. An analysis of the reasoning used by 5th grade students to answer fractional questions, all involving diagrams, offers insight into what such questions assess. We discuss implications for teacher education.

Session 157 **Vineyard**
Mathematics Pedagogy
Discussion Session

Who Writes and What is Written? Teachers' Display Actions Supporting Argumentation in Secondary Mathematics Classrooms

Hyejin Park, *James Madison University*
Jonathan Kyle Foster, *University of Georgia*
Yuling Zhuang, *Emporia State University*

As mathematics teacher educators, we encourage our teachers to record or display mathematical ideas on the board during class. But why is displaying important? In this interactive session, we will discuss how, what, when, and why teachers display mathematical ideas.

Session 158 **Orchard**
Equity, Social Justice, and Mathematics Teacher Education
Discussion Session

Gatekeeping in Social Justice Mathematics: What Counts and Who Decides?

Michael Lolkus, *Purdue University*
Eric Cordero-Siy, *University of Wisconsin, Madison*

In this Discussion Session, we invite participants to engage in a conversation centered on two questions: (a) what counts as teaching mathematics for social justice and engaging in teacher activism, and (b) who decides?

Session 159 **Tuscany**
Mathematics Education Policy and Program Issues
Featured MTEP Discussion Session

Articulating the AMTE Standards: Building a Comprehensive, Justice-Oriented Secondary Mathematics Teacher Preparation Program

Robin Keturah Anderson, *North Carolina State University*
Cyndi Page Edgington, *North Carolina State University*
Brian R. Lawler, *Kennesaw State University*
Lorraine Marie Males, *University of Nebraska, Lincoln*
Luke B. Carman, *North Carolina State University*
Anita Sundrani, *University of Houston*

This session focuses on collectively describing how secondary preparation programs can address the AMTE justice-oriented standards. Attendees will identify a collection of programmatic features that can help identify justice-oriented programs, self-assess, and provide guidance for programs that seek to change.

Session 160 **Siena**
Reports: *Reflecting and Connections*

Connecting Research to Practice: Preservice Teachers, Research Summaries, and Empirical Articles

Sarah van Ingen Lauer*, University of South Florida*

I report on a qualitative study comparing preservice teacher perceptions (n=23) of reading two different forms of mathematics education research: practitioner summaries and original, empirical articles and then how they use both to inform their fraction lesson plans.

How a Course in Content and Process Changes Elementary Mathematics Teacher Self Concept

David W. Denton*, Seattle Pacific University*

This report presents results from a study assessing changes in preservice elementary teachers' perceptions of mathematics self-concept after completing a course in mathematics content and process. Assessment of perceptions used a questionnaire and open-ended item instructing preservice teachers to "draw math."

Using Student-Centered Reflective Prompts in an Elementary Methods Course: Considerations for Teacher Educators

Brooke Krejci*, Winona State University*

This is a presentation of results from a research study utilizing an intervention: reflective prompts focused on student understanding. Results include shifts in preservice teachers' video reflections, beliefs about their ability to teach student-centered mathematics, and use of student-centered instruction.

Session 161 **Salon I**
NCTM Presidential Exchange Session

Advocacy in Mathematics Education: An Essential Element in the Preparation of Teachers of Mathematics

Trena L. Wilkerson, *National Council of Teachers of Mathematics*

Let's explore experiences and opportunities to nurture and support the development of future and practicing teachers of mathematics to advocate for themselves and their students to impact the development of a positive mathematics identity. It will be framed with the role of mathematics teacher educators in the preparation of teachers.

Session 162 **Salon II**
Reports: *Conceptual Understanding*

Developing Procedural Fluency from Conceptual Understanding: A Trigonometry Unit for Content and Methods Courses

Mark Creager*, University of Southern Indiana*
Rachel B. Snider*, The College of New Jersey*
Christopher Parrish*, University of South Alabama*

We share a set of activities, for secondary methods or content courses, that aim to develop preservice teachers' conceptual understanding of trigonometric ratios and support their ability to teach this content in ways that connect procedures to conceptual understanding.

Empirical Evidence for the Conceptualization of the Multiplicative Conceptual Field

John Ezaki*, University of Southern California*
Jingxian Li*, University of Southern California*

This study assessed teachers' knowledge of fractions, ratios, and proportional reasoning to understand the relationship between the concepts. We tested the structure of the teachers' knowledge to verify how the multiplicative conceptual field proposes this content is related.

Fractions and Functions: Supporting Teachers' Use of Definitions

Joshua Chesler*, California State University, Long Beach*
Reanna L. Bromley*, California State University, Long Beach*
Christina Kimmerling*, California State University, Long Beach*

Mathematics teachers must choose and use mathematical definitions. We present results from two complementary studies, about textbook definitions of functions and fractions, and their implications for the preparation of mathematics teachers.

Session 163 **Salon III**
Development of Mathematics Teacher Educators
Discussion Session

Theoretical Frameworks: Where Do We Get Them? How Do We Use Them?

Nicholas Fortune, *Western Kentucky University*

What is the role of theory in mathematics education research? If you find yourself asking or answering this question often, then this session is for you! We don't have "the answer" but aim to provide a space to spark conversations.

Session 164 **Salon IV**
Development of Mathematics Teacher Educators
Discussion Session

Teaching Online Mathematics Methods While Staying True to Your Teaching Philosophy

Diana Moss, *University of Nevada, Reno*
Claudia Bertolone-Smith, *California State University, Chico*
Steven Boyce, *Portland State University*
Beth L. MacDonald, *Utah State University*
Christopher Orlando Roman, *Portland State University*

Have you ever wondered how to emulate learning from a face-to-face course in an online course? We present a framework that balances objectivism and constructivism and discuss designing a learning experience for preservice teachers to construct understanding of fractions.

Session 165 **Assisi**
Teaching and Learning with Technology
Individual Session

Supporting Students' Thinking when Using Math Action Tools: A Framework for Evaluating and Designing Tasks

Kayla Chandler, *East Carolina University*
Charity Cayton, *East Carolina University*

This session will review the IGS Framework and surrounding research. Participants will analyze a task using an updated version of the IGS Framework. Implications and use of the IGS Framework with other mathematical action technologies will be discussed.

Session 166 **Montelago I**
Professional Development
Individual Session

Centering Equity in Blended Learning Professional Development with Elementary Mathematical Modeling

Erin Turner, *The University of Arizona*
Julia Aguirre, *University of Washington, Tacoma*
Mary Alice Carlson, *Montana State University*
Jennifer M. Suh, *George Mason University*

Presenters will share the goals, frameworks, and design principles for an equity centered blended PD model for elementary teachers that focuses on school and community based mathematical modeling. Participants will examine how their PD design can center equity for professional learning.

Session 167 **Montelago II**
Development of Mathematics Teacher Educators
Individual Session

Coaching Online: Coaching Practices of Online Mathematics Coaches

Cynthia D. Carson, *University of Rochester*
Cynthia H. Callard, *University of Rochester*

In this session, we present an analysis of online mathematics coaching practices and how they may support teachers engaging in more ambitious instruction. Time will be devoted to audience discussion of these coaching practices in their own contexts.

Session 168 **Piazza**
Equity, Social Justice, and Mathematics Teacher Education
Individual Session

Reconstructing African American Preservice Teachers Mathematics Evolving Identities and Visions of Mathematics Teaching for Equity

Jared Webb, *North Carolina A&T State University*
Isaiah Shikeem Harper, *North Carolina A&T State University*
Theresa Davis-Nathaniel, *North Carolina A&T State University*
Myah Childs, *North Carolina A&T State University*

In this session, we share preliminary findings of the ways a 15-week mathematics identity and vision lab supported African American preservice elementary teachers' in de/reconstructing their mathematics identities and envisioning a liberatory mathematics education for themselves and their future students.

Session 169 **Monte Vista**
Professional Development
Individual Session

Unpacking Noticing and Wondering and its Impact on Instruction

Jason Silverman, *Drexel University*
Valerie E. Klein, *Drexel University*
Anthony Matranga, *California State University, San Marcos*

We report on teachers' descriptions of instruction featuring Noticing and Wondering as a pedagogical strategy, share themes that emerged from this analysis and discuss the potential implications of these emergent themes for the design of teacher professional development.

Session 170 **Deserto**
Mathematics Pedagogy
Individual Session

Planning for Mathematically Coherent Instruction: Four 'Foreshadowing' Practices

Nicholas Wasserman, *Columbia University*

We extend Wasserman's (2015) notion of 'foreshadowing', having explored secondary teachers' actual planning processes, by conceptualizing four distinct 'foreshadowing' practices. We consider these practices, as well as how they might be used in teacher preparation to plan for mathematical coherence.

