AMTE

Association of Mathematics Teacher Educators

JANUARY 28-30, 2016

20

TWENTIETH ANNUAL AMTE CONFERENCE

HOTEL IRVINE JAMBOREE CENTER, IRVINE, CALIFORNIA

17900 JAMBOREE ROAD, IRVINE, CA 92614 TEL: (949) 230-4452

TABLE OF CONTENTS

WELCOME

to the Twentieth Annual Conference of the
Association of Mathematics Teacher Educators (AMTE)
January 28-30, 2016, Hotel Irvine, Irvine, CA

We would like to personally welcome each of you to the Twentieth Annual Conference of the Association of Mathematics Teacher Educators (AMTE). In 2016, AMTE is celebrating two milestones in our history: our Twentieth Annual Conference and our 25th year as the lead organization devoted to the improvement of mathematics teacher education! It is indeed an exciting time for AMTE as we continue to grow, develop new and exciting collaborations with sister organizations, and engage in new projects supporting the needs and ongoing work of our members. The world of mathematics teacher education is an exciting area in which to work and study, and AMTE is committed to continuing to provide opportunities for members to meet, learn from each other, and enjoy the wonderful and supportive community that we have built over the past two decades.

We would like to give you an idea of what you can expect over the next few days:

AMTE'S INAUGURAL POSTER SESSION

On Thursday afternoon from 5:00 to 6:00 pm in Salon E, thirty posters will be presented in AMTE's inaugural poster session. Come by, and engage with the authors in discussion about their work.

INVITED SPEAKERS

Ed Dickey gives our opening keynote address: "Rebranding the Teaching Profession: Ideas and Strategies for Effective Recruitment of Mathematics Teachers" in the Thursday General Session, at 9:00 am in Salon A/B.

Francis (Skip) Fennell gives the Judith Jacobs Lecture, with a talk titled "Mathematics Teacher Education: Normal Schools to Now. What's the Fit and Future for AMTE?" on Friday afternoon, at 4:45 pm in Salon A/B.

Ruth Heaton, recipient of the Nadine Bezuk Award for Excellence in Leadership and Service in Mathematics Teacher Education, gives a talk titled **"**Many Promises, Certain Pitfalls: Interdisciplinary University Collaborations and School-University Partnerships to Support PreK-16 Teachers' Mathematical and Pedagogical Learning" on Thursday afternoon, at 4:30 pm (Session 52, Salon A).

Eva Thanheiser, recipient of the 2015 Early Career Award, will present a talk titled "Increasing Motivation and Developing Productive Dispositions in Elementary and Middle School Mathematics Content Courses" on Thursday morning, at 10:45 am in (Session 2, Salon A/B).

LARGEST EVER AMTE CONFERENCE

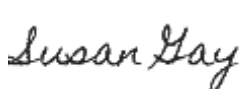
In all, there are 190 sessions on the program, with 483 presenters (compared to 463 in 2015). There were 464 proposals submitted this year—down slightly from 470 in 2015—and 231 were accepted (up from 208 last year), yielding a 49.8% acceptance rate. Along with the accepted sessions, there are also non-reviewed sessions on the program, including 11 invited presentations, 2 award-winner sessions, and 2 sessions presented by AMTE sponsors.

LEAD THE WAY

Before we close, we would like to thank each of you for attending our conference and bringing your expertise and energy to our conference. You, as AMTE members, have the vision, the knowledge, and the experience to help us pave our way into the future. You are truly our greatest asset today and tomorrow, and we could not accomplish what we do without your support and active involvement in AMTE. Throughout this conference and our celebration of the 25th year of AMTE, we ask you to stay engaged, keep us proactive, and help us shape the future of mathematics teacher education. Our personal thanks go out to all of you.

Christine D. Thomas, *AMTE President*

Shannon Dingman, *2016 AMTE Conference Program Chair*



Susan Gay, *AMTE Conference Director*

Tim Hendrix, *AMTE Executive Director*

JOIN OUR CELEBRATION!

At this conference, we are celebrating twenty years, that's two decades of AMTE conferences. In 1997, 125 people attended the first AMTE conference. That first conference was held in Washington, DC in conjunction with the annual conference of the Association of Teacher Educators (ATE) who allowed us to use four of their meeting rooms for our sessions. Since then, the conference has grown in attendance, number of sessions, number of presenters, number of days, and number of activities.

Members of AMTE have supported the conferences by attending a conference, by presenting their work and sharing ideas, by serving on a program committee, and by serving on a local arrangements committee. There are many tasks done over the years by people supporting the AMTE leadership who have also made important contributions to the success and growth of the AMTE conference.

Whether you are attending your first AMTE conference or your twentieth AMTE conference, we invite you to join our celebration with some special activities during the conference. We will also be sharing a bit of our conference history in the program book and during general sessions.

THE AMTE CELEBRATIONS TASKFORCE

Jennifer Bay-Williams

Nadine Bezuk

Erika Bullock

Mark Ellis

Susan Gay, Chair

David Glassmeyer

Suzanne Harper

Dusty Jones

TWENTY PROGRAM COMMITTEE CHAIRS

The position of Conference Program Committee Chair is a pivotal one and we have been fortunate to have AMTE members willing to accept the responsibility to organize and deliver exceptional conference programs. On this anniversary, we acknowledge the program chairs for AMTE's first 20 conferences. Thank you!

1997 Nadine Bezuk

1998 Judith Jacobs

1999 Susan Gay

2000 Nadine Bezuk

2001 Francis (Skip) Fennell

2002 Vena Long

2003 DeAnn Huinker

2004 W. Gary Martin

2005 Sid Rachlin

2006 Gladis Kersaint

2007 Sandi Cooper

2008 Connie Schrock

2009 Stephen Pape

2010 Jennifer Chauvot

2011 Michelle Chamberlin

2012 Keith Leatham

2013 Suzanne Harper

2014 Shannon Driskell

2015 Dusty Jones

2016 Shannon Dingman

CONFERENCE SCHEDULE

Twentieth Annual AMTE Conference
January 28 – 30, 2016, Irvine California

WEDNESDAY, JANUARY 27, 2016

5:00 pm – 7:00 pm	AMTE Registration Desk Open

THURSDAY, JANUARY 28, 2016

7:00 am – 5:00 pm	AMTE Registration Desk Open
9:30 am – 5:00 pm	Exhibits Open
9:00 am – 10:30 am	Opening Session
10:45 am – 11:45 am	Concurrent Sessions
11:45 am – 1:00 pm	Lunch – Salon C/D/E
1:00 pm – 1:45 pm	Concurrent Sessions
2:00 pm – 3:00 pm	Concurrent Sessions
3:00 pm – 3:30 pm	Break
3:30 pm – 4:15 pm	Concurrent Sessions
4:30 pm – 5:30 pm	Concurrent Sessions
5:00 pm – 6:00 pm	Poster Session – Salon E
6:00 pm – 7:00 pm	Reception for Graduate Students and Early Career Faculty – Salon D

FRIDAY, JANUARY 29, 2016

6:45 am – 8:00 am	Breakfast – Salon C/E
6:45 am – 8:00 am	Advocacy Breakfast – Salon D
7:30 am – 4:30 pm	AMTE Registration Desk Open
8:30 am – 5:00 pm	Exhibits Open
8:00 am – 9:00 am	Concurrent Sessions
9:15 am – 10:00 am	Concurrent Sessions
10:15 am – 11:30 am	Concurrent Sessions
11:30 am – 1:00 pm	Lunch – Salon C/D/E
1:00 pm – 2:00 pm	Concurrent Sessions
2:15 pm – 3:00 pm	Concurrent Sessions
3:00 pm – 3:30 pm	Break
3:30 pm – 4:15 pm	Concurrent Sessions
4:45 pm – 6:15 pm	Judith E. Jacobs Lecture – Salon A/B
6:15 pm – 7:30 pm	Dinner – Salon C/D/E

SATURDAY, JANUARY 30, 2016

6:45 am – 8:00 am	Breakfast and Affiliate Meetings – Salon C/D
7:30 am – 10:30 am	AMTE Registration Desk Open
8:00 am – 9:00 am	Concurrent Sessions
9:15 am – 10:15 am	Concurrent Sessions
10:30 am – 11:30 am	Concurrent Sessions
11:30 am – 1:30 pm	Lunch and Business Meeting – Salon C/D

CONFERENCE INFORMATION

CONFERENCE REGISTRATION DESK

Please stop by the AMTE Registration Desk, located in the elevator lobby on the First Floor, to obtain your conference materials, including the conference program and your nametag.

AMTE REGISTRATION DESK HOURS

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

FINDING THE CONFERENCE AREA

Conference session rooms are located on the first and second floors of the hotel. Take the elevators to get to the second floor where the Turtle Rock rooms are located. Meals will be held in Salon C/D/E on the First Floor.

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 or the hotel staff.

WIRELESS INTERNET ACCESS

Complimentary wireless internet access in the conference/meeting area of the hotel for conference attendees is provided by AMTE for usage from Wednesday, January 27 through Saturday, January 30.

Using your laptop or mobile device, look for the network. Then, launch the browser and enter the following:

Network/SSID:	**Hotel Irvine Meeting**
Group Name:	**amte2016**
Password:	**irvine**

Please note that only 600 people can have access at one time, so please only use one device on the hotel network at a time.

Conference attendees who are staying at the Hotel Irvine Jamboree Center 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.

HOTEL PARKING INFORMATION

AMTE has negotiated discounted rates for conference attendees to self-park at the Hotel Irvine Jamboree Center. Discounted self-parking is available for conference attendees for $8.00 per car per day or $12.00 per car per day for overnight parking. In order to obtain these special discounted rates, mention that you are with the AMTE conference either as you exit the parking lot (for day guests) or when checking into the hotel (for overnight guests) and staff will charge the appropriate parking rate. Valet parking is also available at the hotel's prevailing rates.

OPTIONS FOR THURSDAY DINNER

For information on nearby restaurants, check the City Guide on the Conference App or inquire at the 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, Tim Hendrix, at the conference or via email at hendrixt@meredith.edu. Thanks to Tony Nguyen (AMTE) and Margaret Mohr-Schroeder (University of Kentucky) for serving as conference photographers.

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.

CONFERENCE INFORMATION

LOST AND FOUND

Please drop off any unclaimed found items at the AMTE Registration Desk. AMTE and the hotel are not responsible for items being left in the session rooms and in the conference area.

EXHIBITS

THURSDAY **9:30 AM - 5:00 PM**
FRIDAY **8:30 AM - 5:00 PM**

Make sure to **visit the exhibits**! Exhibitors include Budapest Semesters in Mathematics Education, CASIO, ETA hand2mind, Information Age Publishing, the Math Learning Center, NCSM, NCTM, Origo Education, Pearson and TODOS. See the Exhibitors Section of this program on pages 23 and 24 for more information.

COMMITTEE AND AFFILIATE MEETINGS

AMTE Committees will meet during the conference according to the schedule provided to committee chairs.

AMTE Affiliates will meet during breakfast on Saturday in Salon C/D. This is a great time to meet each other face-to-face and discuss a game plan for the upcoming year. See pages 11-12 in your conference program for table locations for each affiliate.

OPPORTUNITIES FOR FEEDBACK ON AMTE'S STANDARDS OF MATHEMATICS TEACHER PREPARATION

Come by to share your feedback on AMTE's Standards of Mathematics Teacher Preparation, which focus on the initial preparation of mathematics teachers in grades PreK-12. Members of the AMTE writing group will be there to hear from you.

FRIDAY	**2:00 PM - 3:00 PM**	**THINK TANK ROOM, 1ST FLOOR**
SATURDAY	**9:30 AM - 10:30 AM**	**THINK TANK ROOM, 1ST FLOOR**

CONFERENCE APP

DOWNLOAD THE FREE AMTE CONFERENCE APP TO YOUR MOBILE DEVICE!

USE THE NEWLY REDESIGNED AMTE CONFERENCE APP TO:

- View the Conference Program
- Organize your schedule
- Find more information about speakers and attendees
- Share documents, participate in audience surveys, polls, and Q & A sessions
- Engage attendees and colleagues around the world through Social Media

The official app is available through the major app stores. Search "AMTE 2016", or go to:

AMTE2016.QUICKMOBILE.MOBI

Username = (email address used to register for the conference)
Password = amte2016

Web Application


Apple App Store


Google Play App Store

SOCIAL MEDIA

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*Use **#AMTE2016** to share what is being discussed at AMTE 2016, and help highlight the importance of the work of the Association!*

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cthomas11@gsu.edu

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University Park, PA
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Portland State University
Portland, OR
rigelman@pdx.edu

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Oxford, OH
Harpersr@MiamiOH.edu

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Ann Arbor, MI
tboerst@umich.edu

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Athens, GA
dywhite@uga.edu

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Tim Hendrix
Meredith College
Raleigh, NC
hendrixt@meredith.edu

CONFERENCE DIRECTOR
Susan Gay
University of Kansas
Lawrence, KS
sgay@ku.edu

AFFILIATES DIRECTOR
Megan Burton
Auburn University
Auburn, AL
megan.burton@auburn.edu

NEWSLETTER EDITOR
Babette Benken
California State Univ., Long Beach
Long Beach, CA
Babette.benken@csulb.edu

PUBLICATIONS DIRECTOR
Christine A. Browning
Western Michigan University
Kalamazoo, MI
christine.browning@wmich.edu

SPONSORSHIP DIRECTOR
Kathleen Lynch-Davis
Appalachian State University
Boone, NC
lynchrk@appstate.edu

WEBSITE DIRECTOR
Joe Champion
Boise State University
Boise, ID
joechampion@boisestate.edu

HISTORICAL LISTING OF AMTE PRESIDENTS

PRESIDENT	TERM
Christine Thomas	2015 – 2017
Fran Arbaugh	2013 – 2015
Marilyn Strutchens	2011 – 2013
Barbara Reys	2009 – 2011
Jennifer Bay-Williams	2007 – 2009
Sid Rachlin	2005 – 2007
Karen Karp	2003 – 2005

PRESIDENT	TERM
Francis (Skip) Fennell	2001 – 2003
Susan Gay	1999 – 2001
Nadine Bezuk	1997 – 1999
Judith Jacobs	1995 – 1997
Henry Kepner	1993 – 1995
Mark Spikell	1991 – 1993

AMTE 20th ANNUAL CONFERENCE COMMITTEE

Conference Director: Susan Gay, University of Kansas, KS, sgay@ku.edu
Assistant Conference Director: Carol Lucas, University of Central Oklahoma, OK, clucas@uco.edu

CONFERENCE LEADERSHIP TEAM

Susan Gay (Conference Director), University of Kansas, sgay@ku.edu
Carol Lucas (Assistant Conference Director), University of Central Oklahoma, clucas@uco.edu
Tim Hendrix (AMTE Executive Director), Meredith College, hendrixt@meredith.edu
Dustin Jones (Chair, 2015), Sam Houston State University, dljones@shsu.edu
Shannon Dingman (Chair, 2016), University of Arkansas, sdingman@uark.edu
P. Holt Wilson (Chair, 2017), University of North Carolina-Greensboro, phwilson@uncg.edu

ANNUAL CONFERENCE – PROGRAM COMMITTEE

2013 – 2016

Ann McCoy, University of Central Missouri, mccoy@ucmo.edu
Robert Powers, University of Northern Colorado, robert.powers@unco.edu
Wendy Smith, University of Nebraska-Lincoln, wsmith5@unl.edu

2014 - 2017

Jill Newton, Purdue University, janewton@purdue.edu
Stacy Reeder, University of Oklahoma, reeder@ou.edu
Farshid Safi, University of Central Florida, farshid.safi@ucf.edu
David Slavit, Washington State University-Vancouver, dslavit@wsu.edu

2015 - 2018

David Barker, Illinois State University, dbarker@ilstu.edu
Dana Cox, Miami University, dana.cox@MiamiOH.edu
Rick Hudson, University of Southern Indiana, rhudson@usi.edu
Courtney Koestler, Ohio University, koestler@ohio.edu

CONFERENCE APP DEVELOPMENT TEAM 2016

AMTE Communications Committee
Chair of Communications Committee, JoAnn Cady, University of Tennessee, jcady@utk.edu
App Coordinator: Joe Champion, Website Director, joechampion@boisestate.edu
App Graphics Assets: Tony Nguyen, Webmaster, ttnguyen@meredith.edu
Ex Officio: Tim Hendrix, Executive Director, hendrixt@meredith.edu

LOCAL ARRANGEMENTS COMMITTEE

Mark Ellis, Chair, California State University-Fullerton
Carol Brouhle, California State University-Fullerton
Dave Chamberlain, Capistrano Unified School District
Wendy Cheek, Tustin Unified School District
Maria Garcia, Wiseburn Unified School District
Brian Hightower, Orange County Department of Education
Shari Kaku, Independent Math Coach
Anna Kwak, Azusa Unified School District
Erin Klopfer, Brea Olinda Unified School District
Naseem Madalia, Anaheim City School District
Jenny Mcgough, Azusa Unified School District
Kelly Nelson, Snowline Joint Unified School District
Michele Ogden, Irvine Unified School District
Barbara Post, California State University-Fullerton
Leisa Sievers, Victor Elementary School District
Julie Spykerman, Anaheim Union High School District
Nita Walker, Santa Ana Unified School District

PUBLICATIONS SESSION INFORMATION

TRANSFORMING AN IDEA INTO AN AMTE PUBLICATION MANUSCRIPT

To help inform potential authors about manuscript expectations for AMTE Publications, a **special two-hour session will be offered Thursday, January 28, from 1:00-3:00 pm, in Saddleback.** This session provides potential authors with feedback to transform ideas into manuscripts for submission for AMTE's publications—*Mathematics Teacher Educator (MTE), Contemporary Issues in Technology and Teacher Education* (*CITE*) and *Connections*—focusing on clarifying expectations for the relevant publication regarding scope, format, and intended audience.

During 15-minute mini-sessions, reviewers will meet with participants to discuss an outline of a potential manuscript that has been critiqued prior to the conference. For those unable to sign up for a mini-session, a representative for each publication will be available at a "drop-in" table to answer general questions relative to submission and publication processes for the respective journals. Drop-in tables will not include review of specific manuscript outlines.

MATHEMATICS TEACHER EDUCATOR (MTE) JOURNAL:

Reviewers:
Angela Barlow
Tonya Bartell
Gladis Kersaint
Randy Philipp
Denise Spangler
Tad Watanabe

Drop-in Table:
Sandra Crespo, Editor
Kristen Bieda, Associate Editor
Laura Van Zoest, Editorial Board Chair

CONTEMPORARY ISSUES IN TECHNOLOGY AND TEACHER EDUCATION (CITE) JOURNAL:

Reviewers:
Suzanne Harper
Asli Koca
Margaret Mohr-Schroeder

Drop-in Table:
Doug Lapp, Co-Editor
Todd Edwards, Co- Editor

AMTE *CONNECTIONS*:

Reviewers:
Daniel Ilaria, Editorial Panel Member

Drop-in Table:
Babette Benken, Editor

ACKNOWLEDGEMENTS

The Twentieth Annual AMTE Conference would not be possible without the contributions and support of many individuals. It is not possible to name each one individually!

AMTE WISHES TO EXPRESS ITS SINCERE APPRECIATION TO THE FOLLOWING:

- The Local Arrangements Committee, especially Mark Ellis, Chair, for Registration support and Audio/Visual support that are critical to making our conference successful;
- The College of Education at California State University-Fullerton for sharing their LCD projectors and audio speakers for use at the conference;
- All of the speakers who have contributed their time and expertise to make this conference a success;
- The many individuals who make up the AMTE infrastructure—the AMTE Board of Directors, the Conference Director and Assistant Conference Director, Executive Director, Program Committee, Conference App Team, and Headquarters staff for providing the time and effort necessary to organize all facets of the conference;
- Joe Champion, Website Director, and Tony Nguyen, AMTE Graphic Designer & Webmaster, for their dedicated work on the conference program and materials; and
- Haley Ginn, Meredith College AMTE Student Assistant, and Stephanie Holmes, Administrative Assistant for the Department of Mathematics & Computer Science, for their dedication and organization preparing our conference registration materials.

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 this 2016 conference.

SATURDAY BREAKFAST AFFILIATE MEETINGS

Saturday, January 30, 2016
Salon C/D, Breakfast

TABLE	AFFILIATE	ACRONYM	REGION
1	Illinois Mathematics Teacher Educators	IMTE	Illinois
2	Utah Association of Mathematics Teacher Educators	UAMTE	Utah
3	Florida Association of Mathematics Teacher Educators	FAMTE	Florida
4	California Association of Mathematics Teacher Educators	CAMTE	California
5	Association of Mathematics Teacher Educators of Connecticut	AMTEC	Connecticut
6	Georgia Association of Mathematics Teacher Educators	GAMTE	Georgia
7	Tennessee Association of Mathematics Teacher Educators	TAMTE	Tennessee
8	Association of Mathematics Teacher Educators - Texas	AMTE-TX	Texas
9	Pennsylvania Association of Mathematics Teacher Educators	PAMTE	Pennsylvania
10	Massachusetts Mathematics Association of Teacher Educators	MassMATE	Massachusetts
11	Missouri Mathematics Association for Advancement of Teacher Training	(MAT)^2	Missouri
12	South Carolina Association of Mathematics Teacher Educators	SCAMTE	South Carolina
13	New Jersey Association of Mathematics Teacher Educators	NJAMTE	New Jersey
14	Rocky Mountain Association of Mathematics Teacher Educators	RMAMTE	Rocky Mtn. Area
15	Teachers of Teachers of Mathematics, Oregon	TOTOM	Oregon
16	Mississippi Association of Mathematics Teacher Educators	MAMTE	Mississippi
17	Association of Mathematics Teacher Educators of Alabama	AMTEA	Alabama
18	Iowa Association of Mathematics Teacher Educators	IAMTE	Iowa
19	Association of Maryland Mathematics Teacher Educators	AMMTE	Maryland
20	Hoosier Association of Mathematics Teacher Educators	HAMTE	Indiana
21	Association of Mathematics Teacher Educators of North Carolina	AMTE-NC	North Carolina
22	Michigan Association of Mathematics Teacher Educators	MI-AMTE	Michigan

INFORMATION ABOUT AMTE AFFILIATES

Are you connected with an AMTE Affiliate? Does your state or regional area have an AMTE Affiliate? There are several opportunities to learn more about AMTE Affiliates during the annual conference.

CONNECTING AND BECOMING STRONGER ADVOCATES THROUGH AFFILIATES

- Friday – 8:00 – 9:00 am in Shady Canyon
- Hear from Members of the Affiliate Connections Committee
- Meet other Affiliate Leaders

COME TO SATURDAY MORNING BREAKFAST

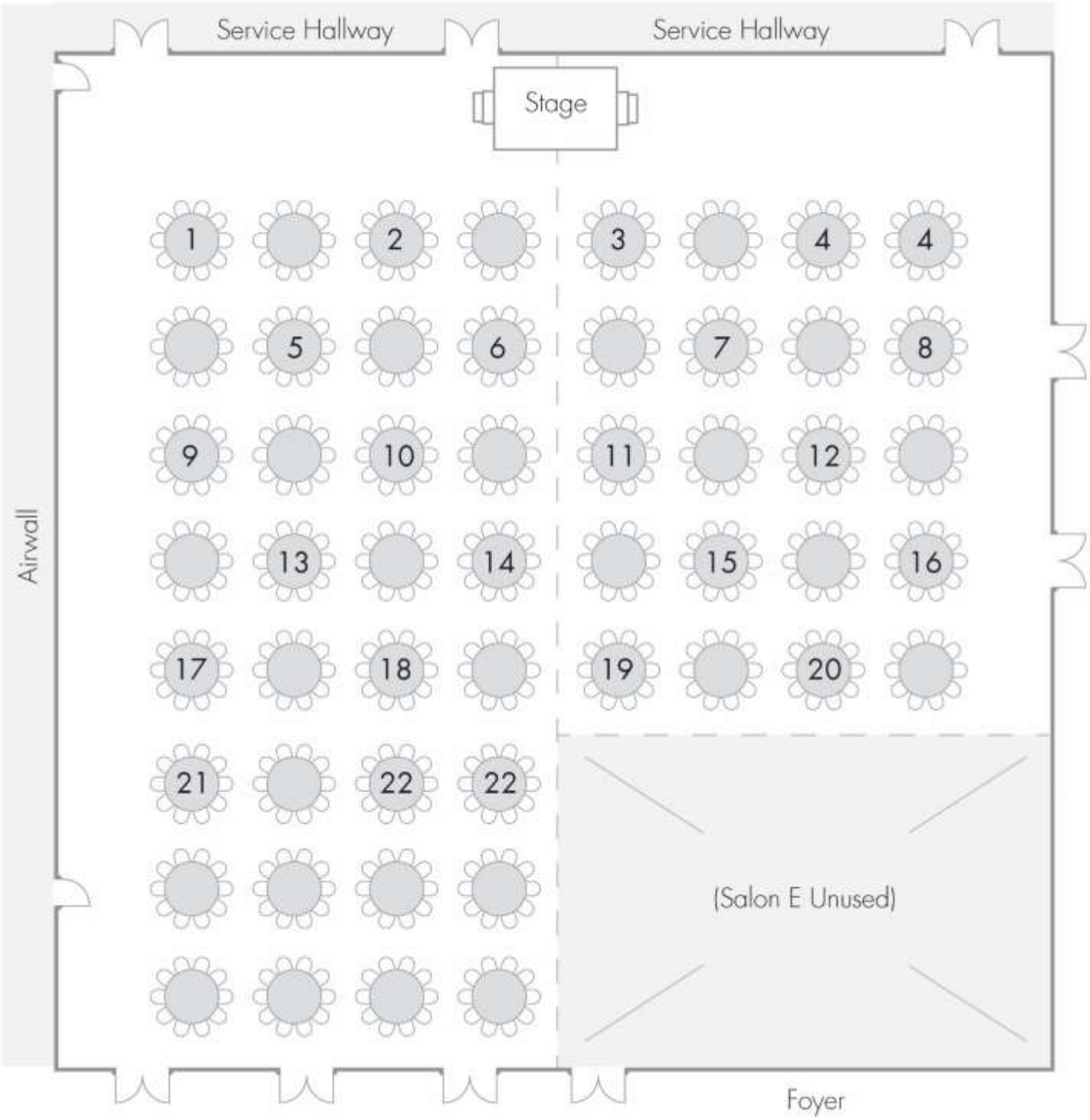
- Tables will be designated for your AMTE Affiliate
- Meet with your Affiliate or Plan a New Affiliate

If your state or regional area does not have an AMTE Affiliate and you are interested in organizing one, please contact the AMTE Affiliates Director, Megan Burton (amteaffiliate@gmail.com). Also, you can find helpful information on the Affiliates section of the AMTE web site at amte.net/affiliates.

SATURDAY BREAKFAST AFFILIATE TABLES

Saturday, January 30, 2016

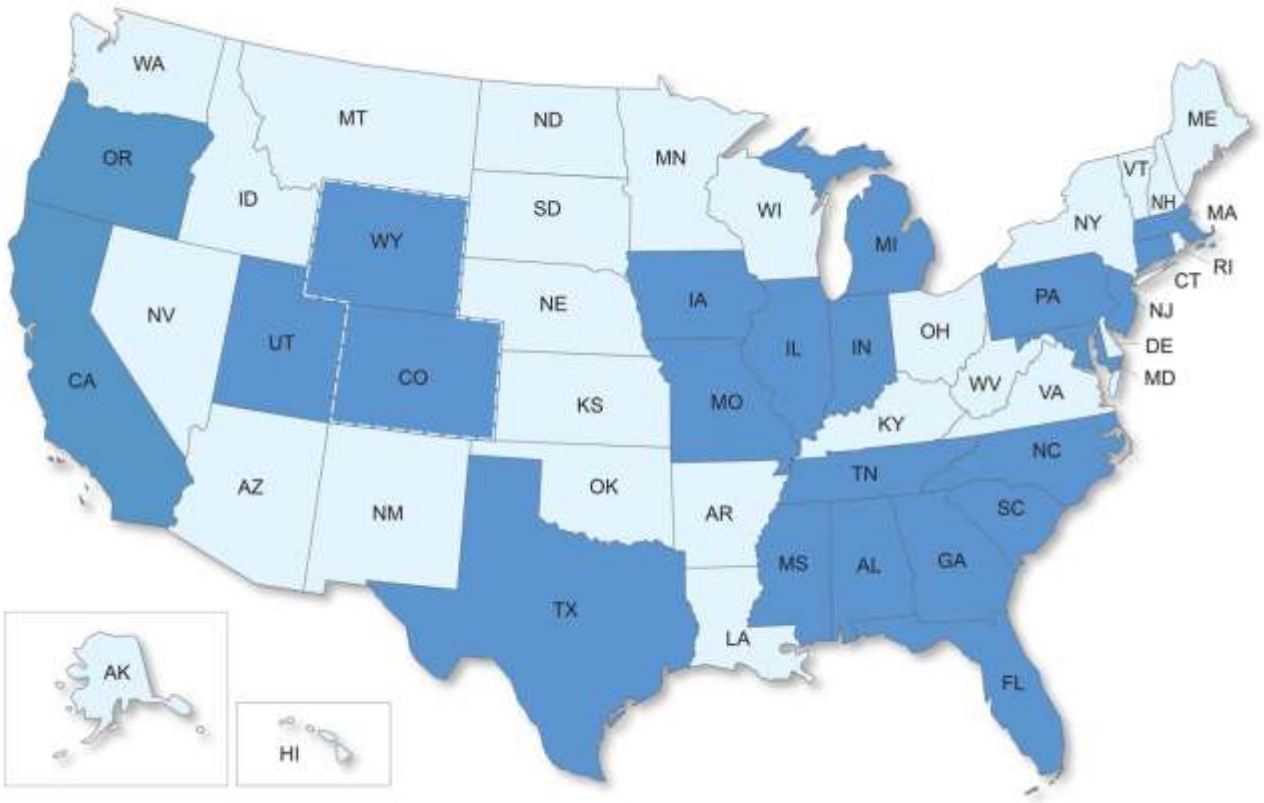
Salon C/D, Breakfast



AMTE AFFILIATES

AMTE is proud to acknowledge and welcome members of its 22 active affiliated organizations, highlighted in the map below, to the Annual AMTE Conference.

AFFILIATE	ACRONYM	REGION
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
Tennessee Association of Mathematics Teacher Educators	TAMTE	Tennessee
Association of Mathematics Teacher Educators - Texas	AMTE-TX	Texas
Pennsylvania Association of Mathematics Teacher Educators	PAMTE	Pennsylvania
Massachusetts Mathematics Association of Teacher Educators	MassMATE	Massachusetts
Missouri Mathematics Association for Advancement of Teacher Training	(MAT)^2	Missouri
South Carolina Association of Mathematics Teacher Educators	SCAMTE	South Carolina
New Jersey Association of Mathematics Teacher Educators	NJAMTE	New Jersey
Rocky Mountain Association of Mathematics Teacher Educators	RMAMTE	Rocky Mountain Area
Teachers of Teachers of Mathematics, Oregon	TOTOM	Oregon
Mississippi Association of Mathematics Teacher Educators	MAMTE	Mississippi
Association of Mathematics Teacher Educators of Alabama	AMTEA	Alabama
Iowa Association of Mathematics Teacher Educators	IAMTE	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



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 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.

2016 NTLI AWARD WINNERS

Gwyneth Retta Hughes, Boise State University
Michele Carney, Boise State University
Jonathan Brendefur, Boise State University

Title: Moving Online: Challenges and Successes of Adapting Mandated Professional Development from In-Person to Hybrid Format

Abstract: This presentation describes adapting a mandated professional development course from 100% in-person to 75% online. We address challenges in maintaining a socio-constructivist philosophy in an online setting and present our online framework that includes progressive formalization and social learning theory.

Location: Session 186, Turtle Rock C

Time: Saturday, January 30, 10:30 am – 11:30 am

Look in the 2017 Call for Proposals for information on how to submit a paper for the 2017 AMTE NTLI Award.

SCHOLARSHIPS FOR ELEMENTARY MATHEMATICS SPECIALISTS

The purpose of this Elementary Mathematics Specialist Scholarship is to provide the recipient with $1,000 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 2015 EMS SCHOLARSHIP RECIPIENTS!

amte.net/about/ems/winners2015

Anna Feil, London Towne Elementary School, Centreville, VA
Kristin Peters, Riverview Elementary School, Vancouver, WA
Heidi Whipple, Barton Academy and Graded School, Barton, VT

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:

SPONSORS

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

GOLD SPONSOR – BROOKHILL INSTITUTE OF MATHEMATICS

The Brookhill Institute of Mathematics supports the teaching and learning of mathematics. Currently, the Brookhill Institute supports AMTE's initiative to develop and articulate a comprehensive set of standards for mathematics teacher preparation. In recent years, the Brookhill Institute has supported Elementary Mathematics Specialists initiatives through AMTE, and the Elementary Mathematics Specialists and Teacher Leader Project. The Institute also continues to provide funding to support the AMTE STaR Fellows program. In 2015, the Brookhill Insititute hosted a small AMTE conference on the existing and needed research on math specialists as well as a retreat for our standards-writing team.

In addition to our work with AMTE, Brookhill has funded the development of the progression documents to support the CCSSM and has worked with CBMS in support of the MET2, national forums, and the development of the CCSSM progression documents. Our largest program is the Wisconsin Statewide Mathematics Initiative (WSMI). This professional development model now has nine courses developed around the CCSSM content and practice standards and the progression documents. Each course is 30 hours and includes K-12 district teams, administrators, leadership development, and action plans. So far, 2255 teacher participants from 596 schools in the State of Wisconsin have participated.

GOLD SPONSOR – THE MATH LEARNING CENTER

The Math Learning Center (MLC) is a nonprofit organization serving the K-12 education community. Our mission is to inspire and enable individuals to discover and develop their mathematical confidence and ability. We offer innovative and standards-based curriculum, resources, and professional development. Our products and services are used by educators throughout the United States and in several international locations.

MLC is the founding sponsor of the Elementary Mathematics Specialist (EMS) Awards. The recipients of these awards receive funding to enhance their mathematics knowledge, teaching, and leadership by enrolling in university coursework that will result in becoming a certified elementary mathematics specialist. MLC also offers university instructors free access to the full contents of the *Bridges in Mathematics* K-5 curriculum through the Bridges University Program.

SILVER SPONSOR – ETA HAND2MIND

ETA hand2mind is pleased to provide the hands-on learning resources and manipulatives used in AMTE sessions. With educational and supplemental materials that enrich teaching and engage students in math, science, STEM, reading, and early childhood, ETA hand2mind offers proven hands-on solutions for PreKindergarten through grade 12 as well as teacher education programs.

For 50 years, ETA hand2mind has been the leader in innovative hands-on learning solutions. Every solution we offer is designed to help students unlock greater understanding. We are dedicated to offering resources that inspire student learning and support educators who every day do more with less. The ETA hand2mind team is resourceful, results oriented, and dedicated. Our team includes expert educational partners who enjoy collaborating with educators who are passionate about changing the lives of students. Our range of products includes thousands of resources for grades PreK-12 and teacher education programs for math, science, reading/language arts, early childhood, and family engagement. In addition, our Custom Solutions experts can help you create custom kits, backpacks, and solutions aligned to your specific needs.

ETA hand2mind sponsorship is also supporting our Graduate Student and Early Career Reception in addition to providing door prizes for the attendees. Thanks to ETA hand2mind for their support!

SILVER SPONSOR – INFORMATION AGE PUBLISHING

Information Age Publishing is partnering with AMTE on multiple projects, including the republication of the AMTE Monograph Series in the last year. In addition, IAP and AMTE are partnering to produce a three-book series in the field of mathematics teacher education over the course of the next 5 years. AMTE is proud to have IAP as a sponsor—they have provided support for the AMTE Awards, and are donating books and gift certificates for our Early Career and Graduate Student Reception. Thanks to IAP for their continued support!

Founded in 1999 by George F. Johnson, IAP is a social science publisher of academic and scholarly book series and journals. IAP's goal is to develop a comprehensive list of book series, monographs and journals that break down and define specific niches that lack high-level research material in the fields of Education and Management. Our products will be offered in both print and electronic formats where possible. We at IAP sincerely hope to have you become a part of a new era in publishing as we grow.

BRONZE SPONSOR – BUDAPEST SEMESTERS IN MATHEMATICS EDUCATION

Budapest Semesters in Mathematics Education (BSME) is a semester-long program in Budapest, Hungary, designed for undergraduates and recent graduates interested in teaching secondary mathematics. Participants will study the Hungarian approach to learning and teaching, in which a strong and explicit emphasis is placed on problem solving, mathematical creativity, and communication. BSME is specifically intended for students who are not only passionate about mathematics, but also the teaching of mathematics.

Applications are currently being accepted for fall 2016 & spring 2017 semesters. Visit www.bsmeducation.com for more information.

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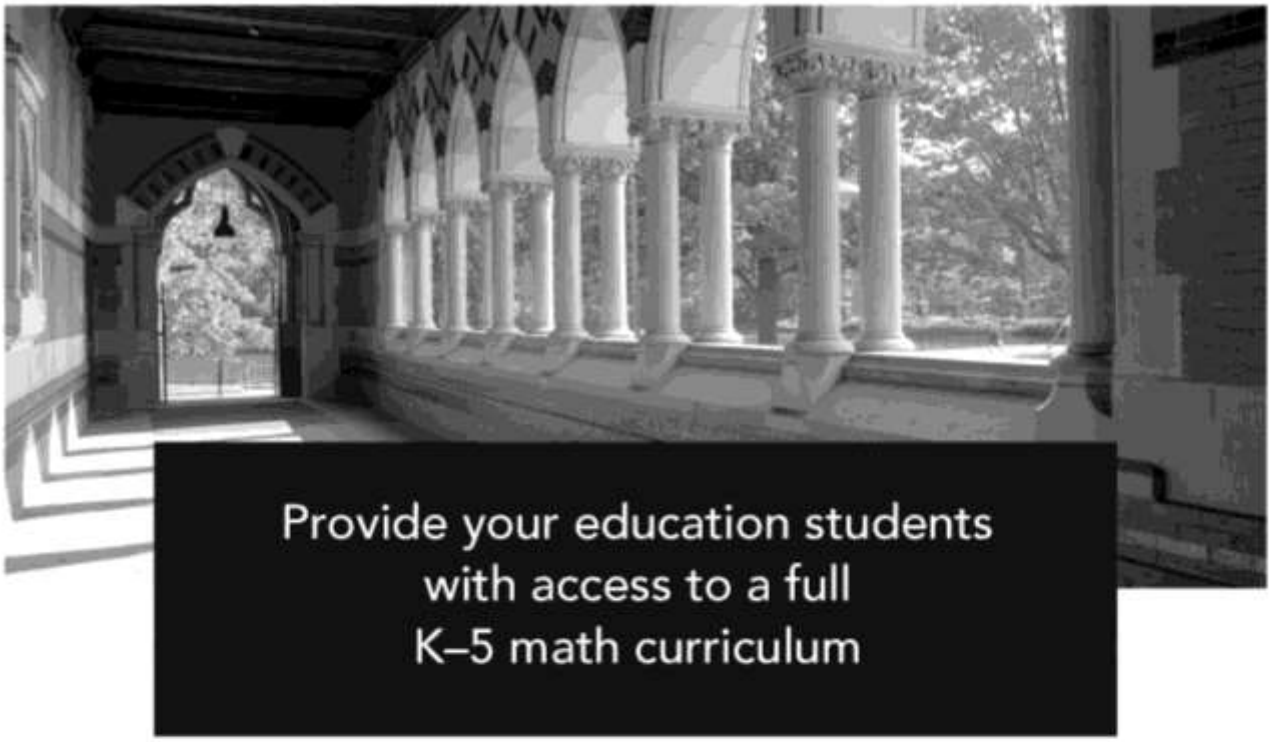
To see the full line of easy-to-use, cost-saving CASIO Calculators, visit: www.casioeducation.com.

