

NINETEENTH ANNUAL CONFERENCE

FEBRUARY 12 - 14, 2015

ROSEN PLAZA HOTEL, ORLANDO, FLORIDA

ROSEN PLAZA HOTEL, ORLANDO, FL

SECOND FLOOR



FIRST FLOOR





WELCOME

to the Nineteenth Annual Conference of the Association of Mathematics Teacher Educators (AMTE)

February 12 -14, 2015 Rosen Plaza Hotel, Orlando, FL

We would like to personally welcome each of you to the Nineteenth Annual Conference of the Association of Mathematics Teacher Educators (AMTE). It's an exciting time for AMTE as we continue to grow, develop new and exciting collaborations with sister organizations, and engage in new projects intended to support the needs and 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, beginning with a few invited session highlights.

Margaret (Peg) Smith, founding Editor of the *Mathematics Teacher Educator*, gives a talk titled "Building a Professional Knowledge Base for Mathematics Teacher Education: Reflections on the First Three Years of *Mathematics Teacher Educator*" in the Thursday General Session.

Nadine Bezuk gives the Judith Jacobs Lecture, with a talk titled "Supporting Elementary Teachers in Developing Their Mathematics Teaching" on Friday afternoon.

Amanda Jansen, recipient of the 2014 Early Career Award, gives a talk titled "Reflections upon Being a Mathematics Teacher Educator" on Friday morning.

Blake Peterson, recipient of the 2015 Excellence in Teaching in Mathematics Teacher Education Award, gives a talk titled "Seeing Through Your Students' Eyes" on Friday afternoon.

Jennifer Nickell, recipient of the 2015 NTLI Award, will present her paper titled "Incorporating Technology to Enhance Teacher Education Lessons and Preservice Teachers' Learning" on Saturday.

In all, there are a total of 197 sessions on the program, with 463 presenters (compared to 429 in 2014). There were 470 proposals submitted this year - up from 407 in 2014 - and 208 proposals were accepted, yielding a 44% 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.

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, 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.

Fran Arbaugh, AMTE President

Susan Lay

Fran arbangt

Dustin Jones, 2015 AMTE Conference Program Chair

Susan Gay, AMTE Conference Director

Tim Hendrix, AMTE Executive Director

Simothy M. Herding

TABLE OF CONTENTS

Conference Schedule	2
Conference Information	3
AMTE 2014 Board of Directors	4
AMTE Nineteenth Annual Conference Committee	5
Acknowledgements	6
Conference Announcements	7
Conference App and Social Media	8
Thursday Lunch Discussion Tables	9-10
Friday Lunch Committee Meeting Tables	11-12
Saturday Breakfast Affiliate Meeting Tables	13-14
AMTE Affiliates	15
NTLI Award	16
AMTE Scholarships for Elementary Mathematics Specialists	16
Sponsors	17-22
Exhibitors	23-24
Thursday Morning Sessions	25-32
Thursday Afternoon Sessions	33-41
Friday Morning Sessions	43-51
Friday Afternoon Sessions	53-61
Saturday Sessions	63-70
Index of Speakers	71
AMTE Events at the 2015 NCTM and NCSM Annual Conferences	80
AMTE 2016 Annual Conference	80
History of the Judith E. Jacobs Lecture	81
AMTE Leadership	82
- Standing Committees	82
- Task Forces	88
- Annual Conference Committee	88
- Publications	91
AMTE 2015 Business Meeting Agenda	93
AMTE Awards	99
Susan Gay AMTE Conference Scholarship for Graduate Students	103
CITE: Call for Manuscripts, Reviewers, Readers and Comments	105
Mathematics Teacher Educator Journal: Call for Manuscripts	107
Special MTF Call for Manuscripts re: Principles to Action	109



CONFERENCE SCHEDULE

Nineteenth Annual AMTE Conference February 12 - 14, 2015, Orlando, Florida

WEDNESDAY, FEBRUARY 11, 2015

5:30 pm - 7:00 pm AMTE Registration Desk Open

THURSDAY, FEBRUARY 12, 2015

7:00 am - 5:00 pm	AMTE Registration Desk Open
9:30 am - 5:00 pm	Exhibits Open
9:00 am - 9:45 am	Concurrent Sessions
10:00 am - 11:00 am	Concurrent Sessions
11:15 am - 12:00 pm	Concurrent Sessions
12:00 pm - 1:15 pm	Lunch and Discussion Tables – Ballroom C & D
1:15 pm - 2:00 pm	Concurrent Sessions
2:15 pm - 3:15 pm	Concurrent Sessions
3:15 pm - 3:45 pm	Break
3:45 pm - 4:30 pm	Concurrent Sessions
5:00 pm - 6:30 pm	General Session – Ballroom B
6:30 pm - 7:30 pm	Reception for Graduate Students and Early Career Faculty

FRIDAY, FEBRUARY 13, 2015

7:00 am - 8:00 am	Breakfast – Ballroom C
7:00 am - 8:00 am	Advocacy Breakfast – Ballroom D
7:30 am - 5:00 pm	AMTE Registration Desk Open
8:00 am - 9:00 am	Concurrent Sessions
8:30 am - 5:00 pm	Exhibits Open
9:15 am - 10:00 am	Concurrent Sessions
10:15 am - 11:30 am	Concurrent Sessions
11:30 am - 12:45 pm	Lunch and Committee Meetings – Ballroom C/D
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 - 4:30 pm	Concurrent Sessions
5:00 pm - 6:30 pm	Judith E. Jacobs Lecture – Ballroom B
6:30 pm - 7:45 pm	Dinner – Ballroom C/D

SATURDAY, FEBRUARY 14, 2015

7:00 am <i>–</i> 8:00 am	Breakfast and Affiliate Meetings – Ballroom 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 – Ballroom C/D

CONFERENCE INFORMATION

CONFERENCE REGISTRATION DESK

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

AMTE REGISTRATION DESK HOURS:

Wednesday,	February 11	5:30 pm - 7:00 pm
Thursday,	February 12	7:00 am – 5:00 pm
Friday,	February 13	7:30 am – 5:00 pm
Saturday,	February 14	7:30 am – 10:30 am

FINDING THE CONFERENCE AREA

Conference session rooms are located on the Mezzanine Level (second floor) and the First Floor in the Grand Ballroom. Meals will be held in Ballroom C/D on the First Floor. Please refer to the hotel map on the back cover of the conference program.

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 Thursday, February 12 through Saturday, February 14.

Using your laptop or mobile device, look for the following network or SSID - **AMTE** and use the Network Security Key – **amte2015**. Please note that only 500 people can have access at one time, so please only use one device on the hotel network at a time.

Guests at the Rosen Plaza Hotel receive complimentary internet access in individual guestrooms. Directions on how to access wireless and wired internet service can be found in each guestroom. Hotel guests also have complimentary wireless internet access in the lobby, lobby bar, and restaurants.

HOTEL PARKING INFORMATION

Self-parking at the Rosen Plaza Hotel is complimentary for everyone attending the conference. Tell the parking booth attendant that you are attending the AMTE conference in order to receive free parking. Valet parking is also available at the prevailing rate for \$20 per car per day.

OPTIONS FOR THURSDAY DINNER

Check at the AMTE Registration Desk or on the AMTE website for information on nearby restaurants. Pointe Orlando is across the street from the hotel; this area has a variety of dining options.

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 Margaret Mohr-Schroeder of University of Kentucky for serving as the conference photographer.

For your convenience, a map of the hotel conference area is printed on the back of the program booklet. For other questions about hotel facilities, please contact the volunteers at the AMTE Registration Desk or the hotel staff.

PERSONAL PROPERTY

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

LOST AND FOUND

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

AMTE 2014 BOARD OF DIRECTORS

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HISTORICAL LISTING OF AMTE PRESIDENTS

President	Term
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
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 NINETEENTH 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

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Tim Hendrix (AMTE Executive Director), Meredith College, hendrixt@meredith.edu
Shannon Driskell (Chair, 2014), University of Dayton, sdriskell1@udayton.edu
Dustin Jones (Chair, 2015), Sam Houston State University, dljones@shsu.edu
Shannon Dingman (Chair, 2016), University of Arkansas, sdingman@uark.edu

ANNUAL CONFERENCE – PROGRAM COMMITTEE

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2013 - 2016

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Coordinator: Joe Champion, Website Director, joechampion@boisestate.edu
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LOCAL ARRANGEMENTS COMMITTEE

Erhan Selcuk Haciomeroglu, Co-Chair, University of Central Florida Enrique Ortiz, Co-Chair, University of Central Florida

Juli K. Dixon, University of Central Florida
Janet B. Andreasen, University of Central Florida
Kristopher Childs, University of Central Florida
Adele Hanlon, Jacksonville University
Heidi Eisenreich, University of Central Florida
Rebecca Gault, University of Central Florida
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Katie Harshman, University of Central Florida
Edward Knote, University of Central Florida
Nesrin Sahin, University of Central Florida
Makini Sutherland, University of Central Florida
Laura Tapp, University of Central Florida

ACKNOWLEDGEMENTS

The Nineteenth 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 (Selcuk Haciomeroglu, Chair) and Audio/Visual Support Team (Enrique Ortiz, Chair) for their organization and dedication to making our conference so successful;
- The University of Central Florida College of Education and Human Performance, especially Larry Jaffe, Director of Technology and Facilities and Interim Dean Grant Hayes, for technology and personnel support for 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, Website
 Director, Conference App Team, and Headquarters staff for providing the time and effort necessary to
 organize all facets of the conference; and
- Tony Nguyen, AMTE Graphic Designer and Webmaster for his dedicated work on the conference program and materials.
- Haley Ginn and Katerina Pittman, Meredith College Students, 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 2015 conference.

CONFERENCE ANNOUNCEMENTS

EXHIBITS

Thursday 9:30 am - 5:00 pm Friday 8:30 am - 5:00 pm

Make sure to **visit the exhibits**! Exhibitors include CASIO, ETA hand2mind, Heinemann, Information Age Publishing, the Math Learning Center, NCSM, NCTM, Pearson, Priority Education Solutions and TODOS. Exhibits are open from 9:30 am – 5:00 pm on Thursday and 8:30 am – 5:00 pm on Friday. See the Exhibitors Section of this program on pages 23 and 24 for more information.