Session 171 **Lago**
Professional Development
Individual Session

Mathematics Teacher Leader Program Impacts: A Multi Program Analysis

Jan Yow, *University of South Carolina*

Eight mathematics teacher leader programs across seven states were studied. Specific components and their impact on program completers will be shared. Program developers will share insights. Discussion among attendees will follow about creating robust, impactful teacher leader programs.

Session 172 **Olive Grove**
Mathematics Content and Curriculum
Discussion Session

Bringing Humanity to the Forefront in our Mathematics Courses: Incorporating Mathematics for Human Flourishing

Dana Grosser-Clarkson, *University of Maryland*

This discussion session will present ways one course has incorporated Su and Jackson's Mathematics for Human Flourishing (2020) and then open the floor for others to discuss how they have used or plan to use the text for future teachers.

Session 173 **Vineyard**
Professional Development
Individual Session

What Counts as Good? Analyzing Teachers' Rationales for Their Evaluations of Students' Mathematical Arguments

Jillian Cavanna, *University of Hartford*
Megan Staples, *University of Connecticut*

Evaluating students' arguments is complex, as teachers must attend to multiple aspects. In this session, we share a tool and examine data on teachers' evaluations and rationales of argumentation work samples. Findings offer guidance for professional learning experiences for teachers.

Session 174 **Orchard**
Reports: *Equity and Content*

A Teacher Leader Trajectory: Developing Teachers in Urban Schools as Elementary Mathematics Specialists

Kayla Myers*, Georgia State University*
Susan Swars Auslander*, Georgia State University*
Carla Lynn Tanguay*, Georgia State University*

A 5-year mathematics professional development project for elementary teachers in high-need urban schools, along with Year 1 research findings, will be shared. Multi-organization partnerships aim to prepare and support Elementary Mathematics Specialists delivering rigorous mathematics instruction and becoming teacher leaders.

Critical Mathematics Modules in an Introductory Secondary Mathematics Methods Course

Luke B. Carman*, North Carolina State University*
Robin Keturah Anderson*, North Carolina State University*

We report a redesign of a secondary math methods course, by adjusting all topics to have an antiracist, critical lens. We will discuss this new content, how students responded, and how we are conceptualizing this course moving forward.

Persistence of Black Girls in Calculus: A Community Cultural Wealth Perspective

Olanrewaju Oriowo*, University of North Carolina, Charlotte*

This report shares preliminary analysis of a counternarrative case study to explore the types of cultural capital leveraged by a high achieving Black girl to persist beyond Calculus I.

Session 175 **Siena**
Reports: *Pedagogy and Problem Solving*

Good Literacy Teaching, Good Math Teaching: Using Ideas from Literacy to Enhance Elementary Mathematics Instruction

Lisa Hawley*, Michigan State University*

Many elementary teachers are uncomfortable teaching mathematics. In this report, I will share results from a content analysis of practitioner journals in both subject areas, highlighting ideas from literacy that MTEs can use to enhance prospective elementary teachers' mathematics teaching.

Investigating Teacher Candidates' Teaching for Conceptual Understanding

Emily C. Elrod*, North Carolina State University*

This study strives to understand how teacher candidates demonstrate the practice of teaching mathematics for conceptual understanding, specifically through multiple representations, within their student teaching placement classroom. An embedded multiple case study design is used to analyze edTPA artifacts.

Starting a Dialogue Around Elementary Preservice Teachers' Problem Solving

Timothy Donald Folger*, Bowling Green State University*
Maria Elizabeth Nielsen Stewart*, University of Missouri*
Jonathan David Bostic*, Bowling Green State University*

This report shares the results of a quantitative study examining preservice teachers' problem-solving performance with grades 3-5 content. The study compares first-year preservice teachers to preservice teachers approaching the end of their program. Implications for teacher preparation programs are discussed.

Session 176 **Salon I**
AMATYC Presidential Exchange

Make an Impact by Opening Doors through Mathematics

Laura Watkins, *Glendale Community College*

With the tagline "Opening Doors through Mathematics" the American Mathematical Association of Two-Year Colleges (AMATYC) is dedicated to continuing its efforts to improve mathematics education in the first two years of college. *IMPACT: Improving Mathematical Prowess and College Teaching* (2018) is AMATYC's most recent standards document providing guidance to faculty for improving the mathematical prowess of students. In this session, we will explore mathematical prowess and strategies for developing prowess in our future teachers.

Session 177 **Salon II**
Reports: *Technology*

Investigating Preservice Math Teachers' TPACK Development via Virtual Microteaching Lessons

Richard Velasco*, University of Iowa*

Using TPACK as a theoretical framework, this session presents an investigative study of microteaching lessons on mathematical modeling planned and taught by preservice math teachers enrolled in a high school math methods course at a large research institution.

Preparing Elementary Teachers to Integrate Computational Thinking and Mathematics: Reasoning and Sense-Making with Scratch

Terrie Galanti*, University of North Florida*

This report describes an instructional module designed to empower teachers to explore the natural connection between computational thinking and mathematics. Evidence of teachers' use visual block-based programming reveals the pedagogical affordances of computational thinking as a representation of mathematical sense-making.

The Impact of Synchronous Online Teaching on Student Teacher Observations During the COVID-19 Pandemic
Featured MTEP Report

Molly Fisher*, University of Kentucky*
Lisa Amick*, University of Kentucky*
Margaret J. Mohr-Schroeder*, University of Kentucky*
Parastoo Zareie*, University of Kentucky*
Michele Stites*, University of Maryland, Baltimore County*
Julian Viera Jr*, Berea College*
Jon Saderholm*, Berea College*
Robert N. Ronau, *University of Louisville*

How did the COVID-19 pandemic impact our student teachers' classroom experiences? Come learn and discuss how we used the Mathematics Classroom Observation Protocol for Practices observation tool to study the impact of synchronous online teaching on secondary mathematics student teachers.

Session 178 **Salon III**
Reports: *Rehearsals and Practice*

Rehearsals: Peers or Avatars? Comparison of Elementary Teacher Candidates' Elicitation of Student Thinking

Carrie Lee*, East Carolina University*

This report session will share findings from NSF-supported work that compares the development of elementary teacher candidates' eliciting skills as they engage in rehearsals within virtual rehearsal simulations and traditional, peer-to-peer rehearsals.

Supporting Mathematics Teachers' Learning Through Co-Inquiry Around Problems of Practice

Patricia Buenrostro*, Lake Forest College*

We share findings from a video-based mathematics teacher learning project designed to support ambitious instruction. Participants will learn how focusing classroom debrief conversations around teacher-generated inquiries afforded distinct yet powerful learning opportunities about complex, interactive dimensions of their teaching.

Using Rehearsals to Prepare Preservice Teachers to Orchestrate Whole Class Discussion

Leigh A. van den Kieboom*, Marquette University*

This session will engage participants in conversations about using rehearsals to support preservice teachers in learning how to orchestrate whole class discussion. Results related to analysis of preservice teachers' video-recorded rehearsals and reflection on whole class discussions will be presented.

Session 179 **Salon IV**
Equity, Social Justice, and Mathematics Teacher Education
Discussion Session

Equitably Attending to and Interpreting Multilingual Learners' Mathematical Thinking: Resources for Teacher Educators

Melissa Ann Gallagher, *University of Houston*
Jessica Jensen, *California Polytechnic State University, San Luis Obispo*

Participants will explore and discuss new resources (video repository + framework for equitably attending to and interpreting students' mathematical thinking + lesson plans) to support their PTs' development of equitable attending and interpreting skills for working with multilingual learners.

Session 180 **Assisi**
Mathematics Pedagogy
Individual Session

Formative Assessments in Secondary Mathematics: Moving Theory to Recommendations for Evidence-Based Practice

Rachael Kenney, *Purdue University*
Michael Lolkus, *Purdue University*

Using a meta-aggregation of qualitative studies, we worked to bridge research findings on formative assessment into practice. In this session, we share recommendations for mathematics teacher educators as they support teachers' development of formative assessment practices in secondary mathematics classrooms.

Session 181 **Montelago I**
Professional Development
Symposium

Examining Mathematics Instructional Coaching: Frames, Practices, Structures, and Learning

Lynsey Gibbons, *University of Delaware*
Evra Baldinger, *San Francisco State University*
Jen Munson, *Northwestern University*
Evthokia Stephanie Saclarides, *University of Cincinnati*
Nicole Rigelman, *Portland State University*

This multifaceted presentation brings together four research studies examining aspects of mathematics coaching, including framings of coaching, practices and structures, and coaches' professional learning. Participants have opportunities to learn about the studies and discuss connections with their own work.