BRONZE SPONSOR – NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS

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 through vision, leadership, professional development, and research. NCTM members belong to the largest community of mathematics educators committed to ensuring all students have 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 — 70,000 strong. Learn more about NCTM and the benefits of membership at NCTM.org.

GOLD SPONSOR – THE MATH LEARNING CENTER



Bridges University Program

The content of Bridges in Mathematics second edition is now available for free to schools of education. University instructors may request access to the Bridges Educator site for themselves and for their students. This teacher portal contains a complete set of the teacher and student materials as well as a wealth of resources for implementation support.

To learn more, stop by The Math Learning Center table or join us for a presentation.

Thursday, January 28th

2–3pm, Trabuco Room

Pamela Weber Harris–University of Texas at Austin

mathlearningcenter.org/**university**

BRIDGES® IN MATHEMATICS

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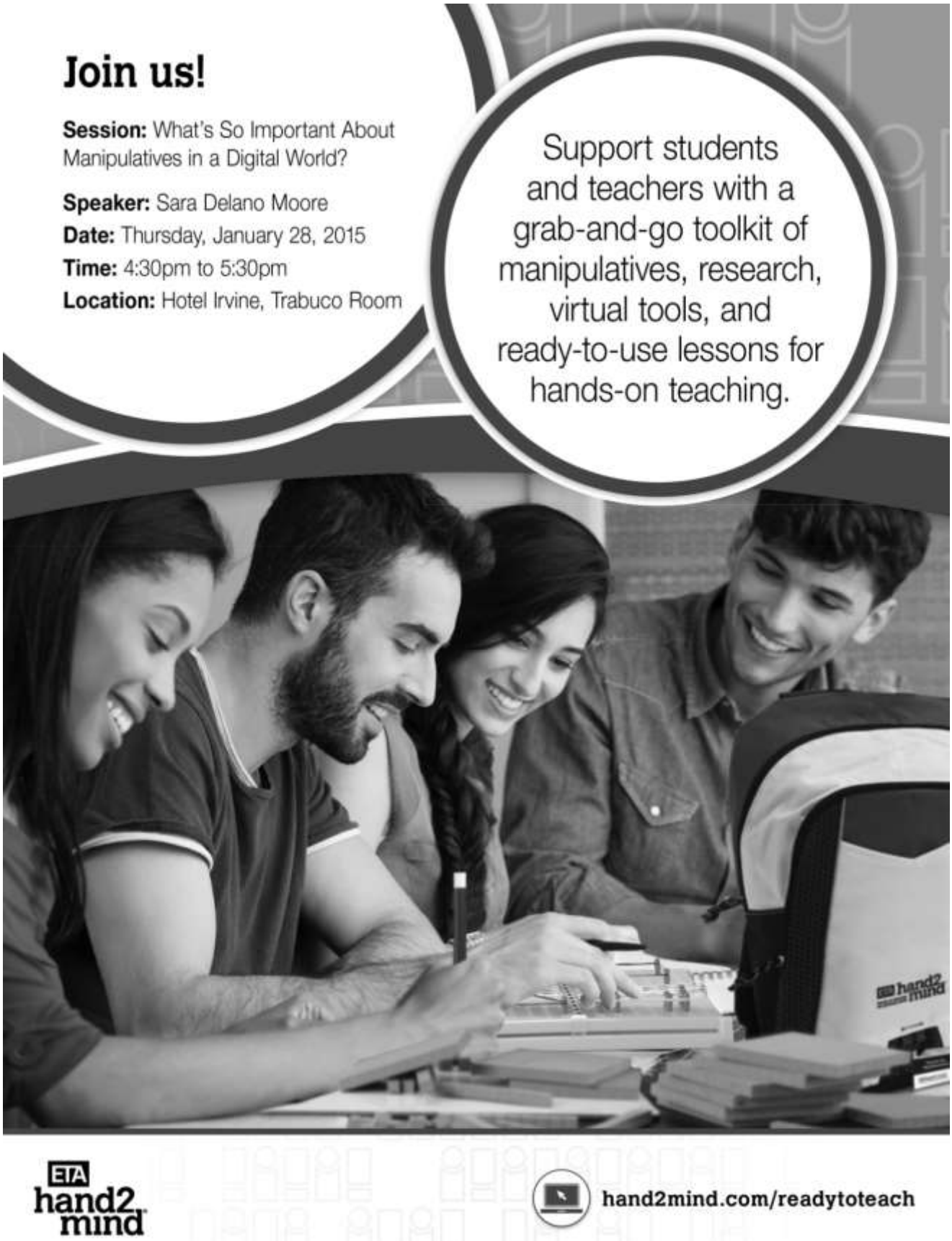

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B S M E

Budapest Semesters in Mathematics Education (BSME)

BSME is a semester-long program in Budapest, Hungary, designed for undergraduates and recent graduates interested in teaching secondary mathematics. Participants will study the Hungarian approach to learning and teaching, in which a strong and explicit emphasis is placed on problem solving, mathematical creativity, and communication. BSME is specifically intended for students who are not only passionate about mathematics, but also the teaching of mathematics.

Applications are currently being accepted for the fall 2016 & spring 2017 semesters.

Admission is on a rolling basis and space is limited so encourage prospective students to apply early!

For more information visit:
www.bsmeducation.com
or email
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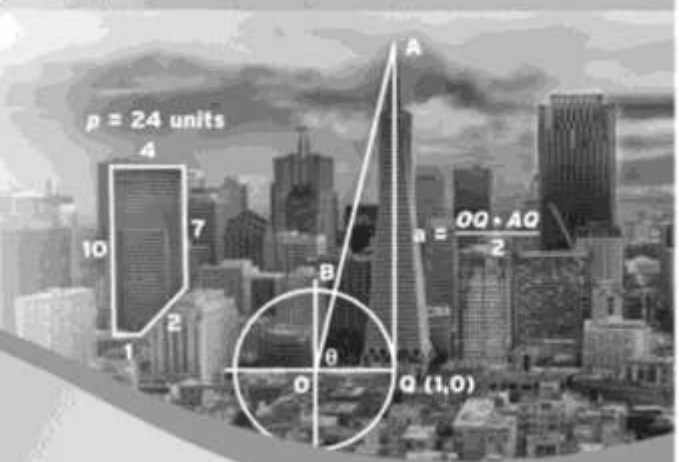
NCTM | NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS

PREMIER MATH EDUCATION RESEARCH EVENT

2016 NCTM RESEARCH CONFERENCE

April 11–13 • San Francisco



Linking Research and Practice

Engage with fellow researchers and build vital relationships within your research community at NCTM's 2016 Research Conference—a leading mathematics research conference with 600 attendees and more than 150 sessions.

For three days, leading mathematics education researchers—

- Attend **targeted sessions** on connecting practitioners and researchers, mentoring opportunities for early-career mathematics education researchers, and university and school partnerships.
- Receive **feedback on your work** and benefit from exposure to alternative points of view.
- Examine and discuss **current issues** in mathematics education.
- Capitalize on the collective wisdom available when **researchers and practitioners come together** to discuss mathematics education and research.

Make your plans today to join your peers and explore the innovations and findings that influence the future of mathematics education.

Learn more at **nctm.org/researchconf** and follow us on

#NCTMRC

EXHIBITORS

AMTE expresses our appreciation to this year's Exhibitors for providing support for our conference. Stop by the Exhibit area to see materials from the following exhibitors:

EXHIBITOR NAME	INFORMATION ABOUT EXHIBIT
BUDAPEST SEMESTERS IN MATHEMATICS EDUCATION	Budapest Semesters in Mathematics Education (BSME) is a semester-long program in Budapest, Hungary, designed for undergraduates and recent graduates interested in teaching secondary mathematics. Participants will study the Hungarian approach to learning and teaching, in which a strong and explicit emphasis is placed on problem solving, mathematical creativity, and communication. BSME is specifically intended for students who are not only passionate about mathematics, but also the teaching of mathematics. Applications are currently being accepted for fall 2016 & spring 2017 semesters. Visit www.bsmeducation.com for more information.
CASIO	CASIO® has a full line of calculators for every level of education. As a leading producer of graphing, scientific and basic calculators, CASIO calculators are easy-to-use and their time-saving operation makes it easier for students to learn. CASIO also provides calculator emulators, print materials and professional development for a total math solution. To see the full line of easy-to-use, cost-saving CASIO Calculators, visit: www.casioeducation.com.
ETA HAND2MIND	With educational and supplemental materials that enrich teaching and engage students in math, science, STEM, reading, and early childhood, ETA hand2mind offers proven hands-on solutions for Pre-Kindergarten through grade 12 as well as teacher education programs. Stop by our exhibit to get your hands on the Ready to Teach toolkits and our integrated STEM modules along with our teacher resource guides and manipulatives.
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 library of content that breaks down and defines specific niches that lack high-level research material in the fields of Education, Psychology, Management, Mathematics, Educational Technology and Black Studies. We are proud to announce our partnership with AMTE as we launch a new book series in 2016. IAP has also republished the original 7 monographs that were a part of the AMTE monograph series. We have an extensive list of products in the field of mathematics and look forward to adding yours to our program. Please stop by the exhibit area to browse our current mathematics publications as well as the AMTE monographs.
THE MATH LEARNING CENTER	The Math Learning Center (MLC) is a nonprofit organization serving the K-12 education community. Our mission is to inspire and enable individuals to discover and develop their mathematical confidence and ability. We offer innovative and standards-based resources and professional development. MLC also provides university instructors free access to the full contents of the Bridges in Mathematics K-5 curriculum. Stop by our table to learn more about the Bridges University program.

EXHIBITOR NAME	INFORMATION ABOUT EXHIBIT
NATIONAL COUNCIL OF SUPERVISORS OF MATHEMATICS	NCSM is an international mathematics leadership organization that provides professional learning opportunities for education leaders to support and sustain improved student achievement. Stop by for more information about NCSM and our publications and resources, including the NCSM Journal for Mathematics Education Leadership, Position Papers, our Principles and, It's TIME. Also learn about NCSM partnerships to support Formative Assessment and Digital Learning, and about professional learning opportunities scheduled for 2016.
NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS	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 through vision, leadership, professional development, and research. NCTM members belong to the largest community of mathematics educators committed to ensuring all students have 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 — 70,000 strong. Learn more about NCTM and the benefits of membership at NCTM.org.
ORIGO	ORIGO Education provides customers with a complete education solution by combining an innovative range of mathematics products with quality professional development. We demonstrate our commitment to excellence by creating resources that inspire and empower both teachers and students. ORIGO's innovative core mathematics program, *Stepping Stones*, was written by a team of experts utilizing all available educational research to create a unique curriculum that had never before been available to teachers. This world-class core program is designed to engage elementary students and help them develop a deeper understanding of mathematics.
PEARSON	Pearson is the leading publisher for mathematics education, with best-selling products for courses in mathematical content and educational methods. Preview the latest print and online course solutions, designed for a variety of course formats, and see new ways to incorporate videos and e-manipulatives into online assessment. Learn more at: www.pearsoned.com.
TODOS: MATHEMATICS FOR ALL	TODOS: Mathematics for ALL is an international professional organization that advocates for equity and high quality mathematics education for all students – in particular, Latina/o students. One of the goals of the organization is to advance educators' knowledge and abilities that lead to implementing an equitable, rigorous, and coherent mathematics program that incorporates the role language and culture play in teaching and learning mathematics. Stop by to hear about the benefits of membership!

OPENING SESSION

Salon A/B

REBRANDING THE TEACHING PROFESSION: IDEAS AND STRATEGIES FOR EFFECTIVE RECRUITMENT OF MATHEMATICS TEACHERS

Ed Dickey, University of South Carolina

In recent years, the teaching profession has had a public relations problem making the already difficult task of recruiting new mathematics teachers even more challenging. Our best students receive messages that teaching might be a less than ideal profession. The Mathematics Teacher Education Partnership and others have investigated mathematics teacher recruitment and are exploring methods to portray teaching positively to attract outstanding students to mathematics teaching. Examples and recommendations for improving your institution's recruitment efforts and ideas for celebrating teachers and the teaching profession will be shared.

Twenty Years of Conference Moments

"WHERE IT ALL BEGAN"

1st ANNUAL CONFERENCE, 1997, IN WASHINGTON, DC

JANUARY 28-30, 2016
20
TWENTIETH ANNUAL AMTE CONFERENCE

Over 20 years, AMTE has had multiple memorable keynote addresses by colleagues in mathematics teacher education and by guest speakers in related fields that impact mathematics teacher education.

Throughout this year's program, you will see call-out boxes that will remind you of some of these memorable general sessions and keynote addresses. In addition, please see the historical listing of Judith Jacobs Lectures on page 86 of your program.

OVERVIEW OF THURSDAY MORNING, JANUARY 28, 2016

	10:45 AM - 11:45 AM
Theater	1. School and University Partnerships and Projects Brief Report Session
Salon A/B	2. Increasing Motivation and Developing Productive Dispositions in Elementary and Middle School Mathematics Content Courses - Thanheiser
Oak Creek	3. Thinking about Mindset and Professional Learning - Lischka, Barlow, Willingham & Hartland
Pelican Hill	4. Beyond Self-Contained Classrooms: Models of Elementary Instructional Specialization - Markworth
Quail Hill	5. Mathematical Nature of Preservice Teacher Noticing Through Video Animations as an Approximation of Practice - Amador, Estapa & Weston
Saddleback	6. Advocacy Strategies for Mathematics Teacher Educators: Equipping Our Voices to Influence - Chval, Strutchens & Sztajn
Santiago	7. Mathematical Content Knowledge Brief Report Session: Focus on Reasoning
Shady Canyon	8. What's in Your Methods Class? Towards a Framework for Examining Mathematics Teacher Educators' Priorities - Willey & Livers
Trabuco	9. Arc of Learning: A Guide for Understanding the Mathematics Embedded in Sequences of Problem-Solving Tasks - Phillips, Edson & Grant
Woodbridge	10. Elementary Mathematics Preservice Teachers' Knowledge of Content and Students: A Multi-Institutional Study - Diamond, Kalinec-Craig & Shih
Turtle Rock A	11. "Heart Plus Square Equals Dot-Circle": Teacher Learning in an Invented Number System - Thomas & Wilburne
Turtle Rock B	12. Mathematics Teachers Making Sense of STEM Through the Use of Engineering Design Challenges - Lesseig & Slavit
Turtle Rock C	13. 1 School District + 2 University Partners = P12 Coherence for District-Wide Impact - Seward, Brownell & Narasimhan

Session 1 **Theater**
School and University Partnerships and Projects
Brief Report Session

BUILDING AND SUPPORTING SCHOOL-BASED MATHEMATICS LEADERS

Cory A. Bennett, Idaho State University
Jason Libberton, Idaho State University
Jan Harwood, Pocatello/Chubbuck School District, Idaho

To address common obstacles found within traditional district mathematics coaches, a university and school district partnered to develop and support school-based mathematics leaders. This session outlines the project's organization, structure, conceptual framework, and key elements in the project's success.

MATHEMATICAL MODELING IN THE ELEMENTARY GRADES THROUGH SCHOOL-UNIVERSITY PARTNERSHIPS

Jennifer M. Suh, George Mason University
Padmanabhan Seshaiyer, George Mason University
Elizabeth A. Burroughs, Montana State University
Rachel Levy, Harvey Mudd College

In this session, we will share the preliminary results from an exploratory research project focused on Mathematical Modeling in the Elementary Grades that examines the impact of professional development (PD) for elementary mathematics teachers through three university-school partnerships.

PARTNERING WITH LOCAL INDUSTRIES TO DESIGN AND IMPLEMENT AUTHENTIC MIDDLE SCHOOL MATHEMATICS TASKS

Ron Preston, East Carolina University
Catherine Schwartz, East Carolina University
Catharina Middleton, East Carolina University

We report on an MSP project which aims to develop partnerships among industries, higher-education faculty, and grades 6-8 teachers to create open-ended tasks couched in local workplace contexts. Sample tasks and classroom video will be shared along with preliminary findings.

Session 2 **Salon A/B**
2015 AMTE Early Career Award Winner

INCREASING MOTIVATION AND DEVELOPING PRODUCTIVE DISPOSITIONS IN ELEMENTARY AND MIDDLE SCHOOL MATHEMATICS CONTENT COURSES

Eva Thanheiser, Portland State University

I share research conducted over the last ten years examining various experiences (such as individual interviews, family math night, and tasks centering around children's mathematical thinking) designed to increase motivation and develop productive dispositions in university mathematics content courses for teachers.

Session 3 **Oak Creek**
Teacher Professional Development
Discussion Session

THINKING ABOUT MINDSET AND PROFESSIONAL LEARNING

Alyson Lischka, Middle Tennessee State University
Angela T. Barlow, Middle Tennessee State University
James Chris Willingham, Middle Tennessee State University
Kristin Sue Hartland, Middle Tennessee State University

The significance of growth and fixed mindsets to professional development will be discussed through exemplar cases. Specific areas of focus will include benefits and obstacles arising from the mindsets, and the design of professional development activities with attention to mindset.

Session 4 **Pelican Hill**
Development of Mathematics Teacher Educators
Individual Session

BEYOND SELF-CONTAINED CLASSROOMS: MODELS OF ELEMENTARY INSTRUCTIONAL SPECIALIZATION

Kim Markworth, Western Washington University

Research on elementary instructional specialists (full-time teachers who teach two+ classes in mathematics) is limited, despite increased interest in EMS. In this presentation, research on instructional specialist models will be shared, with an emphasis on implications for teacher and specialist preparation.

Session 5 **Quail Hill**
Teaching and Learning with Technology
Individual Session

MATHEMATICAL NATURE OF PRESERVICE TEACHER NOTICING THROUGH VIDEO ANIMATIONS AS AN APPROXIMATION OF PRACTICE

Julie Amador, University of Idaho
Anne Estapa, Iowa State University
Tracy L. Weston, Middlebury College

Animation utilized as an approximation of practice has potential to assist mathematics teacher educators in understanding preservice teachers' professional noticing of mathematics content. In this session, we will share an innovative task and highlight affordances and constraints of enactment.

Session 6 **Saddleback**
Mathematics Education Policy and Program Issues
Discussion Session

ADVOCACY STRATEGIES FOR MATHEMATICS TEACHER EDUCATORS: EQUIPPING OUR VOICES TO INFLUENCE

Kathryn Chval, University of Missouri
Marilyn Elaine Strutchens, Auburn University
Paola Sztajn, North Carolina State University

MTEs respond to questions and criticism about teacher education, quality and evaluation, mathematics curriculum, standards and testing. Participants will engage in discussion about cases and strategies used by other MTEs to navigate these situations with the media, legislators, and stakeholders.

Session 7 **Santiago**
Mathematical Content Knowledge
Brief Report Session

USING STUDENT WORK TO ENHANCE PRESERVICE TEACHERS' NOTICING AND CONTENT KNOWLEDGE

Hiroko Kawaguchi Warshauer, Texas State University
Sharon Kay Strickland, Texas State University
Nama Namakshi, Texas State University
Sonalee Bhattacharyya, Texas State University
Lauren Hickman, University of Michigan

We investigated preservice teachers' (PSTs) noticing in the context of a mathematics content course. We examined differences between sections using a writing assignment to support developing PSTs' noticing with those sections that did not and report our findings.

PROMOTING PRESERVICE K-8 TEACHERS' KNOWLEDGE OF MATHEMATICAL REASONING FOR TEACHING: A HYPOTHETICAL LEARNING TRAJECTORY

Marta T. Magiera, Marquette University

We will discuss features of mathematical justifications evident in preservice teachers' arguments, and the aspects of mathematical justifications on which preservice teachers focus when they analyze and critique mathematical arguments presented by others.

HOW SHOULD WE INTERPRET PRESERVICE TEACHERS' CONCEPTIONS OF COUNTEREXAMPLES?

Zulfiye Zeybek, Gazi Osman Pasa University

The aim of this presentation is to examine different ways that preservice elementary teachers use a wide range of reasoning skills to refute false mathematical conjectures. Participants will also reflect upon the implications of the study.

Session 8 **Shady Canyon**
Equity and Mathematics Education
Discussion Session

WHAT'S IN YOUR METHODS CLASS? TOWARDS A FRAMEWORK FOR EXAMINING MATHEMATICS TEACHER EDUCATORS' PRIORITIES

Craig Willey, Indiana University, Indianapolis
Stefanie D. Livers, University of Alabama

We will highlight competing visions for critical mathematics teacher preparation, share narratives supporting preservice teachers to develop anti-racist and culturally relevant teaching, and offer a framework that aims to strike balance among three knowledge bases: content, pedagogy, and critical/community.

Session 9 **Trabuco**
Mathematical Content Knowledge
Individual Session

ARC OF LEARNING: A GUIDE FOR UNDERSTANDING THE MATHEMATICS EMBEDDED IN SEQUENCES OF PROBLEM-SOLVING TASKS

Elizabeth Phillips, Michigan State University
Alden J. Edson, Michigan State University
Yvonne E. Grant, Michigan State University

The Arc of Learning framework describes the development of mathematics learning embedded within sequences of problem-solving tasks. Participants will discuss the opportunities for using the Arc of Learning to design and enact professional learning experiences.

Session 10 **Woodbridge**
Pedagogical Content Knowledge
Discussion Session

ELEMENTARY MATHEMATICS PRESERVICE TEACHERS' KNOWLEDGE OF CONTENT AND STUDENTS: A MULTI-INSTITUTIONAL STUDY

Jaime Marie Diamond, University of Georgia
Crystal Kalinec-Craig, University of Texas, San Antonio
Jeffrey Shih, University of Nevada, Las Vegas

In this session, presenters discuss their initial findings regarding preservice teachers' (PSTs) responses to a CGI video wherein four children solve a mathematics task. Attendees will watch the video and discuss instructional differences associated with differences in our PSTs' knowledge.

Session 11 **Turtle Rock A**
Pedagogical Content Knowledge
Individual Session

"HEART PLUS SQUARE EQUALS DOT-CIRCLE": TEACHER LEARNING IN AN INVENTED NUMBER SYSTEM

Amanda Thomas, University of Nebraska, Lincoln
Jane M. Wilburne, Penn State, Harrisburg

During this session, we will share results from a study that explored preservice and inservice teachers' conceptions and pedagogical knowledge related to place value and whole number operations throughout an intervention involving a base-six number system and alternative numerals.

Session 12 **Turtle Rock B**
Teacher Professional Development
Individual Session

MATHEMATICS TEACHERS MAKING SENSE OF STEM THROUGH THE USE OF ENGINEERING DESIGN CHALLENGES

Kristin Lesseig, Washington State University
David Slavit, Washington State University, Vancouver

We describe an MSP-funded teacher professional development project that emphasized engineering design challenges, cross-disciplinary instruction, and mathematical argumentation. We will ask participants to explore teacher sense-making, the instructional implementation processes, and teacher perceptions of struggling learners.

Session 13 **Turtle Rock C**
School and University Partnerships and Projects
Individual Session

1 SCHOOL DISTRICT + 2 UNIVERSITY PARTNERS = P12 COHERENCE FOR DISTRICT-WIDE IMPACT

Ruth Seward, DePaul University
Jeanine O'Nan Brownell, Erikson Institute
Lynn Narasimhan, DePaul University

Our session will describe how the Chicago Public Schools, DePaul University, and Erikson Institute have established a partnership to increase the district's capacity to provide coherent, district-wide, multi-year math professional development, grounded in the shifts called for by the CCSSM.

THURSDAY, JANUARY 28, 2016 11:45 AM – 1:00 PM

THURSDAY LUNCH

Salon C/D/E

OVERVIEW OF THURSDAY AFTERNOON, JANUARY 28, 2016

	1:00 PM – 1:45 PM	2:00 PM – 3:00 PM
Theater	14. Development of Mathematics Teacher Educators Brief Report Session	28. Equity in Mathematics Education Brief Report Session: Equity in Mathematics Classrooms
Salon A	15. Supporting Teachers' Development of NCTM's Effective Mathematics Teaching Practices: An Exploration of New Resources - Smith, Bill, Hillen, Dillon, Huinker & Boston	
Salon B	16. Leadership Pedagogy for Closing the Opportunity Gap in Mathematics Education - Hakansson	29. Productive Use of Student Mathematical Thinking is More than a Single Move - Peterson, Van Zoest, Stockero & Leatham
Oak Creek	17. Using Videotaped Point-of-View Observations to Study and Develop Teachers' In-the-Moment Thinking - Dyer & Sherin	
Pelican Hill	18. Prospective Secondary Mathematics Teachers' Interactions with Computer Algebra System-Infused Textbook Lessons - Davis	30. Building Secondary Preservice Teachers' Mathematical Content and Pedagogical Capacities Through a Content-Focused Methods Course - Yao, Fleming & Manouchehri
Quail Hill	19. Thinking "Outside the Circle": On Rectangular Lakes and Square Units - Zazkis & Mamolo	31. Classroom Practices to Initiate Preservice Teachers to Socio-Mathematical Norms - Rathouz & Rubenstein
Saddleback	20. Transforming an Idea into an AMTE Publication Manuscript - Browning	
Santiago	21. Using Argumentative Writing to Promote Preservice Teachers' Noticing of Children's Mathematical Thinking - Whitacre & Kervin	AMTE Committee Chairs Meeting - Thomas & Hendrix
Shady Canyon	22. Increasing Teachers' Knowledge Needed to Teach Statistics Through Analyzing Grade 7 Tasks - Huey, Jackson & Males	32. Design and Implementation of Tasks in an Online, Collaborative Environment with Dynamic Mathematics Software - Herbstman, Powell & Alqahtani
Trabuco	23. The CAEP Elementary Standards: Where's the Math? - Fennell	33. Using "Bridges in Mathematics K-5" in Math Methods Courses - Harris
Woodbridge	24. Learning Trajectories in Professional Development: Enhancing Teachers' Formative Assessment Practices - Kobrin & Panorkou	34. To Know or Not to Know? Exploring Effects of Viewing Known and Unknown Mathematics Teachers' Instruction - Beisiegel
Turtle Rock A	25. Exploring Racial Consciousness and Faculty Behavior in STEM Classrooms - Joseph, Johnson & Spencer	
Turtle Rock B	26. Context Matters: Developing an Instructional Sequence to Support Preservice Elementary Teachers' Understanding of Integer Subtraction - Pettis & Glancy	35. Collaborating to Model Formative Assessment: A Multi-Campus Initiative Informing Preservice Teachers' Understanding of Mathematical Practices - Lindaman, La Voy & Haistings
Turtle Rock C	27. Rehearsal and Enactment: Investigating How Practice and Teacher Educator Feedback Influences Preservice Teacher Learning - Virmani	36. Evaluating Language Demands and Creating Scaffolds to Support English Learners and Others - Edwards

OVERVIEW OF THURSDAY AFTERNOON, JANUARY 28, 2016

	3:30 PM – 4:15 PM	4:30 PM – 5:30 PM
Theater	37. Equity in Mathematics Education Brief Report Session: Mathematics for All Students	51. Teacher Professional Development Brief Report Session: Impacting Teachers' Practices
Salon A	38. Critical Considerations in Preparing and Supporting Teachers to Implement Effective Teaching Practices - Briars	52. Many Promises, Certain Pitfalls: Interdisciplinary University Collaborations and School-University Partnerships to Support PreK-16 Teachers' Mathematical and Pedagogical Learning - Heaton
Salon B	39. Incorporating Evidence-Based Intervention Strategies into Elementary Mathematics Methods Courses - Harbour & Karp	53. Promoting Mathematical Understanding for Secondary Teachers - Heid & Wilson
Oak Creek	40. How Mathematics Figures in Teacher Evaluation: Comparing Observational Instruments - McLeod, Ozgun-Koca, Hardamon & Nazelli	54. What are They Capable of? Examining Preservice Teachers' Early Practice of Eliciting Student Thinking - Sherman
Pelican Hill	41. Elementary Teachers' Development of Rational Number Learning Trajectories - Morge, Lynch-Davis & Pugalee	55. Interpreting Students' Use of Representations as Implied by CCSSM: Implications for Mathematics Teacher Educators - Bradfield
Quail Hill	42. Supporting Secondary Preservice Teachers to Become Judicious Users of Technology - Galindo	56. Assessments of Secondary Level Mathematical Knowledge for Teaching as Opportunities for Productive Struggle - Howell, Lai & Miller
Saddleback	43. Rigor, Relevance, and Relationships: Preparing Preservice Teachers for Project-Based Learning (PBL) - Lee	57. Putting it All Together: Bundling Research on Equity in Mathematics Methods Courses - Wager, Yolcu & Ziols
Santiago	44. A Framework for Math Collaborative Leadership: Collaboration, Confidence, Identity - Cardetti & Truxaw	58. Results and Issues in an MSP Staff Development Project on CCSSM Mathematical Practices - Bair
Shady Canyon	45. Developing Prospective Elementary Teachers' Specialized Content Knowledge Through Professional Collaboration - Stump, Roebuck & Contreras	59. K-8 Preservice Teachers Learning Mathematics as They will be Encouraged to Teach Mathematics - Lubinski, Otto & Cady
Trabuco	46. Analyzing Noticing Across Levels of Expertise: The Need for Analytic Frameworks to Transcend Ability and Contexts - Fisher, Amador & Bragelman	60. What's So Important About Manipulatives in a Digital World? - Moore
Woodbridge	47. Enhancing Prospective Teachers' Knowledge of Proof and Dispositions Towards Productive Struggle Through Exploration of Math-Tricks - Buchbinder & Cook	61. Secondary Inservice Teachers' Professional Noticing of Students' Mathematical Thinking - LaRochelle, Lamb & Nickerson
Turtle Rock A	48. Problem Solving Interviews as Mechanisms for Instructional Change - Hodges & Negreiros	62. Teachers' Interactions with a Collaborative, Dynamic-Geometry Environment - Alqahtani & Powell
Turtle Rock B	49. Shifting Perspectives: Practicum as an Opportunity for Preservice Teachers to Understand Student Math Ability Differently - Mitten	63. Bridging Professional Development and Practice Through Structured Weekly Math Meetings - Bauduin, Bray & Schoen
Turtle Rock C	50. Pedagogical Content Knowledge Brief Report Session: Tools and Tasks	64. Successes and Challenges in Using Learning Maps as Instructional Tools - Broaddus

65. POSTER SESSION

Salon E

INAUGURAL AMTE POSTER SESSION

Join us for this interactive discussion regarding research and findings in mathematics teacher education, as 53 presenters share their work with 30 poster presentations at AMTE's first poster session. Posters will be available from 3:30 to 6:00 pm. Presenters will be at their posters from 5:00 to 6:00 pm.

For the full list of poster titles and presenters, see the description of Session 65.

Twenty Years of Conference Moments

"CHANGING SCHOOL MATHEMATICS IN A CHANGE RESISTANT SOCIETY: THE ROLE OF THE MATHEMATICS TEACHER EDUCATOR"

2nd ANNUAL CONFERENCE, 1998, IN POMONA, CA

Jack Price gave the closing address for the Second Annual AMTE Conference, establishing that AMTE is about making positive change in mathematics teacher education.

Session 14 **Theater**
Development of Mathematics Teacher Educators
Brief Report Session

TRANSITIONING FROM TEACHER TO MATHEMATICS TEACHER EDUCATOR

Monica Gonzalez, University of Houston

New mathematics teacher educators experience feelings of inadequacy when they abruptly transition into their new role. This presentation will share how reflective practice and collaboration with experienced teacher educators will help make the transition smoother and more enjoyable.

MAKING SENSE OF JOURNAL RANKINGS IN MATHEMATICS EDUCATION

Ryan Andrew Nivens, East Tennessee State University

What are the top journals in the field of mathematics education? This presentation will examine how quality of academic journals can be assessed and how to determine what journal metrics, if any, are of concern to scholars in the field.

Session 15 **Salon A**
Teacher Professional Development
Extended Session (1:00 – 3:00 pm)

SUPPORTING TEACHERS' DEVELOPMENT OF NCTM'S EFFECTIVE MATHEMATICS TEACHING PRACTICES: AN EXPLORATION OF NEW RESOURCES

Margaret Smith, University of Pittsburgh
Victoria Lynn Bill, University of Pittsburgh
Amy Hillen, Kennesaw State University
Fred Dillon, Ideastream
DeAnn Huinker, University of Wisconsin, Milwaukee
Melissa Boston, Duquesne University

This session will focus on the new materials that are being developed that will support implementation of the effective teaching practices summarized in NCTM's *Principles to Actions: Ensuring Mathematical Success for All* (2014).

Session 16 **Salon B**
TODOS: Leadership for ALL Presidential Exchange Session

LEADERSHIP PEDAGOGY FOR CLOSING THE OPPORTUNITY GAP IN MATHEMATICS EDUCATION

Susie W. Hakansson, TODOS: Mathematics for ALL

Mathematics teacher educators must focus on equity. This requires a paradigm shift to excellence and equity at the center of preservice and inservice programs, which includes the following knowledge, beliefs, and actions: mathematics content knowledge, equity, advocacy, and outcomes focused.

Session 17 **Oak Creek**
Teaching and Learning with Technology
Extended Session (1:00 – 3:00 pm)

USING VIDEOTAPED POINT-OF-VIEW OBSERVATIONS TO STUDY AND DEVELOP TEACHERS' IN-THE-MOMENT THINKING

Elizabeth B. Dyer, Northwestern University
Miriam Gamoran Sherin, Northwestern University

This session introduces point-of-view observations to study teachers' in-the-moment noticing, decision-making, and knowledge. Participants will try out the wearable video equipment, and discuss strategies for the videotaping, interviewing, and analysis. Sample data from point-of-view observations will be discussed.

Session 18 **Pelican Hill**
Teaching and Learning with Technology
Individual Session

PROSPECTIVE SECONDARY MATHEMATICS TEACHERS' INTERACTIONS WITH COMPUTER ALGEBRA SYSTEM-INFUSED TEXTBOOK LESSONS

Jon D. Davis, Western Michigan University

Findings will be shared regarding how a group of prospective secondary mathematics teachers (PSTs) interacted with three different reform-oriented textbook lessons involving varying levels of integration of computer algebra systems (CAS). Implications for MTEs and others will be discussed.

Session 19 **Quail Hill**
Mathematical Content Knowledge
Individual Session

THINKING "OUTSIDE THE CIRCLE": ON RECTANGULAR LAKES AND SQUARE UNITS

Rina Zazkis, Simon Fraser University
Ami Mamolo, University of Ontario Institute of Technology

We extend a conversation on teachers' usage of personal mathematical knowledge in instructional situations, and opportunity to extend this knowledge, with particular focus on secondary school mathematics.

Session 20 **Saddleback**
AMTE Publications Session
Extended Session (1:00 – 3:00 pm)

TRANSFORMING AN IDEA INTO AN AMTE PUBLICATION MANUSCRIPT

Christine Browning, Western Michigan University

This session allows for personal feedback to potential authors for the quality improvement of manuscripts for AMTE's publications *Mathematics Teacher Educator*, *Contemporary Issues in Technology and Teacher Education* (*CITE*), and *Connections*, focusing on clarification of expectations for the relevant publication.

Session 21 **Santiago**
Pedagogical Content Knowledge
Individual Session

USING ARGUMENTATIVE WRITING TO PROMOTE PRESERVICE TEACHERS' NOTICING OF CHILDREN'S MATHEMATICAL THINKING

Ian Whitacre, Florida State University
Traci Kervin, Florida State University

We used argumentative writing to promote the development of preservice teachers' noticing of children's mathematical thinking. Participation in self-evaluation and peer-review processes led to improvements in argumentative writing that relate to development in two of the three aspects of noticing.

Session 22 **Shady Canyon**
Mathematical Content Knowledge
Individual Session

INCREASING TEACHERS' KNOWLEDGE NEEDED TO TEACH STATISTICS THROUGH ANALYZING GRADE 7 TASKS

Maryann Huey, Drake University
Christa Jackson, Iowa State University
Lorraine M. Males, University of Nebraska, Lincoln

We will share a framework for analyzing grade 7 tasks specific to comparison of two data sets and the analysis of five widely distributed textbooks. The framework enables teachers to learn about integral aspects of a well-designed statistical reasoning task.

Session 23 **Trabuco**
Mathematics Education Policy and Program Issues
Individual Session

THE CAEP ELEMENTARY STANDARDS: WHERE'S THE MATH?

Francis (Skip) Fennell, McDaniel College

If you are involved in the preparation of elementary teachers this session is for you! Participants will discuss the draft CAEP Elementary Standards, currently under review and soon to replace the ACEI NCATE/CAEP Elementary Standards. This is your opportunity to provide input to the draft standards before their proposed implementation in early 2017.

Session 24 **Woodbridge**
Pedagogical Content Knowledge
Individual Session

LEARNING TRAJECTORIES IN PROFESSIONAL DEVELOPMENT: ENHANCING TEACHERS' FORMATIVE ASSESSMENT PRACTICES

Jennifer Lise Kobrin, Pearson
Nicole Panorkou, Montclair State University

We conducted a research study to examine how professional development centered on a learning trajectory can improve teachers' formative assessment practices by helping them identify goals for their students, anticipate and interpret student thinking, and respond with appropriate instruction/feedback.

Session 25 **Turtle Rock A**
Equity and Mathematics Education
Extended Session (1:00 – 3:00 pm)

EXPLORING RACIAL CONSCIOUSNESS AND FACULTY BEHAVIOR IN STEM CLASSROOMS

Nicole Michelle Joseph, University of Denver
Kate R. Johnson, Brigham Young University
Joi A. Spencer, University of San Diego

Exploring racial consciousness' influence on faculty behavior, white and faculty of color share narratives that reveal how they hold one another, and themselves, accountable for racial equity in mathematics.

Session 26 **Turtle Rock B**
Mathematical Content Knowledge
Individual Session

CONTEXT MATTERS: DEVELOPING AN INSTRUCTIONAL SEQUENCE TO SUPPORT PRESERVICE ELEMENTARY TEACHERS' UNDERSTANDING OF INTEGER SUBTRACTION

Christy Pettis, University of Minnesota
Aran Glancy, University of Minnesota

This session examines how an instructional sequence in a mathematics content course supported preservice elementary teachers in making sense of integer addition and subtraction. Student work on pre- and posttests will be shared along with activities from the instructional sequence.