CONFERENCE APP AND SOCIAL MEDIA

Be sure to visit facebook.com/AMTE.net and follow @AMTENews on Twitter. Download the newly redesigned Conference App to guide your conference experience. See details on page 8.

DONATE TO AMTE

Please consider supporting the work of AMTE by donating to the following AMTE Activities:

- The Susan Gay Graduate Student Conference Travel Scholarship Fund, which supports graduate student travel scholarships to attend next year's AMTE conference
- The Elementary Mathematics Specialist Scholarships (EMS), which supports elementary teachers seeking graduate level coursework leading to EMS certification
- The STaR Program, which supports early career mathematics educators through a summer institute, academic year networking, meetings at the annual conference, and more
- The General AMTE Fund, which supports the AMTE Board with unrestricted funds for pursuing organizational priorities and ongoing programs

Online donation forms are available at amte.net/support-amte

COMMITTEES AND AFFILIATES

AMTE Committees will meet during lunch on Friday in Ballroom C/D. This is a great time to meet each other face-to-face and discuss a game plan for the upcoming year. See page 11 in your conference program for table locations for each committee.

AMTE Affiliates will meet during breakfast on Saturday in Ballroom C/D. This is a great time to meet each other face-to-face and discuss a game plan for the upcoming year. See page 13 in your conference program for table locations for each affiliate.

CONFERENCE APP AND SOCIAL MEDIA

DOWNLOAD THE FREE AMTE CONFERENCE APP FOR 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 AMTE Conference App is available for free through the following stores, or go to **amte2015.quickmobile.mobi** for links to the app.





Google Play App Store

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FOLLOW AMTE ON TWITTER



Use **#AMTE2015** to share what is being discussed at AMTE 2015, and help highlight the importance of the work of the Association!

THURSDAY LUNCH DISCUSSIONS

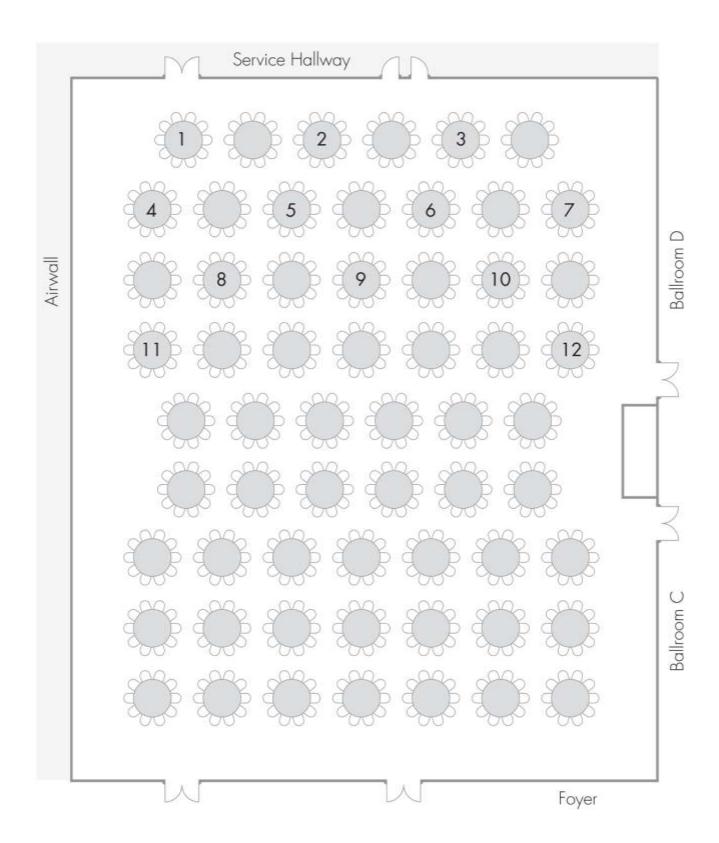
Thursday, February 12, 2015 Ballroom C/D, Lunch

Participate in a discussion table during lunch on Thursday in Ballroom C/D. The topics for each discussion table are listed below. The Mentoring Committee has organized an opportunity for AMTE Conference attendees to make connections and participate in focused discussions during the lunch hour on Thursday. Tables in the dining area will be identified with the topics for discussion, and each of these tables will have two facilitators who have experience and knowledge in the topic area. Whether you are seeking advice, have insights to share, want to make new connections, or desire to continue interacting around some of the conference session themes, you are invited to join a discussion table.

TABLE	DISCUSSION TOPIC	FACILITATOR
1	Teaching, Research, Service, and Life: Finding the Balance	Paola Sztajn, North Carolina State University Doug Corey, Brigham Young University
2	Large Teaching Loads & Finding Time for Scholarship	Barbara Swartz, McDaniel College Christopher Jett, University of West Georgia
3	Supporting Inservice Teachers in Meeting the Demands of Common Core	Melissa Boston, Duquesne University Jonathan Bostic, Bowling Green State University
4	Supporting Preservice Elementary Teachers in Meeting the Demands of Common Core	Jennifer Tobias, Illinois State University Kelley Buchheister, University of South Carolina
5	Supporting Preservice Middle and High School Teachers in Meeting the Demands of Common Core	Amanda Thomas, Penn State University Alyson Lischka, Middle Tennessee State University
6	Collaborating to Connect Content and Methods Courses for Preservice Teachers	Michelle Cirillo, University of Delaware Tom Evitts, Shippensburg University
7	Bringing Mathematicians to the Table: Strategies for Supporting Collaboration	Hyman Bass, University of Michigan Michael Mays, West Virginia University
8	Mentoring Graduate Students: Successes and Challenges	Kristen Bieda, Michigan State University Denisse Thompson, University of South Florida
9	You're about to receive your doctorate, what are the possibilities for your future?	Dana Franz, Mississippi State University Trena Wilkerson, Baylor University
10	Becoming a Mathematics Teacher Educator: Are you prepared?	Corey Drake, Michigan State University Judith Jacobs, JEJMath, Ltd
11	The Job Search Process: What to Expect & Helpful Resources	Barbara Reys, University of Missouri Ryan Smith, University of Georgia
12	Getting the Most from Your Doctoral Program	Sarah van Ingen, University of South Florida John Lannin, University of Missouri

THURSDAY LUNCH DISCUSSION TABLES

Thursday, February 12, 2015 Ballroom C/D, Lunch



FRIDAY LUNCH COMMITTEE MEETINGS

Friday, February 13, 2015 Ballroom C/D, Lunch

TABLE COMMITTEE

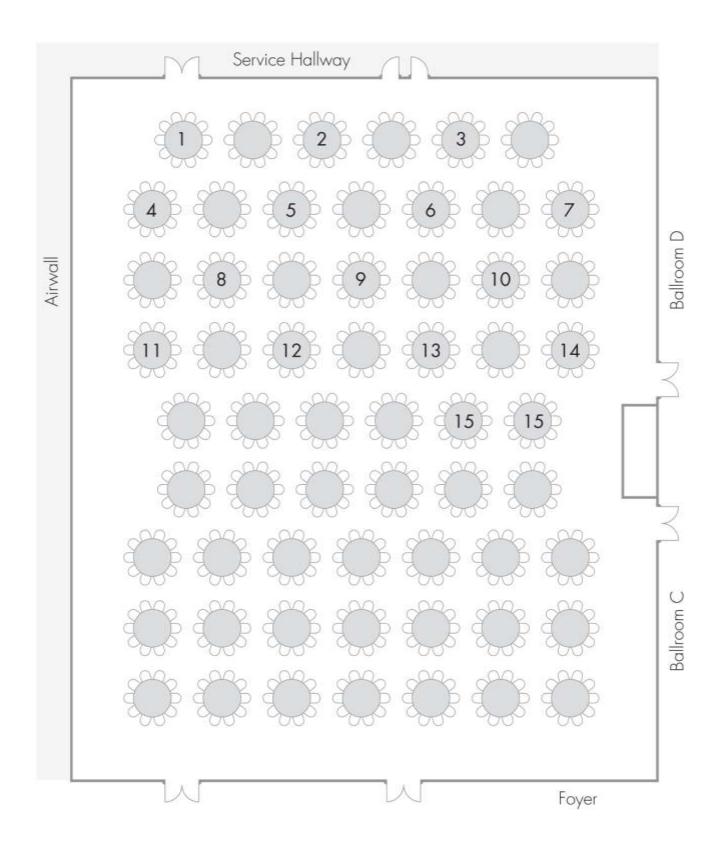
	STANDING COMMITTEES
1	Affiliate Connections Committee
2	Awards Committee
3	Communications Committee
4	Constitution and By-laws Committee
5	Emerging Issues Committee
6	Membership Committee
7	Mentoring Committee
8	STaR Program Sub-commitee
9	Nominations and Elections Committee
10	Professional Development Committee
11	Research Committee
12	Technology and Mathematics Teacher Education Committee
	TASK FORCES
13	Equity Task Force
	PUBLICATIONS COMMITTEES
14	Mathematics Teacher Educator Journal Editorial Panel
	ANNUAL CONFERENCE COMMITTEE

Annual Conference – Program Committee

15

FRIDAY LUNCH COMMITTEE MEETING TABLES

Friday, February 13, 2015 Ballroom C/D, Lunch



SATURDAY BREAKFAST AFFILIATE MEETINGS

Saturday, February 14, 2015 Ballroom 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	lowa 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.