Session 182 **Montelago II**
Mathematics Pedagogy
Symposium

Using Public Records to Support Class Discussion

Blake Ellis Peterson, *Brigham Young University*
Keith R. Leatham, *Brigham Young University*
Shari L. Stockero, *Michigan Technological University*
Laura Van Zoest, *Western Michigan University*
William DeLeeuw, *Valdosta State University*
Michael Duane Hicks, *Texas State University*
Christina Koehne, *State University of New York, New Paltz*
Eva Thanheiser, *Portland State University*
Mai Bui, *Texas State University*

Four groups of mathematics teacher educators share the ways they are exploring the creation, organization, and use of public records of student mathematical thinking - physical and visual representations of student mathematics that are publicly accessible to all participants within a classroom.

Session 183 **Piazza**
Practice-Based Experiences for Prospective Teachers
Symposium

Teacher Candidates' Reflections on Mediated Field Experiences' Impact on their Knowledge and Dispositions for Teaching

Barbara Swartz, *West Chester University of Pennsylvania*
Melinda Knapp, *Oregon State University, Cascades*
Esther Billings, *Grand Valley State University*
Sararose Lynch, *Westminster College*
Holly Henderson Pinter, *Western Carolina University*

Mediated Field Experiences (MFEs) provide teacher candidates opportunities to enact teaching practices, gain mathematics content and pedagogical knowledge, and reflect critically on mathematics teaching and learning. This presentation describes our findings from three studies on the impact of our MFEs.

Session 184 **Monte Vista**
Mathematics Content and Curriculum
Symposium

Building Capacity for Teaching Mathematical Modeling Through Data: Implications for the Preparation of Teachers

Gail Burrill, *Michigan State University*
Thomas P. Dick, *Oregon State University*

The Standards for Preparing Teachers of Mathematics call for including mathematical modeling in the curriculum. Participants will engage in activities and discuss the potential of using a data driven approach in preparing teachers to understand and to teach mathematical modeling.

Session 185 **Lago**
Development of Mathematics Teacher Educators
Symposium

Choose Your Instruments Wisely: Supporting Mathematics Teacher Educators' Research and Practice

Jonathan David Bostic, *Bowling Green State University*
Melissa Ann Gallagher, *University of Houston*
Timothy Donald Folger, *Bowling Green State University*
Michele Carney, *Boise State University*
Christopher Engledowl, *New Mexico State University*

We will encourage mathematics teacher educators to consider the impact validity and validation has on research findings and implications. We leverage work from tests of teacher knowledge, assessments of teacher practices and affect, and statistics education.

Session 186 **Olive Grove**
Equity, Social Justice, and Mathematics Teacher Education
Individual Session

Othering in the Name of Inclusivity: Teaching Mathematics and Science to Culturally Diverse Students

Jordan Henley, *University of Georgia*
Lorraine Franco, *University of Georgia*
Dorothy Y. White, *University of Georgia*

We discuss the implications for teacher educators of our findings that preservice teachers in mathematics and science methods courses may be unintentionally 'othering' their students in a quest to be inclusive and the possibilities of working collaboratively across disciplines.

Session 187 **Vineyard**
Teaching and Learning with Technology
Individual Session

Designing Approximations of Practice for Learning to Teach with Technology

Allison McCulloch, *University of North Carolina, Charlotte*
Dan Meyer, *Desmos*

Join us to consider how the Desmos tools, teacher guides, frameworks, and teaching platform can be used to support secondary preservice teachers' learning to teach with technology. We will share examples of approximations of practice, including sample preservice teacher work.

Session 188 **Orchard**
Reports: *Tasks and Routines*

Advancing Preservice Math Teacher Quantitative Reasoning Skills

Ahmad Alhammouri*, Jacksonville State University*

During this presentation, we will discuss how advancing prospective math teachers' quantitative reasoning skills through mathematical modeling helps them to demonstrate mathematical practices and processes.

Identifying Mathematical Task Features: A Framework for Analyzing Task Enactment

Hoyun Cho*, Capital University*
Sheunghyun Yeo*, The University of Alabama*
Jung Youn Colen*, Chadron State College*

We will share Dimensions and Components of the Task Enactment Framework that focus on the features of tasks that emerge during lessons and various levels of emergence in the process of enactment.

Plan for Effective Instruction: Elementary Preservice Teachers' Mathematical Task Design

Yi-Jung Carol Lee*, University of Arkansas*

In this study, we investigated and analyzed 30 elementary preservice teachers' mathematical task design on the dimensions of context authenticity and task authenticity. We then discussed exemplary examples based on the trends in their task design and relevance.

Scaffolding Students' Learning of Mathematical Modeling Through Instructional Routines

Elyssa Stoddard*, Oregon State University*
Megan Brunner*, Oregon State University*
Rebekah Elliott*, Oregon State University*

While calls to integrate mathematical modeling into K-12 classrooms continue to grow, there is limited research investigating how teachers support students' learning of modeling. In this report, we examine how two teacher-designed instruction routines scaffold students' learning of mathematical modeling.

Session 189 **Tuscany**
Reports: *Equity and Language*

Eliminating the Achievement Gap for English Learners in a Randomized Controlled Study

Ivan Cheng*, California State University, Northridge*

We report the findings of a randomized controlled study that eliminated the achievement gap for English learners. This i3-funded project analyzed almost 7,300 standardized test scores and found students in the treatment group significantly outperformed students in the control group.

Math Teacher Positioning on Emergent Bilinguals in Situated Professional Development

Ji Yeong I*, Iowa State University*
Coskun Erden*, Iowa State University*
Betsy Araujo Grando*, Iowa State University*

This session addresses how a math teacher positions them self and their Emergent Bilingual students (ELLs) in a situated PD. The research results identify and suggest how to improve teaching practices following equitable and rigorous mathematics education for Emergent Bilinguals.

Teacher Impact on the Development of Positive Mathematics Identities of Black Children

Kyalamboka Brown*, Stanford University*

A qualitative research study examined the mathematics learning journeys of Black high school girls and unpacked ways that teachers impact the development of positive mathematics identities. Humanizing pedagogies, positive messages, and supportive communication proved to be effective.

Session 190 **Siena**
Reports: *Equity and Culture*

Developing the Cultural Competencies of Preservice Mathematics Teachers Through Education Abroad Programming

Blair Izard*, University of Northern Iowa*

In order to incorporate students' cultures into the classroom, mathematics teachers must first be able to recognize the backgrounds and experiences of others. We will share one approach to developing this ability—participation in an education abroad program.

Engaging Teacher Beliefs in a Graduate Course on Teaching Mathematics for Social Justice

Manjula Joseph*, Fresno Pacific University*

Study tracked teacher beliefs in semester-long online graduate course on TMfSJ. Findings suggest engaging teachers in examining their own identities can help anticipate ways students' identities shape classroom engagement. Furthermore, teachers need to interrogate notions of culture-free and politically neutral mathematics.

Let's Talk About Race: Online Reflections from Prospective Teachers in Methods Courses

Alesia Mickle Moldavan*, Fordham University*
Monica Gonzalez*, East Carolina University*

This study reports on a case used during methods courses to promote online discussions about race and racism. Findings provide insights into how prospective teachers interpret racial discrimination and how a teacher might respond to racism in the mathematics classroom.

Session 191 **Salon III**
Reports: *Discourse*

Promoting Collective Engagement in Math Discussions

Nicholas Charles Johnson*, San Diego State University*
Megan Franke*, University of California, Los Angeles*

This report presents an investigation of whole-class discussions where multiple students participated in ways previous research shows predict achievement gains. Results illustrate how incomplete and ambiguous ideas served as resources, opening space for different kinds of contributions to collective activity.

The Relationship Between Student Identity and Discourse in K-12 Mathematics Classrooms

Tara Heikila*, Washington State University*
David Slavit*, Washington State University, Vancouver*

The results of a systematic literature on mathematical discourse and student identity are presented. We stress the importance of sociocultural frameworks, common to most studies on mathematical identity, as an explicit topic of discussion with preservice teachers when exploring equitable practices.

Criteria for Selecting Strategies: Insider Knowledge of the Author

Amy Dunning*, University of Illinois, Springfield*

Teachers have many reasons for selecting strategies for discussions, for example, selecting a drawing or a correct answer. This report highlights a less visible criteria - teachers' use of their insider knowledge of the author when selecting strategies for discussions.

Session 192 **Salon IV**
Development of Mathematics Teacher Educators Symposium

Stories from the Field: Mathematics Teacher Educator Learning Via Implementation of a Video-Based Intervention

Laurie Overman Cavey, *Boise State University*
Tatia Totorica, *Boise State University*
Kanita K. DuCloux, *Western Kentucky University*
Roser Gine, *University of Massachusetts, Lowell*
Natasha Gerstenschlager, *Western Kentucky University*
Theresa M. Hopkins, *University of Tennessee, Knoxville*
Marta T. Magiera, *Marquette University*
Nirmala Naresh, *University of North Texas, Denton*
Lee Roberson, *University of Colorado, Boulder*

We share themes across our own stories of learning from implementing a video-based intervention designed to support secondary candidates' ability to make sense of student thinking. Participants will engage in the intervention and discuss ideas for mathematics teacher educator learning and research.