Session 27 **Turtle Rock C**
Pedagogical Content Knowledge
Individual Session

REHEARSAL AND ENACTMENT: INVESTIGATING HOW PRACTICE AND TEACHER EDUCATOR FEEDBACK INFLUENCES PRESERVICE TEACHER LEARNING

Rajeev Virmani, University of Saint Joseph

This presentation investigates how secondary preservice teachers and teacher educators rehearse the high leverage practice of leading a whole-class discussion. We will explore how opportunities to practice and receive teacher educator feedback during rehearsals influence preservice teacher learning and practice.

Session 28 **Theater**
Equity and Mathematics Education
Brief Report Session

SOCIAL JUSTICE MATHEMATICS PEDAGOGY: LEARNINGS FROM A CASE STUDY

Manjula Joseph, University of Wisconsin, Eau Claire

This case study examined key features of equitable mathematics instruction in a diverse urban elementary school setting. A codebook and framework were developed. Session participants will work with sample data and discuss the codebook's usefulness in identifying teacher best practices.

LEARNING TO FACILITATE GROUPWORK THROUGH COMPLEX INSTRUCTION

Jennifer Ann Eli, University of Arizona

In this session, I will describe research-based strategies and pedagogical moves posited by Complex Instruction that I implemented in a content course for prospective elementary teachers. I will present preliminary findings on participants' perspectives about learning mathematics.

(RE)CONSIDERING THE ENACTMENT OF MATHEMATICS INSTRUCTIONAL PRACTICES THROUGH A SOCIAL-PSYCHOLOGICAL LENS

Calli Shekell, University of Pittsburgh
Charles Munter, University of Pittsburgh

Through analysis of classroom video, a social-psychological lens was applied to instructional practices for facilitating mathematics discussions. Analysis suggested that there are considerations to be made in the enactment of such practices that may facilitate more meaningful participation in discussions.

Session 29 **Salon B**
Pedagogical Content Knowledge
Individual Session

PRODUCTIVE USE OF STUDENT MATHEMATICAL THINKING IS MORE THAN A SINGLE MOVE

Blake E. Peterson, Brigham Young University
Laura R. Van Zoest, Western Michigan University
Shari L. Stockero, Michigan Technological University
Keith R. Leatham, Brigham Young University

We will introduce a teaching practice we term "building", and its constituent components, as the most productive use of worthwhile student mathematical thinking, analyze teaching examples for evidence of building, and consider how to support teachers' development of this practice.

Session 30 **Pelican Hill**
Pedagogical Content Knowledge
Individual Session

BUILDING SECONDARY PRESERVICE TEACHERS' MATHEMATICAL CONTENT AND PEDAGOGICAL CAPACITIES THROUGH A CONTENT-FOCUSED METHODS COURSE

Xiangquan Yao, The Ohio State University
Ali Marie Fleming, The Ohio State University
Azita Manouchehri, The Ohio State University

In this session, we will report on a content-focused methods course on geometry and measurement that we designed and implemented at our institution and preservice teachers' assessment of the learning experiences provided for them in the course.

Session 31 **Quail Hill**
Mathematical Content Knowledge
Individual Session

CLASSROOM PRACTICES TO INITIATE PRESERVICE TEACHERS TO SOCIO-MATHEMATICAL NORMS

Margaret Rathouz, University of Michigan, Dearborn
Rheta Rubenstein, University of Michigan, Dearborn

We investigated specific classroom practices used to initiate elementary preservice teachers to socio-mathematical norms. We will orchestrate discussions around videos from the class to help participants understand how norms were established and how students were oriented to each other's thinking.

Session 32 **Shady Canyon**
Teaching and Learning with Technology
Individual Session

DESIGN AND IMPLEMENTATION OF TASKS IN AN ONLINE, COLLABORATIVE ENVIRONMENT WITH DYNAMIC MATHEMATICS SOFTWARE

Baila Herbstman, Rutgers University
Arthur B. Powell, Rutgers University
Muteb M. Alqahtani, Rutgers University

We analyze how the structure of dynamic-geometry tasks designed to promote productive mathematical discourse in an online collaborative environment align with how teacher-learners interact with them. Session participants will examine data about how teacher-learners implemented tasks.

Session 33 **Trabuco**
AMTE Gold Sponsor Individual Session

USING "BRIDGES IN MATHEMATICS K-5" IN MATH METHODS COURSES

Pamela Harris, University of Texas

Bridges in Mathematics K-5 published by The Math Learning Center is now available for free to schools of education. Join *Bridges* author and university instructor Pam Harris to learn how this program can enhance your math methods courses.

Session 34 **Woodbridge**
Teacher Professional Development
Discussion Session

TO KNOW OR NOT TO KNOW? EXPLORING EFFECTS OF VIEWING KNOWN AND UNKNOWN MATHEMATICS TEACHERS' INSTRUCTION

Mary Beisiegel, Oregon State University

I describe a mathematics teacher professional development study that investigates the difference in mathematics teachers' conversations about and reflections on instruction when watching video recordings of themselves and their peers versus watching teachers unknown to them.

Session 35 **Turtle Rock B**
Pedagogical Content Knowledge
Individual Session

COLLABORATING TO MODEL FORMATIVE ASSESSMENT: A MULTI-CAMPUS INITIATIVE INFORMING PRESERVICE TEACHERS' UNDERSTANDING OF MATHEMATICAL PRACTICES

Brian Lindaman, California State University, Chico
Carrie La Voy, University of Kansas
Jeanine Haistings, William Jewell College

In order to model formative assessment, we designed a set of classroom assessments which gauge PSTs' understanding of the SMPs. We will share the rubric, assessment tasks used, and the benefits/pitfalls in modeling formative assessment use with our PSTs.

Session 36 **Turtle Rock C**
Equity and Mathematics Education
Individual Session

EVALUATING LANGUAGE DEMANDS AND CREATING SCAFFOLDS TO SUPPORT ENGLISH LEARNERS AND OTHERS

Belinda Pickett Edwards, Kennesaw State University

In this session, participants will consider the extent to which prospective teachers build/develop language-related knowledge, the ability to evaluate the academic language demands embedded in mathematics instructional materials, and provide language scaffolds to make mathematics learning accessible to ELs and others.

Session 37 **Theater**
Equity and Mathematics Education
Brief Report Session

EXPLORING EQUITABLE PRACTICES THROUGH TEACHER NOTICING

Janet Mercado, University of California, Irvine
Elizabeth van Es, University of California, Irvine

We report the preliminary findings of a one-year, exploratory study in which we observed three mathematics teachers (Tim, Raymond, and Carter) who were nominated by school district personnel as exceptional mathematics teachers in urban contexts.

PREPARING MATHEMATICS PRESERVICE TEACHERS TO WORK WITH ENGLISH LEARNERS

Anthony Fernandes, University of North Carolina, Charlotte

This session will explore an intervention that involved preservice teachers in task-based interviews with English Learners. A framework of noticing proved crucial in developing an understanding of the challenges that these students face and the resources that they draw on.

Session 38 **Salon A**
NCTM Presidential Exchange Session

CRITICAL CONSIDERATIONS IN PREPARING AND SUPPORTING TEACHERS TO IMPLEMENT EFFECTIVE TEACHING PRACTICES

Diane Briars, National Council of Teachers of Mathematics

Preparing teachers to implement effective teaching practices poses a number of challenges for teacher educators, including promoting productive beliefs about teaching and learning while developing teachers' pedagogical content knowledge and instructional practices. In this session, participants will discuss some of these critical beliefs and examine new NCTM professional learning resources for addressing them.

Session 39 **Salon B**
Equity and Mathematics Education
Individual Session

INCORPORATING EVIDENCE-BASED INTERVENTION STRATEGIES INTO ELEMENTARY MATHEMATICS METHODS COURSES

Kristin Harbour, University of Alabama
Karen Karp, University of Louisville

Preservice teachers must be prepared to meet the needs of all students in their classrooms. This session showcases how to incorporate intervention strategies into elementary methods courses in order to prepare preservice teachers to support students who struggle in mathematics.

Session 40 **Oak Creek**
Mathematics Education Policy and Program Issues
Individual Session

HOW MATHEMATICS FIGURES IN TEACHER EVALUATION: COMPARING OBSERVATIONAL INSTRUMENTS

Monica G. McLeod, Wayne State University
S. Asli Ozgun-Koca, Wayne State University
Kaili Takiyah Hardamon, Wayne State University
Christopher Nazelli, Wayne State University

This session compares different observational instruments used for teacher evaluation, specifically in regard to mathematics content. Participants will code an excerpt from a mathematics lesson using several different instruments, and consider the implications for teacher education and teacher evaluation policy.

Session 41 **Pelican Hill**
Development of Mathematics Teacher Educators
Individual Session

ELEMENTARY TEACHERS' DEVELOPMENT OF RATIONAL NUMBER LEARNING TRAJECTORIES

Shelby Paige Morge, University of North Carolina, Wilmington
Kathleen Lynch-Davis, Appalachian State University
David Pugalee, University of North Carolina, Charlotte

Faculty who have taught a course focusing on rational numbers and learning trajectories will discuss the course, learning trajectories assignment, teachers' understandings of setting a goal, sequencing a trajectory, and selecting appropriate mathematical tasks correlated with instances on the trajectory.

Session 42 **Quail Hill**
Teaching and Learning with Technology
Individual Session

SUPPORTING SECONDARY PRESERVICE TEACHERS TO BECOME JUDICIOUS USERS OF TECHNOLOGY

Enrique Galindo, Indiana University

This session provides a report on the development and implementation of a technology portfolio assessment that can be used to support secondary mathematics preservice teachers to develop their Technology and Pedagogical Content Knowledge so that they can become judicious users of technology.

Session 43 **Saddleback**
Pedagogical Content Knowledge
Individual Session

RIGOR, RELEVANCE, AND RELATIONSHIPS: PREPARING PRESERVICE TEACHERS FOR PROJECT-BASED LEARNING (PBL)

Jean S. Lee, University of Indianapolis

Using a framework, participants will examine the successes and challenges preservice teachers experience when designing and implementing PBL units, including how they sustained the rigor, engaged students in relevant learning, and nurtured relationships with students, peers, and members in their community.

Session 44 **Santiago**
Teacher Professional Development
Individual Session

A FRAMEWORK FOR MATH COLLABORATIVE LEADERSHIP: COLLABORATION, CONFIDENCE, IDENTITY

Fabiana Cardetti, University of Connecticut
Mary Truxaw, University of Connecticut

We present an initial framework for math collaborative leadership (MCL): collaboration, confidence, and identity, and share activities designed to promote MCL. Participants will engage in structured discussions focused on how these can support math teacher educators in building MCL capacity.

Session 45 **Shady Canyon**
Mathematical Content Knowledge
Individual Session

DEVELOPING PROSPECTIVE ELEMENTARY TEACHERS' SPECIALIZED CONTENT KNOWLEDGE THROUGH PROFESSIONAL COLLABORATION

Sheryl Stump, Ball State University
Kay Irene Meeks Roebuck, Ball State University
Jose N. Contreras, Ball State University

Description of our work to redesign a mathematics content course for prospective elementary teachers, including sample learning tasks, variations in implementation, and reflections on assessment will be shared. Discussion will focus on learning goals for specialized content knowledge of number, operations, and algebraic reasoning.

Session 46 **Trabuco**
Pedagogical Content Knowledge
Individual Session

ANALYZING NOTICING ACROSS LEVELS OF EXPERTISE: THE NEED FOR ANALYTIC FRAMEWORKS TO TRANSCEND ABILITY AND CONTEXTS

Amanda Fisher, University of Illinois, Chicago
Julie Amador, University of Idaho
John Bragelman, University of Illinois, Chicago

Without a clear understanding of the nuances of PST noticing, it is difficult to adjust MTE instruction accordingly. Thus, there is a need for a framework that captures the progression of teacher noticing across a trajectory of expertise.

Session 47 **Woodbridge**
Mathematical Content Knowledge
Individual Session

ENHANCING PROSPECTIVE TEACHERS' KNOWLEDGE OF PROOF AND DISPOSITIONS TOWARDS PRODUCTIVE STRUGGLE THROUGH EXPLORATION OF MATH-TRICKS

Orly Buchbinder, University of New Hampshire
Alice LaRue Joy Cook, University of Maryland

We will share insights from implementation of an instructional task for promoting elementary and middle school prospective teachers' knowledge of proof and dispositions towards productive struggle. Participants will share and discuss successful strategies for engaging prospective teachers in proving.

Session 48 **Turtle Rock A**
Teacher Professional Development
Individual Session

PROBLEM SOLVING INTERVIEWS AS MECHANISMS FOR INSTRUCTIONAL CHANGE

Thomas E. Hodges, University of South Carolina
Melissa Negreiros, Berkeley County Schools, South Carolina

This session is focused on the use of problem solving interviews with elementary students in supporting instructional change. The interviews, based on the Burke Reading Interviews, demonstrated support for teacher-designed tasks, as well as determined efficacy of reform curriculum materials.

Session 49 **Turtle Rock B**
Preservice Teacher Field Experiences
Individual Session

SHIFTING PERSPECTIVES: PRACTICUM AS AN OPPORTUNITY FOR PRESERVICE TEACHERS TO UNDERSTAND STUDENT MATH ABILITY DIFFERENTLY

Carolyn Mitten, University of Florida

This session will present the results of a study tracking the changes that occurred for preservice teachers regarding their beliefs about high-needs students' mathematical abilities during a semester-long practicum. Implications for future field experience designs will be discussed.

Session 50 **Turtle Rock C**
Pedagogical Content Knowledge
Brief Report Session

THE KNOWLEDGE QUARTET: A TOOL FOR DEVELOPING MATHEMATICAL KNOWLEDGE FOR TEACHING

Marilena Petrou, Montclair State University

This presentation will focus on describing how the Knowledge Quartet, a tool for developing mathematical knowledge by reflecting on mathematics teaching, was used in a graduate mathematics education course for preservice teachers to deepen their mathematical knowledge.

TEACHING PRESERVICE TEACHERS TO PERSEVERE IN PROBLEM SOLVING

Daniel Ilaria, West Chester University

How do teacher educators encourage preservice teachers to "make sense of problems and persevere in solving them"? In this session, we will explore tasks used in methods courses, discuss preservice teacher solutions and invite discussion from participants regarding their practices.

Session 51 **Theater**
Teacher Professional Development
Brief Report Session

TEACHERS' CLASSROOM ASSESSMENT PRACTICES IN CONTEXT OF THE COMMON CORE

Joanne Philhower, Michigan State University
Amy Ray, Michigan State University

This session focuses on how teachers in our study have found that incorporating formative assessment practices into their classroom assessment practices has helped them make the transition to supporting their students' mathematical understanding in the context of CCSSM.

INQUIRY-BASED INSTRUCTION: HOW NOVICE TEACHERS TAKE UP THE CORE PRACTICE OF LAUNCHING A TASK

Dawn Marie Woods, Southern Methodist University

This presentation uses qualitative evidence to showcase how a learning cycle, grounded in a situated perspective of learning, enables novice mathematics teachers to take up the core practice of launching an inquiry-based task.

USING TEACHING REPLAYS AS A PROFESSIONAL DEVELOPMENT TOOL

Rachael Eriksen Brown, Penn State, Abington

This session focuses on an investigation of the use of teaching replays, a form of narrative writing, with beginning secondary math and science teachers. Results of the study will be shared as well as implications for PD providers.

Session 52 **Salon A**
2016 Nadine Bezuk Award for Excellence in Leadership & Service Winner

MANY PROMISES, CERTAIN PITFALLS: INTERDISCIPLINARY UNIVERSITY COLLABORATIONS AND SCHOOL-UNIVERSITY PARTNERSHIPS TO SUPPORT PREK-16 TEACHERS' MATHEMATICAL AND PEDAGOGICAL LEARNING

Ruth Heaton, University of Nebraska, Lincoln

This session will describe the affordances and challenges of working across disciplines and within school-university partnerships to support teachers' learning about mathematics and pedagogy, when the orientation toward such work is grounded in notions of constructivism, inquiry, and responsiveness.

Session 53 **Salon B**
Mathematical Content Knowledge
Individual Session

PROMOTING MATHEMATICAL UNDERSTANDING FOR SECONDARY TEACHERS

Mary Kathleen Heid, Penn State University
Patricia S. Wilson, University of Georgia

What mathematics offers the most value for secondary teachers? A framework for mathematical understanding for secondary teaching will be presented and exemplified. Participants will examine possible uses for the framework and the scenarios on which it was built.

Session 54 **Oak Creek**
Preservice Teacher Field Experiences
Individual Session

WHAT ARE THEY CAPABLE OF? EXAMINING PRESERVICE TEACHERS' EARLY PRACTICE OF ELICITING STUDENT THINKING

Diana Sherman, University of Michigan

What aspects of eliciting student thinking are preservice elementary teachers capable of at the very beginning of their preparation? Examples of early capabilities, demonstrated within the first four weeks of mathematics teacher preparation, will be classified, presented and discussed.

Session 55 **Pelican Hill**
Mathematics Education Policy and Program Issues
Discussion Session

INTERPRETING STUDENTS' USE OF REPRESENTATIONS AS IMPLIED BY CCSSM: IMPLICATIONS FOR MATHEMATICS TEACHER EDUCATORS

Kenneth R. Bradfield, Michigan State University

This discussion session will center on how mathematics teacher educators can facilitate K-8 prospective teachers' interpretation of when and how to use representations critical for the successful implementation of Common Core State Standards for Mathematics.

Session 56 **Quail Hill**
Mathematical Content Knowledge
Individual Session

ASSESSMENTS OF SECONDARY LEVEL MATHEMATICAL KNOWLEDGE FOR TEACHING AS OPPORTUNITIES FOR PRODUCTIVE STRUGGLE

Heather Howell, Educational Testing Service
Yvonne Lai, University of Nebraska, Lincoln
Erica Rose Miller, University of Nebraska, Lincoln

This session engages teacher educators with secondary teachers' responses to items designed to measure mathematical knowledge for teaching. We focus on items eliciting ideas spanning lower to upper secondary content in mathematically complex ways that make pedagogical decisions more ambiguous.

Session 57 **Saddleback**
Equity and Mathematics Education
Symposium

PUTTING IT ALL TOGETHER: BUNDLING RESEARCH ON EQUITY IN MATHEMATICS METHODS COURSES

Anita A. Wager, University of Wisconsin, Madison
Ayse Yolcu, University of Wisconsin, Madison
Ryan Ziols, University of Wisconsin, Madison

Mathematics teacher educators will: learn how we have 'bundled' recent research on various equitable practices in mathematics to structure PreK-8 methods courses, discuss implications of various assignments and activities on student identity, and engage in practices we used.

Session 58 **Santiago**
School and University Partnerships and Projects
Individual Session

RESULTS AND ISSUES IN AN MSP STAFF DEVELOPMENT PROJECT ON CCSSM MATHEMATICAL PRACTICES

Sherry L. Bair, Texas A&M University, Corpus Christi

An overview of an MSP for grades 6-12 math/science teachers focused on the Standards of Mathematical Practice is provided. Participants will explore tasks used, discuss results of the project, as well as address issues encountered and their implications for further work.

Session 59 **Shady Canyon**
Mathematical Content Knowledge
Individual Session

K-8 PRESERVICE TEACHERS LEARNING MATHEMATICS AS THEY WILL BE ENCOURAGED TO TEACH MATHEMATICS

Cheryl Lubinski, Illinois State University
Albert D. Otto, Illinois State University
Jo Ann Cady, University of Tennessee

We will describe a mathematics content course we developed for K-8 elementary teachers that reflects the pedagogy they would encounter in their standards-based mathematics methods courses. We will share data collected over a 12-year period from this course.

Session 60 **Trabuco**
AMTE Silver Sponsor Individual Session

WHAT'S SO IMPORTANT ABOUT MANIPULATIVES IN A DIGITAL WORLD?

Sara Delano Moore, ETA hand2mind

Explore the power of manipulatives in modern math classrooms. See how these tools help connect understanding from whole numbers to fractions and beyond with a focus on the meaning of the operations.

Session 61 **Woodbridge**
Pedagogical Content Knowledge
Individual Session

SECONDARY INSERVICE TEACHERS' PROFESSIONAL NOTICING OF STUDENTS' MATHEMATICAL THINKING

Raymond LaRochelle, San Diego State University
Lisa Lamb, San Diego State University
Susan Nickerson, San Diego State University

We are currently investigating the nature and development of 16 secondary teachers' professional noticing of students' mathematical thinking through professional development. We will discuss initial results focused on the nature of their noticing prior to professional development.

Session 62 **Turtle Rock A**
Teaching and Learning with Technology
Individual Session

TEACHERS' INTERACTIONS WITH A COLLABORATIVE, DYNAMIC-GEOMETRY ENVIRONMENT

Muteb M. Alqahtani, Rutgers University
Arthur B. Powell, Rutgers University

We report on middle and high school teachers who worked in groups for 15 weeks to solve open-ended geometry problems and changes in their interactions with an online, collaborative dynamic-geometry environment, which allowed them to further their mathematical understanding.

Session 63 **Turtle Rock B**
Teacher Professional Development
Individual Session

BRIDGING PROFESSIONAL DEVELOPMENT AND PRACTICE THROUGH STRUCTURED WEEKLY MATH MEETINGS

Charity Bauduin, Florida Center for Research in Science, Technology, Engineering, and Mathematics
Wendy Bray, Florida Center for Research in Science, Technology, Engineering, and Mathematics
Robert Schoen, Florida Center for Research in Science, Technology, Engineering, and Mathematics

Presenters and participants will examine how a weekly math meeting model is being used to support 25 teams of K-2 teachers with adapting ideas learned in professional development to their own classroom contexts through a focus on examining student work.

Session 64 **Turtle Rock C**
Teacher Professional Development
Individual Session

SUCCESSES AND CHALLENGES IN USING LEARNING MAPS AS INSTRUCTIONAL TOOLS

Angela Broaddus, University of Kansas

The development and use of learning maps as instructional tools are relatively new topics for professional development activities. The present study provides insights into the successes and challenges elementary teachers experienced using learning maps as instructional tools.

Session 65 **Salon E**
Poster Session

A CRITICAL MATHEMATICS EDUCATION PERSPECTIVE ON MODELING: DEVELOPING PRESERVICE TEACHERS' COMPETENCIES AND PERCEPTIONS

Lisa L. Poling, Appalachian State University
Tracy J. Goodson-Espy, Appalachian State University
Nirmala Naresh, Miami University

We describe how a critical mathematics education perspective, applied to mathematical modeling, resulted in preservice teachers using mathematics to model real-world scenarios with middle-school students to deepen mathematical knowledge. These activities alter beliefs about who can conceptualize and do mathematics.

AUTHORITY DYNAMICS AND GROUP NORMS OF PRESERVICE MIDDLE SCHOOL TEACHERS DURING GROUP WORK PENCASTS

Daniel Leonardo Rios, Texas A&M University, Commerce
Rebecca Anne Dibbs, Texas A&M University, Commerce

Female students are most likely to give up on mathematics during middle school; their persistence is influenced by their teachers' beliefs about mathematics. This case study examined the gendered discourse of preservice middle school teachers in a PBL pre-calculus course.

BEYOND ASSESSMENT DATA COLLECTION: USING TI-NAVIGATOR CALCULATORS TO INFORM INSTRUCTIONAL PRACTICE IN REAL-TIME

Holly H. Pinter, Western Carolina University

The goals of the poster are to summarize the findings of a study observing the use of TI-Navigator calculator systems in 7th grade classrooms, and to discuss theoretical and practical implications of these findings in regards to instruction and formative assessment.

CHALLENGING THE CURRENT DISCOURSE IN EARLY CHILDHOOD MATHEMATICS: CREATING LEARNING OPPORTUNITIES WITH CHALLENGING, OPEN-ENDED TASKS

Nicholas C. Johnson, University of California, Los Angeles
Brandon McMillan, University of California, Los Angeles
Mary Candace Raygoza, University of California, Los Angeles
Megan Franke, University of California, Los Angeles
Angela Chan Turrou, University of California, Los Angeles

Current discourse in early childhood mathematics positions students, particularly low-income students of color, as knowing little. Our work with early childhood teachers and students demonstrates that more mathematically challenging, open-ended tasks enable teachers and students to show what they know.

CHARACTERIZING SYMBOL SENSE: AN INTERCONNECTED FRAMEWORK

Margaret T. Kinzel, Boise State University

Algebraic notation can be a powerful mathematical tool, but not all seem to develop "symbol sense." Analysis of interview data identified three interconnected viewpoints: looking at, with, and through the notation. The framework and implications for instruction will be presented.

COURSE EXPERIENCES TO IMPROVE PROSPECTIVE SECONDARY MATHEMATICS TEACHERS' UNDERSTANDINGS OF MATHEMATICAL MODELING

Francine Winston Johnson, Hood College
Christy Danko Graybeal, Hood College

Teachers are frequently unsure of what mathematical modeling is and how it can be incorporated into instruction. To address this, we increased the emphasis on mathematical modeling in our methods course. Promising course experiences will be shared.

CULTIVATING A PRODUCTIVE DISPOSITION IN PRESERVICE ELEMENTARY TEACHERS USING THE CONCEPT OF AREA

Sharon K. O'Kelley, Francis Marion University

I consider how developing and connecting different formulas across the concept of area may help preservice elementary teachers develop a productive disposition toward mathematics.

CURRICULAR CHOICES OF SECONDARY MATHEMATICS PRESERVICE TEACHERS DURING STUDENT TEACHING

Katherine Miller, The Ohio State University

This poster presents research findings on the curricular reasoning of preservice mathematics teachers. Three preservice teachers were interviewed and observed during their student teaching and sources of influence on their curricular choices were analyzed.

DO YOUR CLASSES CLICK? INTERACTIVE REMOTES FOSTER EFFECTIVE PEDAGOGY

Linda L. Forbringer, Southern Illinois University, Edwardsville

See how using interactive remotes increased preservice and practicing teachers' awareness of three evidence-based instructional practices: (1) active participation, (2) providing opportunities for frequent review and feedback, and (3) using formative assessment to guide instructional decisions.

EMPHASIZING TPCK POSITIONING IN METHODS COURSES FOR PRESERVICE SECONDARY MATHEMATICS TEACHERS

Ruby L. Lynch-Arroyo, University of Texas, El Paso
Joyce G. Asing-Cashman, University of Texas, El Paso
Enrique Saucedo, University of Texas, El Paso

Educating 21st Century learners is challenging when preservice teachers are faced with their disposition toward secondary mathematics teaching and student needs. Microteaching embedded in methods courses provides a venue for developing TPCK, as demonstrated in preservice teacher lesson plan examples.

FACILITATING CLASSROOM DISCOURSE: A PROJECT DESIGNED TO HELP PRESERVICE TEACHERS IMPLEMENT HIGH-COGNITIVE DEMAND TASKS

Michelle Ann Morgan, University of Northern Colorado
Robert Powers, University of Northern Colorado

This poster presentation will focus on the design, implementation, and results of a project developed to promote the use of high cognitive demand tasks and classroom discourse by preservice secondary mathematics teachers during their pre-student teaching field experiences.

IMPLEMENTING INVESTIGATIONS IN A PERSISTENTLY LOW ACHIEVING (PLA) SCHOOL: A COACHING JOURNEY

Brian Townsend, University of Northern Iowa
Comfort Akwaji-Anderson, Iowa State University

This poster tells the story of a Midwestern inner-city elementary school's implementation of *Investigations* against the backdrop of a district dealing with the demands and realities of NCLB. Teacher interviews, standardized test scores, and math coach perspectives drive the narrative.

INVESTIGATING HOW COOPERATING TEACHERS' FEEDBACK INDUCTS PRESERVICE TEACHERS INTO COMMUNITIES OF REFORM MATHEMATICS TEACHING PRACTICE

Torrey Kulow, University of Wisconsin, Madison

Through sharing the aspects of teaching emphasized as a cooperating teacher gives feedback to a preservice teacher, this poster describes how cooperating teachers can help preservice teachers increasingly and legitimately participate in communities of reform mathematics teaching practice.

INVESTIGATING TEACHING OF HIGH SCHOOL STATISTICS WITH TECHNOLOGY THROUGH THE USE OF ANNOTATED LESSON PLANS

Elizabeth Arnold, Montana State University

This poster presents preliminary results from an experimental design developed to investigate the degree to which specially annotated lesson plans influence inservice public high school teachers' integration of technology in teaching statistical concepts in Algebra II and Mathematics III.

LET'S TALK MATH? PRESERVICE TEACHERS' CONVERSATIONS DURING THEIR COACHING MEETINGS

Lakesia L. Dupree, University of South Florida

This poster discusses the nature of coaching meetings, which were held with preservice teachers during their final field experience. These meetings focused on content knowledge, lesson planning and instructional practices. The findings have implications for professional discourse and coaching practices.

PREPARATION OF MATHEMATICS TEACHERS: CHANGING THE ROLE OF THE COOPERATING TEACHER DURING FIELD EXPERIENCES

Jennifer Edelman, University of West Georgia

This study examines the effects of an intervention on cooperating teachers' skills in guiding, supporting, mentoring, and evaluating mathematics teacher candidates during the student teaching internship. Teachers engaged in monthly researcher-designed professional development meetings focused on mentoring skills and inquiry-based instruction.

PREPARING INSTRUMENTS OF INEQUITY OR AGENTS OF CHANGE: TEACHING MATHEMATICS METHODS FOR SOCIAL JUSTICE

Rebecca Smith Nance, University of Mississippi
Anne Marie Marshall, Lehman College
Joel Amidon, University of Mississippi

This poster shares results of a project that engaged preservice teachers in a social justice mathematics module designed to develop awareness and agency. The authors seek collaborators to discuss and share other social justice mathematics lessons designed specifically for MTEs.

PRESERVICE TEACHERS' LEARNING ABOUT ALGEBRA RELATED TO CONNECTIONS AND TECHNOLOGY

Hyunyi Jung, Purdue University
Eryn Michelle Stehr, Michigan State University

We examine opportunities provided by secondary mathematics teacher preparation programs for preservice teachers to expand their own knowledge of algebra and learn to teach algebra by making connections and using technology in mathematics and mathematics education courses.

PROSPECTIVE TEACHERS' ATTEMPTS TO USE STUDENTS' FUNDS OF KNOWLEDGE IN LESSON PLANNING

Marrielle Myers, Kennesaw State University

I share results from a study focused on the ways prospective elementary teachers incorporated students' funds of knowledge into lesson plans. This study builds upon previous work by examining how teachers' understandings developed over time and examining challenges they faced.

SATURDAY ACADEMY FOR MATHEMATICS: FROM CONCEPTUALIZATION TO CELEBRATION

Brian Christopher Buckhalter, University of Mississippi

Saturday Academy for Math allows teachers to collaboratively deepen their content knowledge while strengthening their instructional strategies. This poster session will share each step of the creation, implementation, and celebration of the success of this voluntary academy for teachers.

SHIFTING TEACHER BELIEFS ABOUT TEACHING MATHEMATICS THROUGH PROFESSIONAL LEARNING COMMUNITIES

Julie James, University of Mississippi
Alice Steimle, University of Mississippi
Rebecca Smith Nance, University of Mississippi
Brian Christopher Buckhalter, University of Mississippi

Analysis of data after teachers have engaged in one year of a two-year professional development project aimed to develop PLCs and increase teacher content knowledge indicates a shift in beliefs about teaching mathematics.

SINGLE AND READY TO MINGLE: CONNECTING TEACHERS AND RESEARCHERS

Zekiye Ozgur, University of Wisconsin, Madison
Susanne Strachota, University of Wisconsin, Madison
Lindsay Reiten, University of Wisconsin, Madison

We argue that establishing and maintaining teacher-researcher partnerships is an essential and effective way to address the divide between research and practice. In response, we propose an online network to initiate and promote productive teacher-researcher partnerships.

THE INFLUENCE OF MATHEMATICS TEACHERS' TPACK IN EBOOK DESIGNING ON THEIR TEACHING EFFECTIVENESS

Khaled Abdullah Alshehri, University of Dammam

This session will provide a brief report of a grant-funded study that aims to investigate the Influence of Mathematics Teachers' TPACK in eBook Designing on their Teaching Effectiveness. The research questions, design, and instruments will be shared.

THE INFLUENCE OF PRESERVICE SCIENCE TEACHERS ON PRESERVICE MATH TEACHERS

Kim Krusen McComas, University of Arkansas

Research will be presented on how math preservice teachers and math teacher educators are influenced by their science counterparts in a combined math/science secondary teacher licensure program, in which math and science majors are in the same teacher preparation courses.

USING CONCEPT MAPS TO ASSESS CHANGE IN ELEMENTARY MATHEMATICS TEACHERS' UNDERSTANDING OF NUMBER SENSE

Adrienne Anne Redmond-Sanogo, Oklahoma State University
Kansas Conrady, University of Oklahoma

In this poster, we share results of a mixed methods study that explored pre/post concept maps to determine if a four-week number sense course which was part of an Elementary Mathematics Specialist Program changed inservice teachers' number sense knowledge.

USING CONFIDENCE INTERVALS TO EVALUATE THE EFFECTS OF PROFESSIONAL DEVELOPMENT ON URBAN MATHEMATICS TEACHERS' TPACK

Jamaal Rashad Young, University of North Texas

This study used meta-analytic thinking to evaluate the results of a three-week professional development on urban mathematics teachers' TPACK. The results suggest that technology professional development can be an effective means to increase TPACK for mathematics teachers in urban schools.

USING TECHNOLOGY TO SUPPORT THE ORCHESTRATION OF PRODUCTIVE MATHEMATICAL DISCUSSIONS

Valerie Klein, Drexel University
Jason Silverman, Drexel University

In our work, we seek to support teachers' evolving understandings of the role of student thinking in planning and implementing instruction and develop skills and expertise that can support effective facilitation of mathematical discussions and the Five Practices.

WHAT FACTORS INFLUENCE TEACHERS' DECISIONS TO PURSUE AN ELEMENTARY MATHEMATICS SPECIALIST CERTIFICATION?

Nicole Shobert, Oklahoma State University
Stacy Reeder, University of Oklahoma

Research focused on the factors that influence teachers' decisions to pursue an Elementary Mathematics Specialist certification will be shared. The findings presented should provide insight for AMTE members interested in extending and sustaining EMS programs in their states.

WHY TEACH MATHEMATICS? PROSPECTIVE TEACHERS' REFLECTIONS ON REPRESENTATIONS OF MATHEMATICS TEACHING IN FEATURE FILMS

Amanda Jansen, University of Delaware
Charles Hohensee, University of Delaware

We elicited prospective middle school mathematics teachers' reflections on the purposes of teaching mathematics in school during a Math Movie Club. We viewed and discussed six feature films that included either leading or supporting characters whose profession was mathematics teaching.

WRITING IN THE MATHEMATICS CLASSROOM: EQUITABLE PRACTICES FOR ENGLISH LANGUAGE LEARNERS

Michael Gilbert, University of Massachusetts, Boston
Fabian Torres-Ardila, University of Massachusetts, Boston

We conducted secondary data analysis of performance on open response questions in a state-mandated mathematics test and identified evidence that student use of genres with more sophisticated language structures correlate to higher scores. We provide resources to enhance ELLs' mathematical writing.

THURSDAY, JANUARY 28, 2016 — 6:00 PM – 7:00 PM

RECEPTION FOR GRADUATE STUDENTS & EARLY CAREER FACULTY

Salon D

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

FRIDAY, JANUARY 29, 2016 — 6:45 AM – 8:00 AM

FRIDAY BREAKFAST & ADVOCACY BREAKFAST

Salon C/D/E

Conference participants have two options for breakfast:

BREAKFAST — **Salon C/E**

Breakfast will be served in **Salon C/E**.

ADVOCACY BREAKFAST — **Salon D**

Ken Krehbiel, Associate Executive Director for Communications, National Council of Teachers of Mathematics
Jim Lewis, Deputy Assistant Director, National Science Foundation
Karen King, Program Director, National Science Foundation

The annual AMTE Advocacy Breakfast highlights up-to-date initiatives and events related to policy in mathematics teacher education. Our invited panel of speakers will participate in an open discussion about how they approach advocacy in various contexts and will highlight important issues AMTE members need to consider related to research and practice in our field. After brief introductions, the panel will respond to questions prepared by the Emerging Issues Committee (EIC) and gathered from the AMTE membership. We will end with an open forum inviting questions from the audience and further discussion from the panel. Doors will open for breakfast at 6:45 am, with the panel beginning promptly at 7:00 am.