PARTICIPATE IN THE AFFILIATES: BECOMING STRONGER ADVOCATES SESSION

- Friday 9:00 10:00 am in Salon 2
- Hear from Members of the ACC
- Meet other Affiliate Leaders

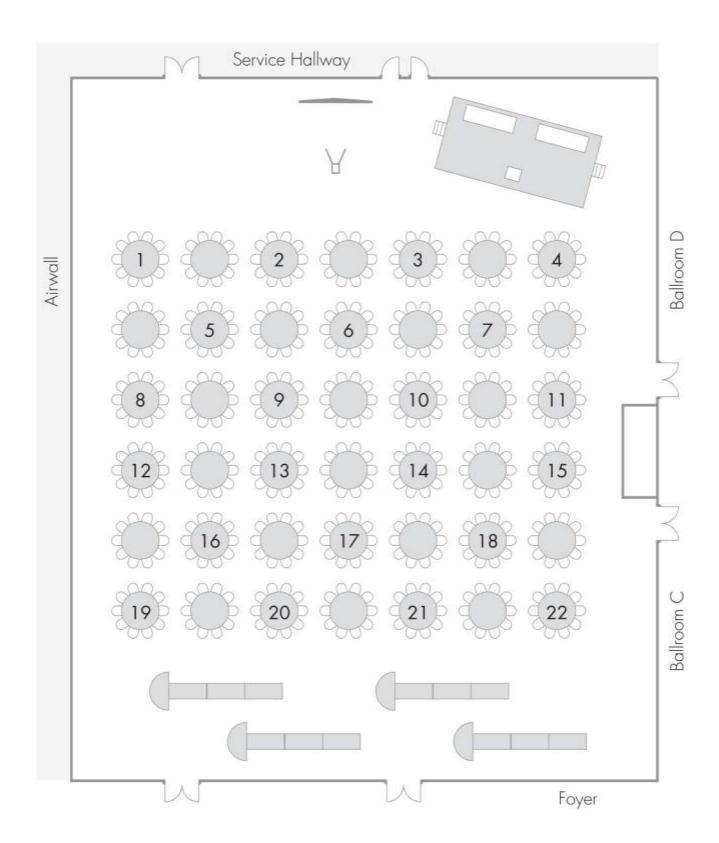
COME TO SATURDAY MORNING BREAKFAST

- 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 (megan.burton@auburn.edu). Also, you can find helpful information on the Affiliates section of the AMTE web site at http://www.amte.net/affiliates.

SATURDAY BREAKFAST AFFILIATE TABLES

Saturday, February 14, 2015 Ballroom C/D, Breakfast



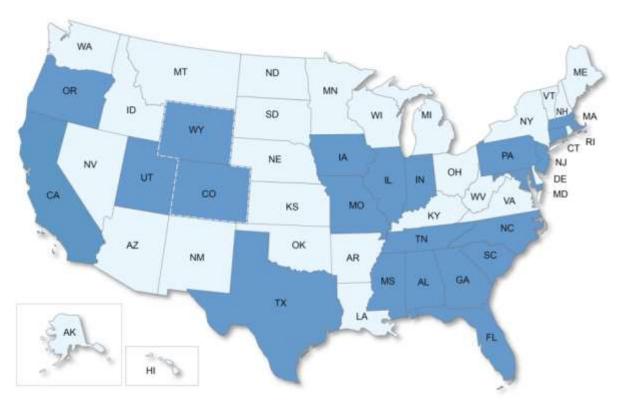
AMTE AFFILIATES

AMTE is proud to acknowledge and welcome members of its 21 affiliated organizations, highlighted in the map below, to the Nineteenth Annual AMTE Conference. At the end of this year's conference, we will confer the charter on our 22nd affiliate, Michigan Association of Mathematics Teacher Educators.

ACRONYM

REGION

AFFILIATE	ACKONTIVI	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	lowa
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.

AFFILIATE

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: http://site.aace.org/awards/awards-ntli.htm Thanks to Texas Instruments for their ongoing support of this award.

2015 NTLI AWARD WINNER

Jennifer Nickell, North Carolina State University - jnickel@ncsu.edu

Incorporating Technology to Enhance Teacher Education Lessons and Preservice Teachers' Learning

Abstract: This session discusses affordances and constraints of incorporating technologies into methods courses to enhance teaching approaches and students' learning of content, pedagogy, and technology. Preservice teachers' reasoning with a task and instructor's pedagogical decisions for incorporating technology will be shared.

Saturday, February 14, 2015, 8:00 am - 9:00 am

Session 169, Salon 8

- Look in next year's Call for Proposals for information on how to submit a paper for next year's Award.

AMTE 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 2014 EMS Scholarship Recipients!

Tiffany Dennison, Lincoln Community School Kimberly Hayden, Weems Elementary School Helen Spruill, PS 503, The School of Discovery

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:





OUR 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. One area of focus is Elementary Mathematics Specialists initiatives through AMTE, and the Elementary Mathematics Specialists and Teacher Leader Project. The Institute also provided funding to support the AMTE STaR Fellows program and, in May, will host a small conference on the existing and needed research on math specialists. 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 1,642 teacher participants from more than 500 schools in the State of Wisconsin have participated. We are planning 6 more institutes this summer, offering 42 classes, K-12.

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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.

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GOLD SPONSOR – THE NATIONAL ACADEMIES PRESS

National Academies Press has donated a limited number of print copies of the two recently released reports, *Mathematical Sciences in 2025* and *Fueling Innovation and Discovery: Mathematical Sciences in the 21st Century*, for AMTE conference attendees.

The National Academy of Sciences, National Academy of Engineering, and National Research Council provide high-quality, objective advice on science, technology, engineering, and mathematics (STEM). Our reports include research on effective STEM education, both on individual topics and on the overall STEM continuum. Our reports have examined and synthesized the evidence on how students most effectively learn, from early childhood to adulthood, in both schools and informal learning environments. These reports have influenced federal legislation, provided guidance to federal agencies involved in STEM education, and shaped curriculum. They are essential for educators, policy makers, decision makers in school districts, government agencies, curriculum developers, and parent and education advocacy groups. Visit our website, www.nap.edu, to browse, read, or download at no charge.

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Information Age Publishing is a new sponsor of AMTE and is partnering with AMTE on multiple projects, including the republication of the AMTE Monograph Series. 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.

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.

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Join us!

Session: What Mathematics Specialists Know

About Rational Numbers and How to Teach What They Don't Know

Speakers: Sara Delano Moore & Marguerite Mason

Thursday, February 12, 2015 11:15am - 12:00pm Rosen Plaza Hotel, Level 2, Salon 5

Session: Ready to Teach: Manipulatives in Mathematics Content Courses

Speakers: Sara Delano Moore & Judith Jacobs

Friday, February 13, 2015 8:00am - 9:00am

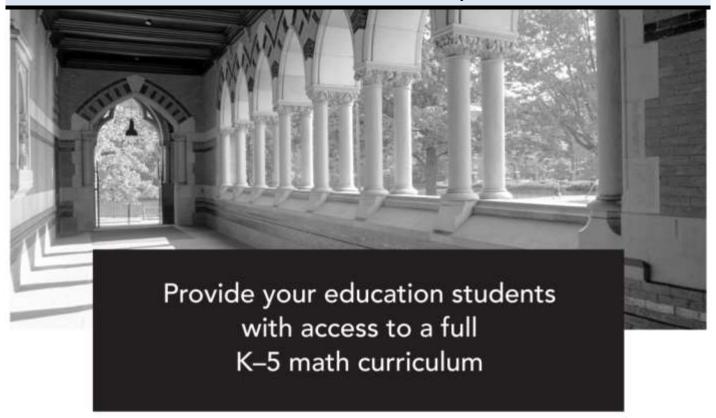
Rosen Plaza Hotel, Level 2, Salon 6



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AMTE 2015 Annual Conference

AMTE THANKS THE MATH LEARNING CENTER, 2015 GOLD SPONSOR



Bridges University Program

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mathlearningcenter.org/university

To learn more please join us for a presentation by Pamela Weber Harris, University of Texas at Austin or stop by The Math Learning Center table.

Using Bridges in Mathematics K-5 in Math Methods Courses Pamela Harris, University of Texas, Austin Session 57, Thursday, February 12, 2015 2:15pm - 3:15pm Rosen Plaza Hotel, Salon 6



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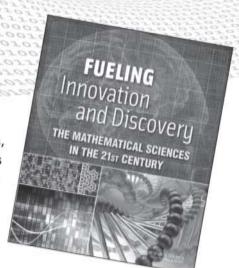
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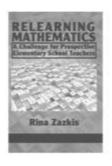








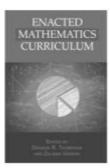
























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AMTE 2015 Annual Conference



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EXHIBITOR NAME

INFORMATION ABOUT EXHIBIT

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HEINEMANN

Heinemann is a publisher of professional resources and a provider of educational services for teachers, kindergarten through college. We strive to give voice to those who share our respect for the professionalism and compassion of teachers and who support teachers' efforts to help children become literate, empathetic, knowledgeable citizens. Our authors are exemplary educators eager to support the practice of other teachers through books, videos, workshops, online courses, and most recently through explicit teaching materials. Our commitment to our work and customers' enthusiastic response to our offerings has made us the leading publisher in this area.

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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 2015. We are also excited to announce that we are bringing back 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 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. Educators throughout the United States and in several international locations use our products and services.

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, and our Principles and our newest publication, It's TIME. Also learn about NCSM partnerships to support Formative Assessment and Digital Learning, and about professional learning opportunities scheduled for 2015.

NATIONAL COUNCIL 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.

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.

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Let us help you create and implement the STEM program of your dreams!

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!

OVERVIEW OF THURSDAY MORNING, FEBRUARY 12, 2015				
	9:00 - 9:45 am	10:00 - 11:00 am		
Salon 2	Developing the Geometry Knowledge Needed for Teaching Using Video Cases Galindo & Uzan	14. Establishing a Virtual Community of Practice Amongst Teaching Candidates, Teachers, and Teacher Educators - Aming-Attai, Lee & Somers		
Salon 3	2. Traversing Everyday Mathematics and Academic Mathematics to Conceive, Construct, and Cruise in a Third Space - Naresh	15. Designing an Asynchronous Online Course for Mathematics Teachers: Opportunities and Challenges - Lynch-Davis, Kastberg & D'Ambrosio		
Salon 4	3. Middle School Mathematics Teachers' Perceptions of the Common Core, Related Assessments, and Teacher Evaluation Systems - Roth McDuffie, Drake & Carson	16. Attending to Teacher Preparation Outcomes from the Beginning: Learning from Baseline and Mid-Program Assessments - Boerst, Shaughnessy, Ball & Farmer		
Salon 5	4. Developing Secondary PST's Ability to Elicit and Notice Student Thinking: Designing a Task-Based Interview Module - Monson, Casey, Lesseig, Huey & Krupa	17. Committee Chairs' Meeting – Arbaugh, Hendrix & Thomas		
Salon 6	5. Program Cases of Opportunities to Learn Algebra and to Learn to Teach Algebra - Mintos, Stehr, Craig & Newton	18. Show Me, Don't Tell Me: Integrating Mathematics, Technology, and Literacy Using Stop Motion Animation - Ruggles & Apraiz		
Salon 7	6. Teaching and Learning with Technology Brief Report Session	19. iPad Technology: Supporting Mathematics Teachers' Curriculum Integration - Hayata & Wheeler		
Salon 8	7. Relationships Between Prospective Mathematics Teachers' Beliefs and TPACK - Kim, Smith & McIntyre	20. Varying Facilitation of Mathematics Teacher Professional Development – Questions and Findings from the Field - Mitchell & Barmore		
Salon 9	8. Using Problem Solving Tasks as a Tool for Mathematics Coaches' Professional Learning in Probability and Statistics - Enderson, Grant & Liu	21. Exploring Case-Method Instruction to Support Mathematics Teachers Developing Cultural Awareness - Parker, Novak & Bartell		
Salon 10	9. "Children Know More Than I Think They Do:" Learning to Teach the World with Mathematics - Felton-Koestler	22. Design Features and Outcomes in Common Core Professional Development for High School: Functions and Modeling - Steele, McLeod, Brown & Schock		
Salon 11	10. Taking the Road Less-Traveled in PD: The Collective Emergence of an "Inquiry Habit of Mind" - Bowers	23. A Critical Examination of the edTPA Framework on Academic Language – Lim & Son		
Salon 12	11. Building Community with Mathematics Education Leadership Partners - Cooper, Wilkerson & Perry	24. Pedagogical Content Knowledge Brief Report Session: Preparing Prospective Teachers		
Salon 13	12. Helping Prospective Teachers Notice and Develop Elementary Students' Thinking in the Context of Learning Fractions - Mojica & Friel	25. The Role of Different Aspects of Mathematical Knowledge in Elementary School Teachers' Instructional Practices - Sun & Copur Gencturk		
Salon 14	13. Effective Mathematics Classroom Coaching: Empirical Evidence of Knowledge for Coaching - Luebeck	26. Bridging University and Clinical Practices Through Mathematical Argumentation: Building Support for Preservice Teachers - Casa & Williams		