Session 193 **Assisi**
Mathematics Pedagogy
Individual Session

Examining Chocolate Chip Cookie Bakeoff Task Reports: Finding a Sweet Spot for Preparing Ambitious Teachers

Alees Lee, *Weber State University*
Rachel Bachman, *Weber State University*

Learn about the creation, use, and results of task reports developed from the *5 Practices in Practice* series to allow preservice teacher candidates to revisit the tasks used in content specific courses from a teacher perspective.

SATURDAY, FEBRUARY 12, 2022 12:00 PM - 1:30 PM

LUNCH & BUSINESS MEETING — SALON I-II

Please join us for lunch, organizational updates, and official AMTE proceedings.

SPEAKER INDEX

Cavey, Laurie Overman	*Boise State University*	lauriecavey@boisestate.edu	192
Cayton, Charity	*East Carolina University*	caytonc@ecu.edu	125, 165
Cengiz-Phillips, Nesrin	*University of Michigan, Dearborn*	nesrinc@umich.edu	33, 131
Chandler, Kayla	*East Carolina University*	chandlerk@ecu.edu	165
Chauvot, Jennifer	*University of Houston*	jchauvot@uh.edu	108
Cheng, Ivan	*California State University, Northridge*	icheng@csun.edu	189
Chesler, Joshua	*California State University, Long Beach*	josh.chesler@csulb.edu	162
Childs, Myah	*North Carolina A&T State University*	mlchilds@aggies.ncat.edu	168
Cho, Hoyun	*Capital University*	hcho1416@capital.edu	188
Cirillo, Michelle	*University of Delaware*	mcirillo@udel.edu	29, 79
Civil, Marta	*The University of Arizona*	civil@math.arizona.edu	66
Colen, Jung Youn	*Chadron State College*	jcolen@csc.edu	188
Connell, Aidan Grace	*San Diego State University*	aidangracec@gmail.com	122
Conner, AnnaMarie	*University of Georgia*	aconner@uga.edu	118, 134
Conner, Kimberly	*University of Northern Iowa*	kimberly.conner@uni.edu	93
Conway, Basil M.	*Columbus State University*	conway_basil@columbusstate.edu	126
Cooper, Sandi	*Baylor University*	sandra_cooper@baylor.edu	83
Cordero-Siy, Eric	*University of Wisconsin, Madison*	epsiy@wisc.edu	39, 158
Corven, Julien	*University of Delaware*	jcorven@udel.edu	86
Cox, Dana Christine	*Miami University*	dana.cox@MiamiOH.edu	38
Creager, Mark	*University of Southern Indiana*	macreager@usi.edu	162
Culpepper, Shea	*University of Houston*	smculpepper@uh.edu	89
Cutler, Carrie S.	*University of Houston*	cscutler@central.uh.edu	89

D

Davis-Nathaniel, Theresa	*North Carolina A&T State University*	tdavis5@aggies.ncat.edu	168
DeFino, Rosalie	*University of Michigan*	rdefino@umich.edu	107
DeLeeuw, William	*Valdosta State University*	wbdeleeuw@valdosta.edu	182
Denton, David W.	*Seattle Pacific University*	dentod@spu.edu	160
Desai, Siddhi	*University of Central Florida*	siddhi.desai@knights.ucf.edu	38, 147
Dick, Thomas P.	*Oregon State University*	tpdick@math.oregonstate.edu	184
DiNapoli, Joseph	*Montclair State University*	dinapolij@montclair.edu	86
Dingman, Shannon Wayne	*University of Arkansas*	sdingman@uark.edu	146
Disney, Andria	*Utah Valley University*	andria.disney@uvu.edu	155
Donham, Melissa	*Baylor University*	melissa_donham1@baylor.edu	83
Drake, Corey	*Michigan State University, The Math Learning Center*	cdrake@msu.edu	3, 109
Drimalla, James	*University of Georgia*	james.drimalla@uga.edu	118
Driskell, Shannon O. S.	*University of Dayton*	sdriskell1@udayton.edu	19
Drozda, Zarek	*University of Chicago*	zarekd20@uchicago.edu	115
Druken, Bridget Kinsella	*California State University, Fullerton*	bdruken@fullerton.edu	156
Duarte Mejia, Iris Mariela	*Indiana University*	irismarieladuarte@gmail.com	68
DuCloux, Kanita K.	*Western Kentucky University*	kanita.ducloux@wku.edu	192
Dunleavy, Teresa K.	*Antioch University Seattle*	teresa.kathleen.dunleavy@gmail.com	100, 148
Dunning, Amy	*University of Illinois, Springfield*	ahewi2@uis.edu	191

E

Eddy, Colleen McLean	*University of North Texas*	colleen.eddy@unt.edu	11, 59
Edelen, Daniel	*University of Central Florida*	dan.edelen@knights.ucf.edu	152
Edenfield, Kelly	*University of Georgia*	kedenfield@uga.edu	122
Edgington, Cyndi Page	*North Carolina State University*	cpedging@ncsu.edu	159
Edwards, Belinda	*Kennesaw State University*	bedwards@kennesaw.edu	101
Eisenreich, Heidi	*Georgia Southern University*	heisenreich@georgiasouthern.edu	26, 155
Elliott, Rebekah	*Oregon State University*	elliottr@oregonstate.edu	52, 188
Ellis, Brittney	*Portland State University*	bme3@pdx.edu	23
Ellis, Mark	*California State University, Fullerton*	mellis@fullerton.edu	120
Elrod, Emily C.	*North Carolina State University*	ekelrod@ncsu.edu	175
Engledowl, Christopher	*New Mexico State University*	chriseng@nmsu.edu	185
Erden, Coskun	*Iowa State University*	cerdentr@gmail.com	189
Evans, Gayle N.	*University of Florida*	gnevans@coe.ufl.edu	122
Ezaki, John	*University of Southern California*	jezaki@usc.edu	162

F

Fernandes, Anthony	*University of North Carolina, Charlotte*	anthony.fernandes@uncc.edu	9
Fisher, Molly	*University of Kentucky*	molly.fisher@uky.edu	63, 177
Fletcher, Samantha	*Middle Tennessee State University*	scf3a@mtmail.mtsu.edu	125
Folger, Timothy Donald	*Bowling Green State University*	tdfolge@bgsu.edu	175, 185
Fortune, Nicholas	*Western Kentucky University*	nicholas.fortune@wku.edu	163
Foster, Jonathan Kyle	*University of Georgia*	fosterjk@uga.edu	104, 157
Franco, Lorraine	*University of Georgia*	lorraine.franco@uga.edu	186
Franke, Megan	*University of California, Los Angeles*	mfranke@ucla.edu	191
Franklin, Christine	*American Statistical Association*	chris_franklin@icloud.com	75
Franz, Dana P.	*Mississippi State University*	df76@colled.msstate.edu	20, 32
Frauenholtz, Todd	*Bemidji State University*	tfrauenholtz@bemidjistate.edu	148
Frazee, Leah M.	*Central Connecticut State University*	frazee@ccsu.edu	149
Freeburn, Benjamin	*Western Michigan University*	byf5045@gmail.com	48
Friedrich, Jami	*Mercer University*	jami.friedrich@gmail.com	27

G

Galanti, Terrie	*University of North Florida*	terrie.galanti@unf.edu	10, 177
Galindo, Enrique	*Indiana University*	egalindo@indiana.edu	68

Weiland, Travis	*University of Houston*	tweiland@uh.edu	84, 127
Welder, Rachael M.	*Texas A&M University*	rachael@rachaelwelder.com	26, 143
Westby, Kathryn R.	*Michigan State University*	Westbyka@msu.edu	121
Weston, Tracy L.	*Middlebury College*	tweston@middlebury.edu	45
Wheeler, Ann	*Texas Woman's University*	awheeler2@twu.edu	19
Whipple, Kyle S.	*University of Wisconsin, Eau Claire*	whipplks@uwec.edu	58, 104
White, Dorothy Y	*University of Georgia*	dywhite@uga.edu	186
Wickstrom, Megan H.	*Montana State University*	megan.wickstrom@montana.edu	12, 128
Wieman, Rob	*Rowan University*	gomathman@yahoo.com	126
Wilburne, Jane M.	*Penn State Harrisburg*	jmw41@psu.edu	20
Wilhelm, Anne Garrison	*Southern Methodist University*	awilhelm@smu.edu	50, 80
Wilkerson, Trena L.	*Baylor University*	Trena_Wilkerson@baylor.edu	59, 161
Willey, Craig	*Indiana University-Purdue University Indianapolis*	cjwilley@iupui.edu	42, 111
Williams, Ashley M.	*Texas A&M University*	amcraft91@tamu.edu	18, 143
Wills, Theresa E.	*George Mason University*	twills@gmu.edu	95
Wilson, Jonee	*North Carolina State University*	jwilson9@ncsu.edu	50
Winfun-Cook, Candies N.	*University of Mississippi*	cnwinfun@go.olemiss.edu	122
Winsor, Matthew	*Illinois State University*	mwinsor@ilstu.edu	47
Womack-Adams, Kelly	*North Carolina State University*	kawomack@ncsu.edu	92, 122
Woods, Dawn	*Oakland University*	dawnwoods@oakland.edu	80
Wrightsman, Elizabeth	*Texas State University*	e_w52@txstate.edu	23, 153
Wylie, Lenelle Christine	*San Diego State University*	wylie@helixcharter.net	122