OVERVIEW OF FRIDAY MORNING, JANUARY 29, 2016

	8:00 AM – 9:00 AM	9:15 AM – 10:00 AM
Theater	66. Teaching and Learning with Technology Brief Report: Technology and Teacher Education	80. School and University Partnerships and Projects Brief Report Session: Results from Inservice Professional Development
Salon A	67. Instructional Modules for K-8 Mathematics Methods with a Focus on Equitable Practices for Diverse Students - Roth McDuffie, Drake, Foote, Turner, Aguirre, Bartell, Witters & Stoehr	
Salon B	68. The Elementary Mathematics Specialist Movement: Maintaining the Momentum - McCoy, Fennell, Kobett, Wray, Swartz, Utley, Reeder & Webel	
Oak Creek	69. Addressing Race-Based Assumptions in Teaching and Learning Mathematics for Social Justice Tasks - Bullock	81. M-Scan Measure: A Framework for Examining Mathematics Teaching Practices - Berry
Pelican Hill	70. Pathways Project: Graduate Model for Developing Regional Leaders in Urban Mathematics Education - Huinker, Steele & Hedges	82. Integrating Preservice Secondary Mathematics Teachers' Knowledge - Winsor
Quail Hill	71. Informal Learning Environments: Unique Approaches to Preparing Preservice Teachers - Mohr-Schroeder & Jackson	83. Influential Practices to Change Beliefs in a Hybrid Mathematics Specialist Program - Sawyer & Ovrick
Saddleback	72. Supporting Mathematics Teaching and Learning with Mathematical and Pedagogical Apps - Ozgun-Koca, Bos, Edwards, Lee, Mikusa & Rhine	
Santiago	73. Integrating Recursive Pedagogical Content Knowledge with the Tower of Hanoi - Yee & Safi	84. Preservice Teachers' Beliefs About Transfer Before and After Their Engagement in a Mathematics Methods Course - McIntyre & Diamond
Shady Canyon	74. Connecting and Becoming Stronger Advocates Through Affiliates - Eddy, Krupa, Lee, Grady, Miller & Burton	85. Re-Envisioning the School Day: A Field-Based Project Focused on Developing Mathematical Practices in the CCSSM - Walkowiak & Edgington
Trabuco	75. Connecting the Dots: Designing Mathematics-Enhanced Scientific Inquiry in an Elementary Classroom - Wang, Erb, Webb & Shafter	86. Case-Study Reflections of Inservice Teachers on Coursework in the Use of Technology in Mathematics Classrooms - Olson & Adkins
Woodbridge	76. Rehearsing Instructional Practices in Professional Development Settings - Wilson, Webb, Martin & Duggan	87. Exploring Algebra Readiness with Teachers and Students - Feikes & Pratt
Turtle Rock A	77. Facing Resistance in the Preparation of Critical Mathematics Teachers - Johnson & Belliston	88. Pedagogical Content Knowledge Brief Report Session: High School Teachers
Turtle Rock B	78. Professional Development in a Synchronous Virtual Environment - Manouchehri, Huang & Fleming	89. A Critical Analysis of the Research Divide Between Mathematics Education and Special Education - Lambert & Tan
Turtle Rock C	79. Measuring Teachers' Promotion of the Standards for Mathematical Practice - Bostic & Matney	

OVERVIEW OF FRIDAY MORNING, JANUARY 29, 2016

	10:15 AM – 11:30 AM
Theater	90. Mathematical Content Knowledge Brief Report Session: Fractions and Rational Numbers
Salon A	91. Leveraging Collaboration Through Instructional Activities: New Learning Across Two Professional Development Projects - Turrou, Franke, Hintz, Johnson, McMillan, Raygoza, Cunard, Lewis & Lomax
Salon B	92. Transforming Secondary Mathematics Teacher Preparation at Scale - Martin, Alibegovic, Dickey & Strutchens
Oak Creek	93. Practicing Practices: Using LessonSketch to Facilitate the Development of Complex Teaching Practices - Wieman, Aaron, Quebec Fuentes, McAneny, Perry, Walkoe & Webel
Pelican Hill	94. Multiple Models for Practice-Based Teacher Development - Rubenstein, Elliott, Ghousseini, Shaughnessy, Nazelli & McLeod
Quail Hill	95. Supporting Mathematics Teacher Educators' Work with Prospective Elementary Teachers: A Look Through Multiple Perspectives - Taylor, Appova & Welder
Saddleback	96. Positioning Formative Assessment (FA) as a Common Theme Across Multiple Theoretical Instructional Frameworks - Silver, Mills, Ebby, Langer-Osuna, Smith, Adams & Karp
Santiago	97. Supporting Teachers' Capabilities to Engage Students in Constructing Viable Arguments and Critiquing Others' Reasoning - Ko, Yee, Boyle, Bleiler, Rumsey, Whitacre & Lesseig
Shady Canyon	98. Access, Agency and Allies: A Systematic Approach to Addressing an Equitable System - Herbel-Eisenmann, Foote, Bartell, Koestler, Yolcu, Jones & Lopez-Leiva
Trabuco	99. Technology-Based Ways to Develop Preservice Teacher Noticing in Three Elementary Methods Courses - Yeh, Soto, Chao, Henry & Guarino
Woodbridge	100. Supporting Prospective Secondary Teachers' Understanding of the Common Core Standards for Mathematical Practice - Bieda & Males
Turtle Rock A	101. Preparing Preservice Teachers (K-8) to Teach Geometry - Cox, Lo, Cirillo & Rathouz
Turtle Rock B	102. Learning to Teach Mathematics: Methodological Challenges in a Cross-National Study of Novice Mathematics Teachers - Tatto & Smith
Turtle Rock C	103. Exploring Frameworks: Building our Practice - Weston & Kastberg

Session 66 **Theater**
Teaching and Learning with Technology
Brief Report Session

STRATEGIES TO ENHANCE ENGAGEMENT AND EFFECTIVENESS IN AN ONLINE ASYNCHRONOUS DISCUSSION BOARD

Pier Angeli Junor Clarke, Georgia State University
Nermin Bayazit, Georgia State University

Argumentative knowledge construction processes were analyzed in the case study of Kevin's written communication in an online asynchronous discussion board for mathematics knowledge development. Suggested strategies to enhance his engagement and effectiveness in such an environment are discussed during this report.

IMPLEMENTING AN ONLINE PROFESSIONAL NOTICING MODULE AND ITS INFLUENCE ON ATTITUDES TOWARD MATHEMATICS

Molly Fisher, University of Kentucky
Cindy Jong, University of Kentucky
Jonathan N. Thomas, University of Kentucky
Edna O. Schack, Morehead State University

This session will provide data on preservice elementary teachers' attitudes and beliefs toward mathematics (using the Attitudes Towards Mathematics Inventory) before and after participating in an online module focused on professional noticing within an early numeracy context.

FLIPPED LEARNING: ENHANCING PROSPECTIVE TEACHERS' ENGAGEMENT BY EMBEDDING QUESTIONS IN VIDEOS

Kien Hwa Lim, University of Texas, El Paso

The flipped model is effective if students are intellectually engaged in the math videos they watch. This research study investigates the effect of embedding questions into online videos, via EdPuzzle.com, on prospective teachers' learning of geometry and measurement concepts.

Session 67 **Salon A**
Equity and Mathematics Education
Extended Session (8:00 – 10:00 am)

INSTRUCTIONAL MODULES FOR K-8 MATHEMATICS METHODS WITH A FOCUS ON EQUITABLE PRACTICES FOR DIVERSE STUDENTS

Amy Roth McDuffie, Washington State University, Tri-Cities
Corey Drake, Michigan State University
Mary Q. Foote, Queens College, City University of New York
Erin E. Turner, University of Arizona
Julia M. Aguirre, University of Washington, Tacoma
Tonya Gau Bartell, Michigan State University
Angela Witters, Washington State University, Tri-Cities
Kathy Stoehr, Santa Clara University

Instructional modules developed and researched over the past five years from the Teachers Empowered to Advance Change in Mathematics (TEACH Math) Project will be shared and discussed. TEACH Math aims to transform mathematics teacher preparation to equip teachers with powerful strategies to improve mathematics learning in diverse schools.

Session 68 **Salon B**
Mathematics Education Policy and Program Issues
Extended Session (8:00 – 10:00 am)

THE ELEMENTARY MATHEMATICS SPECIALIST MOVEMENT: MAINTAINING THE MOMENTUM

Ann McCoy, University of Central Missouri
Francis (Skip) Fennell, McDaniel College
Beth McCord Kobett, Stevenson University
Jon Wray, Howard County Public Schools, Maryland
Barbara Ann Swartz, McDaniel College
Juliana Utley, Oklahoma State University
Stacy Reeder, University of Oklahoma
Corey Webel, University of Missouri

This session will engage participants in a discussion of challenges faced in implementing and sustaining programs (accreditation and ongoing professional development) for Elementary Mathematics Specialists and in identification of necessary steps to sustain the EMS momentum across the United States.

Session 69 **Oak Creek**
Equity and Mathematics Education
Discussion Session

ADDRESSING RACE-BASED ASSUMPTIONS IN TEACHING AND LEARNING MATHEMATICS FOR SOCIAL JUSTICE TASKS

Erika C. Bullock, University of Memphis

In this discussion session, participants will explore questions surrounding race-based assumptions in teaching mathematics for social justice tasks. Session participants will analyze four tasks and discuss ways to work with preservice teachers to present tasks with appropriate social context.

Session 70 **Pelican Hill**
Development of Mathematics Teacher Educators
Individual Session

PATHWAYS PROJECT: GRADUATE MODEL FOR DEVELOPING REGIONAL LEADERS IN URBAN MATHEMATICS EDUCATION

DeAnn Huinker, University of Wisconsin, Milwaukee
Michael D. Steele, University of Wisconsin, Milwaukee
Melissa E. Hedges, University of Wisconsin, Milwaukee

This unique graduate cohort program established multiple pathways to develop teacher leaders and educators in mathematics. From required core courses, teachers branch out to earn a master's degree, doctoral degree, or a graduate certificate. Participants will examine program design, implementation, and impact.

Session 71 **Quail Hill**
Preservice Teacher Field Experiences
Individual Session

INFORMAL LEARNING ENVIRONMENTS: UNIQUE APPROACHES TO PREPARING PRESERVICE TEACHERS

Margaret J. Mohr-Schroeder, University of Kentucky
Christa Jackson, Iowa State University

This study examined the influence informal learning experiences had on preservice teachers' preparation as they worked with struggling mathematics students. The informal learning environment simulated a situation where the tutors were able to practice instructional methodologies in real, contextual situations.

Session 72 **Saddleback**
Teaching and Learning with Technology
Extended Session (8:00 – 10:00 am)

SUPPORTING MATHEMATICS TEACHING AND LEARNING WITH MATHEMATICAL AND PEDAGOGICAL APPS

S. Asli Ozgun-Koca, Wayne State University
Beth Bos, Texas State University
Michael Todd Edwards, Miami University
Mi Yeon Lee, Arizona State University
Michael Mikusa, The Ohio State University
Steve Rhine, Pacific University

We will discuss mathematical content apps and strategies that mathematics teachers use to engage and educate elementary and secondary students. Moreover, pedagogical apps for both mathematics teachers and students will be shared. Bring your laptop or iPad!

Session 73 **Santiago**
Pedagogical Content Knowledge
Individual Session

INTEGRATING RECURSIVE PEDAGOGICAL CONTENT KNOWLEDGE WITH THE TOWER OF HANOI

Sean P. Yee, University of South Carolina
Farshid Safi, University of Central Florida

This session integrates common core content knowledge (recursion) with pedagogical methods knowledge (scenario-based reasoning) through a contextualized module involving the Tower of Hanoi. Participants engage in the module, discuss qualitative results, and explore integrated modules to utilize in methods courses.

Session 74 **Shady Canyon**
AMTE Affilliates Discussion Session

CONNECTING AND BECOMING STRONGER ADVOCATES THROUGH AFFILIATES

Colleen Eddy, University of North Texas
Erin E. Krupa, Montclair State University
Jean S. Lee, University of Indianapolis
Maureen Grady, East Carolina University
Travis Miller, University of Indianapolis
Megan Burton, Auburn University

The Affiliate Connections Committee will respond to affiliate survey results including connecting affiliates and advocating for high-quality mathematics teacher education. Participants will develop at least one goal for their affiliate for the upcoming year and receive updates to serve affiliates.

Session 75 **Trabuco**
School and University Partnerships and Projects
Individual Session

CONNECTING THE DOTS: DESIGNING MATHEMATICS-ENHANCED SCIENTIFIC INQUIRY IN AN ELEMENTARY CLASSROOM

Sasha Wang, Boise State University
Gay Lynn Erb, West Ada School District, Idaho
Melissa Webb, West Ada School District, Idaho
Lynnea Adrienne Shafter, West Ada School District, Idaho

This one-year study is a collaboration between a state university and a local STEM academy. Its aim is to design and implement mathematics-enhanced scientific inquiry in a 4th grade mathematics and science classroom to promote effective classroom discourse practices.

Session 76 **Woodbridge**
Teacher Professional Development
Individual Session

REHEARSING INSTRUCTIONAL PRACTICES IN PROFESSIONAL DEVELOPMENT SETTINGS

P. Holt Wilson, University of North Carolina, Greensboro
Jared Webb, University of North Carolina, Greensboro
Megan Martin, University of North Carolina, Greensboro
Arren Duggan, University of North Carolina, Greensboro

In this session, we share our work in conceptualizing and using rehearsals with practicing secondary mathematics teachers in professional development and provide evidence of teacher learning through an examination of their classroom enactments.

Session 77 **Turtle Rock A**
Equity and Mathematics Education
Individual Session

FACING RESISTANCE IN THE PREPARATION OF CRITICAL MATHEMATICS TEACHERS

Kate R. Johnson, Brigham Young University
Alisa Claire Belliston, University of Wisconsin, Madison

When preparing critical mathematics teachers, mathematics teacher educators may face resistance. We highlight two cases to illustrate the natures of possible resistance and provide tools for illuminating the invisible beliefs and assumptions that disrupt opportunities to learn about critical pedagogies.

Session 78 **Turtle Rock B**
Teaching and Learning with Technology
Discussion Session

PROFESSIONAL DEVELOPMENT IN A SYNCHRONOUS VIRTUAL ENVIRONMENT

Azita Manouchehri, The Ohio State University
Dinglei Huang, The Ohio State University
Ali Marie Fleming, The Ohio State University

We will share our experience facilitating professional development in the virtual environment to engage the mathematics teacher education community in a conversation that might provide guidance on tools and organizational strategies for facilitating content-focused PD in a synchronous virtual environment.

Session 79 **Turtle Rock C**
School and University Partnerships and Projects
Extended Session (8:00 – 10:00 am)

MEASURING TEACHERS' PROMOTION OF THE STANDARDS FOR MATHEMATICAL PRACTICE

Jonathan David Bostic, Bowling Green State University
Gabriel Matney, Bowling Green State University

This session's purpose is for mathematics teacher educators to gain facility with a tool called the Standards for Mathematical Practice (SMP) look-for protocol. It may be used to evaluate teachers' promotion of the SMPs and foster discussions about professional growth.

AMTE **Twenty Years of Conference Moments**

"PRINCIPLES AND STANDARDS FOR SCHOOL MATHEMATICS: LESSONS FROM THE AMTE CONFERENCE"

3rd ANNUAL CONFERENCE, 1999, IN CHICAGO, IL

JANUARY 28-30, 2016
20
TWENTIETH ANNUAL AMTE CONFERENCE

In the General Keynote Session, Enrique Galindo, Mary Lindquist and Gary Martin led a discussion of the NCTM *Principles and Standards for School Mathematics*, one year before the public release of this important document.

Session 80 **Theater**
School and University Partnerships and Projects
Brief Report Session

CHANGES IN TEACHERS' KNOWLEDGE OF CONTENT AND STUDENTS' MATHEMATICS: RESULTS FROM A THREE-YEAR PARTNERSHIP

Laura B. Kent, University of Arkansas
Lynne Nielsen, Louisiana Tech University
Shannon Wayne Dingman, University of Arkansas

We describe the results of a three-year MSP project involving university faculty and grades 4-8 mathematics teachers that emphasized students' mathematical thinking in rational number concepts and algebraic reasoning. Innovative methods of delivery and collaboration will also be discussed.

THE SOUTH TEXAS STEM CENTER: A COLLABORATIVE APPROACH TO PROFESSIONAL DEVELOPMENT

Emily Bonner, University of Texas, San Antonio
Lupita Carmona, University of Texas, San Antonio

This session will report on the development, implementation, and initial findings of a collaborative STEM-focused professional development program that centers on culturally responsive, problem-based teaching strategies. Findings indicate that the STEM Center has affected teacher beliefs, practice, and student outcomes.

Session 81 **Oak Creek**
Development of Mathematics Teacher Educators
Individual Session

M-SCAN MEASURE: A FRAMEWORK FOR EXAMINING MATHEMATICS TEACHING PRACTICES

Robert Q. Berry, University of Virginia

The M-Scan Measure provides teacher educators a framework for examining mathematics teaching practices. This project uses a consultancy model in which developing mathematics teacher educators use observation data to help preservice teachers in self-analysis of their mathematics teaching.

Session 82 **Pelican Hill**
Pedagogical Content Knowledge
Individual Session

INTEGRATING PRESERVICE SECONDARY MATHEMATICS TEACHERS' KNOWLEDGE

Matthew Winsor, Illinois State University

I will present a model for secondary mathematics teacher preparation that connects teachers' knowledge of mathematics and pedagogy through the integration of a content and methods course. The model, strategies for implementation, and research findings will be discussed.

Session 83 **Quail Hill**
Teaching and Learning with Technology
Individual Session

INFLUENTIAL PRACTICES TO CHANGE BELIEFS IN A HYBRID MATHEMATICS SPECIALIST PROGRAM

Amanda Sawyer, James Madison University
Robyn Ovrick, University of Georgia

We investigated specific activities in a hybrid mathematics specialist program to determine if they influenced a mathematical belief change. In this session, we will explore these online activities. Please bring a computer and a current Wikispace account.

Session 84 **Santiago**
Preservice Teacher Field Experiences
Individual Session

PRESERVICE TEACHERS' BELIEFS ABOUT TRANSFER BEFORE AND AFTER THEIR ENGAGEMENT IN A MATHEMATICS METHODS COURSE

Leighton McIntyre, University of Georgia
Jaime Marie Diamond, University of Georgia

In this session, presenters discuss findings regarding preservice teachers' beliefs about students' transfer of learning, before and after their engagement in an elementary mathematics methods course with a field component. Implications for teacher preparation and development will also be considered.

Session 85 **Shady Canyon**
Pedagogical Content Knowledge
Individual Session

RE-ENVISIONING THE SCHOOL DAY: A FIELD-BASED PROJECT FOCUSED ON DEVELOPING MATHEMATICAL PRACTICES IN THE CCSSM

Temple Walkowiak, North Carolina State University
Cyndi Edgington, North Carolina State University

We present a field-based, cross-curricular project focused on developing elementary preservice teachers' understanding of the Standards for Mathematical Practice in conjunction with related practices in science and ELA national standards. We share the project's development and samples of PSTs' work.

Session 86 **Trabuco**
Teaching and Learning with Technology
Individual Session

CASE-STUDY REFLECTIONS OF INSERVICE TEACHERS ON COURSEWORK IN THE USE OF TECHNOLOGY IN MATHEMATICS CLASSROOMS

Travis Austin Olson, University of Nevada, Las Vegas
Amy Beth Adkins, University of Nevada, Las Vegas

We will engage participants in discussions of inservice teachers' technology usage as evidenced in our case-study research analysis conducted to understand ways in which inservice teachers conceptualized coursework focused on the current dynamic landscape of opportunities to integrate technology into mathematics classrooms.

Session 87 **Woodbridge**
Mathematical Content Knowledge
Individual Session

EXPLORING ALGEBRA READINESS WITH TEACHERS AND STUDENTS

David Feikes, Purdue University North Central
David Pratt, Purdue University North Central

The session will explore algebra readiness, how teachers can help their students develop algebra readiness, and present results of teacher learning and student growth. We will share and discuss examples of our professional development activities and approach.

Session 88 **Turtle Rock A**
Pedagogical Content Knowledge
Brief Report Session

A UNIFYING FRAMEWORK USED IN TEACHING A SECONDARY MATHEMATICS METHODS COURSE

Stephen Bismarck, University of South Carolina Upstate

There are many different practices covered in a secondary mathematics methods course, but how can we help our preservice teachers make connections between them and develop rationales for implementing them? A unifying framework using models for instruction will be presented.

ADVANCED PLACEMENT STATISTICS TEACHING KNOWLEDGE: DIRECTIONS FOR TEACHER PREPARATION AND PROFESSIONAL DEVELOPMENT

Brenna J. Haines, Wichita State University

The College Board's Advanced Placement Statistics course requires teachers to utilize a unique blend of teaching knowledge specific to the subject. This study identifies key content and pedagogical content knowledge areas to focus and improve teacher preparation and professional development.

Session 89 **Turtle Rock B**
Equity and Mathematics Education
Individual Session

A CRITICAL ANALYSIS OF THE RESEARCH DIVIDE BETWEEN MATHEMATICS EDUCATION AND SPECIAL EDUCATION

Rachel Lambert, Chapman University
Paulo Tan, University of Tulsa

What is the evidence for educating children with disabilities in reform mathematics? This presentation will analyze the state of mathematics education for students with disabilities, including underlying theories of pedagogy and dis/ability, and how these issues affect mathematics teacher educators.

Twenty Years of Conference Moments

"MATHEMATICS TEACHER EDUCATION AND EQUITY"

11th ANNUAL CONFERENCE, 2007, IN IRVINE, CA

It was our first time in Irvine, CA at this very hotel! In the opening session, AMTE began to address issues of equity in research and practice in the opening session with a panel discussion led by Marta Civil, Megan Franke, Rochelle Gutiérrez, Richard Kitchen, and Dorothy White. This was the first of many AMTE initiatives to address important issues of equity across our organization.

JANUARY 28-30, 2016
20
TWENTIETH ANNUAL AMTE CONFERENCE

Session 90 **Theater**
Mathematical Content Knowledge
Brief Report Session

TRANSFORMING PRESERVICE TEACHERS' PROPORTIONAL REASONING

Kim Helene Johnson, West Chester University

This brief report will highlight specific tasks and targeted questioning used to elicit proportional reasoning in PSTs. Based on transformative learning theory, these disorienting dilemmas allowed PSTs to engage in discourse to overcome their challenges with understanding ratio and proportion.

PRESERVICE TEACHERS' INTERPRETATION AND USE OF FRACTIONS AS OPERATORS

Eun Jung, University of Georgia

This presentation explores potential issues with the timing and content of math curricula relating to students' understanding and use of fractions as operators. Could there be an overemphasis on understanding fractions as quantities, causing long-term limitations in students' fractional understanding?

ACQUISITION, UTILIZATION, AND RETENTION OF FRACTION CONCEPTS FOR STRUGGLING MIDDLE GRADE STUDENTS

Rebecca Darrough, Austin Peay State University

This session provides information for teacher educators on strategies used by struggling middle school students to solve fraction tasks. These students were enrolled in a Tier II RtI mathematics course focused on developing conceptual understanding of fractions.

CULTIVATING MATHEMATICAL HABITS OF MIND IN PRESERVICE TEACHERS: GEOMETRIC THINKING WITH RATIONAL NUMBERS

Jaclyn Marie Murawska, Saint Xavier University

This study examined mathematical habits of mind that can be cultivated in preservice teachers enrolled in the mathematics content course. Issues related to choice and implementation of a rational number task to elicit geometric habits of mind will be shared.

Session 91 **Salon A**
Teacher Professional Development
Symposium

LEVERAGING COLLABORATION THROUGH INSTRUCTIONAL ACTIVITIES: NEW LEARNING ACROSS TWO PROFESSIONAL DEVELOPMENT PROJECTS

Angela Chan Turrou, University of California, Los Angeles
Megan Franke, University of California, Los Angeles
Allison Hintz, University of Washington, Bothell
Nicholas C. Johnson, University of California, Los Angeles
Brandon McMillan, University of California, Los Angeles
Mary Candace Raygoza, University of California, Los Angeles
Adrian Cunard, University of Washington
Becca Lewis, University of Washington
Kendra Lomax, University of Washington

Presenters will engage participants around two approaches to using Instructional Activities in PD, related research findings, and the role of the IAs as a tool for generative learning, shared innovation, and teacher collaboration within and across schools (PreK and K-5).

Session 92 **Salon B**
Mathematics Education Policy and Program Issues
Symposium

TRANSFORMING SECONDARY MATHEMATICS TEACHER PREPARATION AT SCALE

W. Gary Martin, Auburn University
Emina Alibegovic, University of Utah
Ed Dickey, University of South Carolina
Marilyn Elaine Strutchens, Auburn University

A networked improvement community of school-university partnerships is designing solutions to identified problems in secondary mathematics teacher preparation. This session will report on its design for spreading improvements in particular areas across the community to promote and sustain program transformation.

Session 93 **Oak Creek**
Pedagogical Content Knowledge
Symposium

PRACTICING PRACTICES: USING LESSONSKETCH TO FACILITATE THE DEVELOPMENT OF COMPLEX TEACHING PRACTICES

Rob Wieman, Rowan University
Wendy Rose Aaron, Oregon State University
Sarah Quebec Fuentes, Texas Christian University
Taffy McAneny, West Chester University
Jill Perry, Rowan University
Janet Dawn Walkoe, University of Maryland
Corey Webel, University of Missouri

Presenters will share interactive depictions of classroom episodes that target high leverage teaching practices and discuss the results of using these activities with practicing and prospective teachers. Participants will consider the potential usefulness of these activities in their own practice.

Session 94 **Pelican Hill**
Teacher Professional Development
Symposium

MULTIPLE MODELS FOR PRACTICE-BASED TEACHER DEVELOPMENT

Rheta Rubenstein, University of Michigan, Dearborn
Rebekah Elliott, Oregon State University
Hala Ghousseini, University of Wisconsin
J. Michael Shaughnessy, Portland State University
Christopher Nazelli, Wayne State University
Monica G. McLeod, Wayne State University

Participants will learn about four models for practice-based teacher development, how each engages teachers in supporting student learning, and implementation concerns for each. Participants will consider how these models or aspects of them might work in their own programs.

Session 95 **Quail Hill**
Development of Mathematics Teacher Educators
Symposium

SUPPORTING MATHEMATICS TEACHER EDUCATORS' WORK WITH PROSPECTIVE ELEMENTARY TEACHERS: A LOOK THROUGH MULTIPLE PERSPECTIVES

Cynthia E. Taylor, Millersville University of Pennsylvania
Aina Appova, The Ohio State University
Rachael M. Welder, Western Washington University

Results will be presented from three research studies focused on the work of mathematics teacher educators (MTEs) with prospective elementary teachers (PTs). Discussion will focus on professional experiences, goals, and instructional supports for MTEs who teach content/methods courses for PTs.

Session 96 **Saddleback**
Pedagogical Content Knowledge
Symposium

POSITIONING FORMATIVE ASSESSMENT (FA) AS A COMMON THEME ACROSS MULTIPLE THEORETICAL INSTRUCTIONAL FRAMEWORKS

Edward Silver, University of Michigan
Valerie Lynn Mills, National Council of Supervisors of Mathematics
Caroline Ebby, University of Pennsylvania
Jennifer Marie Langer-Osuna, Stanford University
Margaret Smith, University of Pittsburgh
Thomasenia Lott Adams, University of Florida
Karen Karp, University of Louisville

Formative assessment is often treated as a stand-alone topic, disconnected from discussions of other popular instructional reform ideas (e.g., CGI or Discourse Tools). A panel of experts on five instructional frameworks will discuss how formative assessment relates to each and supports coherence across frameworks.

Session 97 **Santiago**
Mathematical Content Knowledge
Symposium

SUPPORTING TEACHERS' CAPABILITIES TO ENGAGE STUDENTS IN CONSTRUCTING VIABLE ARGUMENTS AND CRITIQUING OTHERS' REASONING

Yi-Yin (Winnie) Ko, Indiana State University
Sean P. Yee, University of South Carolina
Justin D. Boyle, University of Alabama
Sarah K. Bleiler, Middle Tennessee State University
Chepina Rumsey, Kansas State University
Ian Whitacre, Florida State University
Kristin Lesseig, Washington State University

In this symposium, we share the design and implementation of our instructional approaches aimed at developing preservice or inservice mathematics teachers' capabilities to engage students in constructing viable arguments and critiquing the reasoning of others.

Session 98 **Shady Canyon**
Equity and Mathematics Education
Discussion Session

ACCESS, AGENCY AND ALLIES: A SYSTEMATIC APPROACH TO ADDRESSING AN EQUITABLE SYSTEM

Beth Herbel-Eisenmann, Michigan State University
Mary Q. Foote, Queens College, City University of New York
Tonya Gau Bartell, Michigan State University
Courtney Koestler, Ohio University
Ayse Yolcu, University of Wisconsin, Madison
Durrell A. Jones, Michigan State University
Carlos Alfonso Lopez-Leiva, University of New Mexico

We describe and discuss a project designing, facilitating and studying PD with 20 middle school teachers that takes an "equitable systems" approach. We consider access, agency, and allies in relationship to students, mathematics teachers, and mathematics teacher educators.

Session 99 **Trabuco**
Teaching and Learning with Technology
Symposium

TECHNOLOGY-BASED WAYS TO DEVELOP PRESERVICE TEACHER NOTICING IN THREE ELEMENTARY METHODS COURSES

Cathery Yeh, University of California, Irvine
Melissa Marie Soto, San Diego State University
Theodore Chao, The Ohio State University
Valerie Henry, University of California, Irvine
Jody Lynn Guarino, University of California, Irvine

This session focuses on the use of technological innovations to develop the professional noticing of preservice teachers. We showcase analysis-based innovations from three elementary mathematics methods courses and will engage the audience on implementing these innovations in their own work.

Session 100 **Woodbridge**
Pedagogical Content Knowledge
Discussion Session

SUPPORTING PROSPECTIVE SECONDARY TEACHERS' UNDERSTANDING OF THE COMMON CORE STANDARDS FOR MATHEMATICAL PRACTICE

Kristen Bieda, Michigan State University
Lorraine M. Males, University of Nebraska, Lincoln

Integrating standards into one's practice is a skill that new teachers have to learn (Feiman-Nemser, 2003). Two teacher educators will discuss their use of a LessonSketch module to help secondary PSTs understand and implement the CCSS Standards for Mathematical Practice.

Session 101 **Turtle Rock A**
Mathematical Content Knowledge
Symposium

PREPARING PRESERVICE TEACHERS (K-8) TO TEACH GEOMETRY

Dana C. Cox, Miami University
Jane-Jane Lo, Western Michigan University
Michelle Cirillo, University of Delaware
Margaret Rathouz, University of Michigan, Dearborn

This panel discussion will explore how MTEs are interpreting and enacting contemporary standards documents. Participants will encounter varied perspectives on the required content, the role of technology, and expectations about proof practice in courses on elementary and middle grades geometry.

Session 102 **Turtle Rock B**
Mathematics Education Policy and Program Issues
Symposium

LEARNING TO TEACH MATHEMATICS: METHODOLOGICAL CHALLENGES IN A CROSS-NATIONAL STUDY OF NOVICE MATHEMATICS TEACHERS

Maria Teresa Tatto, Michigan State University
Wendy Smith, University of Nebraska, Lincoln

This session presents the methodological challenges in designing a research study to explore the challenges novice teachers of mathematics encounter in their first five years of teaching in the current climate of high stakes testing environments across twelve countries.

Session 103 **Turtle Rock C**
Development of Mathematics Teacher Educators
Discussion Session

EXPLORING FRAMEWORKS: BUILDING OUR PRACTICE

Tracy L. Weston, Middlebury College
Signe E. Kastberg, Purdue University

Strong conceptual frameworks can assist MTEs in their work to develop instructional activities that support MKT. The potential of The Knowledge Quartet framework will be discussed and we will share how we use the framework in methods coursework.

AMTE **Twenty Years of Conference Moments**

"MATHEMATICS EDUCATION IN A TIME OF CRISIS: FOR WHAT PURPOSE?"

17TH ANNUAL CONFERENCE, 2013, IN ORLANDO, FL

In our first trip to the Rosen Plaza Hotel in Orlando, Rico Gutstein challenged us to value the importance of social justice in mathematics education.

JANUARY 28-30, 2016
20
TWENTIETH ANNUAL AMTE CONFERENCE

FRIDAY, JANUARY 29, 2016 — 11:30 AM – 1:00 PM

AMTE

FRIDAY LUNCH

Salon C/D/E

OVERVIEW OF FRIDAY AFTERNOON, JANUARY 29, 2016

	1:00 PM – 2:00 PM	2:15 PM – 3:00 PM
Theater	104. Preservice Teacher Field Experiences Brief Report Session	118. Pedagogical Content Knowledge Brief Report Session: Knowledge of Students' Thinking
Salon A	105. AMTE's Standards for Mathematics Teacher Preparation: Share Your Input - Bezuk, Bay-Williams, Clements & Martin	119. Teaching Mathematics in the Digital Age: Tools to Support Preservice and Early Career Teachers - Staley
Salon B	106. Professional Learning for Leading Mathematics Discussions - Shaughnessy, Garcia, McNamara & Willis	120. Two Curriculum Metaphors: Implications for Curricular Design, Digital Materials, and Common Core Implementation - Drake, Roth McDuffie & Davis
Oak Creek	107. An Instructional Mathematics Coaching Model: A Means to Depth and Specificity - Stein & Bill	
Pelican Hill	108. Developing Statistics Knowledge and Effective Mathematics Teaching Practices in High School Teachers - Steele & McLeod	121. Preservice Teachers' Understanding of Whole and Set/Area Models for Fraction - Baek, Safak & Tobias
Quail Hill	109. Examining How Professional Development Facilitators and Teacher Educators Help Establish a Culture of Risk-Taking - Fox & Nieman	122. Developing a Practice-Based Assessment of Preservice Secondary Teachers - Sturgill & Hallman-Thrasher
Saddleback	110. Problems of Practice for Researchers Focused on Mathematics Specialists (MS) and Coaches - Rigelman & McGatha	
Santiago	111. Problem Solving to Develop Teachers' Mathematical Practice and Raise Awareness for Teaching Practice - Venenciano, Manes & Yagi	123. It's Not an Issue in My Class: Teachers' Shifts in Noticing Student Participation - Hackett
Shady Canyon	112. A Calculus Course for Prospective Middle Grades Mathematics Teachers - Jones & Klespis	124. Adjusting the Contrast: Helping Make Learners' Knowledge and Skills More Salient to Preservice Teachers - de Araujo
Trabuco	113. Preparing Teachers to Plan and Implement Technology-Based Algebra Tasks Using Open Access Tools - McCulloch, Lee, Hollebrands, Chandler & Lovett	
Woodbridge	114. Designing Complex Instruction Tasks to Support Prospective Teacher Learning in Elementary Content and Methods Courses - Parks, Felton-Koestler, Eli, Wood, Wager & Crespo	
Turtle Rock A	115. Understanding Mathematical Modeling: A Framework for Faculty Practice - Abel & Salinas	125. Redesigning a STEM MAT Program with Emphasis on Field-Based Mentoring: Lessons Learned - Liebars & Beyers
Turtle Rock B	116. Empowering Algebra Teachers with Online Professional Development Opportunities: Algebra Nation's Challenges and Successes - Schackow, Cugini & Prinstein	126. Preservice Mathematics Teachers' Multiple Foci of Learning: Engaging Multiple Aspects of TPACK Through Isolation - Brakoniecki
Turtle Rock C	117. Planning for and Facilitating Coached Rehearsals of Secondary Novice Mathematics Teachers Leading Class Discussions - Selling & Baldinger	127. Prospective Elementary Teachers' Knowledge of Multiplicative Structure: A Hypothetical Learning Trajectory - Feldman & Dickman

OVERVIEW OF FRIDAY AFTERNOON, JANUARY 29, 2016

	3:30 PM – 4:15 PM
Theater	128. Mathematics Education Policy and Program Issues Brief Report Session
Salon A	129. Tools for Connecting Teaching Practices to Student Learning - Bay-Williams & McGatha
Salon B	130. "Substitutes in Their Own Classrooms" and Other Contextual Dilemmas of Beginning Elementary Mathematics Teachers - Schwartz
Oak Creek	131. Preservice Teachers' Perceptions of a Hybrid Fieldwork Experience - Gallagher, King, Suh & Hargrove
Pelican Hill	132. Developing Elementary Preservice Teachers' Productive Dispositions for Mathematical Problem Solving - Sjostrom & Bennett
Quail Hill	133. Unpacking Mathematical and Pedagogical Thinking with Trello and Google Docs: Instructional Technology for Methods Courses - Elrod
Saddleback	134. Teaching Mathematics Online - Tanner
Santiago	135. A Report of the Redesign of Elementary Math Methods in the Common Core Era - Cobbs & Disney
Shady Canyon	136. Developing Secondary Preservice Teachers' Noticing of Students' Mathematical Thinking: A Focus on Responding - Casey, Monson & Krupa
Trabuco	137. StoryCircles in Mathematics Teacher Education: Their Role in Supporting Beginning Teachers Learning to Practice - Milewski
Woodbridge	138. Using an "Equal Sharing" Approach to Fractions to Support Both Teacher and Student Learning - Lewis
Turtle Rock A	139. Preparing Preservice Teachers to Leverage Mathematics Consultations to Meet the Needs of Students with Exceptionalities - van Ingen & Eskelson
Turtle Rock B	140. Using Learning Trajectories to Structure Professional Development - Bargagliotti
Turtle Rock C	141. Teachers' Ways of Noticing Students' Engagement in Mathematical Practices - Strand

Session 104 **Theater**
Preservice Teacher Field Experiences
Brief Report Session

AN EXAMINATION OF A PRESERVICE ELEMENTARY TEACHER'S ENACTED LESSONS AND VISIONS OF HIGH-QUALITY MATHEMATICS

Ashley Whitehead, North Carolina State University

This session reports on a case study in a STEM-focused elementary education program. Interviews and teaching observations were conducted and an analysis of the enacted lessons and visions of effective mathematics are presented. Implications for elementary education programs are discussed.

PRESERVICE TEACHERS' IMPRESSIONS OF THE STANDARDS FOR MATHEMATICAL PRACTICE: CONTRASTING TWO LEVELS OF EXPERIENTIAL AUTHENTICITY

Janet Bowers, San Diego State University
John Gruver, San Diego State University

This presentation analyzes qualitative differences between two groups of preservice teachers using the Standards for Mathematical Practice (SMPs) to reflect on pedagogy. Results indicate that the group placed in the more authentic setting provided deeper examples of student engagement.

THE IMPACT OF FIELD EXPERIENCES ON PRESERVICE TEACHERS WHO WERE HOMESCHOOLED AS CHILDREN

Christy Danko Graybeal, Hood College

When discussing the apprenticeship of observation, it is assumed that preservice teachers have had experience as students in typical mathematics classrooms. What happens when they have not had such experiences because they were homeschooled as children?

Session 105 **Salon A**
Mathematics Education Policy and Program Issues
Discussion Session

AMTE'S STANDARDS FOR MATHEMATICS TEACHER PREPARATION: SHARE YOUR INPUT

Nadine Bezuk, San Diego State University
Jennifer M. Bay-Williams, University of Louisville
Douglas H. Clements, University of Denver
W. Gary Martin, Auburn University

AMTE has assembled a working group to develop standards on the initial preparation of mathematics teachers in grades PreK-12. We will share the scope of the project and provide an overview to the work in progress.

Session 106 **Salon B**
Pedagogical Content Knowledge
Symposium

PROFESSIONAL LEARNING FOR LEADING MATHEMATICS DISCUSSIONS

Meghan Shaughnessy, University of Michigan
Nicole Marie Garcia, University of Michigan
Julie McNamara, California State University, East Bay
Amber Willis, University of Michigan

We focus on a core practice of teaching: leading mathematics discussions. Three presentations report on efforts to provide practice-based learning experiences for (a) teacher candidates, (b) practicing teachers, and (c) teacher educators teaching teacher candidates to lead skillful mathematics discussions.

Session 107 **Oak Creek**
School and University Partnerships and Projects
Extended Session (1:00 – 3:00 pm)

AN INSTRUCTIONAL MATHEMATICS COACHING MODEL: A MEANS TO DEPTH AND SPECIFICITY

Mary Kay Stein, University of Pittsburgh
Victoria Lynn Bill, University of Pittsburgh

Work by a partnership among a state department of education, university researchers and a professional development provider on the complex challenges of coach-teacher planning and enactment of high-quality mathematics lessons will be described. Data will be reported.

Session 108 **Pelican Hill**
Teacher Professional Development
Individual Session

DEVELOPING STATISTICS KNOWLEDGE AND EFFECTIVE MATHEMATICS TEACHING PRACTICES IN HIGH SCHOOL TEACHERS

Michael D. Steele, University of Wisconsin, Milwaukee
Kevin McLeod, University of Wisconsin, Milwaukee

The demands on secondary teachers' statistical knowledge for teaching have increased with Common Core. We share outcomes from a project designed to develop teachers' statistical knowledge for teaching alongside effective mathematics teaching practices consistent with NCTM's Principles to Actions.

Session 109 **Quail Hill**
Teacher Professional Development
Individual Session

EXAMINING HOW PROFESSIONAL DEVELOPMENT FACILITATORS AND TEACHER EDUCATORS HELP ESTABLISH A CULTURE OF RISK-TAKING

Alison Fox, University of Washington
Hannah Jane Nieman, University of Washington

This session presents an analysis of how facilitators foster risk-taking in collaborative, practice-based teacher learning environments/contexts. During the session we will describe our analysis, examine video examples of facilitators' practices, and discuss implications for future research and teacher learning.

Session 110 **Saddleback**
Mathematics Education Policy and Program Issues
Extended Session (1:00 – 3:00 pm)

PROBLEMS OF PRACTICE FOR RESEARCHERS FOCUSED ON MATHEMATICS SPECIALISTS (MS) AND COACHES

Nicole Rigelman, Portland State University
Maggie B. McGatha, University of Louisville

We will provide an update on MS initiatives, related research projects, and key learning from a conference for MS researchers. The presentation will ground participants for a concentrated discussion addressing issues in MS research and setting future research collaborations.