25 AMTE 2015 Annual Conference

OVERVIEW OF THURSDAY MORNING, FEBRUARY 12, 2015

	OVERVIEW OF THORSDAY WORKEN
	11:15 am - 12:00 pm
Salon 2	27. School and University Collaboration: Working Together to Enhance Children's Understanding of Fractions - Cramer, Ahrendt & Monson
Salon 3	28. The Pivotal Teaching Moment Project: How Preservice Teachers Respond to Critical Moments of Instruction - Powers & Seehausen
Salon 4	29. Language Really is the Barrier: Supporting Preservice Teachers' Strategies for Working with English Learners - de Araujo & I
Salon 5	30. What Mathematics Specialists Know About Rational Numbers and How to Teach What They Don't Know - Mason, Moore & Shippee
Salon 6	31. Mathematics Learning: Gateway, Not Gatekeeper, to STEM Learning - Ferrini-Mundy, Singer & King
Salon 7	32. Sociopedagogical Norms Established During Discussions of a Teacher's Own Teaching versus Others' Teaching - White, Dick & Sztajn
Salon 8	33. "The Lesson's Standards Include MP #2-Now What?": Being Intentional in Developing the Mathematical Practices - Bay-Williams & McGatha
Salon 9	34. Responding to Students' Mathematical Thinking When You Don't Know How to Respond - Warner
Salon 10	35. Examining the Impact of a Cultural Awareness Unit on Preservice Teachers' Multicultural Mathematics Dispositions - DuCloux, Carreras-Jusino, Gonzalez, White & Tucker
Salon 11	36. An Asynchronous Noticing App to Build Preservice Teachers' Noticing: Technology in the Mathematics Methods Course - Chao & Murray
Salon 12	37. Pedagogical Content Knowledge Brief Report Session: Developing Preservice Elementary Teachers
Salon 13	38. Replacing Confusion with Coherence in Teaching Geometric Transformations - Usiskin
Salon 14	39. Teacher Leadership: (Re)shaping of an Identity - Knapp

Session 1

Individual Session

Salon 2

Pedagogical Content Knowledge Individual Session Salon 5

Developing the Geometry Knowledge Needed for Teaching Using Video Cases

Enrique Galindo, *Indiana University* Erol Uzan, *Indiana University*

Pedagogical Content Knowledge

We describe the design and implementation of a videocase to support elementary preservice teachers to develop an understanding of how students reason in geometry. We share the design features, findings, and discuss implications for teacher preparation.

Session 2

Salon 3

Equity and Mathematics Education Individual Session

Traversing Everyday Mathematics and Academic Mathematics to Conceive, Construct, and Cruise in a Third Space

Nirmala Naresh, Miami University

In this session, we draw upon key facets of a culturally responsive mathematics education to bridge academic mathematics and everyday mathematics. We conceived, constructed, and cruised in a third space to broaden prospective teachers' perception of mathematics and its pedagogy.

Session 3

Salon 4

Mathematics Education Policy and Program Issues Individual Session

Middle School Mathematics Teachers' Perceptions of the Common Core, Related Assessments, and Teacher Evaluation Systems

Amy Roth McDuffie, *Washington State University Tri-Cities* Corey Drake, *Michigan State University* Cynthia Carson, *University of Rochester*

Findings will be presented from mixed methods research that investigated middle school teachers' perceptions of and experiences with CCSSM, CCSSM-related assessments and resources, and teacher evaluation processes. Implications for MTEs, professional developers, policy makers, administrators, and teachers will be discussed.

Developing Secondary PST's Ability to Elicit and Notice Student Thinking: Designing a Task-Based Interview Module

Debra Monson, *University of St. Thomas* Stephanie Casey, *Eastern Michigan University* Kristin Lesseig, *Washington State University Vancouver* Maryann Huey, *Drake University* Erin Krupa, *Montclair State University*

This session describes a task-based interview module to help secondary PSTs elicit and notice student thinking. We will share the process we went through to develop the module as well as the module and results on its effectiveness.

Session 5

Session 4

Salon 6

Mathematical Content Knowledge Individual Session

Program Cases of Opportunities to Learn Algebra and to Learn to Teach Algebra

Alexia Mintos, *Purdue University* Eryn M. Stehr, *Michigan State University* Jeffrey Craig, *Michigan State University* Jill Newton, *Purdue University*

In this presentation we plan to discuss the results of case studies of five secondary mathematics teacher education programs related to preservice teachers' opportunities to learn algebra and to learn to teach algebra.

Session 6

Salon 7

Teaching and Learning with Technology Brief Report Session

Using TPACK to Unpack the Effectiveness of Technology on Mathematics Teaching and Learning

Jamaal Rashad Young, University of North Texas

The results of meta-analytic studies investigating the effects of technology on mathematics instruction were systematically reviewed using the TPACK framework. The results of this study provide theoretical, empirical, and practical implications concerning the effectiveness of mathematics instruction with technology.

Lessons Learned about Preschool Children's Use of iPads

Amy Beth Adkins, *University of Nevada, Las Vegas* Jeffrey Shih, *University of Nevada, Las Vegas* Lina DeVaul, *University of Nevada, Las Vegas*

The use of iPads in classrooms is becoming more prevalent. In this session, researchers will share what we have learned in the past two years about the implementation and impact on learning of iPads in a preschool setting.

Session 7

Salon 8

Teaching and Learning with Technology Individual Session

Relationships Between Prospective Mathematics Teachers' Beliefs and TPACK

Somin Kim, *University of Georgia* Ryan C. Smith, *University of Georgia* Leighton C. McIntyre, *University of Georgia*

In this presentation, we examine the relationships between prospective mathematics teachers' TPACK and their beliefs about mathematics, teaching, learning, and the use of technology. We will discuss how these relationships could impact teacher training.

Session 8 Salon 9

Teacher Professional Development Individual Session

Using Problem Solving Tasks as a Tool for Mathematics Coaches' Professional Learning in Probability and Statistics

Mary C. Enderson, *Old Dominion University* Melva R. Grant, *Old Dominion University* Yating Liu, *Old Dominion University*

This session presents the design and findings of an intervention that was adopted to enhance elementary and middle school mathematics coaches' content knowledge of probability and statistics, as well as their understanding of student work.

Session 9 Salon 10

Equity and Mathematics Education Individual Session

"Children Know More Than I Think They Do:" Learning to Teach the World with Mathematics

Mathew D. Felton-Koestler, Ohio University

I describe shifts in an elementary teacher's views of equity over a three-year period during her participation in long-term professional development. In particular, I identify mechanisms that supported her in beginning to integrate social justice into her mathematics teaching.

Session 10 Salon 11

Teacher Professional Development Individual Session

Taking the Road Less-Traveled in PD: The Collective Emergence of an "Inquiry Habit of Mind"

Janet Bowers, San Diego State University

This presentation will describe the results of a three-year professional development (PD) initiative that focused on personal inquiry, or action research, as a vehicle for teacher growth and change.

Session 11 Salon 12

School and University Partnerships and Projects Individual Session

Building Community with Mathematics Education Leadership Partners

Sandi Cooper, *Baylor University* Trena Wilkerson, *Baylor University* Debbie Hunter Perry, *Midway Independent School District, Texas*

How can we build an effective community of practice in mathematics education? In this session, we will describe an effective collaboration of school district leaders, university education faculty, and mathematics department faculty that has led to a strong partnership.

Session 12

Salon 13

Preservice Teacher Field Experiences Individual Session

Helping Prospective Teachers Notice and Develop Elementary Students' Thinking in the Context of Learning Fractions

Gemma Mojica, University of North Carolina, Chapel Hill Susan N. Friel, University of North Carolina, Chapel Hill

To reconceptualize teacher preparation, we explored a model that focused on learning to notice students' mathematical thinking, increasing mathematical knowledge for teaching, and promoting productive discourse. The model promoted learning for students and practicing teachers. Results from the three-year study will be shared.

Session 13

Salon 14

Teacher Professional Development Individual Session

Effective Mathematics Classroom Coaching: Empirical Evidence of Knowledge for Coaching

Jennifer Luebeck, Montana State University

This session describes results from a longitudinal research study designed to investigate knowledge that contributes to successful coaching in grades K-8 mathematics classrooms. Coaching skills, coaching intensity, and specific coaching practices are found to impact teachers' practices, knowledge, and attitudes.