Y

Yalman Ozen, Demet	*Middle Tennessee State University*	dy2i@mtmail.mtsu.edu	125
Yau, Wendy	*Trellis Education*	Wendy@trelliseducation.org	122
Yeh, Cathery	*Chapman University*	yeh@chapman.edu	100
Yeo, Sheunghyun	*The University of Alabama*	syeo@ua.edu	188
Yova, Frederique	*North Carolina State University*	fcyova@ncsu.edu	92
Yow, Jan	*University of South Carolina*	jyow@sc.edu	171

Z

Zambak, Vecihi Serbay	*Monmouth University*	vzambak@monmouth.edu	102
Zareie, Parastoo	*University of Kentucky*	parastoo.zareie@uky.edu	177
Zbiek, Rose Mary	*Pennsylvania State University*	rmz101@psu.edu	7
Zelkowski, Jeremy	*The University of Alabama*	jzelkowski@ua.edu	97, 129
Zelt, Jean Marie	*San Diego State University*	jzelt3371@sdsu.edu	122
Zhou, Lili	*Purdue University*	zhou756@purdue.edu	116
Zhou, Zhenji Jiangang	*University of Nebraska, Lincoln*	zzhou18@huskers.unl.edu	46
Zhuang, Yuling	*Emporia State University*	yzhuang@emporia.edu	157
Zolfaghari, Maryam	*Kent State University*	mzolfagh@kent.edu	62

PROPOSAL REVIEWERS FOR 2022 ANNUAL AMTE CONFERENCE

Abbaspour Tazehkand, Shahabeddin	University of Central Florida
Alhammouri, Ahmad	Jacksonville State University
Alqahtani, Muteb	State University of New York College, Cortland
Ambrose, Rebecca Claire	University of California, Davis
Amidon, Joel	University of Mississippi
An, Tuyin	Georgia Southern University
Anderson, Robin Keturah	North Carolina State University
Appelgate, Mollie	Iowa State University
Apraiz, Kristen	University of Florida
Arbaugh, Fran	Pennsylvania State University
Arnold, Liz	Colorado State University
Austin, Christopher	University of Southern Maine
Bailey, Nina Gabrielle	University of North Carolina, Charlotte
Baldinger, Erin E.	University of Minnesota
Barlow, Angela T.	University of Central Arkansas
Bartell, Tonya	Michigan State University
Benken, Babette M.	California State University, Long Beach
Bertolone-Smith, Claudia	California State University, Chico
Bharaj, Paveneet Kaur	Indiana University
Bieda, Kristen N.	Michigan State University
Bondurant, Liza	Delta State University
Borowski, Rebecca S.	Western Washington University
Bowen, Diana	University of the Virgin Islands
Brass, Amy	Pennsylvania State University
Broaddus, Angela	Benedictine College
Brown-Tess, Karie C.	University of Illinois, Urbana-Champaign
Brunner, Megan	Oregon State University
Burton, Megan	Auburn University
Callard, Cynthia H.	University of Rochester
Campbell, Matthew P.	West Virginia University
Campbell, Tye	Crandall University
Cannon, Susan	Mercer University
Carson, Cynthia D.	University of Rochester
Casler-Failing, Shelli L.	Georgia Southern University
Cavanna, Jillian	University of Hartford
Cavey, Laurie Overman	Boise State University
Champion, Joe	Boise State University
Chandler, Kayla	East Carolina University
Chao, Theodore	The Ohio State University
Chesler, Joshua	California State University, Long Beach
Cho, Hoyun	Capital University
Colen, Jung Youn	Chadron State College
Colonnese, Madelyn	University of North Carolina, Charlotte
Conner, AnnaMarie	University of Georgia
Conner, Kimberly	University of Northern Iowa
Contreras, Jose N.	Ball State University
Cooper, Sandi	Baylor University
Corven, Julien	University of Delaware
Cox, Dana Christine	Miami University
Craig, Crystal Anne	University of Texas at San Antonio
Crawford, Amy K.	Ashland University
Creager, Mark	University of Southern Indiana
Currens, Kimberly Ann	Texas A&M University
DeFino, Rosalie	University of Michigan
DeJarnette, Anna Fricano	University of Cincinnati
DeLeeuw, William	Valdosta State University
Desai, Siddhi	University of Central Florida
DiNapoli, Joseph	Montclair State University
Disney, Andria	Utah Valley University
Dobie, Tracy	University of Utah
Donaldson, Sara	Wheaton College
Drimalla, James	University of Georgia
Driskell, Shannon O. S.	University of Dayton
Dubbs, Christopher H.	East Stroudsburg University
Dyess, Sarah Roller	University of Alabama Huntsville
Early, Kathryn	Auburn University
Eddy, Colleen McLean	University of North Texas
Edelen, Daniel	University of Central Florida
Edenfield, Kelly	Universi ty of Georgia
Edgington, Cyndi Page	North Carolina State University
Elliott, Lucas	University of Louisville
Elrod, Emily C.	North Carolina State University
Evans, Gayle N.	University of Florida
Ezaki, John	University of Southern California
Ferguson, Sarah	Old Dominion University
Fernandez, Maria L.	Florida International University
Fessler, Charles	Michigan State University
Forde, Elizabeth	Florida International University
Fossum, Nolan	University of San Diego
Foster, Jonathan Kyle	University of Georgia
Franshaw, Maria	University of Wisconsin, Parkside
Franz, Dana P.	Mississippi State University
Frazee, Leah M.	Central Connecticut State University
Freeburn, Benjamin	Western Michigan University
Freeland, Sean	West Virginia University
Galanti, Terrie	University of North Florida
Galindo, Enrique	Indiana University
Gallagher, Melissa Ann	University of Houston
Gerardo, Juan M.	University of Cincinnati
Gerberry, Carla	Xavier University
Gerstenschlager, Natasha	Western Kentucky University
Ghosh Hajra, Sayonita	California State University, Sacramento
Gibbons, Lynsey	University of Delaware
Graysay, Duane	Syracuse University
Grosser-Clarkson, Dana	University of Maryland
Gunpinar, Yasemin	St. Catherine University
Gupta, Dittika	Midwestern State University
Gurl, Theresa	City University of New York, Queens College
Hallman-Thrasher, Allyson	The Ohio State University
Hamilton, Michael	University of Georgia
Han, Jaepil	University of Missouri
Hansen, Heidi	Bemidji State University
Harbour, Kristin E.	University of South Carolina
Hardison, Hamilton	Texas State University
Harper, Frances K.	University of Tennessee, Knoxville
Heckathorn, Jennifer	Syracuse University
Heinzman, Erica	University of California, San Diego
Henderson, Francesca	University of Maryland
Hensberry, Karina R.	University of South Florida, Saint Petersburg
Hohensee, Charles	University of Delaware
Huey, Maryann	Drake University
Hummer, Jenifer	West Chester University of Pennsylvania
Jacobson, Erik D.	Indiana University
Jansen, Amanda	University of Delaware
Jensen, Jessica	California Polytechnic State University, San Luis Obispo
Jilk, Lisa M.	TODOS
Johnson, Cheryll Crowe	Asbury University
Johnston, Christopher	Cambium Assessment
Joswick, Candace	The University of Texas at Arlington
Karr, Joshua	West Virginia University
Karunakaran, Monica Smith	Michigan State University
Kasmer, Lisa Anne	Grand Valley State University
Kelley, Traci	University of Texas at San Antonio
King, Barbara	Florida International University
King, Michelle	Western Colorado University
King, Shande	Trevecca Nazarene University
Kirwan, J. Vince	Kennesaw State University
Klein, Valerie E.	Drexel University
Knapp, Melinda	Oregon State University, Cascades
Kochmanski, Nicholas	University of North Carolina, Greensboro
Konuk, Nursen	Metropolitan State University of Denver
Krebs, Angela	University of Michigan, Dearborn
Kruger, Jennifer	University of Rochester
Kulow, Torrey	Portland State University
La Voy, Carrie	University of Kansas
Lannin, John Kirk	University of Missouri
LaRochelle, Raymond	University of Delaware
LaTona-Tequida, Talia	San Diego State University
LaValley, Bethany	University of Mississippi
Lawson, Michael Andrew	University of Southern California
Leatham, Keith R.	Brigham Young University
Lee, Alees	Weber State University
Lee, Carrie	East Carolina University
Lee, Hwa Young	Texas State University
Lee, Yi-Jung Carol	University of Arkansas
Lee-Hassan, Alexa	University of Illinois at Chicago
Liang, Su	University of Texas at San Antonio
Lischka, Alyson E.	Middle Tennessee State University
Litke, Erica	University of Delaware
Lolkus, Michael	Purdue University
Long, Valerie Nicole	Indiana University of Pennsylvania
LoPresto, Kevin	Francis Marion University
Lord, Sarah	University of Wisconsin, Madison
Luczak, Rileigh	Michigan State University
Lynch, Sararose	Westminster College
Magiera, Marta T.	Marquette University
Maher, Eryn Michelle	Georgia Southern University
Mainzer, Emily Amanda	Pennsylvania State University
Maiorca, Cathrine	California State University, Long Beach
Mallam, Winifred A.	Texas Woman's University
Mangram, Charmaine	University of Hawaii
Mannix, Joshua P.	North Carolina State University
Marchionda, Hope	Western Kentucky University