Session 111 **Santiago**
Teacher Professional Development
Individual Session

PROBLEM SOLVING TO DEVELOP TEACHERS' MATHEMATICAL PRACTICE AND RAISE AWARENESS FOR TEACHING PRACTICE

Linda Venenciano, University of Hawaii, Manoa
Michelle Manes, University of Hawaii, Manoa
Seanyelle Yagi, Hawaii Department of Education

We share a professional development design that develops teachers' mathematical practice and supports transfer to their instruction. Project findings show that teacher engagement in extended problem solving serves as a means for promoting teachers' learning, thinking about, and practicing mathematics.

Session 112 **Shady Canyon**
Mathematical Content Knowledge
Individual Session

A CALCULUS COURSE FOR PROSPECTIVE MIDDLE GRADES MATHEMATICS TEACHERS

Dusty Jones, Sam Houston State University
Mark Klespis, Sam Houston State University

We describe our course on concepts and applications of calculus emphasizing the use of technology. Participants will discuss the rationale for such a course, the sequence of topics, and its placement within a program for prospective middle grades mathematics teachers.

Session 113 **Trabuco**
Teaching and Learning with Technology
Extended Session (1:00 – 3:00 pm)

PREPARING TEACHERS TO PLAN AND IMPLEMENT TECHNOLOGY-BASED ALGEBRA TASKS USING OPEN ACCESS TOOLS

Allison McCulloch, North Carolina State University
Hollylynne Lee, North Carolina State University
Karen Hollebrands, North Carolina State University
Kayla Chandler, North Carolina State University
Jennifer Nickell Lovett, North Carolina State University

Mathematics teacher educators will have opportunities to engage in algebraic and pedagogical tasks using GeoGebra while being introduced to materials that have been designed specifically for preparing teachers to teach secondary algebraic concepts with technology. Bring your laptop!

Session 114 **Woodbridge**
Equity and Mathematics Education
Extended Session (1:00 – 3:00 pm)

DESIGNING COMPLEX INSTRUCTION TASKS TO SUPPORT PROSPECTIVE TEACHER LEARNING IN ELEMENTARY CONTENT AND METHODS COURSES

Amy Noelle Parks, Michigan State University
Mathew D. Felton-Koestler, Ohio University
Jennifer Ann Eli, University of Arizona
Marcy B. Wood, University of Arizona
Anita A. Wager, University of Wisconsin, Madison
Sandra Crespo, Michigan State University

The session will offer mathematics educators who work with prospective elementary teachers the opportunity to learn about the use of Complex Instruction pedagogies in elementary content and methods courses and the opportunity to create tasks for their local contexts.

Session 115 **Turtle Rock A**
Mathematical Content Knowledge
Individual Session

UNDERSTANDING MATHEMATICAL MODELING: A FRAMEWORK FOR FACULTY PRACTICE

Todd Abel, Appalachian State University
Tracie McLemore Salinas, Appalachian State University

This session will explore understanding of mathematical modeling and implications for teacher education. Participants will discuss teacher conceptions of modeling and barriers to developing shared understandings, then explore a framework developed to assist in the classroom implementation of modeling.

Session 116 **Turtle Rock B**
Teacher Professional Development
Individual Session

EMPOWERING ALGEBRA TEACHERS WITH ONLINE PROFESSIONAL DEVELOPMENT OPPORTUNITIES: ALGEBRA NATION'S CHALLENGES AND SUCCESSES

Joy Schackow, University of Florida
Stephanie Cugini, University of Florida
Alexandra Prinstein, University of Florida

This interactive session will inform mathematics teacher educators about the online professional development opportunities for Algebra I teachers that Algebra Nation has designed and implemented. Presenters will share successes and challenges of a teacher wall platform and content-specific video chats.

Session 117 **Turtle Rock C**
Pedagogical Content Knowledge
Individual Session

PLANNING FOR AND FACILITATING COACHED REHEARSALS OF SECONDARY NOVICE MATHEMATICS TEACHERS LEADING CLASS DISCUSSIONS

Sarah Kate Selling, University of Michigan
Erin E. Baldinger, University of Minnesota

This session will stimulate discussion about the work of the teacher educator in facilitating coached rehearsals in methods courses. Participants will examine videos of discussion facilitation rehearsals to explore how teacher educators might implement this pedagogy of practice.

AMTE **Twenty Years of Conference Moments**

"LESSONS FROM RESEARCH: WHAT RESEARCH DOES AND DOES NOT TELL US"

16th ANNUAL CONFERENCE, 2012, IN FORT WORTH, TX

JANUARY 28-30, 2016
20
TWENTIETH ANNUAL AMTE CONFERENCE

Celebrating the 20th Anniversary year of AMTE, we gathered in Fort Worth where Doug Clements gave us a "state of the field" of research informing practice in the General Keynote Session.

FRIDAY, JANUARY 29, 2016 — 2:00 PM – 3:00 PM

AMTE

MATHEMATICS TEACHER PREPARATION STANDARDS — Think Tank Room

Come by to share your feedback on AMTE's Standards of Mathematics Teacher Preparation, which focus on the initial preparation of mathematics teachers in grades PreK-12. Members of the AMTE writing group will be there to hear from you.

Session 118 **Theater**
Pedagogical Content Knowledge
Brief Report Session

USING BRANCHING EXPERIENCES IN LESSONSKETCH TO FOSTER ELEMENTARY PRESERVICE TEACHERS' PEDAGOGICAL CONTENT KNOWLEDGE

Karl Wesley Kosko, Kent State University

Elementary preservice teachers' descriptions of students' mathematical thinking were analyzed following engagement in Branching Experiences, a simulation of mathematics teaching embedded in LessonSketch.org. Findings suggest preservice teachers who cite connections with course materials are more likely to choose probing questions.

ASSESSING TEACHERS' ABILITY TO INTERPRET AND RESPOND TO STUDENTS' MATHEMATICAL THINKING

Michele Carney, Boise State University
Gwyneth Retta Hughes, Boise State University
Jonathan Brendefur, Boise State University
Laurie Overman Cavey, Boise State University

We will describe the initial development of an assessment to measure teachers' ability to interpret and respond to students' mathematical thinking. We will report on a cyclical process of item development including how analysis of responses to free-response items informs development of complex multiple-choice items.

Session 119 **Salon A**
NCSM Presidential Exchange Session

TEACHING MATHEMATICS IN THE DIGITAL AGE: TOOLS TO SUPPORT PRESERVICE AND EARLY CAREER TEACHERS

John William Staley, National Council of Supervisors of Mathematics

The mathematics classroom and role of the teacher is changing as digital resources and technology become more available. Participants will consider two key pillars of educational quality - student learning and professional learning as they explore a collection of resources to support the teaching and learning of mathematics in the digital age.

Session 120 **Salon B**
Mathematics Education Policy and Program Issues
Individual Session

TWO CURRICULUM METAPHORS: IMPLICATIONS FOR CURRICULAR DESIGN, DIGITAL MATERIALS, AND COMMON CORE IMPLEMENTATION

Corey Drake, Michigan State University
Amy Roth McDuffie, Washington State University, Tri-Cities
Jon D. Davis, Western Michigan University

We discuss two broad curriculum metaphors – curriculum as delivery mechanism and curriculum as dialogic device. We describe the metaphors, implications for curriculum design and digital materials, and evidence for the metaphors in how teachers design lessons for the CCSSM.

Session 121 **Pelican Hill**
Mathematical Content Knowledge
Individual Session

PRESERVICE TEACHERS' UNDERSTANDING OF WHOLE AND SET/AREA MODELS FOR FRACTION

Jae M. Baek, Illinois State University
Elif Safak, Florida Gulf Coast University
Jennifer M. Tobias, Illinois State University

In this session, we will share our research on how preservice teachers identify wholes for given fractions and make sense of area- and set-model representations. Participants will discuss different levels of understanding these concepts and instructional implications.

Session 122 **Quail Hill**
Pedagogical Content Knowledge
Individual Session

DEVELOPING A PRACTICE-BASED ASSESSMENT OF PRESERVICE SECONDARY TEACHERS

Derek Sturgill, Ohio University
Allyson Hallman-Thrasher, Ohio University

We share how we developed a practice-based assessment of preservice secondary teachers' skills in responding to student misconceptions through role-playing. We discuss modifications to the assessment that resulted from a pilot implementation and share findings from the modified assessment.

Session 123 **Santiago**
Equity and Mathematics Education
Individual Session

IT'S NOT AN ISSUE IN MY CLASS: TEACHERS' SHIFTS IN NOTICING STUDENT PARTICIPATION

Maggie M. Hackett, University of Arizona

This qualitative study of a long-term professional development on Complex Instruction investigated the increased level of noticing from the teacher participants as they learned about status and its influence on their students' mathematical participation.

Session 124 **Shady Canyon**
Preservice Teacher Field Experiences
Discussion Session

ADJUSTING THE CONTRAST: HELPING MAKE LEARNERS' KNOWLEDGE AND SKILLS MORE SALIENT TO PRESERVICE TEACHERS

Zandra de Araujo, University of Missouri

This session will offer a brief overview of an innovative, early field experience that demonstrates how focusing on core practices can facilitate PSTs' learning inside the complexity of teaching. Participants will engage in discussion around different models of early field experiences.

Session 125 **Turtle Rock A**
School and University Partnerships and Projects
Individual Session

REDESIGNING A STEM MAT PROGRAM WITH EMPHASIS ON FIELD-BASED MENTORING: LESSONS LEARNED

Cathy Liebars, The College of New Jersey
James Edgar Richard Beyers, The College of New Jersey

Directors will provide an overview of the revised STEM MAT program that includes a year-long field placement in high-needs partner districts. Participants will learn about successes and benefits and discuss possible solutions to challenges that arose during implementation.

Session 126 **Turtle Rock B**
Teaching and Learning with Technology
Individual Session

PRESERVICE MATHEMATICS TEACHERS' MULTIPLE FOCI OF LEARNING: ENGAGING MULTIPLE ASPECTS OF TPACK THROUGH ISOLATION

Aaron Brakoniecki, Boston University

Session attendees will use the Internet to explore different aspects of TPACK around a particular mathematical concept. Study results of preservice elementary teachers will illuminate how tasks centered on one aspect of TPACK resulted in participants focusing on multiple aspects.

Session 127 **Turtle Rock C**
Mathematical Content Knowledge
Individual Session

PROSPECTIVE ELEMENTARY TEACHERS' KNOWLEDGE OF MULTIPLICATIVE STRUCTURE: A HYPOTHETICAL LEARNING TRAJECTORY

Ziv Feldman, Boston University
Benjamin Dickman, Boston University

This session presents an evidence-based hypothetical learning trajectory for prospective elementary teachers' developing understanding of multiplicative structure. Participants will examine and discuss classroom video data revealing four mathematical constructs that shaped the prospective teachers' thinking around multiplicative structure.

Session 128 **Theater**
Mathematics Education Policy and Program Issues
Brief Report Session

USING THE PROFESSIONAL NOTICING FRAMEWORK TO ASSESS SECONDARY PRESERVICE MATHEMATICS TEACHER KNOWLEDGE

Lisa Krause, University of Kentucky
Molly Fisher, University of Kentucky
Margaret J. Mohr-Schroeder, University of Kentucky

This session will describe a master's exam with individual and collaborative components that is centered on a framework of professional noticing. This exam required students to watch a teaching video, attend, interpret, and decide in relationship to students' mathematical abilities.

INVESTIGATING APPROACHES FOR RECRUITING INDIVIDUALS INTO SECONDARY MATHEMATICS TEACHER EDUCATION

Maria Lorelei Fernandez, Florida International University
Nicholas Oehm, Florida International University
Vishodana Thamotharan, Florida International University

Approaches for recruiting diverse individuals into mathematics teacher education explored as part of the Mathematics Teacher Education Partnership and FIUteach will be shared. Research on their effectiveness analyzed from survey, observation and interview data will be discussed with implications for recruitment.

Session 129 **Salon A**
Pedagogical Content Knowledge
Individual Session

TOOLS FOR CONNECTING TEACHING PRACTICES TO STUDENT LEARNING

Jennifer M. Bay-Williams, University of Louisville
Maggie B. McGatha, University of Louisville

NCTM Principles to Actions describes eight effective teaching practices. This session will explore a collection of tools and strategies that help preservice and inservice teachers make connections between teacher practices and students' opportunities to develop mathematical proficiency.

Session 130 **Salon B**
Teacher Professional Development
Individual Session

"SUBSTITUTES IN THEIR OWN CLASSROOMS" AND OTHER CONTEXTUAL DILEMMAS OF BEGINNING ELEMENTARY MATHEMATICS TEACHERS

Catherine Schwartz, East Carolina University

I examine how beginning elementary teachers in a mathematics-specific induction program negotiated their school contexts when attempting to implement their professional vision for teaching mathematics. After considering data, participants will discuss ways to support beginning teachers' agency in mathematics teaching.

Session 131 **Oak Creek**
Preservice Teacher Field Experiences
Individual Session

PRESERVICE TEACHERS' PERCEPTIONS OF A HYBRID FIELDWORK EXPERIENCE

Melissa Ann Gallagher, George Mason University
Lesley King, George Mason University
Jennifer M. Suh, George Mason University
Dori Hargrove, George Mason University

We will share an innovative math methods course in which we create a hybrid space with structured field experiences. We will explore the impact of this experience on our preservice teachers' reflections.

Session 132 **Pelican Hill**
Mathematical Content Knowledge
Individual Session

DEVELOPING ELEMENTARY PRESERVICE TEACHERS' PRODUCTIVE DISPOSITIONS FOR MATHEMATICAL PROBLEM SOLVING

Mary Pat Sjostrom, Winthrop University
Cory A. Bennett, Idaho State University

We will describe a study designed to develop preservice teachers' dispositions towards and persistence in problem solving. Data indicate that extended work on a single problem over several days encouraged PSTs to analyze the problem and consider alternative methods.

Session 133 **Quail Hill**
Teaching and Learning with Technology
Individual Session

UNPACKING MATHEMATICAL AND PEDAGOGICAL THINKING WITH TRELLO AND GOOGLE DOCS: INSTRUCTIONAL TECHNOLOGY FOR METHODS COURSES

Melody Elrod, University of South Florida

Unpacking pedagogical thinking about inquiry-based mathematics instruction can be challenging for preservice teachers and teacher educators. This session will provide participants with instructional technology tools to facilitate engagement in mathematical and pedagogical thinking during methods courses.

Session 134 **Saddleback**
AMATYC Presidential Exchange Session

TEACHING MATHEMATICS ONLINE

Jane D. Tanner, American Mathematical Association of Two Year Colleges

I will share my experience teaching mathematics courses online. We will discuss the advantages and the pitfalls to be avoided.

Session 135 **Santiago**
Pedagogical Content Knowledge
Discussion Session

A REPORT OF THE REDESIGN OF ELEMENTARY MATH METHODS IN THE COMMON CORE ERA

Georgia Cobbs, University of Montana
Andria Disney, University of Montana

This presentation provides a report of how one university redesigned its Elementary Math Methods course from K-8 to PreK-4 and 5-8 to reflect the CCSSM shifts. A summary will be shared of our teacher candidates' case study with a struggling student.

Session 136 **Shady Canyon**
Pedagogical Content Knowledge
Individual Session

DEVELOPING SECONDARY PRESERVICE TEACHERS' NOTICING OF STUDENTS' MATHEMATICAL THINKING: A FOCUS ON RESPONDING

Stephanie Casey, Eastern Michigan University
Debbie Monson, University of St. Thomas
Erin E. Krupa, Montclair State University

We will share a novel assignment used with secondary PSTs to develop their ability to respond to students' mathematical thinking. The development, implementation, and effectiveness of the assignment will be discussed.

Session 137 **Trabuco**
Preservice Teacher Field Experiences
Individual Session

STORYCIRCLES IN MATHEMATICS TEACHER EDUCATION: THEIR ROLE IN SUPPORTING BEGINNING TEACHERS LEARNING TO PRACTICE

Amanda Milewski, University of Michigan

StoryCircles involve a process of collaboratively representing instruction using storyboards. While lesson plans provide the teacher with a "bird's eye view" of instruction, storyboarding creates opportunities for teachers to learn from practice by visualizing a lesson while planning.

Session 138 **Woodbridge**
Mathematical Content Knowledge
Individual Session

USING AN "EQUAL SHARING" APPROACH TO FRACTIONS TO SUPPORT BOTH TEACHER AND STUDENT LEARNING

Becca Lewis, University of Washington

In this presentation, attendees will explore how an Equal Sharing approach to teaching fractions supported elementary school teachers to reorganize their instructional practices and contributed to improvement in students' conceptual understanding of fractions.

Session 139 **Turtle Rock A**
Equity and Mathematics Education
Individual Session

PREPARING PRESERVICE TEACHERS TO LEVERAGE MATHEMATICS CONSULTATIONS TO MEET THE NEEDS OF STUDENTS WITH EXCEPTIONALITIES

Sarah van Ingen, University of South Florida
Samuel L. Eskelson, University of South Florida

We created an opportunity for elementary preservice teachers to engage in mathematics consultations with special education colleagues in order to meet the learning needs of students with exceptionalities from their field placements. We report on the effectiveness of this intervention.

Session 140 **Turtle Rock B**
Teacher Professional Development
Discussion Session

USING LEARNING TRAJECTORIES TO STRUCTURE PROFESSIONAL DEVELOPMENT

Anna Bargagliotti, Loyola Marymount University

This session will present results of a professional development program that underwent three iterations and was designed around learning trajectories. The learning trajectories provided a framework for the design and enabled teachers to achieve deep learning of the concepts.

Session 141 **Turtle Rock C**
Pedagogical Content Knowledge
Individual Session

TEACHERS' WAYS OF NOTICING STUDENTS' ENGAGEMENT IN MATHEMATICAL PRACTICES

Krista Strand, University of Oregon

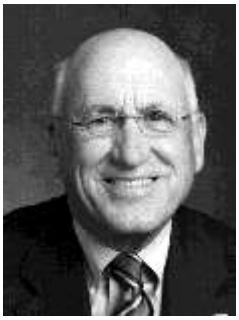
In this session, we explore the notion that teachers use different ways of noticing (perspectives) when gauging students' engagement in Mathematical Practices. Four perspectives will be introduced, and audience members will explore their own perspectives.

FRIDAY, JANUARY 29, 2016 — 4:45 PM – 6:15 PM

JUDITH JACOBS LECTURE — Salon A/B

MATHEMATICS TEACHER EDUCATION: NORMAL SCHOOLS TO NOW. WHAT'S THE FIT AND FUTURE FOR AMTE?

Francis (Skip) Fennell, McDaniel College



Teacher education and specifically mathematics teacher education has come a long way! This session will trace the roots of teacher education, with particular attention to mathematics teacher education, from normal schools to online efforts, including the creation of and the early years of AMTE. Importantly, it will also identify current and potential challenges for the field as well as suggest how mathematics teacher education, and specifically AMTE, can and must be engaged in issues impacting our field. This ranges from previous to ongoing and future initiatives regarding teacher preparation and professional development for mathematics teachers at all levels.

FRIDAY, JANUARY 29, 2016 — 6:15 PM – 7:30 PM

AMTE CONFERENCE DINNER — Salon C/D/E

SATURDAY, JANUARY 30, 2016 — 6:45 AM – 8:00 AM

AMTE BREAKFAST AND AFFILIATE MEETINGS — Salon C/D

Breakfast will be served in Salon C/D.

AFFILIATE MEETINGS — **Salon C/D**

Tables will be designated for AMTE Affiliate groups to meet during Saturday morning's breakfast. For table locations and a listing of the AMTE Affiliates, please see pages 11-13 of your conference program.

OVERVIEW OF SATURDAY MORNING, JANUARY 30, 2016

	8:00 AM – 9:00 AM	9:15 AM – 10:15 AM
Theater	142. Equity in Mathematics Education Brief Report Session: Teaching Prospective Teachers	157. Teaching and Learning with Technology Brief Report Session: Technology in the Classroom
Salon A	143. Reconceptualizing a Mathematical Domain Around Ways of Reasoning: The Case of Integers - Phillipp, Hawthorne & Lamb	158. You Know It When You See It: Defining and Assessing Productive Disposition - Siegfried & Philipp
Salon B	144. Comparing Two Specifications of Mathematics Needed by Elementary Teachers: Do the Differences Make a Difference? - Mortimer & Silver	159. Using Task Dialogues to Enhance Preservice Teachers' Abilities to Orchestrate Discourse - Hallman-Thrasher & Spangler
Oak Creek	145. Developing a Professional Vision of Mathematics Instruction by Learning to Learn from Teaching - van Es, Santagata, Sun, Tunney & Yeh	160. Pedagogical Analysis of Mathematical Modeling Teaching Experiments - Lewis & Czocher
Pelican Hill	146. Developing Prospective Secondary Mathematics Teachers' Understandings, Strategies, and Dispositions Regarding Mathematical Modeling - Zbiek	161. When 1 Square Foot Equals 12 Square Inches: Examining and Supporting Preservice Teachers' Geometrical Reasoning - Wickstrom, Carlson & Fulton
Quail Hill	147. Learning to Teach Through Video Analysis: Preservice Teachers Learning and Engaging in Participation Questioning Discourse - Switzer, Teuscher & Palsky	162. How "Something to Do in Class Tomorrow" Can Support Design of High-Quality Professional Development - Heck
Saddleback	148. Connecting Transformations and Functions with Technology - Hollebrands & McCulloch	163. Visualizing Equitable Discourse Practices in Methods Courses - Lim, Chauvot, Lee, Son & Lee
Santiago	149. Unpacking Teachers' Moves for Navigating Mathematical Complexities in Teacher Education - Wasserman	164. Identifying and Classifying Connections Between Abstract Algebra and Secondary School Mathematics - Suominen
Salon E	150. Listening and Responding to Student Voices: Fostering Caring Relationships with Prospective Teachers Through Pre-Course Meetings - Hohensee, Conner, Thanheiser & Jansen	165. A Proposed Mathematics Education Professional Development Process and Framework - Driskell, Bush, Ronau, Pugalee & Rakes
Shady Canyon	151. Engaging Teachers in Identifying the Point of Student Mathematical Thinking - Van Zoest, Fraser & Ochieng	166. Developing Preservice Teacher Noticing via the LessonSketch Platform - Amidon & Casey
Trabuco	152. Using Rehearsals with Secondary Preservice Mathematics Teachers - Arbaugh, Freeburn, Graysay & Konuk	167. Technology Tools that Support Mathematical Discourse in K-2 Classrooms - McCormick, Buffington & Larsen
Woodbridge	153. Math Specialist Institute (MSI): Developmental Trajectory, Needs, Support, and Identity - Bailey, Baker, Hjalmarson, Bolyard & King	168. Curriculum for Elementary Mathematics Content Courses: Developing Faculty Expertise - Chapin & Feldman
Turtle Rock A	154. Supporting Teachers as They Support Emerging Bilinguals with Mathematical Practices: A Teacher Learning Cycle - Truxaw & Rojas	169. Common Teacher Actions Described Through Q Methodology: Research Informs Professional Development - Wilburne & Franz
Turtle Rock B	155. Design Features of an Online Professional Learning Community for K-12 Math Teachers - Ziegler, Brown & Richards	170. Closing the Distance: Online Learning for Rural Mathematics Teachers - Luebeck
Turtle Rock C	156. Co-Teaching Across the Pipeline: Encouraging Discourse Among Students, Teachers, and Prospective Teachers - McNamara, Olkin, Eldridge & Hill	171. Managing Power and Status to Support Teachers' Learning - Louie, Jilk & Baldinger

OVERVIEW OF SATURDAY MORNING, JANUARY 30, 2016

	10:30 AM – 11:30 AM
Theater	172. Teacher Professional Development Brief Report Session: Focus on Coaching
Salon A	173. Learning to Learn from Teaching: A Different Kind of Professional Development Outcome - Suzuka, Boerst, Van Dine & Clements
Salon B	174. Influence of Focused Video Analysis on Preservice Secondary Mathematics Teachers' Noticing of Student Mathematical Thinking - Teuscher, Leatham, Peterson & Derocher
Oak Creek	175. Productive Struggle and Problem Solving During Professional Development - Hudson, Eker & Zeybek
Pelican Hill	176. Integrated STEM Initiatives: Issues, Challenges, and Opportunities for Mathematics Teacher Education - Bolyard, Campbell, Selmer & Valentine
Quail Hill	177. Teaching Mathematical Modeling in Elementary Grades: A Framework - Carlson, Wickstrom, Burroughs & Fulton
Saddleback	178. Mathematics Education and English Learners: Reviewing Literature to Connect Research to Practice - Roberts, de Araujo, Willey & Zahner
Santiago	179. DBR: A Scholarly Approach to Teaching – What it Means for New [and Veteran] MTEs - Swartz, Lischka & van Ingen
Salon E	180. The CCSS, Expressions and Equations: The Role of Mathematics Educators - Burrill, Dick & Whitesides
Shady Canyon	181. Designing a Progression for Mathematical Modeling: From Early Elementary to High School Grades - Anhalt & Cortez
Trabuco	182. Promoting Effective Math Instruction for Young Children Through Counting Collections - Humphreys & Sun
Woodbridge	183. Considering the Chicken and the Egg: Jointly Investigating Mathematical Knowledge for Teaching and Teaching Practices - Rougee & Snider
Turtle Rock A	184. Developing Algebraic Structure Sense for Secondary Mathematics Teaching - Patterson
Turtle Rock B	102. Learning to Teach Mathematics: Methodological Challenges in a Cross-National Study of Novice Mathematics Teachers - Tatto & Smith
Turtle Rock C	103. Exploring Frameworks: Building our Practice - Weston & Kastberg

Session 142 **Theater**
Equity and Mathematics Education
Brief Report Session

PUPPET SHOW RACISM: A MATHEMATICS EDUCATOR'S RESPONSE TO PROSPECTIVE TEACHERS' MISINTERPRETATIONS OF CLASSROOM DISCOURSE

Alisa Claire Belliston, University of Wisconsin, Madison

The content and presentation of a puppet show about inequities in mathematics education fell short and awry. The teacher educator's response used an intent versus impact framework. We'll examine whether that response contributed to the prospective teachers' social awareness growth.

WHO INVENTED MATH? HOW ELEMENTARY PRESERVICE TEACHERS "READ THE WORLD" MATHEMATICALLY

Ryan Ziols, University of Wisconsin, Madison

This study examines preservice teachers' journals regarding: lived experiences of "reading the world mathematically" (Gutstein, 2003), dispositions towards teaching equitable mathematics, self-reflection on their own (mathematical) identities, and responses to systemic and personal sites of injustice in schools and society.

RESOLVING CHALLENGES THAT MATHEMATICS TEACHER EDUCATORS FACE WHEN TEACHING THROUGH A LENS OF EQUITY

Laura McLeman, University of Michigan, Flint

The purpose of this session is to present different ways in which mathematics teacher educators may resolve a challenge when teaching through a lens of equity. Preservice teachers' responses to the different resolution strategies will be examined.

Session 143 **Salon A**
Pedagogical Content Knowledge
Individual Session

RECONCEPTUALIZING A MATHEMATICAL DOMAIN AROUND WAYS OF REASONING: THE CASE OF INTEGERS

Randolph Philipp, San Diego State University
Casey Hawthorne, San Diego State University
Lisa Lamb, San Diego State University

What is the relationship among teachers' instructional goals, the reasoning they (often implicitly) invoke, and their understanding of students' thinking? We consider these issues within the domain of integers and discuss how to reconceptualize instructional domains around ways of reasoning.

Session 144 **Salon B**
Mathematical Content Knowledge
Individual Session

COMPARING TWO SPECIFICATIONS OF MATHEMATICS NEEDED BY ELEMENTARY TEACHERS: DO THE DIFFERENCES MAKE A DIFFERENCE?

Jillian Peterson Mortimer, University of Michigan
Edward Silver, University of Michigan

Participants will explore the relationship between two different specifications of the mathematical knowledge needed for elementary teaching - TEDS-M and MET II - and discuss the implications of this activity for our understanding of MKT. Do the commonalities and the differences really matter?

Session 145 **Oak Creek**
Preservice Teacher Field Experiences
Symposium

DEVELOPING A PROFESSIONAL VISION OF MATHEMATICS INSTRUCTION BY LEARNING TO LEARN FROM TEACHING

Elizabeth van Es, University of California, Irvine
Rossella Santagata, University of California, Irvine
Jennifer Sun, University of California, Irvine
Jessica Williams Tunney, University of California, Irvine
Cathery Yeh, University of California, Irvine

We adopt a systems view to teacher preparation and examine preservice teachers', beginning teachers', and teacher educators' development of professional vision of mathematics instruction after participating in video-based learning environments focused on learning to systematically analyze and respond to instruction.

Session 146 **Pelican Hill**
Mathematical Content Knowledge
Individual Session

DEVELOPING PROSPECTIVE SECONDARY MATHEMATICS TEACHERS' UNDERSTANDINGS, STRATEGIES, AND DISPOSITIONS REGARDING MATHEMATICAL MODELING

Rose Mary Zbiek, Penn State University

Structures, activities, assessments, and evidence will be shared from a course designed to provoke mal-conceptions, strengthen understandings, encourage productive dispositions, develop classroom strategies, and leverage secondary school mathematics content to prepare students to be teachers of mathematical modeling as a process.

Session 147 **Quail Hill**
Pedagogical Content Knowledge
Individual Session

LEARNING TO TEACH THROUGH VIDEO ANALYSIS: PRESERVICE TEACHERS LEARNING AND ENGAGING IN PARTICIPATION QUESTIONING DISCOURSE

John Switzer, Texas Christian University
Dawn Teuscher, Brigham Young University
Kylie Palsky, Brigham Young University

We share video learning activities that support preservice secondary mathematics teachers' implementation of participation questioning discourse that consists of (a) modeling and engaging students in mathematical discourse and activity, and (b) supporting and assessing students' development of conceptual understanding.

Session 148 **Saddleback**
Teaching and Learning with Technology
Individual Session

CONNECTING TRANSFORMATIONS AND FUNCTIONS WITH TECHNOLOGY

Karen Hollebrands, North Carolina State University
Allison McCulloch, North Carolina State University

Help teachers develop deep connections between algebra and geometry with these technology-based activities that build conceptual links between geometric transformations and functions. Bring a laptop or a tablet so that you can try these free Web Sketchpad-based activities.

Session 149 **Santiago**
Mathematical Content Knowledge
Discussion Session

UNPACKING TEACHERS' MOVES FOR NAVIGATING MATHEMATICAL COMPLEXITIES IN TEACHER EDUCATION

Nick Wasserman, Teachers College, Columbia University

This discussion session explores incorporating four ways that teachers navigate mathematical complexities in the classroom into teacher education. Identifying local and nonlocal mathematical complexities provides a lens to discuss possible teachers' moves in response to them.

Session 150 **Salon E**
Development of Mathematics Teacher Educators
Symposium

LISTENING AND RESPONDING TO STUDENT VOICES: FOSTERING CARING RELATIONSHIPS WITH PROSPECTIVE TEACHERS THROUGH PRE-COURSE MEETINGS

Charles Hohensee, University of Delaware
AnnaMarie Conner, University of Georgia
Eva Thanheiser, Portland State University
Amanda Jansen, University of Delaware

We will present three contexts in which pre-course meetings with prospective teachers were used to help further an understanding and counteract difficulties with establishing a caring relation between the instructors of teacher-preparation courses and the prospective teachers taking the courses.

Session 151 **Shady Canyon**
Pedagogical Content Knowledge
Individual Session

ENGAGING TEACHERS IN IDENTIFYING THE POINT OF STUDENT MATHEMATICAL THINKING

Laura R. Van Zoest, Western Michigan University
Elizabeth H. Fraser, Western Michigan University
Mary A. Ochieng, Western Michigan University

We will explore activities aimed at identifying the mathematical point of an instance of student thinking and identifying ways upon which the instance may be built. Participants will discuss the potential of such activities for supporting teachers to productively use student mathematical thinking.

Session 152 **Trabuco**
Pedagogical Content Knowledge
Discussion Session

USING REHEARSALS WITH SECONDARY PRESERVICE MATHEMATICS TEACHERS

Fran Arbaugh, Penn State University
Ben Freeburn, Penn State University
Duane Graysay, Penn State University
Nursen Konuk, Pennsylvania Association of Mathematics Teacher Educators

During this session, participants will view and discuss videos and classroom artifacts from three different enactments of rehearsals from a secondary mathematics methods course.

Session 153 **Woodbridge**
Development of Mathematics Teacher Educators
Discussion Session

MATH SPECIALIST INSTITUTE (MSI): DEVELOPMENTAL TRAJECTORY, NEEDS, SUPPORT, AND IDENTITY

Pamela Rae Bailey, Mary Baldwin College
Courtney Baker, George Mason University
Margret Hjalmarson, George Mason University
Johnna Bolyard, West Virginia University
Lesley King, George Mason University

Data from the 2015 MSI, specifically on career stages, needs, support, and identified roles will be shared. Discussions will be on the developmental trajectory of the MS, support from higher education, and the impact on identity.

Session 154 **Turtle Rock A**
Equity and Mathematics Education
Individual Session

SUPPORTING TEACHERS AS THEY SUPPORT EMERGING BILINGUALS WITH MATHEMATICAL PRACTICES: A TEACHER LEARNING CYCLE

Mary Truxaw, University of Connecticut
Eliana D. Rojas, University of Connecticut

Explore a teacher learning cycle designed to promote awareness, reflection, and teaching practice aimed at supporting teachers as they support emerging bilingual students with mathematical practices. Academic and experiential components of the cycle will be shared, evaluated, generated, and discussed.

Session 155 **Turtle Rock B**
Teacher Professional Development
Individual Session

DESIGN FEATURES OF AN ONLINE PROFESSIONAL LEARNING COMMUNITY FOR K-12 MATH TEACHERS

Jeff Ziegler, Brookhill Institute of Mathematics
Sara Brown, Brookhill Institute of Mathematics
Paige Richards, Brookhill Institute of Mathematics

We will discuss design features of a state-wide online course for inservice teachers that enabled them to come together as a PLC focused on improving their mathematics teaching practice. Strategies and structures for supporting high functioning PLCs will be shared.

Session 156 **Turtle Rock C**
School and University Partnerships and Projects
Individual Session

CO-TEACHING ACROSS THE PIPELINE: ENCOURAGING DISCOURSE AMONG STUDENTS, TEACHERS, AND PROSPECTIVE TEACHERS

Julie McNamara, California State University, East Bay
Julia Olkin, California State University, East Bay
Andrea Lee Eldridge, California State University, East Bay
La Queitta Hill, California State University, East Bay

We will report on our experience revising and co-teaching an undergraduate math course, secondary mathematics methods courses, high school algebra, and professional development for secondary mathematics teachers, with the goal of increasing discourse in the mathematics classroom across the pipeline.

AMTE **Twenty Years of Conference Moments**

"CBMS MET REPORT AND MATHEMATICAL KNOWLEDGE FOR TEACHING"

4th ANNUAL CONFERENCE, 2000, IN CHARLOTTE, NC

AMTE has been involved in the larger mathematics community of CBMS for many years, and addressed the importance of the CBMS *Mathematical Education of Teachers* (*MET*) Report in a Pre-Conference Symposium, led by Jim Lewis, Mary Lindquist, and Dale Oliver. In her general session keynote, "Developing Usable Mathematical Knowledge In, For, and From Practice," Deborah Ball continued to keep our focus on mathematical knowledge for teaching.

Session 157 **Theater**
Teaching and Learning with Technology
Brief Report Session

MATHEMATICS TEACHER EDUCATORS' TPACK AND MKT: DESIGNING COURSEWORK ON GEOMETRIC MEASUREMENT FOR PROSPECTIVE ELEMENTARY TEACHERS

Anne Marie S. Marshall, Berry College
Kadian M. Callahan, Kennesaw State University

This session describes a study that examined how two mathematics teacher educators applied their TPACK and MKT knowledge domains when designing online discussion prompts. These prompts focused on supporting prospective elementary teachers' learning of geometric measurement.

USING MOTION VIRTUAL MANIPULATIVES TO TEACH ELEMENTARY SCHOOL MATHEMATICS

Adam Feldhaus, University of Northern Iowa

Motion virtual manipulatives (MVMs) are a new toolset that transforms an ordinary classroom wall into an interactive manipulative space through the use of a projector, a Microsoft Kinect®, and virtual manipulative software developed by researchers.

PERTURBING PRACTICES: THE EFFECTS OF NOVEL DIDACTIC OBJECTS ON INSTRUCTION

Krysten Pampel, Arizona State University

Before new technology can be introduced into mathematics classrooms, we need to better understand how technology affects instruction. This session focuses on perturbations in established classroom practices when new technology is implemented in mathematics instruction.

Session 158 **Salon A**
Mathematical Content Knowledge
Individual Session

YOU KNOW IT WHEN YOU SEE IT: DEFINING AND ASSESSING PRODUCTIVE DISPOSITION

John (Zig) Siegfried, James Madison University
Randolph Philipp, San Diego State University

We examined differences in the productive dispositions of 100 inservice elementary school teachers engaged with a mathematical task. We will share study results, our list of productive-disposition indicators, and discuss implications for assessing productive disposition.

Session 159 **Salon B**
Preservice Teacher Field Experiences
Individual Session

USING TASK DIALOGUES TO ENHANCE PRESERVICE TEACHERS' ABILITIES TO ORCHESTRATE DISCOURSE

Allyson Hallman-Thrasher, Ohio University
Denise A. Spangler, University of Georgia

We will describe an activity, writing task dialogues coupled with a field experience, designed to help preservice elementary school teachers develop MKT with respect to facilitating mathematical discussions. We describe the benefits and limitations of two iterations of the activity.

Session 160 **Oak Creek**
Pedagogical Content Knowledge
Individual Session

PEDAGOGICAL ANALYSIS OF MATHEMATICAL MODELING TEACHING EXPERIMENTS

Stephen T. Lewis, The Ohio State University
Jennifer A. Czocher, Texas State University

We report on the results of a teaching experiment where mathematical modeling tasks are implemented with high school students, prospective secondary teachers and classroom teachers. We will report on common patterns of practice amongst all when working on these tasks.

Session 161 **Pelican Hill**
Mathematical Content Knowledge
Individual Session

WHEN 1 SQUARE FOOT EQUALS 12 SQUARE INCHES: EXAMINING AND SUPPORTING PRESERVICE TEACHERS' GEOMETRICAL REASONING

Megan H. Wickstrom, Montana State University
Mary Alice Carlson, Montana State University
Elizabeth White Fulton, Montana State University

This session focuses on elementary preservice teachers' understanding and spatial coordination of length, area, and volume measures. The presenters will share instructional tasks that promote growth over time as well as data to highlight common misconceptions and support structures.

Session 162 **Quail Hill**
Pedagogical Content Knowledge
Individual Session

HOW "SOMETHING TO DO IN CLASS TOMORROW" CAN SUPPORT DESIGN OF HIGH-QUALITY PROFESSIONAL DEVELOPMENT

Daniel Heck, Horizon Research, Inc.