THURSDAY, FEBRUARY 12, 2015

10:00 AM -11:00 AM

Session 14

Preservice Teacher Field Experiences Individual Session

Session 18

Salon 2

Teaching and Learning with Technology Individual Session Salon 6

Establishing a Virtual Community of Practice Amongst Teaching Candidates, Teachers, and Teacher Educators

Rachael Aming-Attai, *University of Indianapolis* Jean Lee, *University of Indianapolis* John Somers, *University of Indianapolis*

We share research examining an innovative way to create a virtual community of practitioners among candidates in their junior year, mentor teachers at a charter school, and teacher education faculty. We discuss lessons learned, and offer ideas for future research.

Session 15 Salon 3

Development of Mathematics Teacher Educators Discussion Session

Designing an Asynchronous Online Course for Mathematics Teachers: Opportunities and Challenges

Kathleen Lynch-Davis, *Appalachian State University* Signe Kastberg, *Purdue University* Beatriz Silva D'Ambrosio, *Miami University*

In this session we explore the development of mathematics teacher educator practice in asynchronous learning environments. Questions about design and interaction to demonstrate listening and caring will be discussed.

Session 16 Salon 4

Pedagogical Content Knowledge Individual Session

Attending to Teacher Preparation Outcomes from the Beginning: Learning from Baseline and Mid-Program Assessments

Tim Boerst, *University of Michigan*Meghan Shaughnessy, *University of Michigan*Deborah Loewenberg Ball, *University of Michigan*Susanna Owens Farmer, *University of Michigan*

This session is intended to stimulate discussion of the knowledge and skills that preservice teachers bring to initial teacher education and how they develop over time. Participants will explore examples of performances and experiences intended to support development.

Session 17 Individual Session

Salon 5

Committee Chairs' Meeting

Fran Arbaugh, *Penn State University* Timothy M. Hendrix, *Meredith College* Christine Thomas, *Georgia State University*

2014 and 2015 AMTE Committee Chairs meet with AMTE President, President-Elect, and Executive Director to discuss goals and activities for 2015.

Show Me, Don't Tell Me: Integrating Mathematics, Technology, and Literacy Using Stop Motion Animation

Krista Ruggles, *University of Florida* Kristen Apraiz, *University of Florida*

This session provides an overview of a preservice teacher practicum experience that integrated mathematics, technology, and literacy skills in the creation of stop motion animation videos with students in grades K-3. Strategies, examples, and guided practice will be provided.

Session 19 Salon 7

Teaching and Learning with Technology Discussion Session

iPad Technology: Supporting Mathematics Teachers' Curriculum Integration

Carole Hayata, Southern Methodist University Ann Wheeler, Texas Woman's University

How can educators support the development of TPACK in mathematics teachers? Session participants will engage in discussion of teachers' responses to the use of iPad technology in the classroom. Please bring your iPads with *Educreations*, *Geoboard*, and *AutoRap* pre-installed.

Session 20 Salon 8

Teacher Professional Development Discussion Session

Varying Facilitation of Mathematics Teacher Professional Development – Questions and Findings from the Field

Rebecca Mitchell, *Boston College* Johanna Barmore, *Harvard University*

We describe a mathematics professional development study that investigates the impact of varying levels of facilitation on teacher discourse around mathematics instruction and whether the level of facilitation has varying effects on how teachers reflect on their own practices.

Session 21 Salon 9

Equity and Mathematics Education Individual Session

Exploring Case-Method Instruction to Support Mathematics Teachers Developing Cultural Awareness

Frieda Parker, *University of Northern Colorado* Jodie Novak, *University of Northern Colorado* Tonya Bartell, *Michigan State University*

This session provides an opportunity for attendees to consider what case-method instruction might look like in supporting secondary mathematics teachers to work with culturally diverse students and to analyze a prototype case.

Session 22

Salon 10

Teacher Professional Development Discussion Session

Design Features and Outcomes in Common Core Professional Development for High School: Functions and Modeling

Michael Steele, University of Wisconsin, Milwaukee Kevin McLeod, University of Wisconsin, Milwaukee Sara Brown, Brookhill Institute of Mathematics Bridget Schock, University of Wisconsin, Milwaukee

This session reports on the design principles and outcomes of a professional development project focused on both content and pedagogy in the high school Common Core State Standards for Mathematics related to functions and modeling.

Session 23 Salon 11

Mathematics Education Policy and Program Issues Individual Session

A Critical Examination of the edTPA Framework on Academic Language

Woong Lim, Kennesaw State University Ji-Won Son, University at Buffalo, State University of New York

The presenters introduce six elements of academic language as framed by edTPA and demonstrate how lesson plans incorporating edTPA academic language are evaluated against the rubrics. We offer opportunities to critique how edTPA frames academic language and share concerns about edTPA.

Session 24 Salon 12

Pedagogical Content Knowledge **Brief Report Session**

Making Mathematics Teaching and Learning Visible: A Framework for Shifting Prospective Teachers' **Beliefs and Attitudes**

Kateri Thunder, James Madison University Kyle T. Schultz, James Madison University

How can we change prospective teachers' attitudes and beliefs about teaching and learning in mathematics? We will share a framework to design a mastery-oriented learning project that influenced prospective teachers' beliefs to make them more amenable to student-centered pedagogies.

Examining Novice Middle School Teachers' Instruction: Leveraging Actions that Cultivate Rapport to Develop Mathematical Practices

Enakshi Bose, University of Pennsylvania

I present an analysis of novice teachers' actions and discourse during instruction. The findings underscore how seemingly nonmathematical interactions shape the experience of learning mathematics and present opportunities for teachers to cultivate mathematical practices while developing their pedagogical personas

Developing Productive Dispositions for Problem Solving in Preservice Teachers

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

This presentation will share initial data from a qualitative study on developing preservice teachers' dispositions towards problem solving. Initial data suggest preservice teachers tend to analyze problems more carefully, consider multiple representations, and solve problems in various ways.

Session 25 Salon 13 Mathematical Content Knowledge

The Role of Different Aspects of Mathematical **Knowledge in Elementary School Teachers' Instructional Practices**

Li Sun, *University of Houston* Yasemin Copur Gencturk, University of Houston

Individual Session

In this presentation, we will share findings from a longitudinal study of relationships between the specifics of teachers' mathematical knowledge and their instructional practices, using data collected from 21 elementary school teachers over a 3-year period.

Session 26 Salon 14

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

Bridging University and Clinical Practices Through Mathematical Argumentation: Building Support for Preservice Teachers

Tutita M. Casa, University of Connecticut Madelyn Williams, University of Connecticut

What better way to prepare preservice teachers than to have them advance their coursework by collaborating with inservice teachers about authentic problems of practice? Come learn about and apply our model supporting the building of shared knowledge about implementing argumentation.

THURSDAY, FEBRUARY 12, 2015

11:15 AM - 12:00 PM

Session 27

Individual Session

School and University Partnerships and Projects

Session 31
Mathematics Education Policy and Program Issues
Symposium

Salon 6

School and University Collaboration: Working Together to Enhance Children's Understanding of Fractions

Kathleen Cramer, *University of Minnesota* Sue Ahrendt, *University of Wisconsin River Falls* Debra Monson, *University of St. Thomas*

This session will describe a successful school-university partnership that focused on improving third graders' learning of fractions as well as enhancing the researchers' and teachers' understanding of the role of the number line model in fraction learning.

Session 28

Salon 3

Salon 2

Preservice Teacher Field Experiences Individual Session

The Pivotal Teaching Moment Project: How Preservice Teachers Respond to Critical Moments of Instruction

Robert Powers, *University of Northern Colorado* Alees Teel Seehausen, *University of Northern Colorado*

We describe the design, implementation, and impacts of a project developed to help preservice teachers recognize and attend to pivotal teaching moments in secondary mathematics instruction and how they respond to such moments in their own practice.

Session 29

Equity and Mathematics Education Individual Session Salon 4

Language Really is the Barrier: Supporting Preservice Teachers' Strategies for Working with English Learners

Zandra de Araujo, *University of Missouri* Ji Yeong I, *University of Missouri*

In this interactive session we discuss a study that examined a field experience focused on providing preservice teachers with experience enacting cognitively demanding tasks with English learners. Participants will examine tasks and create and analyze supports for enacting these tasks.

Session 30 Salon 5

Mathematical Content Knowledge Individual Session

What Mathematics Specialists Know About Rational Numbers and How to Teach What They Don't Know

Marguerite Mary Mason, College of William and Mary Sara Delano Moore, ETA hand2mind Eric Shippee, College of William and Mary

What do K-8 mathematics specialists know about rational numbers and proportional reasoning? What should they know? How can you foster the complex and sophisticated ways of thinking about rational numbers needed to successfully serve as a math specialist? Manipulatives included.

Mathematics Learning: Gateway, Not Gatekeeper, to STEM Learning

Joan Ferrini-Mundy, *National Science Foundation* Susan Rundell Singer, *National Science Foundation* Karen King, *National Science Foundation*

Mathematics learning is often a barrier, not a gateway, to STEM majors and careers for many students. This session will explore promising approaches for mathematics teacher education in grades K-12 that can expand opportunities in STEM and beyond grade 12.

Session 32

Salon 7

Teacher Professional Development Individual Session

Sociopedagogical Norms Established During Discussions of a Teacher's Own Teaching versus Others' Teaching

Tracy Foote White, *North Carolina State University* Lara Dick, *Bucknell University* Paola Sztajn, *North Carolina State University*

This individual research report session will focus on the concept of sociopedagogical norms and the development of the codes used for analyzing video data on discourse surrounding mathematics instruction.

Session 33

Salon 8

Pedagogical Content Knowledge Individual Session

"The Lesson's Standards Include MP #2-Now What?": Being Intentional in Developing the Mathematical Practices

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

When a lesson lists a Mathematical Practice, it means the lesson has potential for that practice. We will share a collection of activities that have helped preservice and practicing teachers be intentional and explicit in developing the Mathematical Practices.

Session 34

Salon 9

Teacher Professional Development Individual Session

Responding to Students' Mathematical Thinking When You Don't Know How to Respond

Lisa Warner, William Paterson University

I share how several middle school teachers dealt with situations in which they did not understand their students' thinking. The goal is to discuss strategies and decisions related to dealing with the complexities of classroom situations involving cognitively demanding tasks.