Marin, Katherine Ariemma	Stonehill College
Martin, W. Gary	Auburn University
Martinez, Ricardo	University of Nebraska, Lincoln
Massey, Johanna	Alabama A&M University
Mbewe, Rose	Purdue University
McCloskey, Andrea	Pennsylvania State University
McCulloch, Allison	University of North Carolina, Charlotte
McMahon, Mary T.	North Central College
McMillan, Brandon	Brigham Young University
Meiners, Amanda	Northwest Missouri State University
Melville, Matthew	University of Delaware
Merritt, Monica	Mount Saint Mary College
Miller, Katherine	University of Massachusetts, Lowell
Moldavan, Alesia Mickle	Fordham University
Morrow-Leong, Kimberly	George Mason University
Moss, Diana	University of Nevada, Reno
Myers, Marrielle	Kennesaw State University
Nguyen, Giang-Nguyen	University of West Florida
Nirode, Wayne	Miami University
Orr, Sheila	Michigan State University
Orrill, Chandra	University of Massachusetts, Dartmouth
Ortiz, Enrique	University of Central Florida
Pak, Byungeun	Dixie State University
Park, Hyejin	James Madison University
Park, Jina	Florida International University
Parrish, Christopher	University of South Alabama
patton, barba	University of Houston, Victoria
Paulding, Katie	California Polytechnic State University, San Luis Obispo
Perdue, Diana S.	Rimwe Educational Resources LLC
Peterson, Blake Ellis	Brigham Young University
Pitvorec, Kathleen	University of Illinois at Chicago
Poling, Lisa	Appalachian State University
Polojac-Chenoweth, Denise	University of South Florida
Priest, Shannon	University of Mississippi
Rakes, Christopher	University of Maryland, Baltimore County
Raman, Sandhya	Berryessa Union School District
Rassi, Darl	Olivet Nazarene University
Rathouz, Margaret	University of Michigan, Dearborn
Raygoza, Mary	Saint Mary's College of California
Reinke, Luke	University of North Carolina, Charlotte
Rhine, Steve	Pacific University
Rhodes, Sam R.	Georgia Southern University
Ritter, Kenley Bailey	Baylor University
Rocha, Abby E.	Arizona State University
Rosencrans, Brenda	Portland State University
Rothrock, Katrina Stullken	University of Wisconsin, Eau Claire
Rupe, Kathryn Mary	Western Washington University
Sabinin, Polina	Bridgewater State University
Saclarides, Evthokia Stephanie	University of Cincinnati
Safi, Farshid	University of Central Florida
Schack, Edna O.	
Scott, Mallika H.	California State University, Fullerton
Sevgi, Sevim	Erciyes University
Shah, Meetal	The Math Door
Sharpe, Charlotte J.	Syracuse University
Shaughnessy, Meghan	Boston University
Shelton, Ryann	Baylor University
Sherman, Diana	Saint Anselm College
Simpson, Amber	Binghamton University
Snider, Rachel B.	The College of New Jersey
Somers, John W.	University of Indianapolis
Stites, Michele	University of Maryland, Baltimore County
Stoehr, Kathleen Jablon	Santa Clara University
Stump, Sheryl L.	Ball State University
Sturgill, Derek Joseph	University of Wisconsin, Stout
Suh, Jennifer M.	George Mason University
Suzuka, Kara	University of Hawai‘i at Mānoa
Swartz, Barbara	West Chester University of Pennsylvania
Sztajn, Paola	North Carolina State University
Tackie, Nii Ansah	University of Louisiana at Lafayette
Taylor, Cynthia	Millersville University of Pennsylvania
Thrasher, Emily	North Carolina State University
Uy, Frederick L.	California State University
Valero, Jonathan	Indiana University
van Ingen Lauer, Sarah	University of South Florida
Venenciano, Linda	University of Hawai‘i at Mānoa
Waddell, Glenn	University of Nevada, Reno
Waller, Patrice	California State University, Fullerton
Warshauer, Hiroko K.	Texas State University
Watanabe, Tadanobu	Kennesaw State University
Watkins, Jonathan D.	Ball State University
Watson, Lucy	Belmont University
Weiland, Travis	University of Houston
Welch, Lise E.	Utah State University
Whipple, Kyle S.	University of Wisconsin, Eau Claire
Wieman, Rob	Rowan University
Wilkerson, Trena L.	Baylor University
Williams, Ashley M.	Texas A&M University
Wilson, David C.	Buffalo State, State University of New York
Winfun-Cook, Candies N.	University of Mississippi
Winsor, Matthew	Illinois State University
Woods, Dawn	Oakland University
Wrightsman, Elizabeth	Texas State University
Yagi, Seanyelle L.	University of Hawai‘i at Mānoa
Yee, Sean P.	University of South Carolina
Zambak, Vecihi Serbay	Monmouth University
Zbiek, Rose Mary	Pennsylvania State University
Zhang, Pingping	Winona State University
Zhuang, Yuling	Emporia State University
Zuniga Ruiz, Sandra	University of California, Berkeley

2022 AMTE Business Meeting Agenda

Saturday, February 12, 2022

A. WELCOME — MEGAN BURTON, *AMTE PRESIDENT*, PRESIDING

B. APPROVAL OF THE MINUTES — CYNTHIA TAYLOR

C. TREASURER AND MEMBERSHIP REPORT — SARAH QUEBEC FUENTES
SHARI STOCKERO

D. CONFERENCE REPORT — COLLEEN EDDY

E. DIVISION REPORTS AND RECOGNITIONS

Headquarters Division	Shari Stockero, Executive Director
Membership Division	Lisa Poling, Vice-President
Professional Learning Division	Jennifer Suh, Vice-President
Publications Division	Babette Benken, Vice-President
Advocacy, Equity, and Research Division	Sarah van Ingen Lauer, Vice-President
Communications and Outreach Division	Dustin Jones, Vice-President

F. NEW BUSINESS

1. Amendments to Constitution and Bylaws

G. INSTALLATION OF NEW BOARD MEMBERS

H. ADJOURNMENT

2021 AMTE Business Meeting Minutes

Friday, February 12, 2021
5:30 pm – 7:00pm (EST)
Via Zoom

Mike Steele, President, called the meeting to order at 5:31 pm (EST).

I. Welcome **Mike Steele, AMTE President, Presiding**

Mike Steele started by welcoming everyone to the meeting. He asked for a motion to accept the agenda.
Colleen Eddy motioned to accept the agenda as displayed in the app. Sarah Quebec Fuentes seconded the motion. The motion passed.

II. Approval of the Minutes **Cynthia Taylor, Secretary**

Mike asked if there were any corrections to the minutes as written from last year's business meeting at the 2020 Conference. There were none. *Motion to accept the minutes as presented moved by Sarah Quebec Fuentes and seconded by Jenny Bay-Williams. Motion passed.*

III. Treasurer and Membership Report **Sarah Quebec Fuentes, Treasurer**
Shari Stockero, Executive Director

Sarah Quebec Fuentes shared the 2020 fiscal year (FY) financial report. The 2020 FY net income was $117,742.04. Bank accounts totaled $428,140.18 as of June 30th, 2020. Subtracting the monies earmarked for specific purposes leaves $205,772.37 in deep reserves. A goal from last year was to increase the amount in deep reserves, which was accomplished. Sarah noted that the goal of the budget was not to balance the budget within each division, but to balance the overall budget across all divisions. She provided an overview of how the funds were divided across the divisions.