I will share a PD storyline, which couples easily implemented instructional strategies with a focus on subtraction to promote mathematics discourse. This PD approach has proven successful, and I will discuss how other programs may adapt the storyline to address their goals.

Session 163 **Saddleback**
Equity and Mathematics Education
Discussion Session

VISUALIZING EQUITABLE DISCOURSE PRACTICES IN METHODS COURSES

Woong Lim, University of New Mexico
Jennifer Chauvot, University of Houston
Ji-Eun Lee, Oakland University
Ji-Won Son, University at Buffalo, State University of New York
Mi Yeon Lee, Arizona State University

Presenters share ideas to support teacher candidates in developing equitable discourse practice. Teacher candidates use web-based software to produce classroom dialogues in which students have equitable opportunities to learn. Participants discuss strategies to surface beginning notions of equitable discourse practice.

Session 164 **Santiago**
Mathematical Content Knowledge
Individual Session

IDENTIFYING AND CLASSIFYING CONNECTIONS BETWEEN ABSTRACT ALGEBRA AND SECONDARY SCHOOL MATHEMATICS

Ashley Luan Suominen, University of Georgia

In this session I plan to engage the audience in a discussion about how to help prospective secondary mathematics teachers learn abstract algebra by discussing the mathematical connections that can be made between abstract algebra and secondary school mathematics concepts.

Session 165 **Salon E**
Teacher Professional Development
Individual Session

A PROPOSED MATHEMATICS EDUCATION PROFESSIONAL DEVELOPMENT PROCESS AND FRAMEWORK

Shannon Driskell, University of Dayton
Sarah B. Bush, Bellarmine University
Robert Ronau, University of Cincinnati
David Pugalee, University of North Carolina, Charlotte
Christopher Rakes, University of Maryland, Baltimore County

This study analyzed practices in mathematics education technology professional development over time. We will share a new Mathematics Education Professional Development Process and Framework to guide the improvement of mathematics education professional development and solicit feedback from participants.

Session 166 **Shady Canyon**
Pedagogical Content Knowledge
Individual Session

DEVELOPING PRESERVICE TEACHER NOTICING VIA THE LESSONSKETCH PLATFORM

Joel Amidon, University of Mississippi
Stephanie Casey, Eastern Michigan University

Presenters will share the design and associated study of LessonSketch learning modules which promote the acquisition of professional noticing skills by preservice teachers. Participants will engage with the modules, learning how their design promotes development of professional noticing.

Session 167 **Trabuco**
Teaching and Learning with Technology
Individual Session

TECHNOLOGY TOOLS THAT SUPPORT MATHEMATICAL DISCOURSE IN K – 2 CLASSROOMS

Kelly McCormick, University of Southern Maine
Pamela Joy Buffington, Education Development Center
Shannon Larsen, University of Maine, Farmington

How can teachers leverage technology to support mathematics learning in K-2 classrooms? After 1.5 years of classroom-based research, we found that audio-video tools engage students in problem solving and communication, while supporting teachers in conducting purposeful sharing of strategies.

Session 168 **Woodbridge**
Mathematical Content Knowledge
Individual Session

CURRICULUM FOR ELEMENTARY MATHEMATICS CONTENT COURSES: DEVELOPING FACULTY EXPERTISE

Suzanne Chapin, Boston University
Ziv Feldman, Boston University

This session presents a curriculum with corresponding written and video support materials that was developed by the Elementary Preservice Teachers Mathematics Project for use in mathematics content courses for prospective elementary teachers. Participants will learn how these materials can support faculty enactment of high cognitive demand tasks using classroom discourse.

Session 169 **Turtle Rock A**
Teacher Professional Development
Individual Session

COMMON TEACHER ACTIONS DESCRIBED THROUGH Q METHODOLOGY: RESEARCH INFORMS PROFESSIONAL DEVELOPMENT

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

What teaching actions identified in *Principles to Actions* (NCTM, 2014) do middle grades mathematics teachers commonly implement? We will share how a Q Methodology was used, the results that led to a productive discussion with teachers, and model the process.

Session 170 **Turtle Rock B**
Teacher Professional Development
Individual Session

CLOSING THE DISTANCE: ONLINE LEARNING FOR RURAL MATHEMATICS TEACHERS

Jennifer Luebeck, Montana State University

A series of online modules undergird an innovative approach to school-based professional learning in K-8 mathematics. Discover how self-paced, asynchronous learning, guided facilitation, collaboration with peers, a content focus, and access to online resources are changing rural professional development.

Session 171 **Turtle Rock C**
Development of Mathematics Teacher Educators Symposium

MANAGING POWER AND STATUS TO SUPPORT TEACHERS' LEARNING

Nicole L. Louie, University of Texas, El Paso
Lisa M. Jilk, University of Washington
Evra M. Baldinger, University of California, Berkeley

How do educators manage differences in power and status to forge collegial relationships that support learning? We will discuss two approaches, drawing on data from two research projects. Both approaches foster positive interpersonal relationships, but one better supports teacher learning.

AMTE **Twenty Years of Conference Moments**

"LIVING CONTRADICTIONS: NEGOTIATING PRACTICES AS MATHEMATICS TEACHER EDUCATORS"

18th ANNUAL CONFERENCE, 2014, IN IRVINE, CA

JANUARY 28-30, 2016
20
TWENTIETH ANNUAL AMTE CONFERENCE

The last time we were here at the Hotel Irvine, our late colleague, Beatriz D'Ambrosio, challenged and inspired us to consider both the ethics of and the consistency between our beliefs and our practices as mathematics teacher educators.

SATURDAY, JANUARY 30, 2016 9:30 AM – 10:30 AM

AMTE

MATHEMATICS TEACHER PREPARATION STANDARDS

Think Tank Room

Come by to share your feedback on AMTE's Standards of Mathematics Teacher Preparation, which focus on the initial preparation of mathematics teachers in grades PreK-12. Members of the AMTE writing group will be there to hear from you.

Session 172 **Theater**
Teacher Professional Development
Brief Report Session

TEACHER LEADERS SUPPORTING SOUND ASSESSMENT PRACTICES IN HIGH SCHOOL MATHEMATICS CLASSROOMS

Richelle Marynowski, University of Lethbridge

This session presents five essential characteristics of a model of school based coaching as professional development for teacher leaders.

TEACHER COACHING AS RENARRATION: SUPPORTING MATHEMATICAL LEARNING BY SHIFTING TEACHER STORIES

Marcy B. Wood, University of Arizona
Jennifer Kinser-Traut, University of Arizona

Content coaching is a productive form of teacher professional development. From a narrative perspective, coaching is the activity of co/re-narrating teacher stories. We describe how coaches' renarrations change teacher stories by proposing a shift in antagonists and suggesting turnarounds.

TRACING THE ENACTMENT OF MATHEMATICS COACHES' PROFESSIONAL KNOWLEDGE IN CLASSROOM-BASED PRACTICES

Dinglei Huang, The Ohio State University
Xiangquan Yao, The Ohio State University

We will report our analysis of mathematics coaches' reflective reports to engage the audience in a conversation that might conceptualize mathematics coaches' knowledge development at professional development sessions and knowledge enactment in classroom-based practices of mathematics educators.

Session 173 **Salon A**
Teacher Professional Development
Individual Session

LEARNING TO LEARN FROM TEACHING: A DIFFERENT KIND OF PROFESSIONAL DEVELOPMENT OUTCOME

Kara Suzuka, University of Michigan
Timothy Boerst, University of Michigan
Douglas W. Van Dine, University of Denver
Douglas H. Clements, University of Denver

This session examines efforts to facilitate teachers' use of protocols that support professional learning in and from engagement in teaching. Specifically, participants will unpack professional learning protocols that are featured in a unique set of online professional development materials.

Session 174 **Salon B**
Preservice Teacher Field Experiences
Individual Session

INFLUENCE OF FOCUSED VIDEO ANALYSIS ON PRESERVICE SECONDARY MATHEMATICS TEACHERS' NOTICING OF STUDENT MATHEMATICAL THINKING

Dawn Teuscher, Brigham Young University
Keith R. Leatham, Brigham Young University
Blake E. Peterson, Brigham Young University
Allyson Michelle Derocher, Brigham Young University

We discuss evidence that preservice secondary mathematics teachers who participated in focused video analysis, watching, analyzing and discussing videos through the lens of a specific theoretical framework, are able to transfer their noticing into the real-time classroom.

Session 175 **Oak Creek**
Teacher Professional Development
Individual Session

PRODUCTIVE STRUGGLE AND PROBLEM SOLVING DURING PROFESSIONAL DEVELOPMENT

Rick Alan Hudson, University of Southern Indiana
Ayfer Eker, Indiana University
Zulfiye Zeybek, Gazi Osman Pasa University

This session focuses on norms for professional development that support a learning environment fostering reasoning and conceptual understanding through productive struggle and problem solving. Participants will engage in solving conceptually-rich tasks and reflect on elementary teachers' solutions to the tasks.

Session 176 **Pelican Hill**
Mathematics Education Policy and Program Issues
Discussion Session

INTEGRATED STEM INITIATIVES: ISSUES, CHALLENGES, AND OPPORTUNITIES FOR MATHEMATICS TEACHER EDUCATION

Johnna Bolyard, West Virginia University
Matthew P. Campbell, West Virginia University
Sarah Selmer, West Virginia University
Keri Duncan Valentine, West Virginia University

This session will promote dialogue on issues relevant to mathematics teacher educators engaged in STEM initiatives across multiple contexts, including teacher preparation, teacher professional development, and interdisciplinary collaborations. Outcomes include designation of next steps, additional questions, and potential collaborations.

Session 177 **Quail Hill**
Pedagogical Content Knowledge
Individual Session

TEACHING MATHEMATICAL MODELING IN ELEMENTARY GRADES: A FRAMEWORK

Mary Alice Carlson, Montana State University
Megan H. Wickstrom, Montana State University
Elizabeth A. Burroughs, Montana State University
Elizabeth White Fulton, Montana State University

Mathematical modeling is a cyclic process that involves developing and using mathematical tools to represent, understand, and solve real-world problems. We present a framework for teaching mathematical modeling in grades K-5 and illustrations of its use by teachers.

Session 178 **Saddleback**
Equity and Mathematics Education
Discussion Session

MATHEMATICS EDUCATION AND ENGLISH LEARNERS: REVIEWING LITERATURE TO CONNECT RESEARCH TO PRACTICE

Sarah A. Roberts, University of California, Santa Barbara
Zandra de Araujo, University of Missouri
Craig Willey, Indiana University, Indianapolis
William Zahner, San Diego State University

We completed a review of the literature to help us clarify the state of knowledge around ELs in mathematics education. Our review situates and motivates our collective collaboration and discussion around unresolved, key issues of the mathematics education of ELs.

Session 179 **Santiago**
Development of Mathematics Teacher Educators
Discussion Session

DBR: A SCHOLARLY APPROACH TO TEACHING – WHAT IT MEANS FOR NEW [AND VETERAN] MTES

Barbara Ann Swartz, McDaniel College
Alyson Lischka, Middle Tennessee State University
Sarah van Ingen, University of South Florida

Three MTEs share their experiences implementing design-based research (DBR) projects while teaching methods and/or content courses. Use of DBR promotes systematic improvement of course tasks over time. Session discussion will encourage cross-institutional connections to promote high-quality teacher education.

Session 180 **Salon E**
Teaching and Learning with Technology
Discussion Session

THE CCSS, EXPRESSIONS AND EQUATIONS: THE ROLE OF MATHEMATICS EDUCATORS

Gail Burrill, Michigan State University
Thomas Dick, Oregon State University
Ellen Whitesides, Illustrative Mathematics

An interactive discussion will focus on a technology-leveraged approach for developing understanding of expressions and equations. How do we help teachers make sense of the shifts needed to bring coherence to these concepts, given the CCSS and research on misconceptions?

Session 181 **Shady Canyon**
Mathematical Content Knowledge
Discussion Session

DESIGNING A PROGRESSION FOR MATHEMATICAL MODELING: FROM EARLY ELEMENTARY TO HIGH SCHOOL GRADES

Cynthia Oropesa Anhalt, University of Arizona
Ricardo Cortez, Tulane University

This session proposes a coherent progression for teaching and learning mathematical modeling aligned with the Common Core State Standards. We illustrate the progression through several modeling tasks from early elementary through high school levels that target specific elements of modeling.

Session 182 **Trabuco**
Teacher Professional Development
Individual Session

PROMOTING EFFECTIVE MATH INSTRUCTION FOR YOUNG CHILDREN THROUGH COUNTING COLLECTIONS

Cathy Humphreys, Stanford University
Kathy Liu Sun, Santa Clara University

This session focuses on the study, design, and implementation of math professional development for prospective and practicing early childhood teachers. We will engage participants around children's thinking, knowledge of content, and pedagogical strategies related to the teaching of young children.

Session 183 **Woodbridge**
Pedagogical Content Knowledge
Individual Session

CONSIDERING THE CHICKEN AND THE EGG: JOINTLY INVESTIGATING MATHEMATICAL KNOWLEDGE FOR TEACHING AND TEACHING PRACTICES

Annick Rougee, University of Michigan
Rachel B. Snider, University of Michigan

We consider the intersection of secondary mathematics teachers' knowledge and their actual teaching practices by drawing on data from two studies that examine different teaching practices. We then discuss how this work can inform teacher preparation and professional development.

Session 184 **Turtle Rock A**
Mathematical Content Knowledge
Individual Session

DEVELOPING ALGEBRAIC STRUCTURE SENSE FOR SECONDARY MATHEMATICS TEACHING

Cody Patterson, University of Texas, San Antonio

The role of algebraic structure in secondary mathematics will be discussed, and some tasks from a professional development course that highlight algebraic structure will be presented. Preliminary evidence of growth in PD participants' structure sense will also be shared.

Session 185 **Turtle Rock B**
Pedagogical Content Knowledge
Individual Session

SUPPORTING THE DEVELOPMENT OF SECONDARY PSTS USING MINI-VIGNETTES AND STUDENT WORK

Trena Wilkerson, Baylor University
Keith Kerschen, Baylor University

Participants will engage in a sequence of activities used with secondary PSTs to develop mathematical teaching practices and mathematical practices through problem solving, mini-vignettes, and student work. We will discuss benefits, challenges and research opportunities for the MTE community.

Session 186 **Turtle Rock C**
Mathematical Content Knowledge
Individual Session

MOVING ONLINE: CHALLENGES AND SUCCESSES OF ADAPTING MANDATED PROFESSIONAL DEVELOPMENT FROM IN-PERSON TO HYBRID FORMAT

Gwyneth Retta Hughes, Boise State University
Michele Carney, Boise State University
Jonathan Brendefur, Boise State University

This presentation describes adapting a mandated professional development course from 100% in-person to 75% online. We address challenges in maintaining a socio-constructivist philosophy in an online setting and present our online framework that includes progressive formalization and social learning theory.

SATURDAY, JANUARY 30, 2016 — 11:30 AM – 1:30 PM

LUNCH AND BUSINESS MEETING — Salon C/D

Join us for the Annual AMTE Business Meeting during lunch, President Christine Thomas presiding.

INDEX OF SPEAKERS

A

B

Brown, Sara	*Brookhill Institute of Mathematics*	sara.brown@brookhillmath.org	155
Brownell, Jeanine O'Nan	*Erikson Institute*	jbrownell@erikson.edu	13
Browning, Christine	*Western Michigan University*	christine.browning@wmich.edu	20
Buchbinder, Orly	*University of New Hampshire*	orly.buchbinder@unh.edu	47
Buckhalter, Brian Christopher	*University of Mississippi*	bcbuckha@go.olemiss.edu	65
Buffington, Pamela Joy	*Education Development Center*	pbuffington@edc.org	167
Bullock, Erika C.	*University of Memphis*	erika.bullock@memphis.edu	69
Burrill, Gail	*Michigan State University*	burrill@msu.edu	180
Burroughs, Elizabeth A.	*Montana State University*	burroughs@math.montana.edu	1, 177
Burton, Megan	*Auburn University*	megan.burton@auburn.edu	74
Bush, Sarah B.	*Bellarmine University*	sbush@bellarmine.edu	165

C

Cady, Jo Ann	*University of Tennessee*	jcady@utk.edu	59
Callahan, Kadian M.	*Kennesaw State University*	kmcallahan@kennesaw.edu	157
Campbell, Matthew P.	*West Virginia University*	mpcampbell@mail.wvu.edu	176
Cardetti, Fabiana	*University of Connecticut*	fabiana.cardetti@uconn.edu	44
Carlson, Mary Alice	*Montana State University*	mary.carlson5@montana.edu	161, 177
Carmona, Lupita	*University of Texas, San Antonio*	guadalupe.carmona@utsa.edu	80
Carney, Michele	*Boise State University*	michelecarney@boisestate.edu	118, 186
Casey, Stephanie	*Eastern Michigan University*	scasey1@emich.edu	136, 166
Cavey, Laurie Overman	*Boise State University*	lauriecavey@boisestate.edu	118
Chandler, Kayla	*North Carolina State University*	kcchand2@ncsu.edu	113
Chao, Theodore	*The Ohio State University*	chao.160@osu.edu	99
Chapin, Suzanne	*Boston University*	schapin@bu.edu	168
Chauvot, Jennifer	*University of Houston*	jchauvot@uh.edu	163
Chval, Kathryn	*University of Missouri*	chvalkb@missouri.edu	6
Cirillo, Michelle	*University of Delaware*	mcirillo@udel.edu	101
Clements, Douglas H.	*University of Denver*	Douglas.Clements@du.edu	105, 173
Cobbs, Georgia	*University of Montana*	georgia.cobbs@mso.umt.edu	135
Conner, AnnaMarie	*University of Georgia*	aconner@uga.edu	150
Conrady, Kansas	*University of Oklahoma*	kansas.conrady@ou.edu	65
Contreras, Jose N.	*Ball State University*	jncontrerasf@bsu.edu	45
Cook, Alice LaRue Joy	*University of Maryland*	cookie.teach@gmail.com	47
Cortez, Ricardo	*Tulane University*	rcortez@tulane.edu	181
Cox, Dana C.	*Miami University*	dana.cox@miamiOH.edu	101
Crespo, Sandra	*Michigan State University*	crespo@msu.edu	114
Cugini, Stephanie	*University of Florida*	src04@ufl.edu	116
Cunard, Adrian	*University of Washington*	acunard@uw.edu	91
Czocher, Jennifer A.	*Texas State University*	czocher.1@txstate.edu	160

D

Darrough, Rebecca	*Austin Peay State University*	dbccak@hotmail.com	90
Davis, Jon D.	*Western Michigan University*	jon.davis@wmich.edu	18, 120
de Araujo, Zandra	*University of Missouri*	dearaujoz@missouri.edu	124, 178
Derocher, Allyson Michelle	*Brigham Young University*	allyson.derocher@gmail.com	174
Diamond, Jaime Marie	*University of Georgia*	diamond@uga.edu	10, 84
Dibbs, Rebecca Anne	*Texas A&M University, Commerce*	Rebecca.Dibbs@tamuc.edu	65
Dick, Thomas	*Oregon State University*	tpdick@math.oregonstate.edu	180
Dickey, Ed	*University of South Carolina*	ed.dickey@sc.edu	92, Opening Session
Dickman, Benjamin	*Boston University*	benjamindickman@gmail.com	127
Dillon, Fred	*Ideastream*	dillon314@sbcglobal.net	15
Dingman, Shannon Wayne	*University of Arkansas*	sdingman@uark.edu	80
Disney, Andria	*University of Montana*	andriadisney@live.com	135
Drake, Corey	*Michigan State University*	cdrake@msu.edu	67, 120
Driskell, Shannon	*University of Dayton*	sdriskell1@udayton.edu	165
Duggan, Arren	*University of North Carolina, Greensboro*	aiduggan@uncg.edu	76
Dupree, Lakesia L.	*University of South Florida*	ldupree@mail.usf.edu	65
Dyer, Elizabeth B.	*Northwestern University*	elizabethdyer@u.northwestern.edu	17

E

Ebby, Caroline	*University of Pennsylvania*	cbe@gse.upenn.edu	96
Eddy, Colleen	*University of North Texas*	Colleen.Eddy@unt.edu	74
Edelman, Jennifer	*University of West Georgia*	jedelman@westga.edu	65
Edgington, Cyndi	*North Carolina State University*	cpedging@ncsu.edu	85
Edson, Alden J.	*Michigan State University*	edsona@msu.edu	9
Edwards, Belinda Pickett	*Kennesaw State University*	bedwards@kennesaw.edu	36
Edwards, Michael Todd	*Miami University*	michael.todd.edwards@gmail.com	72
Eker, Ayfer	*Indiana University*	ayeker@indiana.edu	175
Eldridge, Andrea Lee	*California State University, East Bay*	aeldridge@cv.k12.ca.us	156
Eli, Jennifer Ann	*University of Arizona*	jeli@math.arizona.edu	28, 114
Elliott, Rebekah	*Oregon State University*	elliottr@science.oregonstate.edu	94
Elrod, Melody	*University of South Florida*	melodyelrod@mail.usf.edu	133
Erb, Gay Lynn	*West Ada School District, Idaho*	erb.gay@gmail.com	75
Eskelson, Samuel L.	*University of South Florida*	eskelson@usf.edu	139
Estapa, Anne	*Iowa State University*	aestapa@iastate.edu	5

F

Feikes, David	*Purdue University North Central*	dfeikes@pnc.edu	87
Feldhaus, Adam	*University of Northern Iowa*	cafeldhaus@gmail.com	157
Feldman, Ziv	*Boston University*	zfeld@bu.edu	127, 168
Felton-Koestler, Mathew D.	*Ohio University*	felton@ohio.edu	114
Fennell, Francis (Skip)	*McDaniel College*	ffennell@mcdaniel.edu	23, 68, Jacobs Lecture
Fernandes, Anthony	*University of North Carolina, Charlotte*	anthony.fernandes@uncc.edu	37
Fernandez, Maria Lorelei	*Florida International University*	mfernan@fiu.edu	128
Fisher, Amanda	*University of Illinois, Chicago*	afishe8@uic.edu	46
Fisher, Molly	*University of Kentucky*	molly.fisher@uky.edu	66, 128
Fleming, Ali Marie	*The Ohio State University*	fleming.72@osu.edu	30, 78
Foote, Mary Q.	*Queens College, City University of New York*	mary.foote@qc.cuny.edu	67, 98
Forbringer, Linda L.	*Southern Illinois University, Edwardsville*	lforbri@siue.edu	65
Fox, Alison	*University of Washington*	foxla@uw.edu	109
Franke, Megan	*University of California, Los Angeles*	mfranke@ucla.edu	65, 91
Franz, Dana Pomykal	*Mississippi State University*	df76@colled.msstate.edu	169
Fraser, Elizabeth H.	*Western Michigan University*	elizabeth.h.fraser@wmich.edu	151
Freeburn, Ben	*Penn State University*	byf5045@gmail.com	152
Fulton, Elizabeth White	*Montana State University*	lizafulton@gmail.com	161, 177

G

Galindo, Enrique	*Indiana University*	egalindo@indiana.edu	42
Gallagher, Melissa Ann	*George Mason University*	magallagher27@gmail.com	131
Garcia, Nicole Marie	*University of Michigan*	nmgarcia@umich.edu	106
Ghousseini, Hala	*University of Wisconsin*	Ghousseini@wisc.edu	94
Gilbert, Michael	*University of Massachusetts, Boston*	mike.gilbert@umb.edu	65
Glancy, Aran	*University of Minnesota*	aran@umn.edu	26
Gonzalez, Monica	*University of Houston*	mrs.monicagonzalez@yahoo.com	14
Goodson-Espy, Tracy J.	*Appalachian State University*	goodsonespyt@appstate.edu	65
Grady, Maureen	*East Carolina University*	gradym@ecu.edu	74
Grant, Yvonne E.	*Michigan State University*	grant@math.msu.edu	9
Graybeal, Christy Danko	*Hood College*	graybeal@hood.edu	65, 104
Graysay, Duane	*Penn State University*	dtg105@psu.edu	152
Gruver, John	*San Diego State University*	jgruve@gmail.com	104
Guarino, Jody Lynn	*University of California, Irvine*	jguarino@uci.edu	99

H

Hackett, Maggie M.	*University of Arizona*	mhackett@email.arizona.edu	123
Haines, Brenna J.	*Wichita State University*	brenna.haines@wichita.edu	88
Haistings, Jeanine	*William Jewell College*	haistingsj@william.jewell.edu	35
Hakansson, Susie W.	*TODOS: Mathematics for ALL*	shakans@g.ucla.edu	16
Hallman-Thrasher, Allyson	*Ohio University*	hallman@ohio.edu	122, 159
Harbour, Kristin	*University of Alabama*	kharbour35@gmail.com	39

Hardamon, Kaili Takiyah	*Wayne State University*	ay3029@wayne.edu	40
Hargrove, Dori	*George Mason University*	dhargro1@masonlive.gmu.edu	131
Harris, Pamela	*University of Texas*	pamharris@utexas.edu	33
Hartland, Kristin Sue	*Middle Tennessee State University*	Kristin.hartland@mtsu.edu	3
Harwood, Jan	*Pocatello/Chubbuck School District, Idaho*	harwooja@sd25.us	1
Hawthorne, Casey	*San Diego State University*	caseyhawthorne@yahoo.com	143
Heaton, Ruth	*University of Nebraska, Lincoln*	rheaton1@unl.edu	52
Heck, Daniel	*Horizon Research, Inc.*	dheck@horizon-research.com	162
Hedges, Melissa E.	*University of Wisconsin, Milwaukee*	mhedges@uwm.edu	70
Heid, Mary Kathleen	*Penn State University*	mkh2@psu.edu	53
Hendrix, Tim	*Meredith College*	hendrixt@meredith.edu	Committee Chairs Meeting
Henry, Valerie	*University of California, Irvine*	vhenry@uci.edu	99
Herbel-Eisenmann, Beth	*Michigan State University*	bhe@msu.edu	98
Herbstman, Baila	*Rutgers University*	bs550@scarletmail.rutgers.edu	32
Hickman, Lauren	*University of Michigan*	hickmala@umich.edu	7
Hill, La Queitta	*California State University, East Bay*	lhill@cv.k12.ca.us	156
Hillen, Amy	*Kennesaw State University*	ahillen@kennesaw.edu	15
Hintz, Allison	*University of Washington, Bothell*	ahintz@uw.edu	91
Hjalmarson, Margret	*George Mason University*	mhjalmar@gmu.edu	153
Hodges, Thomas E.	*University of South Carolina*	hodgeste@sc.edu	48
Hohensee, Charles	*University of Delaware*	hohensee@udel.edu	65, 150
Hollebrands, Karen	*North Carolina State University*	kfholleb@ncsu.edu	113, 148
Howell, Heather	*Educational Testing Service*	hhowell@ets.org	56
Huang, Dinglei	*The Ohio State University*	huang.1265@osu.edu	78, 172
Hudson, Rick Alan	*University of Southern Indiana*	rhudson@usi.edu	175
Huey, Maryann	*Drake University*	maryann.huey@drake.edu	22
Hughes, Gwyneth Retta	*Boise State University*	gwynethhughes@boisestate.edu	118, 186
Huinker, DeAnn	*University of Wisconsin, Milwaukee*	huinker@uwm.edu	15, 70
Humphreys, Cathy	*Stanford University*	cathy.j.humphreys@gmail.com	182

I

Ilaria, Daniel	*West Chester University*	dilaria@wcupa.edu	50

J

Jackson, Christa	*Iowa State University*	jacksonc@iastate.edu	22, 71
James, Julie	*University of Mississippi*	jjames1@olemiss.edu	65
Jansen, Amanda	*University of Delaware*	jansen@udel.edu	65, 150
Jilk, Lisa M.	*University of Washington*	jilklisa@uw.edu	171
Johnson, Francine Winston	*Hood College*	johnsonf@hood.edu	65
Johnson, Kate R.	*Brigham Young University*	johnson@mathed.byu.edu	25, 77
Johnson, Kim Helene	*West Chester University*	kjohnson2@wcupa.edu	90
Johnson, Nicholas C.	*University of California, Los Angeles*	nicko@ucla.edu	65, 91
Jones, Durrell A.	*Michigan State University*	jonesdur@msu.edu	98
Jones, Dusty	*Sam Houston State University*	dljones@shsu.edu	112
Jong, Cindy	*University of Kentucky*	cindy.jong@uky.edu	66
Joseph, Manjula	*University of Wisconsin, Eau Claire*	josephm@uwec.edu	28
Joseph, Nicole Michelle	*University of Denver*	nicole.joseph@du.edu	25
Jung, Eun	*University of Georgia*	eunjung@uga.edu	90
Jung, Hyunyi	*Purdue University*	jung91@purdue.edu	65
Junor Clarke, Pier Angeli	*Georgia State University*	pjunor@gsu.edu	66

K

Kalinec-Craig, Crystal	*University of Texas, San Antonio*	crystal.kalinec-Craig@utsa.edu	10
Karp, Karen	*University of Louisville*	karen@louisville.edu	39, 96
Kastberg, Signe E.	*Purdue University*	skastber@purdue.edu	103
Kent, Laura B.	*University of Arkansas*	lkent@uark.edu	80
Kerschen, Keith	*Baylor University*	Keith_Kerschen@baylor.edu	185
Kervin, Traci	*Florida State University*	tlc03h@my.fsu.edu	21
King, Karen	*National Science Foundation*	kking@nsf.gov	Advocacy Breakfast
King, Lesley	*George Mason University*	lesleyking27@hotmail.com	131, 153
Kinser-Traut, Jennifer	*University of Arizona*	jkinser@email.arizona.edu	172

Kinzel, Margaret T.	*Boise State University*	mkinzel@boisestate.edu	65
Klein, Valerie	*Drexel University*	vek25@drexel.edu	65
Klespis, Mark	*Sam Houston State University*	klespis@shsu.edu	112
Ko, Yi-Yin (Winnie)	*Indiana State University*	Winnie.Ko@indstate.edu	97
Kobett, Beth McCord	*Stevenson University*	bkobett@stevenson.edu	68
Kobrin, Jennifer Lise	*Pearson*	jennifer.kobrin@pearson.com	24
Koestler, Courtney	*Ohio University*	koestler@ohio.edu	98
Konuk, Nursen	*Pennsylvania State University*	nuk141@psu.edu	152
Kosko, Karl Wesley	*Kent State University*	kkosko1@kent.edu	118
Krause, Lisa	*University of Kentucky*	lisa.krause@uky.edu	128
Krehbiel, Ken	*National Council of Teachers of Mathematics*	kkrehbiel@nctm.org	Advocacy Breakfast
Krupa, Erin E.	*Montclair State University*	krupae@mail.montclair.edu	74, 136
Kulow, Torrey	*University of Wisconsin, Madison*	kulow@wisc.edu	65

L

La Voy, Carrie	*University of Kansas*	cll@ku.edu	35
Lai, Yvonne	*University of Nebraska, Lincoln*	yvonnexlai@unl.edu	56
Lamb, Lisa	*San Diego State University*	Lisa.Lamb@sdsu.edu	61, 143
Lambert, Rachel	*Chapman University*	mathematizing4all@gmail.com	89
Langer-Osuna, Jennifer Marie	*Stanford University*	jmlo@stanford.edu	96
LaRochelle, Raymond	*San Diego State University*	rlarochelle89@gmail.com	61
Larsen, Shannon	*University of Maine, Farmington*	shannon.larsen@maine.edu	167
Leatham, Keith R.	*Brigham Young University*	kleatham@mathed.byu.edu	29, 174
Lee, Hollylynne	*North Carolina State University*	hollylynne@ncsu.edu	113
Lee, Jean S.	*University of Indianapolis*	jslee@uindy.edu	43, 74
Lee, Ji-Eun	*Oakland University*	lee2345@oakland.edu	163
Lee, Mi Yeon	*Arizona State University*	mlee115@asu.edu	72, 163
Lesseig, Kristin	*Washington State University*	kristin.lesseig@vancouver.wsu.edu	12, 97
Levy, Rachel	*Harvey Mudd College*	levy@hmc.edu	1
Lewis, Becca	*University of Washington*	blewis42@uw.edu	91, 138
Lewis, Jim	*National Science Foundation*	wjlewis@nsf.gov	Advocacy Breakfast
Lewis, Stephen T.	*The Ohio State University*	lewis.813@osu.edu	160
Libberton, Jason	*Idaho State University*	libbjaso@isu.edu	1
Liebars, Cathy	*The College of New Jersey*	liebars@tcnj.edu	125
Lim, Kien Hwa	*University of Texas, El Paso*	kienlim@utep.edu	66
Lim, Woong	*University of New Mexico*	lim.mathed@gmail.com	163
Lindaman, Brian	*California State University, Chico*	blindaman@csuchico.edu	35
Lischka, Alyson	*Middle Tennessee State University*	Alyson.Lischka@mtsu.edu	3, 179
Livers, Stefanie D.	*University of Alabama*	sdlivers@bamaed.ua.edu	8
Lo, Jane-Jane	*Western Michigan University*	jane-jane.lo@wmich.edu	101
Lomax, Kendra	*University of Washington*	klomax@uw.edu	91
Lopez-Leiva, Carlos Alfonso	*University of New Mexico*	callopez@unm.edu	98
Louie, Nicole L.	*University of Texas, El Paso*	nicole.louie@gmail.com	171
Lovett, Jennifer Nickell	*North Carolina State University*	jnickel@ncsu.edu	113
Lubinski, Cheryl	*Illinois State University*	calubinski@mac.com	59
Luebeck, Jennifer	*Montana State University*	luebeck@math.montana.edu	170
Lynch-Arroyo, Ruby L.	*University of Texas, El Paso*	rllynch@utep.edu	65
Lynch-Davis, Kathleen	*Appalachian State University*	lynchrk@appstate.edu	41

M

Magiera, Marta T.	*Marquette University*	marta.magiera@marquette.edu	7
Males, Lorraine M.	*University of Nebraska, Lincoln*	lmales2@unl.edu	22, 100
Mamolo, Ami	*University of Ontario Institute of Technology*	ami.mamolo@uoit.ca	19
Manes, Michelle	*University of Hawaii, Manoa*	mmanes@math.hawaii.edu	111
Manouchehri, Azita	*The Ohio State University*	manouchehri.1@osu.edu	30, 78
Markworth, Kim	*Western Washington University*	Kimberly.Markworth@wwu.edu	4
Marshall, Anne Marie	*Lehman College*	anne.marshall@lehman.cuny.edu	65
Marshall, Anne Marie S.	*Berry College*	amarshall@berry.edu	157
Martin, Megan	*University of North Carolina, Greensboro*	M_reid@uncg.edu	76
Martin, W. Gary	*Auburn University*	martiwg@auburn.edu	92, 105
Marynowski, Richelle	*University of Lethbridge*	richelle.marynowski@uleth.ca	172
Matney, Gabriel	*Bowling Green State University*	gmatney@bgsu.edu	79

McAneny, Taffy	*West Chester University*	kmcaneny@wcupa.edu	93
McComas, Kim Krusen	*University of Arkansas*	kmccomas@uark.edu	65
McCormick, Kelly	*University of Southern Maine*	kmccormick@usm.maine.edu	167
McCoy, Ann	*University of Central Missouri*	mccoy@ucmo.edu	68
McCulloch, Allison	*North Carolina State University*	allison_mcculloch@ncsu.edu	113, 148
McGatha, Maggie B.	*University of Louisville*	Maggie.mcgatha@louisville.edu	110, 129
McIntyre, Leighton	*University of Georgia*	mr1mcint@uga.edu	84
McLeman, Laura	*University of Michigan, Flint*	lauramcl@umflint.edu	142
McLeod, Kevin	*University of Wisconsin, Milwaukee*	kevinm@uwm.edu	108
McLeod, Monica G.	*Wayne State University*	monicamcleod@wayne.edu	40, 94
McMillan, Brandon	*University of California, Los Angeles*	brandon.g.mcmillan@gmail.com	65, 91
McNamara, Julie	*California State University, East Bay*	julie.mcnamara@csueastbay.edu	106, 156
Mercado, Janet	*University of California, Irvine*	janetg1@uci.edu	37
Middleton, Catharina	*East Carolina University*	middletonc14@ecu.edu	1
Mikusa, Michael	*The Ohio State University*	mikusa.12@osu.edu	72
Milewski, Amanda	*University of Michigan*	amilewsk@umich.edu	137
Miller, Erica Rose	*University of Nebraska, Lincoln*	erica.miller@huskers.unl.edu	56
Miller, Katherine	*The Ohio State University*	kingkatz@gmail.com	65
Miller, Travis	*University of Indianapolis*	tmiller@uindy.edu	74
Mills, Valerie Lynn	*National Council of Supervisors of Mathematics*	Valerie.mills@oakland.k12.mi.us	96
Mitten, Carolyn	*University of Florida*	cmitten@ufl.edu	49
Mohr-Schroeder, Margaret J.	*University of Kentucky*	m.mohr@uky.edu	71, 128
Monson, Debbie	*University of St. Thomas*	debbie.monson@stthomas.edu	136
Moore, Sara Delano	*ETA hand2mind*	smoore@hand2mind.com	60
Morgan, Michelle Ann	*University of Northern Colorado*	michelle.morgan@unco.edu	65
Morge, Shelby Paige	*University of North Carolina, Wilmington*	morges@uncw.edu	41
Mortimer, Jillian Peterson	*University of Michigan*	jbpet@umich.edu	144
Munter, Charles	*University of Pittsburgh*	cmunter@pitt.edu	28
Murawska, Jaclyn Marie	*Saint Xavier University*	murawska@sxu.edu	90
Myers, Marrielle	*Kennesaw State University*	mmyers22@kennesaw.edu	65

N

Namakshi, Nama	*Texas State University*	nn1052@txstate.edu	7
Nance, Rebecca Smith	*University of Mississippi*	rsnance@go.olemiss.edu	65
Narasimhan, Lynn	*DePaul University*	cnarasim@depaul.edu	13
Naresh, Nirmala	*Miami University*	nareshn2@miamioh.edu	65
Nazelli, Christopher	*Wayne State University*	nazelli@wayne.edu	40, 94
Negreiros, Melissa	*Berkeley County Schools, South Carolina*	negreirosm@bcsdschools.net	48
Nickerson, Susan	*San Diego State University*	snickerson@mail.sdsu.edu	61
Nielsen, Lynne	*Louisiana Tech University*	nielsen@latech.edu	80
Nieman, Hannah Jane	*University of Washington*	hnieman@uw.edu	109
Nivens, Ryan Andrew	*East Tennessee State University*	nivens@etsu.edu	14

O

O'Kelley, Sharon K.	*Francis Marion University*	sokelley@fmarion.edu	65
Ochieng, Mary A.	*Western Michigan University*	maryachieng.ochieng@wmich.edu	151
Oehm, Nicholas	*Florida International University*	oehmn@fiu.edu	128
Olkin, Julia	*California State University, East Bay*	julia.olkin@csueastbay.edu	156
Olson, Travis Austin	*University of Nevada, Las Vegas*	travis.olson@unlv.edu	86
Otto, Albert D.	*Illinois State University*	alotto@mac.com	59
Ovrick, Robyn	*University of Georgia*	robynovrick@gmail.com	83
Ozgun-Koca, S. Asli	*Wayne State University*	aokoca@wayne.edu	40, 72
Ozgur, Zekiye	*University of Wisconsin, Madison*	zozgur@wisc.edu	65