Session 35

Equity and Mathematics Education Individual Session

Examining the Impact of a Cultural Awareness Unit on Preservice Teachers' Multicultural Mathematics Dispositions

Kanita Kimmons DuCloux, Western Kentucky University Angel M. Carreras-Jusino, University of Georgia Dario Andres Gonzalez, University of Georgia Dorothy Y. White, University of Georgia Claudette Denise Tucker, University of Georgia

This session provides an overview of a cultural awareness unit in mathematics methods courses and research methods for analyzing its impact on preservice teachers' multicultural mathematics dispositions (MCMD). Participants will engage in a coding activity and discuss implications for future research.

Session 36 Salon 11

Teaching and Learning with Technology Individual Session

An Asynchronous Noticing App to Build Preservice Teachers' Noticing: Technology in the Mathematics Methods Course

Theodore Chao, Harvard University Eileen Murray, Harvard University

Noticing children's mathematical thinking is important for mathematics teacher development. We show how a mobile technology app can be used within mathematics methods courses to facilitate prospective teachers' noticing, allowing student/teacher communication without the need for physical proximity.

Session 37

Salon 10

Pedagogical Content Knowledge Brief Report Session

Examining Mathematical Knowledge for Teaching: How Preservice Teachers Use Children's Literature to Teach Mathematical Concepts

Jennifer Edelman, University of West Georgia

This study examined preservice teachers' developing mathematical knowledge for teaching as they planned, taught, and reflected on a mathematics lesson that included children's literature. Results indicate a need for further development of critical analysis of curricular resources and teaching methods.

Teachers' Perceptions of "Use" of Student Mathematical Thinking in Whole Class Discussion

Mary Achieng Ochieng, Western Michigan University Keith Leatham, Brigham Young University Shari L. Stockero, Michigan Technological University Laura Van Zoest, Western Michigan University

What does it mean to productively "use" student mathematical thinking in whole-class discussion? The MOST project interviewed mathematics teachers about their perceptions of such use. We discuss our framework for categorizing teachers' perceptions of use and implications for professional development.

Session 38

Mathematical Content Knowledge Individual Session Salon 13

Salon 12

Replacing Confusion with Coherence in Teaching Geometric Transformations

Zalman Usiskin, University of Chicago

Of all the high school CCSSM, the 11 standards relating to geometric transformations may represent the content most unfamiliar to mathematics teachers. As a result, confusions are common. This presentation involves discussion of these confusions and how to overcome them.

Session 39

Salon 14

Development of Mathematics Teacher Educators Individual Session

Teacher Leadership: (Re)shaping of an Identity

Melinda Knapp, Bend-LaPine School District, Oregon

The presentation will highlight research results focusing on how teacher leaders learn leadership practices supporting high-quality mathematics instruction. In this session, the researcher will share experiences that led her to redefine her understanding of teacher leadership practices during a yearlong self-study.

THURSDAY, FEBRUARY 12, 2015

12:00 PM - 1:15 PM

MTE

Association of Mathematics Teacher Educators

BALLROOM C/ D

LUNCH AND DISCUSSION TABLES

The Mentoring Committee has organized discussion tables for today's lunch. Tables in the dining area are identified with topics for discussion, and there will be two facilitators at each table. Discussion topics and a map of table locations are located on pages 9 & 10 of your conference program.

AMTE 2015 Annual Conference

32

OVERVIEW OF THURSDAY AFTERNOON, FEBRUARY 12, 2015		
	1:15 - 2:00 pm	2:15 - 3:15 pm
Ballroom B	40. Putting the Teaching Principles into Action! - Gojak	54. Defining and Developing Teaching Practices Related to Responding to Students' Mathematical Thinking - Webel, DeLeeuw, Empson, Jacobs, Land, Leatham, Peterson, Stockero, Van Zoest & Conner
Salon 2	41. Differentiating in Mathematics Education Courses: Practicing What We Preach - Wilburne & Mitten	55. Teacher Time Out: Supporting the Collective Learning of Educators When Students are Present - Hintz & Gibbons
Salon 3	42. Fostering Growth in Middle-Grades Teachers' Classroom Discourse Practices – Bostic & Matney	56. Noticing Exposed through Preservice Teachers' Video Animations - Amador, Estapa, Weston, de Araujo, Kosko & Aming-Attai
Salon 4	43. Using the LessonSketch Platform to Infuse a Practice- Teacher Education Programs - Chazan, Amidon, Bieda, Alibegovic, Walkoe & Zahner	Based Orientation throughout our University-Based
Salon 5	44. Developing Teachers' Understanding and Fluency with - Giné	n the Common Core Mathematical Practices
Salon 6	45. Problematizing Multiplication: Using an Alternate Base to Develop Conceptual Understanding of an Overly-Routine Context - Fasteen	57. Using Bridges in Mathematics K-5 in Math Methods Courses - Harris
Salon 7	46. The Influence of Instructional Methods on Elementary Preservice Teachers' Anxieties for Mathematics and Teaching Mathematics - Dove	58. Preservice Teacher Field Experiences Brief Report Session: Elementary, Middle, & Secondary
Salon 8	47. Enacting Digital Instructional Materials: The Role of Middle and High School Mathematics Teachers - Edson & Thomas	59. Reunited and It Feels So Good: Mathematical Knowledge for Teaching and Teaching Practices Together Again - Snider & Rougee
Salon 9	48. Middle School Mathematics Teacher Evaluation: Discipline Specific Feedback - Trinter	60. Developing a Measure of Mathematical Knowledge for Teaching for Primary Grades Teachers - Bray, Schoen, Nielsen, Wolfe & Tazaz
Salon 10	49. Articulating Structure and Regularity in Rich Mathematical Tasks - Jacobs, Kennedy, Lai & Sherman	61. How Can CCSSM Modeling Standards Support Teaching Mathematics for Social Justice? - Cirillo, Bartell, Wager & Novak
Salon 11	50. Preparing to Teach the Standards for Mathematical Practice: A Learning Progressions Approach - Newton, Staples & Kasten	62. Creating Classroom-Developed Criteria for What Counts as Proof - Ko, Yee, Bleiler & Boyle
Salon 12	51. School and University Partnerships and Projects Brief Report Session	63. Connected Mathematical Thinking - Bass
Salon 13	52. Putting Professional Development into Practice: How Teachers Process, Implement, and Disseminate Specialized Knowledge of Standards - Diemert & Samuels	64. A National Report: The Statistical Education of Teachers - Bargagliotti, Jacobbe, Spangler & Case
Salon 14	53. Improving Preservice Elementary Teachers' Mathematical Learning via Clickers and Discussion - Miller	65. How do Preservice Teachers Make Sense of Fraction Division with Remainders? - Sahin, Gault, Tapp & Dixon

AMTE 2015 Annual Conference

OVERVIEW OF THURSDAY AFTERNOON, FEBRUARY 12, 2015

	3:45 - 4:30 pm
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Ballroom B	66. Tools to Support the Development of Preservice and Early Career Teachers in the Use of Formative Assessment - Mills
Salon 2	67. Theory into Practice: How a Teacher Preparation Program Leads to a Successful First-Year Teaching Experience - Steckroth
Salon 3	68. Instructional Practices of Experienced Mathematics Teacher Educators Teaching K-8 Content Courses - Appova & Taylor
Salon 4	69. How do Japanese Teachers Critically Analyze a Lesson During Lesson Study? - Corey
Salon 5	70. STaR: An Opportunity for New Doctorates and Something Senior Mathematics Educators Should Know About - Reys, Spangler, Wanko, Moore, Dollard & Krupa
Salon 6	71. I-THINK: University and Elementary School Partnership to Improve Problem Solving for All Students - Lynch & Lynch
Salon 7	72. Linking Service-Learning to Field Experiences as a Way to Broaden Perspectives in Mathematics Education - Harbour, Karp & Lingo
Salon 8	73. Consultation between Elementary and Special Education Preservice Teachers: On the Journey toward Equitable Mathematics Teaching - van Ingen, Eskelson & Allsopp
Salon 9	74. Teachers as Critical Consumers of Assessments: A Professional Development Model - Hunsader, Zorin & Thompson
Salon 10	75. Assessment of Teacher Knowledge of Students' Oral Strategies in Subtraction using Multimedia Storyboarding Tools - Hanby
Salon 11	76. Preparing Preservice Teachers for STEM Project- Based Instruction Classrooms - Goodell & Jackson
Salon 12	77. Mathematical Content Knowledge Brief Report Session: Strategies, Models, and Problem Solving
Salon 13	78. Challenges and Opportunities of Teaching Mathematics for Social Justice - Ortiz
Salon 14	79. Who Teaches Mathematics Content Courses for Teachers? An Analysis of Colleges and Universities in Texas - Quebec Fuentes, Johnson & Jorgensen

THURSDAY, FEBRUARY 12, 2015

1:15 PM - 2:00 PM

Session 40

Ballroom B

Pedagogical Content Knowledge Individual Session

Putting the Teaching Principles into Action!

Linda M. Gojak, John Carroll University

Principles to Actions (NCTM 2014) describes eight effective teaching practices linked to six research based principles of learning. Let's examine these practices and share strategies that can support K-8 inservice teachers in understanding and incorporating them into their mathematics instruction.

Session 41

Salon 2

Equity and Mathematics Education Individual Session

Differentiating in Mathematics Education Courses: Practicing What We Preach

Jane M. Wilburne, *Penn State Harrisburg* Carolyn Mitten, *University of Florida*

Two mathematics educators present challenges to meeting different mathematics standards to a class of K-12 mathematics teachers. We will model strategies and present activities used to differentiate learning opportunities that increased teachers' understanding and knowledge of teaching for diverse learners.

Session 42

Salon 3

Teacher Professional Development Individual Session

Fostering Growth in Middle-Grades Teachers' Classroom Discourse Practices

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

We describe a yearlong PD program for middle school teachers and offer videos characterizing teachers' pre- and post-PD instruction. Results of discourse analysis will be shared. Attendees will reflect on teachers' instructional changes leading to effective classroom discourse practices.

Session 43

Salon 4

Pedagogical Content Knowledge Extended Session (1:15 – 3:15 pm)

Using the LessonSketch Platform to Infuse a Practice-Based Orientation throughout our University-Based Teacher Education Programs

Daniel Chazan, University of Maryland Joel Amidon, University of Mississippi Kristen Bieda, Michigan State University Emina Alibegovic, University of Utah Janet Walkoe, University of Maryland William Zahner, Boston University

Presenters in this working group will share initial designs for blended-learning modules using the LessonSketch platform. These modules infuse a practice-based orientation to content courses, methods courses, and internship experiences. Participants will examine the modules in depth and provide feedback.