Shari Stockero reported that current membership is 1010, which is fairly consistent from last year (984 members last year on February 8, 2020). Of our current members, approximately 60% registered for the conference, 209 are graduate students and 29 are emeritus members. Current members are from 47 states in the U.S. along with Washington DC, Puerto Rico, 4 Canadian Provinces, and eight other countries (Australia, China, Guam, India, Jamaica, Korea, Malaysia, and Saudi Arabia).

Stats on memberships:

- 45 current members have been a member since 2000 or before
- 639 memberships expire in 2021
- 233 memberships expire in 2022
- 105 memberships expire in 2023
- 23 memberships expire in 2024
- 3 memberships expire in 2025
- 4 memberships expire in 2026
- 2 memberships expire in 2027

Shari asked members to encourage colleagues to join AMTE or renew their memberships. She also asked everyone to complete the conference feedback survey by February 22, 2021, which will be available on the guidebook app.

IV. Conference Report **Colleen Eddy, Conference Director**

Colleen Eddy, AVP for Conferences, offered thanks to the 2021 conference committee (Suzanne Harper, Ray LaRochelle, Lateefa Id-Deen, Julie James, and Trena Wilkerson) who planned for the first virtual conference. She also thanked board members Enrique Galindo, Shari Stockero, and Jennifer Suh, all of the moderators, Temple Walkowiak who created the Community Circles, and attendees at this year's conference for helping to make it a success. She thanked Rick Hudson, AVP for Conference Program, and his committee for putting together a great program this year.

V. Division Reports and Recognitions

Mike noted that the 2020 Annual Report provides a great summary of the different activities that AMTE does throughout the year. He encouraged AMTE members to share the 2020 Annual Report with colleagues, administrators, and those who may be interested in volunteering on a committee as the report includes descriptions for each of the 19 committees.

A. Headquarters Division **Shari Stockero, Executive Director**

Shari Stockero encouraged members to submit a nomination form for elected positions that will be filled this year, which are president, treasurer, and board member-at-large. She recognized AVP for Nominations & Elections Jennifer Bay-Williams and AVP for Constitution & By-Laws Barbara Swartz who will continue in their role next year. (Report for this division can be found on page 7 of the AMTE 2020 Annual Report located HERE.)

B. Membership Division **Lisa Poling, Vice-President**

Lisa Poling highlighted that the Awards Committee developed, in collaboration with the Advocacy Committee, the development and guidelines of the Karen D. King Advocacy Award, which is being awarded this year. She encouraged members to nominate individuals deserving of the recognition and noted that the Membership Committee was instrumental in the creation and organization of the Community Circles that will be introduced at the conference this year. She also recognized the three AVPs for this division which includes: AVP for Affiliates: outgoing Ziv Feldman and incoming Hartono Tjoe; AVP for Awards: outgoing Amanda Gantt Sawyer and incoming Todd Abel; and AVP for Membership, Temple Walkowiak. (Report for this division can be found on pages 13-14 of the AMTE 2020 Annual Report located HERE.)

C. Professional Learning Division **Jennifer Suh, Vice-President**

Jennifer Suh provided an overview of the contributions committees in the Professional Learning Division made in response to remote instruction this past year. Jennifer highlighted that the Professional Development Committee quickly provided webinars on synchronous and asynchronous online instruction. The Technology Committee vetted online resources and uploaded them to the AMTE website. This past summer the STaR Committee worked with 28 enthusiastic STaR fellows to join in the discussion on research and practice on mathematics education. She also thanked the Program Committee for their leadership in organizing the virtual conference this year.

Jennifer recognized the AVPs for this division which includes: AVP for Professional Development: outgoing William DeLeeuw and incoming Denise Polojac-Chenoweth; AVP for Program Committee: outgoing Rick Hudson and incoming Julie Amador and AVP Designee Jeremy Zelkowski; AVP for STaR Committee: outgoing Beth Herbel-Eisenmann and Marta Civil and incoming Maria Fernandez; AVP for Technology Committee: outgoing Amanda Thomas and incoming Dawn Woods; and AVP for Conference Committee: Colleen Eddy who will continue in this role for 2021 and AVP Designee Julie James. (Report for this division can be found on pages 15-17 of the AMTE 2020 Annual Report located HERE.)

D. Publications Division **Babette Benken, Vice-President**

Babette Benken provided several highlights from the division this past year that included: a special call in Connections called “Voices from the Field,” which highlighted numerous voices and stories related to what is happening post COVID; the addition of a third issue to the journal Mathematics Teacher Educator, which will be ongoing; the publication of the fourth volume of the AMTE Professional Book Series and a fifth volume will be a handbook of Mathematics Teacher Education, which will be out in 2022; and a special call for materials to support the work of the AMTE Standards that will be published summer 2021.

Babette thanked Board Member liaison Marielle Myers for her service this past year and welcomed Farshid Safi who will be the new Board liaison. She also welcomed new members to the publications division and recognized AVPs of this division which includes: AVP for Publications Review: outgoing Óscar Chavéz; AVP for Connections! Newsletter: Susan Swars Auslander who will be continuing in this role; AVP for CITE Journal: Shannon Driskell and Ann Wheeler who will continue in this role; AVP for MTE Editorial Panel: outgoing Laura Bofferding and incoming Matt Campbell; and AVP for MTE Editors: Karen Hollebrands and Valerie Faulkner. (Report for this division can be found on pages 18-20 of the AMTE 2020 Annual Report located HERE.)

Babette also announced that the 2021-2025 Mathematics Teacher Educator Editorial Team will be Mike Steele and Kate Johnson.

E. Advocacy, Equity and Research Division **Sarah van Ingen Lauer, Vice-President**

Sarah van Ingen Lauer thanked outgoing board member Christa Jackson for her service to the division. She also noted this past year that the Emerging Issues Committee transitioned to be the Advocacy Committee and mentioned there would be resources from the new committee on the website in the coming weeks and months. She recognized the AVPs for the division which includes: AVP for Advocacy: outgoing Zandra de Araujo and incoming Rob Wieman; AVP for Equity: Carlos López Leiva and incoming Crystal Kalinek-Craig; and AVP for Research: outgoing Meghan Shaughnessy and incoming Mary Candace Raygoza. (Report for this division can be found on pages 21-22 of the AMTE 2020 Annual Report located HERE.)

F. Communications and Outreach Division **Dustin Jones, Vice-President**

Dustin Jones recognized AVPs for this division, all of who will continue in this role next year includes: AVP for Communications, Steve Rhine; AVP for Social Media Director, Mandy Jansen; AVP for Sponsorship, Marilyn

Evans; AVP for Marketing, Sandi Cooper; and AVP for STaR Fundraising, Jeff Wanko. Dustin highlighted that two ad hoc committees have been formed to draft some guidance for using social media within AMTE and for leveraging social media during the 2021 conference. He thanked the sponsors for the conference and noted that this past year the Giving Tuesday campaign and the Cohort Challenge were launched for the STaR Program. He also shared that the Teaching Math Teaching podcast is one year old and encouraged members to check out the podcasts. (Report for this division can be found on pages 23-24 of the AMTE 2020 Annual Report located HERE.)

VI. New Business **Mike Steele, AMTE President**

Mike provided an overview of the three phases of AMTE's 2020-2024 Long-Term Goals that the board worked on this past year based on membership feedback from the conference last year.

Phase 1: Needs Assessment and Membership Engagement (October 2019-February 2020)
Phase 2: Create long-term goals (February – June 2020)
Phase 3: Create action plan for the next 12-18 months of activity (June-December 2020)

He then shared the four long term goals that were created this past year and the actions taken for each goal in 2020-2021.