P

Palsky, Kylie	*Brigham Young University*	kyliea@gmail.com	147
Pampel, Krysten	*Arizona State University*	krysten.pampel@asu.edu	157
Panorkou, Nicole	*Montclair State University*	panorkoun@mail.montclair.edu	24
Parks, Amy Noelle	*Michigan State University*	parksamy@msu.edu	114
Patterson, Cody	*University of Texas, San Antonio*	cpatterson@math.arizona.edu	184
Perry, Jill	*Rowan University*	perry@rowan.edu	93

Peterson, Blake E.	*Brigham Young University*	blake@byu.edu	29, 174
Petrou, Marilena	*Montclair State University*	petroum@mail.montclair.edu	50
Pettis, Christy	*University of Minnesota*	cpettis@umn.edu	26
Philhower, Joanne	*Michigan State University*	philhowe@msu.edu	51
Philipp, Randolph	*San Diego State University*	rphilipp@mail.sdsu.edu	143, 158
Phillips, Elizabeth	*Michigan State University*	ephillips@math.msu.edu	9
Pinter, Holly H.	*Western Carolina University*	hhpinter@gmail.com	65
Poling, Lisa L.	*Appalachian State University*	polingll@appstate.edu	65
Powell, Arthur B.	*Rutgers University*	powellab@andromeda.rutgers.edu	32, 62
Powers, Robert	*University of Northern Colorado*	robert.powers@unco.edu	65
Pratt, David	*Purdue University North Central*	dpratt@pnc.edu	87
Preston, Ron	*East Carolina University*	prestonr@ecu.edu	1
Prinstein, Alexandra	*University of Florida*	aprinstein@coe.ufl.edu	116
Pugalee, David	*University of North Carolina, Charlotte*	david.pugalee@uncc.edu	41, 165

Q

Quebec Fuentes, Sarah	*Texas Christian University*	s.quebec.fuentes@tcu.edu	93

R

Rakes, Christopher	*University of Maryland, Baltimore County*	rakes@umbc.edu	165
Rathouz, Margaret	*University of Michigan, Dearborn*	rathouz@umich.edu	31, 101
Ray, Amy	*Michigan State University*	rayamy1@msu.edu	51
Raygoza, Mary Candace	*University of California, Los Angeles*	marycandaceraygoza@gmail.com	65, 91
Redmond-Sanogo, Adrienne Anne	*Oklahoma State University*	adrienne.redmond@okstate.edu	65
Reeder, Stacy	*University of Oklahoma*	reeder@ou.edu	65, 68
Reiten, Lindsay	*University of Wisconsin, Madison*	reiten@wisc.edu	65
Rhine, Steve	*Pacific University*	steverhine@pacificu.edu	72
Richards, Paige	*Brookhill Institute of Mathematics*	paige.richards@brookhillmath.org	155
Rigelman, Nicole	*Portland State University*	n.rigelman@gmail.com	110
Rios, Daniel Leonardo	*Texas A&M University, Commerce*	danielrios610@gmail.com	65
Roberts, Sarah A.	*University of California, Santa Barbara*	sroberts@education.ucsb.edu	178
Roebuck, Kay Irene Meeks	*Ball State University*	kroebuck@bsu.edu	45
Rojas, Eliana D.	*University of Connecticut*	eliana.rojas@uconn.edu	154
Ronau, Robert	*University of Cincinnati*	bobronau@gmail.com	165
Roth McDuffie, Amy	*Washington State University, Tri-Cities*	mcduffie@tricity.wsu.edu	67, 120
Rougee, Annick	*University of Michigan*	arougee@umich.edu	183
Rubenstein, Rheta	*University of Michigan, Dearborn*	rrubenst@umich.edu	31, 94
Rumsey, Chepina	*Kansas State University*	chepina@ksu.edu	97

S

Safak, Elif	*Florida Gulf Coast University*	esafak@ilstu.edu	121
Safi, Farshid	*University of Central Florida*	farshid.safi@ucf.edu	73
Salinas, Tracie McLemore	*Appalachian State University*	salinastm@appstate.edu	115
Santagata, Rossella	*University of California, Irvine*	r.santagata@uci.edu	145
Saucedo, Enrique	*University of Texas, El Paso*	esaucedo12@miners.utep.edu	65
Sawyer, Amanda	*James Madison University*	sawyerag@jmu.edu	83
Schack, Edna O.	*Morehead State University*	e.schack@morehead-st.edu	66
Schackow, Joy	*University of Florida*	schackow@coe.ufl.edu	116
Schoen, Robert	*Florida State University*	rschoen@lsi.fsu.edu	63
Schwartz, Catherine	*East Carolina University*	schwartzca@ecu.edu	1, 130
Selling, Sarah Kate	*University of Michigan*	sselling@umich.edu	117
Selmer, Sarah	*West Virginia University*	sarah.selmer@mail.wvu.edu	176
Seshaiyer, Padmanabhan	*George Mason University*	pseshaiy@gmu.edu	1
Seward, Ruth	*DePaul University*	rseward@depaul.edu	13
Shafter, Lynnea Adrienne	*West Ada School District, Idaho*	shafter.lynnea@westada.org	75
Shaughnessy, J. Michael	*Portland State University*	mikesh@pdx.edu	94
Shaughnessy, Meghan	*University of Michigan*	mshaugh@umich.edu	106
Shekell, Calli	*University of Pittsburgh*	cas285@pitt.edu	28
Sherin, Miriam Gamoran	*Northwestern University*	msherin@northwestern.edu	17
Sherman, Diana	*University of Michigan*	shdiana@umich.edu	54
Shih, Jeffrey	*University of Nevada, Las Vegas*	jshih@unlv.nevada.edu	10

Shobert, Nicole	*Oklahoma State University*	nicole.shobert@okstate.edu	65
Siegfried, John (Zig)	*James Madison University*	siegfrjm@jmu.edu	158
Silver, Edward	*University of Michigan*	easilver@umich.edu	96, 144
Silverman, Jason	*Drexel University*	js657@drexel.edu	65
Sjostrom, Mary Pat	*Winthrop University*	mpshoemath@gmail.com	132
Slavit, David	*Washington State University, Vancouver*	dslavit@wsu.edu	12
Smith, Margaret	*University of Pittsburgh*	pegs@pitt.edu	15, 96
Smith, Wendy	*University of Nebraska, Lincoln*	wsmith5@unl.edu	102
Snider, Rachel B.	*University of Michigan*	rsnider@umich.edu	183
Son, Ji-Won	*University at Buffalo, State University of New York*	jiwonson@buffalo.edu	163
Soto, Melissa Marie	*San Diego State University*	melissa.soto@mail.sdsu.edu	99
Spangler, Denise A.	*University of Georgia*	dspangle@uga.edu	159
Spencer, Joi A.	*University of San Diego*	joi.spencer@sandiego.edu	25
Staley, John William	*National Council of Supervisors of Mathematics*	jstaley@bcps.org	119
Steele, Michael D.	*University of Wisconsin, Milwaukee*	steelem@uwm.edu	70, 108
Stehr, Eryn Michelle	*Michigan State University*	stehrery@msu.edu	65
Steimle, Alice	*University of Mississippi*	asteimle@olemiss.edu	65
Stein, Mary Kay	*University of Pittsburgh*	mkstein@pitt.edu	107
Stockero, Shari L.	*Michigan Technological University*	stockero@mtu.edu	29
Stoehr, Kathy	*Santa Clara University*	kathy.stoehr@gmail.com	67
Strachota, Susanne	*University of Wisconsin, Madison*	sstrachota@wisc.edu	65
Strand, Krista	*University of Oregon*	kstrand@uoregon.edu	141
Strickland, Sharon Kay	*Texas State University*	ss67@txstate.edu	7
Strutchens, Marilyn Elaine	*Auburn University*	strutme@auburn.edu	6, 92
Stump, Sheryl	*Ball State University*	sstump@bsu.edu	45
Sturgill, Derek	*Ohio University*	ds278604@ohio.edu	122
Suh, Jennifer M.	*George Mason University*	jsuh4@gmu.edu	1, 131
Sun, Jennifer	*University of California, Irvine*	sunjy@uci.edu	145
Sun, Kathy Liu	*Santa Clara University*	ksun@scu.edu	182
Suominen, Ashley Luan	*University of Georgia*	ashley.suominen@gmail.com	164
Suzuka, Kara	*University of Michigan*	ksuzuka@umich.edu	173
Swartz, Barbara Ann	*McDaniel College*	bswartz@mcdaniel.edu	68, 179
Switzer, John	*Texas Christian University*	j.switzer@tcu.edu	147
Sztajn, Paola	*North Carolina State University*	psztajn@ncsu.edu	6

T

Tan, Paulo	*University of Tulsa*	paultan123@me.com	89
Tanner, Jane D.	*American Mathematical Association of Two Year Colleges*	tannerj@sunyocc.edu	134
Tatto, Maria Teresa	*Michigan State University*	mttatto@msu.edu	102
Taylor, Cynthia E.	*Millersville University of Pennsylvania*	cynthia.taylor@millersville.edu	95
Teuscher, Dawn	*Brigham Young University*	dawn.teuscher@byu.edu	147, 174
Thamotharan, Vishodana	*Florida International University*	vthamoth@fiu.edu	128
Thanheiser, Eva	*Portland State University*	evat@pdx.edu	2, 150
Thomas, Amanda	*University of Nebraska, Lincoln*	amanda.thomas@unl.edu	11
Thomas, Christine	*Georgia State University*	cthomas11@gsu.edu	Committee Chairs Meeting
Thomas, Jonathan N.	*University of Kentucky*	jonathan.thomas1@uky.edu	66
Tobias, Jennifer M.	*Illinois State University*	jtobias@ilstu.edu	121
Torres-Ardila, Fabian	*University of Massachusetts, Boston*	fabian.torres-ardila@umb.edu	65
Townsend, Brian	*University of Northern Iowa*	brian.townsend@uni.edu	65
Truxaw, Mary	*University of Connecticut*	mary.truxaw@uconn.edu	44, 154
Tunney, Jessica Williams	*University of California, Irvine*	jtunney@uci.edu	145
Turner, Erin E.	*University of Arizona*	eturner@email.arizona.edu	67
Turrou, Angela Chan	*University of California, Los Angeles*	achan@gseis.ucla.edu	65, 91

U

Utley, Juliana	*Oklahoma State University*	juliana.utley@okstate.edu	68

V

Valentine, Keri Duncan	*West Virginia University*	kevalentine@mail.wvu.edu	176
Van Dine, Douglas W.	*University of Denver*	Douglas.VanDine@du.edu	173
van Es, Elizabeth	*University of California, Irvine*	evanes@uci.edu	37, 145
van Ingen, Sarah	*University of South Florida*	vaningen@usf.edu	139, 179
Van Zoest, Laura R.	*Western Michigan University*	laura.vanzoest@wmich.edu	29, 151
Venenciano, Linda	*University of Hawaii, Manoa*	lhirashi@hawaii.edu	111
Virmani, Rajeev	*University of Saint Joseph*	rajeev.virmani@gmail.com	27

W

Wager, Anita A.	*University of Wisconsin, Madison*	awager@wisc.edu	57, 114
Walkoe, Janet Dawn	*University of Maryland*	jwalkoe@umd.edu	93
Walkowiak, Temple	*North Carolina State University*	tawalkow@ncsu.edu	85
Wang, Sasha	*Boise State University*	sashawang@boisestate.edu	75
Warshauer, Hiroko Kawaguchi	*Texas State University*	hw02@txstate.edu	7
Wasserman, Nick	*Teachers College, Columbia University*	wasserman@tc.columbia.edu	149
Webb, Jared	*University of North Carolina, Greensboro*	jnwebb2@uncg.edu	76
Webb, Melissa	*West Ada School District, Idaho*	webb.melissa@westada.org	75
Webel, Corey	*University of Missouri*	webelcm@missouri.edu	68, 93
Welder, Rachael M.	*Western Washington University*	rachael@rachaelwelder.com	95
Weston, Tracy L.	*Middlebury College*	tweston@middlebury.edu	5, 103
Whitacre, Ian	*Florida State University*	iwhitacre@fsu.edu	21, 97
Whitehead, Ashley	*North Carolina State University*	anwhiteh@ncsu.edu	104
Whitesides, Ellen	*Illustrative Mathematics*	ellen.whitesides@gmail.com	180
Wickstrom, Megan H.	*Montana State University*	megan.wickstrom@montana.edu	161, 177
Wieman, Rob	*Rowan University*	gomathman@yahoo.com	93
Wilburne, Jane M.	*Penn State, Harrisburg*	jmw41@psu.edu	11, 169
Wilkerson, Trena	*Baylor University*	Trena_Wilkerson@baylor.edu	185
Willey, Craig	*Indiana University, Indianapolis*	cjwilley@iupui.edu	8, 178
Willingham, James Chris	*Middle Tennessee State University*	jw5x@mtmail.mtsu.edu	3
Willis, Amber	*University of Michigan*	atwillis@umich.edu	106
Wilson, P. Holt	*University of North Carolina, Greensboro*	phwilson@uncg.edu	76
Wilson, Patricia S.	*University of Georgia*	pswilson@uga.edu	53
Winsor, Matthew	*Illinois State University*	mwinsor@ilstu.edu	82
Witters, Angela	*Washington State University, Tri-Cities*	ajwitters@tricity.wsu.edu	67
Wood, Marcy B.	*University of Arizona*	mbwood@email.arizona.edu	114, 172
Woods, Dawn Marie	*Southern Methodist University*	dwoods@smu.edu	51
Wray, Jon	*Howard County Public Schools, Maryland*	jon_wray@hcpss.org	68

Y

Yagi, Seanyelle	*Hawaii Department of Education*	seanyelle@gmail.com	111
Yao, Xiangquan	*The Ohio State University*	yao.298@osu.edu	30, 172
Yee, Sean P.	*University of South Carolina*	yee@math.sc.edu	73, 97
Yeh, Cathery	*University of California, Irvine*	catheryy@uci.edu	99, 145
Yolcu, Ayse	*University of Wisconsin, Madison*	yolcu@wisc.edu	57, 98
Young, Jamaal Rashad	*University of North Texas*	jamaal.young@unt.edu	65

Z

Zahner, William	*San Diego State University*	bzahner@mail.sdsu.edu	178
Zazkis, Rina	*Simon Fraser University*	zazkis@sfu.ca	19
Zbiek, Rose Mary	*Penn State University*	rmz101@psu.edu	146
Zeybek, Zulfiye	*Gazi Osman Pasa University*	zeybekzulfiye@gmail.com	7, 175
Ziegler, Jeff	*Brookhill Institute of Mathematics*	jeff.ziegler@brookhillmath.org	155
Ziols, Ryan	*University of Wisconsin, Madison*	ziols@wisc.edu	57, 142

AMTE EVENTS AT THE 2016 NCTM ANNUAL CONFERENCE

APRIL 13 - 16, 2016 IN SAN FRANCISCO, CALIFORNIA

AMTE RECEPTION AT THE NCTM CONFERENCE

Thursday, April 14, 2016
6:00 - 7:30 pm
Golden Gate Ballroom C1, Hotel Level B2
The San Francisco Marriott Marquis

All members and interested persons are invited to attend.

For more detailed information,
please visit **amte.net**

AMTE'S 2017 ANNUAL CONFERENCE

We invite you to attend and speak at next year's Twenty-First Annual AMTE Conference, which will be held on February 9 - 11, 2017, in Orlando, Florida. The Call for Proposals will be available on the AMTE website (amte.net) by March 1, 2016, and in the next issue of AMTE Connections. Holt Wilson of the University of North Carolina-Greensboro (holtwilson@uncg.edu) is the Program Chair.

THE DEADLINE FOR SUBMITTING PROPOSALS FOR THE 2017 ANNUAL CONFERENCE IS MAY 15, 2016.

Visit amte.net for updated information about the 2017 Conference.

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 members of AMTE. 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 the treasurer, the president, and as the first executive director. The Judith 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 and outlined how being a mathematics teacher educator is different from being a mathematics teacher, a career professional developer, or a researcher in mathematics education. She challenged us to recognize our roles as mathematics teacher educators and through this organization, an outlet was created to share and learn from each other.

Year	Judith E. Jacobs Lecturer	Affiliation	Title
2016	Francis (Skip) Fennell	McDaniel College	*Mathematics Teacher Education: Normal Schools to Now. What's the Fit and Future for AMTE?*
2015	Nadine Bezuk	San Diego State University	*Supporting Elementary Teachers in Developing Their Mathematics Teaching*
2014	Barbara J. Reys	University of Missouri	*Curriculum Matters! For Teachers, for Students, and for Mathematics Teacher Educators*
2013	Karen Karp	University of Louisville	*The Invisible 10% - Preparing Teachers to Teach Mathematics to Students with Special Needs*
2012	Deborah Schifter	Education Development Center	*Interpreting the Common Core: What Might It Look Like in the Classrooms?*
2011	Joan Ferrini-Mundy	Michigan State University	*Learning for Tomorrow: Challenges and Opportunities in Mathematics Teacher Education*
2010	James Hiebert	University of Delaware	*Building Knowledge for Helping Teachers Learn to Teach: An Alternative Path for Teacher Education*
2009	Jeremy Kilpatrick	University of Georgia	*Going to War with the Army You Have*
2008	Ed Silver	University of Michigan	*Mathematics Teacher Education in Dodge City: Desperately Seeking Wyatt Earp and Henri Poincaré*
2007	Deborah Loewenberg Ball	University of Michigan	*The Core and Contemporary Challenges of Mathematics Teacher Education*
2006	Judith Sowder	San Diego State University	*Preparing Elementary Teachers: The Role of Reasoning about Numbers and Quantities*
2005	Glenda Lappan	Michigan State University	*Reflections on a Lifetime of Work: Why Curriculum Matters*
2004	Thomas J. Cooney	University of Georgia	*The Role of Mathematics Teacher Education: Reform or Enculturation?*
2003	Judith E. Jacobs	California State Polytechnic University - Pomona	*Improving Mathematics Education: Mathematics Teacher Educators Lead the Way*

AMTE LEADERSHIP

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AFFILIATE CONNECTIONS COMMITTEE

2013 - 2016

- **Colleen Eddy (Chair, 2015), University of North Texas, Colleen.Eddy@unt.edu**
- Erin Krupa, Montclair State University, ekrupa@hotmail.com

2014 - 2017

- Alejandra Salinas, Boston University, salinas@bu.edu
- Jean Lee (Chair, 2016), University of Indianapolis, jslee@uindy.edu

2015 - 2018

- Maureen Grady, East Carolina University, mpshoemath@gmail.com
- Travis Miller, University of Indianapolis, tmiller@uindy.edu

2016 - 2019

- Mary Pat Sjostrom, Winthrop University, gradym@ecu.edu
- Thomas Evitts, Shippensburg University of PA, taevit@ship.edu

Board Representative

- Megan Burton, Auburn University, meb0042@auburn.edu

AWARDS COMMITTEE

2013 - 2016

- William Bush, University of Louisville, bill.bush@louisville.edu
- Vanessa Pitts Bannister, Florida A&M University, vanessa.pittsbannister@famu.edu

2014 - 2017

- Stephanie Livers, University of Alabama, sdlivers@bamaed.ua.edu
- **Kimberly Markworth (Chair, 2015, 2016), Western Washington Univ., Kimberly.Markworth@wwu.edu**
- Bethany Noblitt, Northern Kentucky University, noblittb@nku.edu

2015 - 2018

- Zandra de Araujo, University of Missouri, dearaujoz@missouri.edu
- Nirmala Naresh, Miami University, nareshn2@miamioh.edu

2016 - 2019

- Courtenay Miller, College of Coastal Georgia, cmiller@ccga.edu
- Lisa Poling, Appalachian State University, polingll@appstate.edu

Board Representative

- Edward Silver, University of Michigan, easilver@umich.edu

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- Virginia Fraser, Indiana University Southeast, vfraser@ius.edu

2014 - 2017

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- Lorraine Males, University of Nebraska-Lincoln, lmales2@unl.edu

2015 - 2018

- Erika Bullock (Chair, 2016), University of Memphis, Erika.Bullock@memphis.edu
- Michael Simone, New Visions for Public Schools, Mr.Michael.Simone@gmail.com

2016 - 2019

- Cory Bennett, Idaho State University, benncor3@isu.edu
- Stephanie Cross, Georgia State University, scross@gsu.edu

Board Representative

- Joe Champion, Boise State University, joechampion@boisestate.edu

CONSTITUTION AND BY-LAWS COMMITTEE

2013 - 2016

- Melissa Boston, Duquesne University, bostonm@duq.edu
- Karen Keene, North Carolina State University, karen_keene@ncsu.edu

2014 - 2017

- Melva Grant, Old Dominion University, mgrant@odu.edu
- Azita Manouchehri, The Ohio State University, manouchehri.1@osu.edu

2015 - 2018

- **Francis (Skip) Fennell (Chair, 2015, 2016), McDaniel College, ffennell@mcdaniel.edu**

2016 - 2019

- Fran Arbaugh, Pennsylvania State University, arbaugh@psu.edu
- Bonnie Oppenheimer, Mississippi University for Women, bloppenheimer@muw.edu

Board Representative

- Tim Hendrix, Meredith College, hendrixt@meredith.edu

EMERGING ISSUES COMMITTEE

2013 - 2016

- Sybilla Beckman, The University of Georgia, sybillabeckmann@gmail.com
- **Jennifer Luebeck (Chair, 2014, 2015), Montana State University, luebeck@math.montana.edu**

2014 - 2017

- Kathryn Chval, University of Missouri, chvalkb@missouri.edu
- Marilyn Strutchens (Chair, 2016), Auburn University, strutme@auburn.edu

2015 - 2018

- Corey Drake, Michigan State University, cdrake@msu.edu
- Paola Sztajn, North Carolina State University, psztajn@ncsu.edu

2016 - 2019

- M.Kathleen Heid, The Pennsylvania State University, mkh2@psu.edu
- Shari Stockero, Michigan Technological University, stockero@mtu.edu

Board Representative

- Kathleen Lynch-Davis, Appalachian State University, lynchrk@appstate.edu

MEMBERSHIP COMMITTEE

2013 - 2016

- Susan Swars, Georgia State University, sswars@gsu.edu
- Whitney Wesley, Edinboro University of Pennsylvania, wwesley@edinboro.edu

2014 - 2017

- **Jonathan Bostic (Chair, 2015, 2016), Bowling Green State University, bosticj@bgsu.edu**
- Jane Keiser, Miami University, keiserjm@miamioh.edu

2015 - 2018

- Tommy Hodges, University of South Carolina, hodgeste@sc.edu
- Christopher Jett, University of West Georgia, cjett@westga.edu

2016 - 2019

- Suzanne Harper, Miami University, harpersr@MiamiOH.edu
- Yi-Yin (Winnie) Ko, Indiana State University, Winnie.Ko@indstate.edu

Board Representative

- Nicole Rigelman, Portland State University, rigelman@pdx.edu

MENTORING COMMITTEE

2013 - 2016

- Calli Holaway, The University of Alabama, cholaway@bamaed.ua.edu
- Matthew Winsor, Illinois State University, mwinsor@ilstu.edu

2014 - 2017

- **Jennifer Chauvot (Chair, 2015), University of Houston, jchauvot@uh.edu**
- Dave Kennedy, Shippensburg University of Pennsylvania, dikenn@ship.edu

2015 - 2018

- Pier Clarke, Georgia State University, pjunor@gsu.edu
- Alyson Lischka, Middle Tennessee State University, Alyson.Lischka@mtsu.edu

2016-2019

- Karen King, National Science Foundation, kking@nsf.gov
- Sararose Lynch, Westminster College, lynchsd@westminster.edu
- Gladis Kersaint (Chair, 2016), University of South Florida, mkersaint@usf.edu

Board Representative

- Dorothy White, University of Georgia, dywhite@uga.edu

STAR PROGRAM COMMITTEE (MENTORING SUBCOMMITTEE)

2013 - 2016

- Christa Jackson, University of Kentucky, christa.jackson@uky.edu
- Vena Long, The University of Tennessee, vlong@utk.edu
- Jon Star, Harvard University, jon_star@gse.harvard.edu
- Anita Wager, University of Wisconsin, awager@wisc.edu

2014 - 2017

- Sue Peters, University of Louisville, s.peters@louisville.edu
- **Barbara Reys (Co-Chair, 2015, 2016), University of Missouri, ReysB@missouri.edu**
- **Bob Reys (Co-Chair, 2015, 2016), University of Missouri, ReysR@missouri.edu**
- Denise Spangler (Co-Director) , University of Georgia, dspangle@uga.edu
- Jeff Wanko (Co-Director) , Miami University, wankojj@muohio.edu

2015 - 2018

- Amanda Jansen, University of Delaware, jansen@udel.edu
- Jeremy Zelkowski, The University of Alabama, jzelkowski@ua.edu

2016 - 2019

- Susan Gregson, University of Cincinnati, susan.gregson@uc.edu
- Niral Shah, Michigan State University, niral@msu.edu

NOMINATIONS AND ELECTIONS COMMITTEE

2013 - 2016

- **Karen Karp (Chair, 2014, 2015), University of Louisville, karen.karp@louisville.edu**
- Andrea McCloskey, Pennsylvania State University, amccloskey@psu.edu

2014 - 2017

- Adam Feldhaus, University of Northern Iowa, cafeldhaus@gmail.com
- Margaret Mohr-Schroeder (Chair, 2016), University of Kentucky, m.mohr@uky.edu

2015 - 2018

- Temple Walkowiak, North Carolina State University, tawalkow@ncsu.edu
- Tad Watanabe, Kennesaw State University, twatanab@kennesaw.edu

2016 - 2019

- Toya Frank, George Mason University, tfrank4@gmu.edu
- Mark Klespis, Sam Houston State University, klespis@shsu.edu

Board Representative

- Fran Arbaugh, Pennsylvania State University, arbaugh@psu.edu

PROFESSIONAL DEVELOPMENT FOR MEMBERS COMMITTEE

2013 - 2016

- Hyman Bass, University of Michigan, hybass@umich.edu
- Jennifer Bay-Williams, University of Louisville, j.baywilliams@louisville.edu

2014 - 2017

- **Amy Hillen (Chair, 2015), Kennesaw State University, ahillen@kennesaw.edu**
- Mark Thames, University of Michigan, mthames@umich.edu

2015 - 2018

- Julie James (Chair, 2016), University of Mississippi, jjames1@olemiss.edu
- P. Mark Taylor, Carson-Newman University, ptalyor@cn.edu

2016 - 2019

- Samuel (Sam) Eskelson, University of South Florida, eskelson@usf.edu
- Trena Wilkerson, Baylor University, Trena_WIlkerson@baylor.edu

Board Representative

- Tim Boerst, University of Michigan, tboerst@umich.edu

RESEARCH COMMITTEE

2013 - 2016

- Tonya Bartell, Michigan State University, tbartell@msu.edu
- Alison Castro-Superfine, University of Illinois at Chicago, amcastro@uic.edu

2014 - 2017

- **Mathew Felton-Koestler (Chair, 2015), Ohio University, felton@ohio.edu**
- Janet Frost, Washington State University Spokane, frost@wsu.edu

2015 - 2018

- John Lannin (Chair, 2016), University of Missouri, LanninJ@missori.edu
- Sarah van Ingen, University of South Florida, vaningen@usf.edu

2016 - 2019

- Hilda Borko, Stanford University, hildab@stanford.edu
- Imani Goffney, University of Houston, igoffney@central.uh.edu

Board Representative

- Babette Benken, California State University-Long Beach, Babette.benken@csulb.edu

TECHNOLOGY AND MATHEMATICS TEACHER EDUCATION COMMITTEE

2013 - 2016

- Beth Bos, Texas State University-San Marcos, bb33@txstate.edu
- Michael Mikusa, Kent State University, mmikusa@kent.edu
- **S. Asli Ozgun-Koca (Chair, 2015), Wayne State University, aokoca@wayne.edu**

2014 - 2017

- Mi Yeon Lee, Arizona State University, mlee115@asu.edu
- Angiline Powell, The University of Memphis, apowell3@memphis.edu

2015 - 2018

- Steve Rhine, Willamette University, srhine@willamette.edu
- Barbara Swartz (Chair, 2016), McDaniel College, bswartz@mcdaniel.edu

2016 - 2019

- Rob Wieman, Rowan University, gomathman@yahoo.com
- Ann Wheeler, Texas Woman's University, awheeler2@twu.edu

Board Representative

- Suzanne Harper, Miami University, Harpersr@miamioh.edu

AMTE 20th ANNUAL CONFERENCE COMMITTEE

Conference Director: Susan Gay, University of Kansas, KS, sgay@ku.edu
Assistant Conference Director: Carol Lucas, University of Central Oklahoma, OK, clucas@uco.edu

CONFERENCE LEADERSHIP TEAM

Susan Gay (Conference Director), University of Kansas, sgay@ku.edu
Carol Lucas (Assistant Conference Director), University of Central Oklahoma, clucas@uco.edu
Tim Hendrix (AMTE Executive Director), Meredith College, hendrixt@meredith.edu
Dustin Jones (Chair, 2015), Sam Houston State University, dljones@shsu.edu
Shannon Dingman (Chair, 2016), University of Arkansas, sdingman@uark.edu
P. Holt Wilson (Chair, 2017), University of North Carolina-Greensboro, phwilson@uncg.edu

ANNUAL CONFERENCE – PROGRAM COMMITTEE

2013 – 2016
Ann McCoy, University of Central Missouri, mccoy@ucmo.edu
Robert Powers, University of Northern Colorado, robert.powers@unco.edu
Wendy Smith, University of Nebraska-Lincoln, wsmith5@unl.edu

2014 - 2017
Jill Newton, Purdue University, janewton@purdue.edu
Stacy Reeder, University of Oklahoma, reeder@ou.edu
Farshid Safi, University of Central Florida, farshid.safi@ucf.edu
David Slavit, Washington State University-Vancouver, dslavit@wsu.edu

2015 - 2018
David Barker, Illinois State University, dbarker@ilstu.edu
Dana Cox, Miami University, dana.cox@MiamiOH.edu
Rick Hudson, University of Southern Indiana, rhudson@usi.edu
Courtney Koestler, Ohio University, koestler@ohio.edu

PROPOSAL REVIEWERS FOR 2016 ANNUAL AMTE CONFERENCE

Khaled Abdullah Alshehri, University of Dammam
Julie Amador, University of Idaho
Joel Amidon, University of Mississippi
Kristen Apraiz, University of Florida
Christopher Austin, University of Missouri
Sherry L. Bair, Texas A&M University, Corpus Christi
Erin E. Baldinger, Arizona State University
David Barker, Illinois State University
Tonya Gau Bartell, Michigan State University
Allan Bellman, University of Mississippi
Robert Q. Berry, University of Virginia
Kristen Bieda, Michigan State University
Johnna Bolyard, West Virginia University
Enakshi Bose, University of Pennsylvania
Melissa Boston, Duquesne University
Janet Bowers, San Diego State University
Justin D. Boyle, University of Alabama
Angela Broaddus, University of Kansas
Orly Buchbinder, University of New Hampshire
Erika C. Bullock, University of Memphis
Elizabeth A. Burroughs, Montana State University
Megan Burton, Auburn University
Jo Ann Cady, University of Tennessee
Kadian M. Callahan, Kennesaw State University
Matthew P. Campbell, West Virginia University
Amber Grace Candela, University of Missouri, St. Louis
Kayla Chandler, North Carolina State University
Theodore Chao, The Ohio State University
Noelle Conforti Preszler, James Madison University
Kelly M. Costner, Winthrop University
Dana C. Cox, Miami University
Anna Fricano DeJarnette, University of Cincinnati
William DeLeeuw, University of Missouri
Jaime Marie Diamond, University of Georgia
Rebecca Anne Dibbs, Texas A&M University, Commerce
Shannon Dingman, University of Arkansas
Belinda Pickett Edwards, Kennesaw State University
Anne Estapa, Iowa State University
Elizabeth Fleming, University of Maryland
Dana Pomykal Franz, Mississippi State University
Marie Franzosa, Oregon State University
Heather Gallivan, University of Northern Iowa
Michael Gilbert, University of Massachusetts, Boston
Imani Goffney, University of Houston
Christy Danko Graybeal, Hood College
Susan A. Gregson, University of Cincinnati
Dana Lynn Grosser-Clakrson, University of Maryland
Dittika Gupta, Midwestern State University

Leigh Haltiwanger, Clemson University
Kristin Harbour, University of Alabama
Frances Harper, Michigan State University
Suzanne Harper, Miami University
Timothy Hendrix, Meredith College
Amy Hillen, Kennesaw State University
Rick Hudson, University of Southern Indiana
Elizabeth Hughes, University of Northern Iowa
Amanda Jansen, University of Delaware
Naomi A. Jessup, University of North Carolina, Greensboro
Lisa M. Jilk, University of Washington
Gwendolyn Johnson, University of North Texas, Dallas
Jennifer Ellen Johnson, Kansas State University
Kate R. Johnson, Brigham Young University
Dusty Jones, Sam Houston State University
Nicole Michelle Joseph, University of Denver
Debra Plowman Junk, University of Texas, Austin
Pier Angeli Junor Clarke, Georgia State University
Lisa Anne Kasmer, Grand Valley State University
Jane Keiser, Miami University
Barbara Kinach, Arizona State University
Margaret T. Kinzel, Boise State University
Valerie Klein, Drexel University
Yi-Yin (Winnie) Ko, Indiana State University
Mark Koester, Metropolitan State University, Denver
Courtney Koestler, Ohio University
Nursen Konuk, Pennsylvania State University
Olga M. Kosheleva, University of Texas, El Paso
Keith R. Leatham, Brigham Young University
Mi Yeon Lee, Arizona State University
Kimberly Morrow Leong, George Mason University
Stephen T. Lewis, The Ohio State University
Woong Lim, University of New Mexico
Alyson Lischka, MIddle Tennessee State University
Stefanie D. Livers, University of Alabama
Kevin LoPresto, Radford University
Jennifer Nickell Lovett, North Carolina State University
Sararose DeVore Lynch, Westminster College
Richelle Marynowski, University of Lethbridge
Ewelina McBroom, Southeast Missouri State University
Kelly McCormick, University of Southern Maine
Ann McCoy, University of Central Missouri
Laura McLeman, University of Michigan, Flint
Kevin McLeod, University of Wisconsin, Milwaukee
Monica G. McLeod, Wayne State University
Michael Meagher, Brooklyn College, CUNY
Margaret J. Mohr-Schroeder, University of Kentucky
Eula E. Monroe, Brigham Young University
Diana L. Moss, Appalachian State University
Marrielle Myers, Kennesaw State University
Jill Newton, Purdue University
Giang-Nguyen T. Nguyen, University of West Florida
Jeffrey Pair, Middle Tennessee State University
Arnulfo Perez, The Ohio State University
Marilena Petrou, Montclair State University
Lisa L. Poling, Appalachian State University
Arthur B. Powell, Rutgers University
Robert Powers, University of Northern Colorado
Stacy Reeder, University of Oklahoma
Elif Safak, Florida Gulf Coast University
Farshid Safi, University of Central Florida
Lina M. Sanchez Leal, Rutgers University, Newark
Catherine Schwartz, East Carolina University
Ruthmae Sears, University of South Florida
Sarah Kate Selling, University of Michigan
Sarah Selmer, West Virginia University
Ali Shaqlaih, University of North Texas, Dallas
Anu Sharma, University of Kansas
Meghan Shaughnessy, University of Michigan
Diana Sherman, University of Michigan
Rose Sinicrope, East Carolina University
David Slavit, Washington State University, Vancouver
Wendy Smith, University of Nebraska, Lincoln
Rachel B. Snider, University of Michigan
John W. Somers, University of Indianapolis
Joi A. Spencer, University of San Diego
Eryn Michelle Stehr, Michigan State University
Kathy Liu Sun, Santa Clara University
Barbara Ann Swartz, McDaniel College
Amanda Thomas, University of Nebraska, Lincoln
Dung Tran, North Carolina State University
Andrew M. Tyminski, Clemson University
Erol Uzan, Indiana University
Linda Venenciano, University of Hawaii, Manoa
Jared Webb, University of North Carolina, Greensboro
Jane M. Wilburne, Penn State, Harrisburg
Trena Wilkerson, Baylor University
Aaron T. Wilson, University of Texas, Rio Grande Valley
P. Holt Wilson, University of North Carolina, Greensboro
Xiangquan Yao, The Ohio State University
Sean P. Yee, University of South Carolina
Jamaal Rashad Young, University of North Texas
William Zahner, San Diego State University

PUBLICATIONS

MATHEMATICS TEACHER EDUCATOR EDITORIAL PANEL

2013 - 2016

- Anthony Fernandes, University of North Carolina-Charlotte, anthony.fernandes@uncc.edu
- **Laura Van Zoest (Chair, 2014-2016) , Western Michigan University, laura.vanzoest@wmich.edu**

2014 - 2017

- Rebekah Elliot, Oregon State University, elliottr@science.oregonstate.edu
- Jeff Shih, University of Nevada-Las Vegas, jshih@unlv.nevada.edu

2015 - 2018

- Amy Hillen, Kennesaw State University, ahillen@kennesaw.edu
- Randall Groth, Salisbury University, regroth@salisbury.edu

2016 – 2019

- TBA
- TBA

Editors

- Kristen Bieda (Associate Editor), Michigan State University, kbieda@msu.edu
- **Sandra Crespo (Editor), Michigan State University, crespo@msu.edu**

Board Representatives

- Nadine Bezuk (NCTM), San Diego State University, nadine.bezuk@mail.sdsu.edu
- Christine Browning (AMTE), Western Michigan University, christine.browning@wmich.edu

CONNECTIONS NEWSLETTER EDITORIAL PANEL

2013 - 2016

- Nancy Dyson, University of Delaware, ndyson@udel.edu
- Sarah Roberts, UC Santa Barbara, sroberts@education.ucsb.edu

2014 - 2017

- Daniel Ilaria, West Chester University, dilaria@wcupa.edu
- Maggie Niess, Oregon State University, niessm@onid.orst.edu

2015 - 2018

- Barbara Hess, California University of Pennsylvania, Hess@calu.edu
- James Telese, University of Texas-Brownsville, james.telese@utb.edu

2016 - 2019

- Gwendolyn Johnson, University of North Texas at Dallas, gwendolyn.johnson@untdallas.edu
- Sarah Selmer, West Virginia University, sarah.selmer@mail.wvu.edu

Editor

- **Babette Benken (Editor, 2014-2017), California State University-Long Beach, babette.benken@csulb.edu**

Board Representative

- Christine Browning, Western Michigan University, christine.browning@wmich.edu

CITE JOURNAL

Editors

- Doug Lapp (Co-Editor through 2016), Central Michigan University, lapp1da@cmich.edu
- Michael Edwards (Co-Editor through 2017), Miami University, edwardm2@miamioh.edu

Board Representative

- Christine Browning, Western Michigan University, christine.browning@wmich.edu

AMTE TASK FORCES

AMTE CELEBRATIONS TASKFORCE

- Jenny Bay-Williams, University of Louisville, j.baywilliams@louisville.edu
- Nadine Bezuk, San Diego State University, nbezuk@mail.sdsu.edu
- Erika Bullock, University of Memphis, Erika.Bullock@memphis.edu
- Mark Ellis, California State University-Fullerton, mellis@fullerton.edu
- Susan Gay (Chair), University of Kansas, sgay@ku.edu
- David Glassmeyer, Kennesaw State University, dglassme@kennesaw.edu
- Suzanne Harper, Miami University, Harpersr@MiamiOH.edu
- Dustin Jones, Sam Houston State University, dljones@shsu.edu

MATHEMATICS TEACHER PREPARATION (MTP) STANDARDS WRITING TASK FORCE

Leadership Team

- Nadine Bezuk (Project Director), San Diego State University, nbezuk@mail.sdsu.edu
- Jenny Bay-Williams, University of Louisville, j.baywilliams@louisville.edu
- Doug Clements, University of Denver, douglas.clements@du.edu
- Gary Martin, Auburn University, martiwg@auburn.edu

Grades PK – 2

- Dorothy White, University of Georgia, dywhite@uga.edu
- Nicole Rigelman, Portland State University, rigelman@pdx.edu
- DeAnn Huinker, University of Wisconsin, Milwaukee, huinker@uwm.edu
- Doug Clements, University of Denver (Chair), douglas.clements@du.edu

Grades 3 – 5

- Karen Karp, Johns Hopkins University, karen@louisville.edu
- Tim Boerst, University of Michigan, tboerst@umich.edu
- Julia Aguirre, University of Washington, jaguirre@u.washington.edu
- Nadine Bezuk, San Diego State University (Chair), nbezuk@mail.sdsu.edu

Grades 6 – 8

- Ed Dickey, University of South Carolina, ed.dickey@sc.edu
- Travis Olson, University of Nevada-Las Vegas, travis.olson@unlv.edu
- Elizabeth Hughes, University of Northern Iowa, elizabeth.hughes@uni.edu
- Jenny Bay-Williams, University of Louisville (Chair), j.baywilliams@louisville.edu

Grades 9 – 12

- Rochelle Gutiérrez, University of Illinois, rg1@uiuc.edu
- Marilyn Strutchens, Auburn University, strutme@auburn.edu
- Randy Philipp, San Diego State University, rphilipp@mail.sdsu.edu
- Gary Martin, Auburn University (Chair), martiwg@auburn.edu

Grades PK – 5

- Kristin Umland, University of New Mexico, unland@unm.edu

Grades 6 – 8

- Jim Lewis, University of Nebraska, jlewis@unl.edu

Grades 9 – 12

- Beth Burroughs, University of Montana, burroughs@math.montana.edu

AMTE 2016 BUSINESS MEETING AGENDA

Saturday, January 30, 2016
Hotel Irvine, Irvine, CA

A. Welcome	Christine D. Thomas
B. Approval of the Minutes	Nicole Rigelman
C. Treasurer & Membership Report	Suzanne Harper, Tim Hendrix
D. Committee and Task Force Reports	
Committees:	
Affiliate Connections	Colleen Eddy, Chair
Awards	Kimberly Markworth, Chair
Communications	Jo Ann Cady, Chair
Constitution and Bylaws	Francis (Skip) Fennell, Chair
Emerging Issues	Jennifer Luebeck, Chair
Membership	Jonathan Bostic, Chair
Mentoring	Jennifer Chauvot, Chair
STaR Program	Barbara Reys, Chair
Nominations and Elections	Karen Karp, Chair
Professional Development	Amy Hillen, Chair
Program	Shannon Dingman, Chair
Research	Matthew Felton-Koestler, Chair
Technology (and NTLI Award)	S. Asli Ozgun-Koca, Chair
E. Publications	
Mathematics Teacher Educator Journal	Laura Van Zoest, Panel Chair
Connections Newsletter	Babette Benken, Editor
CITE Journal	Doug Lapp, Michael Todd Edwards, Co-Editors
F. Conferences	Susan Gay
G. Celebrations Task Force	Susan Gay
H. Recognitions	Tim Hendrix & Christine Thomas
Program & Local Arrangements Committee Chairs	
Outgoing Board Members & Committee Chairs	
I. Other Business	
J. Installation of new Board Members	Christine D. Thomas
K. 2016 Strategic Priorities & Announcements	Christine D. Thomas
L. Adjournment	

2015 AMTE BUSINESS MEETING MINUTES

February 14, 2015, 12:00 PM - 1:00 PM (EDT)
Rosen Plaza, Ballroom C/D, Orlando, Florida

Fran Arbaugh, president, called the meeting to order at 12:15 pm

WELCOME

Fran Arbaugh welcomed the membership and provided the overview for the meeting.