Session 44

Pedagogical Content Knowledge Extended Session (1:15 – 3:15 pm)

Developing Teachers' Understanding and Fluency with the Common Core Mathematical Practices

Roser Giné, Lesley University

A mathematics methods course framework will be presented, with specific attention to tasks that engage preservice and inservice teachers in mathematical practices delineated within the standards. In particular, participants will explore pedagogy supporting depth of understanding of structure in mathematics.

Session 45

Salon 6

Salon 5

Mathematical Content Knowledge Individual Session

Problematizing Multiplication: Using an Alternate Base to Develop Conceptual Understanding of an Overly-Routine Context

Jodi Fasteen, Portland State University

Alternate bases can be used in preservice teacher courses to gain deeper conceptual understanding of the routine context of whole numbers. This session will describe research on preservice teachers' mathematical activity with a set of multiplication tasks in base five.

Session 46

Salon 7

Teaching and Learning with Technology Individual Session

The Influence of Instructional Methods on Elementary Preservice Teachers' Anxieties for Mathematics and Teaching Mathematics

Anthony Michael Dove, Radford University

This session will examine the use of multiple flipped classroom and traditional instructional methods and their influence on mathematics anxieties. Participants are asked to watch a brief video about the study's background (http://youtu.be/1bBff5AKy1M) to assist in session discussions.

Session 47

Salon 8

Teaching and Learning with Technology Individual Session

Enacting Digital Instructional Materials: The Role of Middle and High School Mathematics Teachers

Alden J. Edson, *Michigan State University* Amanda Thomas, *Penn State Harrisburg*

This session will examine enactment of digital instructional materials across two research studies, highlighting the role of middle and high school mathematics teachers. Implications for mathematics teacher educators will be identified and discussed.

Mathematics Education Policy and Program Issues Individual Session

Middle School Mathematics Teacher Evaluation: Discipline Specific Feedback

Christine Trinter, Virginia Commonwealth University

This session focuses on a qualitative research study examining middle school mathematics teacher evaluation systems with particular attention to the types of feedback given to teachers by administrators with different levels of mathematics education or experience. Findings and implications are shared.

Session 49

Salon 10

Salon 9

Development of Mathematics Teacher Educators Discussion Session

Articulating Structure and Regularity in Rich Mathematical Tasks

Judith E. Jacobs, *JEJMath, Ltd.*Dave I. Kennedy, *Shippensburg University of Pennsylvania* Yvonne Lai, *University of Nebraska, Lincoln* Diana Sherman, *University of Michigan*

Mathematical Practices (MPs) 7 & 8 play out in many tasks, including mental arithmetic and Nim games. Mathematics teacher educators must be able to articulate the importance of structure and regularity. We'll discuss strategies for highlighting the presence of these MPs.

Session 50

Salon 11

Pedagogical Content Knowledge Discussion Session

Preparing to Teach the Standards for Mathematical Practice: A Learning Progressions Approach

Jill Newton, *Purdue University*Megan Staples, *University of Connecticut*Sarah Kasten, *Northern Kentucky University*

We will discuss preservice teachers' preparation to engage students in the Standards for Mathematical Practice (SMPs). We will present our preliminary work on a learning progression for argumentation (SMP 3) and engage participants in discussions of progressions for other SMPs.

Session 51

Salon 12

School and University Partnerships and Projects Brief Report Session

Linking Theory and Practice: Mathematics Methods in Collaboration with an Urban School District

Courtney Nagle, Penn State Erie, The Behrend College

This session will describe the details of a university/secondary school partnership, focusing on the restructuring of the mathematics methods curriculum to incorporate planning and teaching rich mathematics lessons to visiting urban students. Preliminary results over two semesters will be shared.

Collaboration Around Mathematics Instruction: Professional Learning in a PDS Triad

Gwendolyn Lloyd, *Penn State University* Courtney Lynch, *Penn State University*

How did members of one PDS triad (intern, mentor teacher, and supervisor) describe the nature of their professional learning in the context of mathematics instruction? In our session, we highlight the role of collaboration in this PDS triad's learning.

Session 52

Salon 13

Teacher Professional Development Individual Session

Putting Professional Development into Practice: How Teachers Process, Implement, and Disseminate Specialized Knowledge of Standards

Kacey Marie Diemert, Lewis-Clark State College Shari Samuels, Montana State University

This session showcases results from research on a "teach the teachers" model where teachers receive Common Core professional development, then create and facilitate similar experiences for school-based peers. A framework demonstrates how these experiences may be replicated, diluted, or transformed.

Session 53

Salon 14

Teaching and Learning with Technology Individual Session

Improving Preservice Elementary Teachers' Mathematical Learning via Clickers and Discussion

Travis K. Miller, *University of Indianapolis*

This session examines clicker use via an answer-discuss-answer format in a mathematics course for preservice teachers. Comparison to a course section without clickers reveals an improved understanding of course content during the lessons and higher achievement on subsequent exams.

2:15 PM - 3:15 PM

Session 54

Ballroom B

Pedagogical Content Knowledge Symposium

Session 57 **Individual Session** Salon 6

Defining and Developing Teaching Practices Related to Responding to Students' Mathematical Thinking

Corey Webel, University of Missouri William DeLeeuw, University of Missouri Susan Empson, University of Texas, Austin Victoria Jacobs, University of North Carolina, Greensboro Tonia Land, Drake University Keith Leatham, Brigham Young University Blake Peterson, Brigham Young University Shari L. Stockero, Michigan Technological University Laura Van Zoest, Western Michigan University Kimberly Conner, University of Missouri

This session builds on research on professional noticing of students' mathematical thinking by unpacking different ways of conceptualizing the teaching practice of responding to student thinking. Four projects focused on defining and developing this practice will be presented and discussed.

Salon 2 Session 55

Teacher Professional Development Individual Session

Teacher Time Out: Supporting the Collective Learning of Educators When Students are Present

Allison Hintz, University of Washington, Bothell Lynsey Gibbons, University of Washington

This session examines how an organizational routine supported professional learning as educators worked together in settings with students present to develop high-quality instructional practices. Video of the routine will be examined and implications for teacher educators will be considered.

Session 56 Salon 3

Teaching and Learning with Technology Symposium

Noticing Exposed through Preservice Teachers' Video Animations

Julie Amador, University of Idaho Anne Estapa, Iowa State University Tracy Weston, Middlebury College Zandra de Araujo, University of Missouri Karl Wesley Kosko, Kent State University Rachael Aming-Attai, University of Indianapolis

We will discuss how PSTs engaged in a video animation activity focused on noticing elementary students' mathematical thinking and the actions of a classroom teacher. We will introduce the software, engage with a coding framework, and report research findings.

Using Bridges in Mathematics K-5 in Math Methods Courses

Pamela Harris, University of Texas, Austin

What better way to prepare teachers than to use examples from real classroom materials? Bridges in Mathematics K-5 is published by The Math Learning Center. The second edition of Bridges was rebuilt from the ground up for the Common Core State Standards and the content is now available for free to schools of education.

Session 58 Salon 7

Preservice Teacher Field Experiences **Brief Report Session**

Features of Practice: Describing Preservice Teachers' Early Eliciting Practice in Elementary Mathematics

Diana Sherman, University of Michigan

This session focuses on describing how preservice elementary teachers elicit student thinking and steer student understanding to a particular mathematical content point. Salient features of this practice will be shared in addition to two instances of preservice teachers' practice.

Lesson Study as an Activity for Preservice Teacher Fieldwork: A Case Study

Dana Lynn Grosser-Clarkson, University of Maryland

This report will share the outcomes from a case study of middle school mathematics PSTs' experience with a lesson study, which was supported by a methods course, that took place during the first semester of a yearlong field placement.

Integrating In-School Field Experiences with a **Teaching Math Methods Course**

Erica Slate Young, University of Alabama, Huntsville

Results of an effort to integrate a unified field experience component within a secondary math methods course will be shared. The university professor partnered with a math department at a public school in order to provide rich, hands-on teaching experiences for the students.

Session 59 Salon 8

Pedagogical Content Knowledge Individual Session

Reunited and It Feels So Good: Mathematical **Knowledge for Teaching and Teaching Practices Together Again**

Rachel B. Snider, University of Michigan Annick Rougee, University of Michigan

In this session we present research from two studies that have probed the intersection of secondary mathematics teachers' knowledge and teaching practice and consider how these might inform approaches to teacher preparation and professional development.

Mathematical Content Knowledge Individual Session

Developing a Measure of Mathematical Knowledge for Teaching for Primary Grades Teachers

Wendy Bray, University of Central Florida Robert Schoen, Florida State University Lynne Nielsen, Louisiana Tech University Christopher B. Wolfe, Saint Leo University Amanda Tazaz, Florida State University

Presenters and participants will discuss the construct of Mathematical Knowledge for Teaching (MKT). Presenters will describe efforts to develop a measure of MKT and share results from a field test of the measure with over 400 primary grades teachers.

Session 61

Salon 10

Salon 9

Equity and Mathematics Education Symposium

How Can CCSSM Modeling Standards Support Teaching Mathematics for Social Justice?

Michelle Cirillo, *University of Delaware* Tonya Bartell, *Michigan State University* Anita Wager, *University of Wisconsin, Madison* Jodie Novak, *University of Northern Colorado*

Symposium participants will consider how the CCSSM modeling standards can support teaching mathematics for social justice. Mathematical modeling in school mathematics, connections to teaching mathematics for social justice, and mathematicians' perspectives on mathematical modeling as a practice will be considered.

Session 62

Salon 11

Mathematical Content Knowledge Individual Session

Creating Classroom-Developed Criteria for What Counts as Proof

Yi-Yin Ko, *Indiana State University* Sean P. Yee, *University of South Carolina* Sarah K. Bleiler, *Middle Tennessee State University* Justin David Boyle, *University of New Mexico*

In this presentation, we will share our before-during-after instructional sequence used to develop preservice secondary mathematics teachers' communal understanding of proof. Participants will learn how to implement our sequence into secondary school, preservice, and inservice courses regarding reasoning and proving.

Session 63

Mathematical Content Knowledge Individual Session

Connected Mathematical Thinking

Hyman Bass, University of Michigan

Secondary mathematics is conceptually boxed (algebra, geometry, probability, pre-calculus); students struggle to think outside these boxes, losing sight of the unity of mathematics. This interactive session presents a problem-based intervention on this disconnection, based on a course for teachers.