Long-Term Goal 1: Provide resources and strategies for recruitment, retention, and diversification of the mathematics teacher pipeline.
Actions taken in 2020-2021:

- Agreed to serve as the mathematics education organization in the Get the Facts Out (GFO) project
- Created a GFO task force within AMTE to carry out the work
- Engaged in discussions regarding recruitment and retention with sibling organizations (TODOS, NCSM, NCTM) via the Conference Board of Mathematical Sciences
- Published the work of the Mathematics Teacher Education Partnership (MTE-P) in the fourth book of the AMTE professional book series
- Forged an agreement for MTE-P presessions and program representation at AMTE 2021 & 2022
- Published articles related to "voices from the field" in Winter 2020 issue of Connections

Long-Term Goal 2: Provide resources and strategies for recruitment, retention, and diversification of the mathematics teacher educator pipeline.
Actions taken in 2020-2021:

- Continued to enact and refine the STaR early career program
- Revised our financial systems for supporting STaR to increase sustainability
- Convened and supported the Membership Task Force in their work, including the receipt and discussion of a final report of the Task Force
- Published articles related to "voices from the field" in Winter 2020 issue of Connections
- Added additional (3rd) issue of Mathematics Teacher Educator (MTE) journal that focused on equity

Long-Term Goal 3: Engage mathematics teacher educators in opportunities designed to strengthen the research and research-based practices of mathematics teacher education, with a commitment to supporting understanding of how issues of social and racial justice undergird all of our work.
Actions taken in 2020-2021:

- Provided additional professional development and learning opportunities related to emergency remote teaching and addressing racial equity and justice
- Responded to racial justice events via press releases and statements to our membership
- Agreed to embark on the new Mathematics Education Handbook project in partnership with IAP
- Put out a second call for supplemental materials related to the AMTE Standards
- Changed the name and mission of the Emerging Issues Committee to the Advocacy Committee
- Developed and awarded the first Karen D. King Advocacy Award to recognize outstanding work of AMTE members in the advocacy space
- Solicited proposals for both AMTE standards materials and the new book (volume 5) for AMTE Professional Book Series

Long-Term Goal 4: Develop systematic processes for studying progress towards and effectiveness of actionable items embedded in the long-term goals.
Actions taken in 2020-2021:

- Created the long-term plan in the AMTE 2020-2024 Long-Term Goals document found HERE.

Members were invited to share actions they would like to see AMTE take in 2021-2022 related to the four goals. Ideas that were shared included:

- Help teachers have critical conversations that connect mathematics to the world and support antiracist teaching;

- Share productive new ways of doing our work that should continue endure post-pandemic as well as identify aspects of teaching online will we need to durably integrate into mathematics teacher education;
- Reimagine mathematics education and relate to individuals' institutional structures and think about ways to push back on changes our institutions might enact related to teacher education due to budget constraints;
- Consider adding a graduate student on the board;
- Connect with state-level organizations that are also trying to work toward Long Term Goal 1;
- Help lead national conversations about who should be math teachers and math teacher educators;
- Develop specific plans in 2021 to help broaden participation in mathematics teacher education field;
- Continue to provide opportunities for professional development of members toward supporting anti-racist mathematics teaching;
- Support individuals who are paraprofessionals or otherwise already involved in and committed to schools in becoming certified teachers and learning the skills they need to do so;
- Develop an online collection of short videos that AMTE members can access to use in classes, PD, etc.
- Update the mathematics specialist document from AMTE to better reflect a central focus on equity; and
- Include online videos that are not edited "perfect" practice and those that support discussions of systemic racism and justice in math contexts.

VII. Installation of New Board Members **Mike Steele, AMTE President**

Mike recognized outgoing board member Christa Jackson (Member-at-Large). He then welcomed incoming board member Farshid Safi as board member-at-large, thanked Babette Benken who will continue as AVP of the Publications Division, and recognized the transition of Megan Burton to President for 2021-2023.

IX. Adjournment **Mike Steele, AMTE President**

Motion: To adjourn the 2021 AMTE Annual Business Meeting. Moved by Tim Hendrix, and seconded by Jenny Bay-Williams. Motion passed unanimously.

Meeting adjourned 6:39 pm (EST)
Respectfully submitted by Cynthia Taylor

More Information on AMTE.net

- AMTE Leadership, including members serving on committees and task forces
- AMTE Awards, including the Excellence in Teaching in Mathematics Teacher Education Award and the Early Career Award
- Susan Gay Graduate Student Conference Travel Scholarship
- Elementary Mathematics Specialist (EMS) Scholarship
- Call for Manuscripts, Reviewers, Readers, & Comments for *CITE-Math Journal*
- Call for Manuscripts for *Mathematics Teacher Educator*
- Call for Manuscripts for *Connections*

2023 Annual AMTE Conference

See you in New Orleans!

We invite you to attend and present at the Twenty-Seventh Annual AMTE Conference, to be held **February 2-4, 2023**, at the Astor Crowne Plaza New Orleans French Quarter in **New Orleans, LA**.

The Call for Proposals will be available on the AMTE website (amte.net) in March 2022, and in the next issue of *AMTE Connections*. The Associate Vice President for Conference Programs is Jeremy Zelkowski, The University of Alabama (programchair@amte.net).

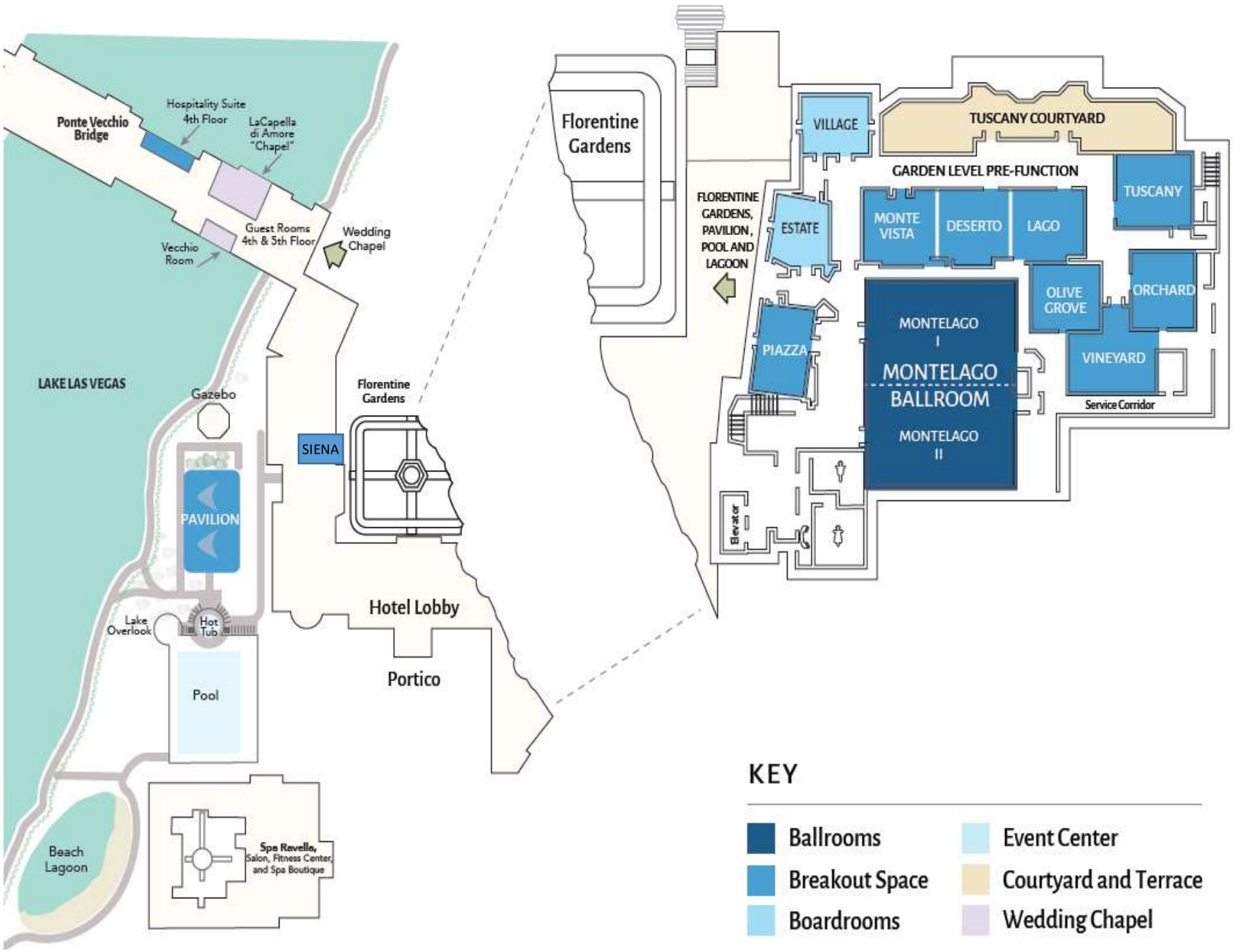
THE DEADLINE FOR SUBMITTING PROPOSALS FOR THE 2023 ANNUAL CONFERENCE IS MAY 15, 2022.

Visit **amte.net/conferences** for updated information about past and future conferences.

Future AMTE Conferences

2023 AMTE Conference	Astor Crowne Plaza New Orleans French Quarter New Orleans, LA	February 2 – 4, 2023
2024 AMTE Conference	Rosen Centre Hotel Orlando, FL	February 8 – 10, 2024

Garden Level – 1st Floor



Hilton
LAKE LAS VEGAS RESORT & SPA

Meetings and Events

Lobby Level – 3rd Floor