2014 YEAR IN REVIEW

- Tim Hendrix began his tenure as AMTE Executive Director
- Redesign and shoring up of the website – kudos to Joe Champion (AMTE Website Director), Tim Hendrix, and Tony Nguyen
- Engaging on-going legal and accounting services
- AMTE response to the Federal Regulations

APPROVAL OF MINUTES FROM BUSINESS MEETING HELD ON FEBRUARY 8, 2014

Nicole Rigelman, Secretary, called for any changes in the 2014 Business Meeting minutes found on pages 94-98 of the conference guide.

Motion: Suzanne Harper made the motion to accept the minutes from the 2/8/14 meeting. Judith Jacobs seconded the motion. Unanimously approved.

TREASURER REPORT

Suzanne Harper, Treasurer, presented the expenditures and income from July 2014 through June 2015. The operating expenses are at about $88,000 with the total income at about $83,000. The difference between expenditures and income is made up with income generated through sponsors and conference income. We also made about $10,000 from growing subscriptions (both individual and institutional) to *Mathematics Teacher Educator.* We currently have about $110,000 in reserves representing about more than one year's expenses.

MEMBERSHIP REPORT

Tim Hendrix provided the following information about membership.

- Last year at this time: 947 members
- Total Current Membership: 1065
- Highest point of membership in 2014 was in mid-December at 1089

Of our current members 173 are graduate students and 23 are emeritus members.

Tim also reminded everyone to complete the conference feedback survey. This can be accessed through the conference app or the website.

COMMITTEE AND TASK FORCE REPORTS

Affiliate Connections Committee: Fran Arbaugh provided the report for the committee. Jacqueline Coomes served as chair in 2014. Colleen Eddy will be the chair in 2015. This committee welcomes two new members: Maureen Grady and Travis Miller.

Committee Activities:
- Drafted a survey to understand the needs of Affiliate Leaders. Survey results indicated that a variety of issues concern them, including advocacy within their states, recruiting new members, conducting productive meetings, and creating websites.
- Conducted a Go-To-Meeting for Affiliate Leaders to further discuss their challenges and help them connect with other leaders who had similar issues. We provided notes of this meeting to all Affiliate Leaders.

Awards Committee: Courtney Koestler provided the report. She welcomed Zandra de Araujo as a new committee member and thanked Stephen Pape for his service.

Committee Activities:
- This past year they awarded the following: Excellence in Teaching Award, Early Career Award, Susan Gay Scholarships, and Elementary Specialist Scholarship. Courtney encouraged everyone to consider nominating someone in 2015. The following awards will be granted: Early Career Award, Susan Gay and EMS Scholarships, and the Nadine Bezuk Excellence in Service Award.
- Courtney, as outgoing chair, was honored with an award.

Communications Committee: JoAnn Cady provided the report. In 2014, the committee's main work focused on preparing the conference app. JoAnn welcomed Erika Bullock and Michael Simone to the committee. Joe Champion will continue to serve as Board Liaison. JoAnn will continue as chair.

Next year's goals include: 1) Increasing the visibility of the organization on social media, and 2) Continuing to be responsible for the conference app and finding ways to make the app more interactive and useable by participants.

Constitution and By Laws: No report. Jane Cushman finished her term as chair. Skip Fennell will serve as chair in the coming year.

Emerging Issues Committee: Jennifer Luebeck provided the report. EIC has two new members: Paola Sztajn and Corey Drake. Kathleen Lynch-Davis will now serve as board liaison. Jennifer will continue as chair.

Committee Activities:
- Planning and facilitating three sessions at the 2015 AMTE Conference, designed around emerging issues of advocacy and identity.
- Aiding the AMTE Board in reviewing and responding to emerging issues (i.e., release of the NCTQ report, federal teacher prep regulations).
- Maintaining the Emerging Issues tab on the AMTE Web site and investigating other social media options.
- Continuing to explore AMTE's advocacy needs by drafting an Advocacy Toolkit inventory, connecting with Affiliate Committee members, and exploring resources from other organizations.

Membership Committee: Jonathan Bostic provided the report as incoming chair for the committee. Travis Miller completes his term. The committee welcomes two new members: Christopher Jett and Tommy Hodges. Nicole Rigelman will continue to serve as board liaison.

Highlights for the year:
- Completed membership drive resulting in 59 new members, 95 individuals renewed expired memberships, and 86 current members renewed or extended their memberships.
- Developed a broad growth plan as a blueprint to guide future membership committee work.

Priorities for next year:
- Complete our work of identifying recruitment/member benefits information unique to target audiences (NCSM, MAA, and AMATYC members, for example), Articulate how AMTE membership complements their existing membership(s) and how AMTE member benefits can promote and support their work. Incorporate this information into revised versions of:
  - audience-specific recruitment materials such as recruitment e-mails and brochures.
  - the member benefits section of the website
- Surveying/interviewing the membership at the conference gaining insight into what they view as benefits of AMTE membership, and using this information on the website and in promotional materials.

Mentoring Committee**:** Angela Barlow provided the report. The incoming chair is Jennifer Chauvot. New members include: Pier Clarke and Alyson Lischka. The new board liaison is Dorothy White. Angela was honored for her service as committee chair.

Committee Activities:
- Collected and analyzed feedback from participants and facilitators of the discussion tables from the 2014 conference.
- Identified and recruited a phenomenal set of facilitators for this year's discussion tables.
- Supported the reception for graduate students and new faculty.

STaR Program: Christa Jackson provided the report on behalf of Barbara Reys and Bob Reys. New members of the committee include: Amanda Jansen and Jeremy Zelkowski**.**

Information about the program:
- 2015 STaR Cohort includes 32 early career mathematics educators from 20 states.
- Denise Spangler and Jeff Wanko - co-directors of the program
- Beginning in 2016, program will rely completely on donations
- Donations can be made at: http://amte.net/support-amte

Nominations and Elections Committee: Karen Karp provided the report and urged everyone to nominate candidates for president, treasurer, and board member at large. The committee identified excellent candidates for this past election. The committee's main work was related to thinking about whether we should consider having categories of board election – such as an East, Midwest, or West representative. Karen will continue to serve as committee chair.

Professional Development Committee: Dorothy White provided the report. New members include: P. Mark Taylor and Julie James. Tim Boerst will continue to serve as board liaison. Amy Hillen will be the 2015 chair. Dorothy was honored for her leadership and service on the committee.

Committee Activities:
- Organized 5 webinars in 2014: Jan, Mar, Sep, Oct. & Nov
- Developed a set of guidelines for webinar presenters
- Developed and administered a survey on the usefulness of the webinars
- Created a webinar volunteer form to encourage members to present a webinar

Conference Program Committee: Dustin Jones provided the report. Shannon Dingman will serve as the 2016 Chair. P. Holt Wilson will serve as the 2017 Chair. New members of the committee include: David Barker, Dana Cox, Rick Hudson, and Courtney Koestler.

Dustin thanked the conference program committee. He shared that there were 470 submitted proposals (44% acceptance rate). At the conference there were 197 Sessions with 463 Presenters. Dustin reminded everyone that proposals for next year's conference are due May 15, 2015. Dustin was honored for his leadership on the committee.

Local Arrangements Committee: Fran honored Selcuk Haciomeroglu and Enrique Ortiz for their work as co-chairs for the local arrangements. She thanked the committee for their work on the conference.

Research Committee: Matt Felton-Koestler, incoming chair, provided the report. New members include: Sarah van Ingen and John Lannin. Babette Benken will continue to serve as board liaison.

Committee Activities:
- Continued to work on the Research tab contents of the website
- Working toward trying to support Grad Students and Early Career Professors through such possibilities as:
  - Posters juried by Senior Faculty
  - Fire-side chats on getting your research agenda launched
  - Continuing posting of interviews with math ed faculty
  - Continuing updating of list of useful articles

Technology and Mathematics Teacher Education Committee: Asli Özgün-Koca provided the report. She will serve as chair again this year. She welcomed Barbara Swartz and Steve Rhine as new members on the committee. Suzanne Harper will continue to serve as board liaison.

Committee Activities:
- Provided the first technology committee sponsored webinar: Using Animations to Create Teaching and Learning Scenarios for Mathematics Teacher Education by Hollylynne Lee.
- Proposed and organized conference session related to technology in mathematics teacher education.
- Wrote for AMTE Summer Newsletter: We highlighted 3 recently published CITE articles and provided longer summaries (Michael Mikusa, Todd Edwards (CITE Editor, and S. Asli Özgün-Koca)
- Oversaw the AMTE-NTLI Award process and identified the annual fellow. We believe that this year's changes (requesting a shorter paper and adding more information to the website) have contributed to many highly-qualified submissions.

Equity Task Force: Fran Arbaugh, President, described the work on the task force and thanked the members, in particular co-chairs Anita Wager and Julia Aguirre. Fran stated that the board is currently reviewing a request from this task force to establish a standing Equity Committee. The board is also reviewing an equity position statement from this task force.

Mathematics Teacher Educator Editorial Panel: Laura Van Zoest, committee chair, provided the report welcoming new members: Amy Hillen and Randall Groth. Christine Browning will continue to serve as Board Liaison to the panel.

Highlights from the year:
- Significant increase in subscribers: 3278 individual (1.7x); 292 institutional (2.3x)
- Intentional efforts to educate the field on expectations for the journal
- Celebrating Peg Smith's successful term as the journal's first editor
- Smoothly transitioning to the next editor, Sandra Crespo

Connections Newsletter Editorial Panel: Fran Arbaugh provided the report on behalf of Babette Benken. She welcomed new members: Barbara Hess and James Telese.

Highlights from the year:
- Established the on-line version of the *Connections* newsletter
- Began accepting ads (revenue generation)

CITE Editorial Panel: Fran provided the report. She recognized the co-editors Doug Lapp (through 2016) and Michael Todd Edwards (through 2017).

OTHER BUSINESS

NEW AFFILIATE
Fran recognized MiAMTE (Michigan Association of Mathematics Teacher Educators) as the newest AMTE affiliate.

CONFERENCES
Susan Gay, conference director, thanked the hotel and wait staff for their support during the conference. Then Susan thanked the membership for their attendance at the conference and invited them to attend the 2016 conference in Irvine, CA. Fran thanked Susan for putting together another great conference.

RECOGNITIONS
Stephen Pape was recognized as outgoing board member-at-large and thanked for his service.

INSTALLATION OF NEW BOARD MEMBERS
Fran welcomed Dorothy White as incoming board member-at-large.

Fran introduced Christine Thomas as incoming president for AMTE. Christine thanked Fran for her mentoring.

PRIORITIES FOR 2015
Christine shared ongoing priorities for the organization that include connecting with members year round and enhancing the suite of AMTE membership benefits for early career mathematics teacher educators' professional development. She also shared the following as priorities in the coming year.

- **Strengthen connections across the organization to promote the improvement of mathematics teacher education through evidence-based decisions:**
  - Connect member to member, member to resources, and members to board leadership.
  - Connect committees to members, committee to committee, and committees to board leadership.
- **Strengthen AMTE's advocacy for high quality mathematics teacher education in support of quality mathematics teaching.**
  - Bring attention to what we know about quality mathematics teacher education **and** be a catalyst for the improvement of the profession of mathematics teacher education.
  - Support members as advocates

ADJOURNMENT
Christine adjourned the meeting at 1:02 pm (EDT).

Respectfully submitted by Nicole Rigelman.

AMTE AWARDS:

EXCELLENCE IN MATHEMATICS TEACHER EDUCATION AWARD

2017 EXCELLENCE IN SCHOLARSHIP IN MATHEMATICS TEACHER EDUCATION AWARD

The Board of Directors of the Association of Mathematics Teacher Educators has established an Award for Recognition of Excellence in Mathematics Teacher Education, to be awarded annually to a mathematics teacher educator of national recognition at the Annual Meeting of the AMTE. The purpose of this award is to recognize excellence in each area of mathematics teacher education (teaching, service, scholarship). The recipient will give a featured presentation at the AMTE Annual Conference in the year they receive the award.

The 2017 Excellence in Scholarship Award is intended to recognize a colleague for a unique contribution in scholarship that has made a significant and lasting contribution to mathematics teacher education, directly and indirectly. The nominee shall have demonstrated commitment to mathematics teacher education through one or more of the following areas:

a. The dissemination of research findings and publication of materials offering unique perspectives on the professional growth of mathematics teachers
b. The publication of materials useful in the preparation or continuing growth of mathematics teachers
c. The design of innovative preservice or inservice programs
d. The contribution of theoretical perspectives that have pushed the field forward

CRITERIA FOR EXCELLENCE IN SCHOLARSHIP AWARD

The nominee for the Excellence in Scholarship Award should be an active member of the mathematics teacher education community and have at least five years of commitment to mathematics teacher education. The nominee should have made unique contributions to the field of mathematics teacher education. Unique contributions should be considered in the broadest sense possible.

NOTE: Nominations for this award are for individuals only. Group nominations will not be considered.

DOCUMENTATION REQUIRED FOR EXCELLENCE IN SCHOLARSHIP AWARD:

a. A current vita of the nominee.
b. A letter of nomination from an established colleague documenting evidence that supports the nominee's contributions in the particular focus area (service, teaching, scholarship) for which they are nominated.
c. Additional letters of support (no more than two) from individuals (e.g., colleagues within and outside of the individual's institution, recent doctoral graduates mentored by the nominee) knowledgeable of the nominee's contributions relative to the focus area. Letters with multiple authors are accepted.

NOMINATION PROCESS

AMTE members can nominate a mathematics teacher educator who meets the criteria for the particular focus area (service, teaching, scholarship). Self-nominations will not be considered. Nomination materials should include those stated in each section above.

The committee will review applications in an electronic format; all application materials should be submitted as a single PDF file. The file should be uploaded to the AMTE Awards website. See http://amte.net/about/awards in summer 2016 for more information regarding where to upload.

DEADLINE FOR NOMINATIONS

Nominations for the Excellence in Scholarship Award must be received by **September 15, 2016**.
Please be sure that the nomination materials are clearly labeled with the name of the nominee.

AMTE AWARDS:

EARLY CAREER AWARD

2017 EARLY CAREER AWARD

The Board of Directors of the Association of Mathematics Teacher Educators (AMTE) has established an **Early Career Award**. The Early Career Award will be given on an annual basis, and the recipient recognized at the annual meeting of the AMTE. The purpose of this 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.

CRITERIA FOR EARLY CAREER AWARD

The nominee for the Early Career Award should be a mathematics teacher educator serving in the field no later than 10 years after receipt of a doctoral degree. The Early Career Award is intended to recognize a colleague's contributions in a program of teaching, service, and/or scholarship within the first decade after receiving a doctoral degree. We invite nominations that highlight an individual's innovative contributions in one or more areas of teaching, service, and/or scholarship.

TEACHING

Contributions in the area of teaching preservice or inservice mathematics teachers may include one or more of the following areas:

a. Implementation of effective and innovative teaching practices.
b. Demonstration of innovative teaching methods (e.g., publications, materials, video).
c. Recipient of awards in teaching from department, college, university and/or national entities.

SERVICE

Contributions in the area of service to mathematics teacher education may include one or more of the following areas:

a. Active participation in advancing the development and improvement of mathematics teacher education (e.g., membership and leadership roles in state, national, and international organizations).
b. Active promotion and participation in activities promoting quality mathematics teacher education (e.g., creator of programs, coordinator of programs, author of and participant in grants, conferences, symposia, academies).
c. Active participation in the governmental and political areas to promote and protect beneficial legislation, to promote better awareness, and/or to build better communication.
d. Active promotion and participation in school-university-community-government partnerships that have advanced mathematics teacher education at the local, state, and/or national level.
e. An unusual commitment to the support of mathematics teachers in the field (e.g., distinctive mentoring experiences).

SCHOLARSHIP

Contributions in the area of scholarship to mathematics teacher education may include one or more of the following areas:

a. Dissemination of research findings offering unique perspectives on the preparation or professional development of mathematics teachers.
b. Publication of materials useful in the preparation or continuing professional development of mathematics teachers.
c. Design of innovative preservice or inservice programs.
d. Contribution of theoretical perspectives that have pushed the field forward.

DOCUMENTATION REQUIRED FOR EARLY CAREER AWARD

a. A current vita of the nominee.
b. A letter of nomination from an established colleague documenting evidence that supports nominee's contributions in the particular focus area (service, teaching, scholarship) for which they are nominated.
c. Additional letters of support (no more than two) from individuals (e.g., colleagues within and outside of the individual's institution, recent doctoral graduates mentored by the nominee) knowledgeable of the nominee's contributions relative to the focus area. Multiple authored letters are accepted.

NOMINATION PROCESS

AMTE members can nominate a mathematics teacher educator who meets the criteria for eligibility. Self-nominations will not be considered. The three areas of teaching, service, and scholarship shall be weighted equally in the evaluation of the nomination materials. Nominees do not need to demonstrate exceptional work in every area, and may be considered for exemplary work in only one area.

The committee will review applications in an electronic format; all application materials should be submitted as a single PDF file using the AMTE Award Nomination Form. More information and the online nomination form can be found at: http://amte.net/about/awards. The deadline is **September 15, 2016**.

Please be sure that the nomination materials are clearly labeled with the name of the nominee.

SUSAN GAY AMTE CONFERENCE SCHOLARSHIP FOR GRADUATE STUDENTS

2017 CONFERENCE SCHOLARSHIP AWARDS

DESCRIPTION OF AWARDS

The **Susan Gay Graduate Student Conference Travel Scholarship**, 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, was established to provide graduate students financial support to attend the AMTE annual conference. Each year a minimum of four graduate students will receive the award, which will cover the cost of graduate student early registration and an additional $400 to offset the cost of attending the conference. To qualify, one must be a doctoral student making steady progress toward completion of their degree. Applications will be screened initially based on the eligibility of the application and then put into a lottery based on geographic location.

APPLICATION PROCESS

Graduate students can fill out an application for the Susan Gay AMTE Conference Scholarships online at the AMTE website at http://www.amte.net. The online applications will be available within a few weeks of the end of the AMTE annual conference. The deadline for completed applications will be posted on the AMTE website and announced via email to all AMTE members.

APPROXIMATE TIMELINE

- July 1, 2016: Applications due.
- September 1, 2016: Awardees named and notified.

ELIGIBILITY

Applicants must be enrolled in a doctoral program in mathematics education or a related field (e.g., curriculum and instruction).

SUBMIT APPLICATION ONLINE

amte.net/about/awards/susangayscholarship

APPLICATION INFORMATION

Part A

1. Name
2. Mailing Address
3. Email
4. Phone
5. Doctoral Institution
6. Name and Email Contact Information for your advisor (or doctoral committee member)

Note: Your advisor or committee member will be asked to respond to a very brief email about support for your application.

Part B

1. In one paragraph describe your background and your future goals and plans as a mathematics teacher educator.
2. In one paragraph briefly describe your progress within your doctoral program including progress toward your dissertation if appropriate. In this paragraph be sure to describe your teaching and research interests and the current direction of your work.

SUSAN GAY SCHOLARSHIP WINNERS

2016 Jared Webb, University of North Carolina, Greensboro
Melody Elrod, University of South Florida
Dawn Woods, Southern Methodist University
Elizabeth Fulton, Montana State University

2015 Monica Gonzales, University of Houston
Leigh Haltiwanger, Clemson University
Mary Achieng Ochieng, Western Michigan University
Nicole M. Wessman-Enzinger, Illinois State University

2014 Matthew Campbell, Oregon State University
Jodi Fasteen, Portland State University
Courtney Lynch, Penn State University
Amanda Sawyer, University of Georgia

2013 David Glassmeyer, University of Northern Colorado
Casey Hawthorne, San Diego State University/University of California at San Diego
Hyunyi Jung, Purdue University
Alison Mall, University of Louisville

2012 Jeramy Donovan, Wayne State University
Comfort Akwaji-Anderson, Iowa State University
Alyson Lischka, Kennesaw State University
Cathery Yeh, University of California, Irvine

ELEMENTARY MATHEMATICS SPECIALIST (EMS) SCHOLARSHIP

2017 ELEMENTARY MATHEMATICS SPECIALIST (EMS) SCHOLARSHIP

The purpose of the **Elementary Mathematics Specialist (EMS) Scholarship** is to provide the recipient with $1,000 of funding to enhance their mathematics knowledge, teaching, and leadership by enrolling in university coursework or other training to develop the expertise in becoming an 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.

Funds should be used to work towards an elementary mathematics specialist certificate or endorsement recognized by a state or local education authority such as a school district.

APPROXIMATE TIMELINE

- June 1, 2016: Applications due.
- September 1, 2016: Awardees named and notified.
- March 1, 2017: Awardees submit a brief statement regarding their use of the funds, along with receipts and reimbursement form, to the AMTE treasurer.

Eligibility: Candidates must possess a valid credential to teach elementary school and must have 3 years of full-time teaching experience.

ONLINE APPLICATION

amte.net/about/ems

APPLICATION INFORMATION

Part A

1. Name
2. Mailing Address
3. Email
4. Phone
5. College degrees [degree(s), major(s), date(s), name of institution(s)]
6. Teaching certifications (subjects, grade-levels, state issuing the certification)
7. Teaching experience (years, subjects, levels)
8. Current position

Part B

1. State the certification/endorsement that these funds will be used to pursue and the state or Local Education Agency. If it is not a certificate or endorsement program, please explain.
2. List and description of related costs.
3. Title(s) and course description(s) of course(s) in which you plan to enroll. (Preference will be given to applicants taking a collection of courses rather than a single course.)

Part C

In only 1-2 paragraphs, please respond to the following questions:

1. What are the anticipated outcomes or impacts of your specific coursework? How is your coursework related to your development of mathematics knowledge, teaching, and/or leadership?
2. Once you complete your Elementary Mathematics Specialist training, in what capacity do you envision your work is related to effective mathematics instruction and student learning at the classroom, school, district, or state levels?

Note: Scholarship awardees may be interviewed or asked to provide a brief statement about the award and their pursuit of their elementary mathematics specialist certification, along with a photo, edited versions of which may appear on the AMTE website. Appropriate permissions will be requested of awardees.

EMS SCHOLARSHIP RECIPIENTS

2015 Anna Feil, Fairfax, VA
Kristin Peters, Brush Prairie, WA
Heidi E. Whipple, Barton, VT

2014 Tiffany Dennison, Lincoln, VT
Kimberly Hayden, Manassas, VA
Helen Spruill, Brooklyn, NY

2013 Lindsey Atkinson, Arlington, VA
Rebecca Fowler, Maryville, MO
Kellie Petrick, Hillsboro, OR

2012 Gay Lynn Erb, Meridian, ID
Marta Garcia, Asheville, NC
Monica Hocter, Williamsburg, VA

CONTEMPORARY ISSUES IN TECHNOLOGY AND MATHEMATICS TEACHER EDUCATION

CALL FOR MANUSCRIPTS, REVIEWERS, READERS, & COMMENTS

http://www.citejournal.org

The *CITE-Math Journal* provides a forum for dialog about best practices regarding the use of technology in the preparation and ongoing development of pre- and in-service mathematics teachers. Papers may address any area of research involving technology and mathematics teacher education. Papers will be reviewed based on their relevance to technology and mathematics teacher education research, originality, clarity of expression, and literature support.

A wide range of formats and approaches is accepted, including qualitative research, quantitative research, and theoretical pieces. Articles are published online and in a PDF format suitable for print. The online format allows for timely publication and allows the inclusion of various media including applets, color graphics, photographs, and video. Manuscripts are submitted online through the journal website (http://bit.ly/CITE-MATH). Inquiries about potential manuscript topics are welcomed.

The following are examples of works published in *CITE-Math*.

> Pape, S. J., Prosser, S. K., Griffin, C. C., Dana, N. F., Algina, J., & Bae, J. (2015). Prime online: Developing grades 3-5 teachers' content knowledge for teaching mathematics in an online professional development program. *Contemporary Issues in Technology and Teacher Education*,*15*(1). Retrieved from http://www.citejournal.org/vol15/iss1/mathematics/article1.cfm

> Starling, T., & Lee, H. (2015). Synchronous online discourse in a technology methods course for middle and secondary prospective mathematics teachers. *Contemporary Issues in Technology and Teacher Education*, *15*(2). Retrieved from http://www.citejournal.org/vol15/iss2/mathematics/article2.cfm

CITE: CALL FOR REVIEWERS

As a peer-reviewed venue, *CITE-Math* depends on the work of its reviewers. In addition to providing invaluable assistance to the journal, the review process helps readers stay abreast of latest developments in the field of mathematics education. The review process itself is not overly cumbersome. Members of the review board are typically given no more than one or two manuscripts to review annually and have four to six weeks to complete each. Visit http://bit.ly/CITE-MATH and provide information online. You will need to select CITE-Math as the journal you are willing to review. Contact journal co-editors, Doug Lapp lapp1da@cmich.edu or Todd Edwards (m.todd.edwards@gmail.com), for more information.

CITE: CALL FOR READERS AND COMMENTS

Read an article and post your comments online in response to published articles in CITE-Math. The CITE Journal has a unique Commentary feature which permits readers to author short responses to published articles. This feature takes advantage of an interactive medium, which is designed to encourage ongoing, peer-reviewed dialog. Readers are encouraged to provide scholarly responses to a published article using an online commentary strand linked to the article. Comments will be peer reviewed prior to publication.

BONUS JOURNAL FEATURES

The journal's online medium also allows and encourages authors to demonstrate the technologies about which they are writing, including video and audio segments, animation, virtual reality, web links, applets, and simulations.

CITE JOURNAL SPONSORS

The *CITE Journal* is a peer-reviewed online journal, established by these five professional associations: **AMTE** – Association of Mathematics Teacher Educators; **ASTE** – Association of Science Teacher Educators; **CEE** – Conference on English Education of the National Council of Teachers of English; **NCSS-CUFA** – College and University Faculty Assembly of the National Council for the Social Studies; and **SITE** – Society for Information Technology and Teacher Education.

MATHEMATICS TEACHER EDUCATOR: CALL FOR MANUSCRIPTS

The mission of *Mathematics Teacher Educator* (*MTE*) is to contribute to building a professional knowledge base for mathematics teacher educators that stems from, develops, and strengthens practitioner knowledge. This online journal provides a forum for sharing practitioner knowledge related to the preparation and support of teachers of mathematics as well as for verifying and improving that knowledge over time. The journal is thus a tool that uses the personal knowledge that mathematics educators gain from their practice to build a trustworthy knowledge base that can be shared with the profession.

Therefore, all manuscripts should be crafted in a manner that makes the *scholarly* nature of the work apparent. Toward that end, manuscripts should contain a description of the problem or issue of mathematics teacher education that is addressed, a connection to existing literature, evidence for claims that are made, clear implications for/connections to the practice of mathematics teacher education (both the authors' practice and the larger community), and a statement about the new contribution that is made to the knowledge base.

The nature of evidence in a practitioner journal is different from that in a research journal, but evidence is still critically important to ensuring the scholarly nature of the journal. Thus, authors must go beyond simply describing innovations or raising issues to providing empirically or theoretically grounded evidence of the ability of a proposed innovation, strategy or tool to effectively address the intended issue. Note that *effectiveness of an innovation* implies that something is *better* and not just *different* as a result of the innovation.

We also offer some examples of broad categories of manuscripts that might be appropriate for this journal. The categories are meant to be illustrative but not exhaustive.

- Manuscripts that describe *effective ways of influencing teachers' knowledge, practices, or beliefs:* Manuscripts about these interventions might include a description of activities, tasks, or materials (e.g., cases, articles, software) that are used by a teacher educator to influence teachers in some way. These manuscripts would include a rationale for the intervention, a careful description of the intervention, documentation of evidence of the impact of the intervention (e.g., classroom transcript, teacher work, interview data, assessment results), a discussion of how this intervention might be used by others, and a clear statement of the contribution to the mathematics teacher education knowledge base.
- Manuscripts that describe the use of *broadly applicable tools and frameworks in mathematics teacher education*: Such tools and frameworks are generally portable across a range of settings (e.g., grade level, preservice/inservice) and are not idiosyncratic to the instructor. Again, such manuscripts would include a careful description of the tool, what it is designed to capture/assess, its use (including modifications to the tool, changes in setting, etc., if this tool has been discussed previously in the literature), and evidence of the effectiveness of the tool, including reliability and validity (if appropriate). The constructs measured by the tool should be grounded in the literature, and the manuscript should include an explanation of how to interpret the results of the data captured with the tool. Although space might not permit the inclusion of the tool in its entirety in the manuscript, it could be made available online for other professionals to use, modify, enhance, and study. Examples of such tools might include a classroom observation protocol, a task analysis framework, a textbook analysis tool, assessment tasks, or framework for an entire teacher education program.

- Manuscripts that address *programmatic issues*: These manuscripts should clearly situate the issue within the practice of mathematics teacher education and should contain a description of the problem or issue of mathematics teacher education that is addressed, including relevant background information, the impact of the issue/problem on practice (potentially both the authors' practice and the larger community), and/or relevant policy context. The manuscript should go beyond simply describing the issue to illuminating the trade-offs that would result from alternative solutions to the issue.. For instance, an author might report the results of a survey of capstone courses for secondary majors with an analysis of the pros and cons of different models and a suggestion for a new model. Similarly, an author might elaborate on different models for elementary mathematics specialists in schools and note limitations and advantages of each model, providing examples from practice where available.
- Manuscripts that address *external factors that have an impact on mathematics teacher education policy and programs*: Such manuscripts would articulate an issue and clearly identify the impact that this issue has on mathematics teacher education (e.g., factors that affect teacher education directly and factors that affect schools directly, which then affect teacher education, such as Title I, special education, English Language Learners, accreditation, Common Core State Standards, tracking). For instance, an author might review the literature on school practices with respect to equity and diversity and provide evidence of the impact of these various practices on mathematics teacher education. Additionally, the manuscript might describe effective ways of challenging such effects.

Because one of the goals of *MTE* is to build a knowledge base for the field, we particularly encourage submissions that deliberately build on prior published work. Manuscripts should include careful descriptions of how previous methods/interventions/tools have been modified and should articulate comparisons or contrasts with earlier reported results. In this way, the journal will help the field make incremental improvements in practice over time.

LOGISTICS

Because *MTE* is published in electronic format, we encourage authors to take advantage of the possibilities of this medium by including items such as student work, videos, applets, hyperlinks, and other items that enhance the manuscript. Appropriate permission for such items must be submitted before such a manuscript will be accepted for publication. In addition, color can be used to the extent that it enhances the submission.

MTE uses a double-blind peer review process, is indexed in ISSN, and is available (from January 2013) through JSTOR. The first issue was published in September 2012, with two issues per volume planned for the foreseeable future.

Manuscripts should be no longer than 25 pages of text or 6,250 words (exclusive of references). For ease of reading by reviewers, all figures and tables should be embedded in the correct locations in the text. All manuscripts should be formatted according to the guidelines of the *Publication Manual of the American Psychological Association* (6th edition). Manuscripts not conforming to these specifications may be returned without review.

Please submit manuscripts using the online manuscript submission and review system at http://mte.msubmit.net.

Mathematics Teacher Educator is a joint publication of the Association of Mathematics Teacher Educators (AMTE) and the National Council of Teachers of Mathematics (NCTM). The editor is Sandra Crespo, Michigan State University; the associate editor is Kristen Bieda, Michigan State University.

To volunteer to be a reviewer or to learn more about *MTE*, please visit www.nctm.org/mte**.**

GIVE 25 FOR AMTE'S 25th ANNIVERSARY IN 2016

Throughout 2016 and culminating in our 2017 AMTE Conference in Orlando, Florida, we will be celebrating the 25th Anniversary of the Association of Mathematics Teacher Educators. For 25 years, AMTE has been hard at work—growing in number and in scope, finding meaningful ways to promote excellence in mathematics teacher education, and increasing our voice in the fields of mathematics and education. We want this anniversary year to be a year of unparalleled growth and energy to honor the foundation laid by the many members who have given their time and energy to the organization.

GIVE 25 FOR AMTE'S 25th CAMPAIGN

Beginning in January 2016, we invite contributions in honor of the legacy of AMTE. **We encourage you to make a donation of $25, or multiples of $25, to express your appreciation for the organization and the work it does to support mathematics teacher education.** Many of you already give on a regular basis, and we thank you for those donations. On the website and in the *Connections* newsletter, we will keep the membership updated on the progress of the *Give 25 for AMTE's 25th* Campaign.

WHERE ARE THE DONATIONS GOING?

Donations can be directed towards any of the ongoing work of AMTE, described below.

AMTE GENERAL FUND

In 25 years, AMTE has grown as an organization to over 1000 members. With 7 elected board members and 7 appointed directors, the work of the organization is carried out with only one part-time employee, a baker's dozen of volunteer committees, and hundreds of volunteers who give selflessly of their time and energy reviewing proposals, organizing committee work, carrying out task force projects, etc. As AMTE continues to grow in the next quarter-century, please consider supporting both the growth in infrastructure and the ongoing development of new initiatives.

ELEMENTARY MATHEMATICS SPECIALIST SCHOLARSHIP FUND

Since 2012, AMTE has awarded 12 scholarships of $1000 each to elementary teachers to enhance their mathematics knowledge, teaching, and leadership by enrolling in university coursework or other training to develop the expertise in becoming an elementary mathematics specialist. The EMS Scholarship is also supported by the generous sponsorship of the Math Learning Center; your donation could help increase the number of scholarships that could be awarded.

STaR PROGRAM FOR EARLY CAREER MATHEMATICS EDUCATORS FUND

The Service, Teaching and Research (STaR) Program is a one-year induction program for early career mathematics educators working at institutions of higher education. The program includes a summer institute, academic year networking, and meetings at the annual AMTE conference. STaR has been instrumental in supporting many future leaders in mathematics education, including the currently 207 STaR Fellows who have completed the cohort program.

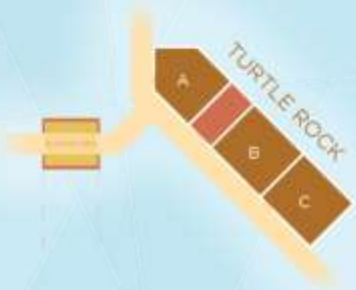
SUSAN GAY GRADUATE STUDENT CONFERENCE TRAVEL SCHOLARSHIP FUND

Since 2012, AMTE has awarded scholarships to 20 graduate students in support of their travel to AMTE's Annual Conference. This has helped many graduate students learn about and become involved in our organization. Your contribution to this fund will help future graduate students be able to attend and participate in the AMTE Conference.

VISIT AMTE.NET/GIVE TO GIVE $25 (OR $25*N)

Hotel Irvine, Irvine, California

Second Floor



First Floor