Session 64

Salon 13

Salon 12

Mathematics Education Policy and Program Issues Individual Session

A National Report: The Statistical Education of Teachers

Anna Bargagliotti, Loyola Marymount University Tim Jacobbe, University of Florida Denise A. Spangler, University of Georgia Catherine Case, University of Florida

This session will present the recommendations of The Statistical Education of Teachers report sponsored by the American Statistical Association. The goal of the report is to address the needs for the statistical preparation of elementary, middle, and high school teachers.

Session 65

Salon 14

Mathematical Content Knowledge Individual Session

How do Preservice Teachers Make Sense of Fraction Division with Remainders?

Nesrin Sahin, *University of Central Florida* Rebecca Gault, *University of Central Florida* Laura Elizabeth Kathryn Tapp, *University of Central Florida* Juli K. Dixon, *University of Central Florida*

The presentation describes how preservice teachers in our study developed content knowledge about fraction division with remainders. The roles of student led learning in a discourse rich environment and replacement of traditional algorithms with modeling and reasoning strategies are highlighted.

Ballroom B

NCSM Presidential Exchange Session

Tools to Support the Development of Preservice and Early Career Teachers in the Use of Formative Assessment

Valerie Mills, National Council of Supervisors of Mathematics

Participants will explore a collection of modules designed for use in teacher preparation and inservice activities related to formative assessment. The modules were produced as part of a joint AMTE/NCSM project to support greater understanding and use of formative assessment in the mathematics classroom. Additionally, participants will consider opportunities to connect formative assessment to a variety of other well-known instructional frameworks, tools and approaches to professional learning.

Session 67 Salon 2

Teaching and Learning with Technology Individual Session

Theory into Practice: How a Teacher Preparation Program Leads to a Successful First-Year Teaching Experience

Jeffrey John Steckroth, Christopher Newport University

A mathematics teacher education program built upon a strong TPACK foundation resulted in success for a first-year teacher and vastly improved student achievement. I will share details of the experience from two perspectives: mine, as professor, and that of a former student.

Session 68 Salon 3

Development of Mathematics Teacher Educators Individual Session

Instructional Practices of Experienced Mathematics Teacher Educators Teaching K-8 Content Courses

Aina Appova, The Ohio State University Cynthia Taylor, Millersville University of Pennsylvania

After examining instructional practices of experienced K-8 mathematics teacher educators, we will engage participants in discussing the common themes observed in mathematics teacher educators' classroom practices and share an initial framework and efforts to conceptualize those practices.

Session 69 Salon 4

Teacher Professional Development Individual Session

How do Japanese Teachers Critically Analyze a Lesson During Lesson Study?

Doug Corey, Brigham Young University

I analyze three lesson study conversations collected in Japanese schools to better understand how Japanese teachers analyze a lesson and the kinds of instructional ideas that they use to understand quality instruction, and discuss which ideas might benefit US teachers.

Session 70

Symposium

Salon 5

STaR: An Opportunity for New Doctorates and Something Senior Mathematics Educators Should Know About

Robert Reys, *University of Missouri*Denise A. Spangler, *University of Georgia*Jeff Wanko, *Miami University*Kevin C. Moore, *University of Georgia*Clark Dollard, *Metropolitan State University, Denver*Erin Krupa, *Montclair State University*

Newly hired mathematics education doctorates in colleges/universities will discuss ways their participation in the STaR Program has facilitated their successful early career transition. Senior faculty members will reflect on why institutions and our profession should support STaR.

Session 71

Salon 6

School and University Partnerships and Projects Individual Session

I-THINK: University and Elementary School Partnership to Improve Problem Solving for All Students

Jeremy Lynch, Slippery Rock University Sararose Lynch, Westminster College

A partnership between two universities and a school district changed the way district provided CCSS-aligned performance tasks were facilitated. The results prompted instructional changes at both the elementary school and preservice levels to address mathematical discourse and metacognitive skills.

Session 72 Salon 7

Preservice Teacher Field Experiences Individual Session

Linking Service-Learning to Field Experiences as a Way to Broaden Perspectives in Mathematics Education

Kristin Harbour, *University of Louisville* Karen Karp, *University of Louisville* Amy Lingo, *University of Louisville*

Participants will learn how service-learning partnerships in an urban community center and rural international schools build upon teacher candidates' pedagogical strengths and mathematics content knowledge. Information about planning and assessment models that respond to differentiated mathematical instruction will be shared.

Salon 8

Salon 12

Equity and Mathematics Education Individual Session

Consultation between Elementary and Special Education Preservice Teachers: On the Journey toward Equitable Mathematics Teaching

Sarah A. van Ingen, *University of South Florida* Samuel Eskelson, *University of South Florida* David Allsopp, *University of South Florida*

We report findings from a study in which preservice elementary teachers engaged in consultation with preservice special education teachers about meeting the mathematics needs of special education students. We discuss implications for preparing teachers to facilitate equitable mathematics classrooms.

Session 74

Salon 9

Teacher Professional Development Individual Session

Teachers as Critical Consumers of Assessments: A Professional Development Model

Patricia Diane Hunsader, *University of South Florida, Sarasota-Manatee*

Barbara Zorin, *University of South Florida, St. Petersburg* Denisse R. Thompson, *University of South Florida*

This session will introduce a professional development model used to engage inservice teachers in objectively analyzing their classroom assessments. Teacher reflections will be shared, and participants will engage in discussion about potential uses of and adaptations to the model.

Session 75

Salon 10

Pedagogical Content Knowledge Individual Session

Assessment of Teacher Knowledge of Students' Oral Strategies in Subtraction using Multimedia Storyboarding Tools

Kristi L. Hanby, University of Michigan

A multimedia storyboarding tool was used to study pedagogical content knowledge of mental strategies by creating multimedia representations of students' oral work. Responses indicate genuine reflection on practice, while data show that students' early work in subtraction is often misinterpreted.

Session 76

Salon 11

Pedagogical Content Knowledge Individual Session

Preparing Preservice Teachers for STEM Project-Based Instruction Classrooms

Joanne Elizabeth Goodell, *Cleveland State University* Debbie K. Jackson, *Cleveland State University*

We will discuss the field experiences and pedagogy courses we are implementing to prepare the next generation of teachers to work in STEM project- and problem-based environments.

Session 77

Mathematical Content Knowledge Brief Report Session

Connecting One's Own Solution Strategy with Teaching Mathematics, Impressions from Prospective Teachers

Melfried Olson, *University of Hawaii* Travis A. Olson, *University of Nevada*, *Las Vegas* Linda Venenciano, *University of Hawaii* Judith Olson, *University of Hawaii*

In this session we compare the thinking and reasoning processes used in the explanations prospective teachers gave regarding their predictions and solutions for a task. We will discuss implications for implementation of learning trajectories in CCSSM.

Examining Preservice Elementary Teachers' Interactions with Problem Posing and Problem Solving

Jinxia Xie, Syracuse University

This study explores the development of interaction between mathematical problem posing and problem solving with preservice elementary teachers. Important theoretical background information, detailed methodology and findings will be presented with an open forum for feedback and comments.

Session 78

Salon 13

Equity and Mathematics Education Discussion Session

Challenges and Opportunities of Teaching Mathematics for Social Justice

Enrique Ortiz, University of Central Florida

We will discuss challenges and opportunities associated with teaching mathematics for social justice (for example, hunger, economy and poverty). Activities tested with students, preservice teachers, and inservice teachers will be presented. Possible adaptations and connections to standards will be shared.

Session 79

Salon 14

Mathematics Education Policy and Program Issues Individual Session

Who Teaches Mathematics Content Courses for Teachers? An Analysis of Colleges and Universities in Texas

Sarah Quebec Fuentes, *Texas Christian University* Gwendolyn Joy Johnson, *University of North Texas, Dallas* Theresa Jorgensen, *University of Texas, Arlington*

Who teaches the mathematics content courses for preservice teachers at your college or university? We investigated this question for all colleges and universities in Texas and will paint a portrait of who is educating the next generation of teachers.



Association of Mathematics Teacher Educators

BALLROOM B

GENERAL SESSION

BUILDING A PROFESSIONAL KNOWLEDGE BASE FOR MATHEMATICS TEACHER EDUCATION: REFLECTIONS ON THE FIRST THREE YEARS OF *MATHEMATICS TEACHER EDUCATOR*

Margaret Smith, University of Pittsburgh

In this session, the successes and challenges of launching a new journal will be discussed. In addition, what a professional knowledge base for mathematics teacher education could look like, and the extent to which the groundwork for such a knowledge base has been laid, will be considered.

THURSDAY, FEBRUARY 12, 2015

6:30 PM - 7:30 PM



BALLROOM C

RECEPTION FOR GRADUATE STUDENTS AND EARLY CAREER FACULTY

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



BALLROOM C/ D

FRIDAY BREAKFAST AND ADVOCACY BREAKFAST

Conference participants have two choices for breakfast:

BREAKFAST BALLROOM C

Breakfast will be served in **Ballroom C**.

ADVOCACY BREAKFAST BALLROOM D

Ken Krehbiel, National Council of Teachers of Mathematics Sharon Robinson, American Association of Colleges for Teacher Education Joan Ferrini-Mundy, National Science Foundation Karen King, National Science Foundation

The annual AMTE Advocacy Breakfast highlights up-to-date initiatives and events related to policy in mathematics teacher education. We've also updated the format this year! Rather than speaking separately, 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.

OVERVIEW OF FRIDAY MORNING, FEBRUARY 13, 2015		
	8:00 - 9:00 am	9:15 - 10:00 am
Ballroom B	81. 2014 AMTE Early Career Awardee: Reflecting upon Being a Mathematics Teacher Educator - Jansen	95. Teaching Matters! NCTM Tools to Support Implementation of Effective Mathematics Teaching Practices - Briars
Salon 2	82. Promoting Preservice Teachers' Knowledge of Argumentation for Teaching - Rumsey & Whitacre	96. Affiliates: Becoming Stronger Advocates - Coomes, Eddy, Burton, Lee & Franz
Salon 3	83. Conceptualizing Sustainability and Factors That Support Teachers Continuing Lesson Study After Infusion of External Resources - Druken & Nickerson	97. Prospective Mathematics Teachers' Conceptions of Equitable Mathematics Teaching - Jackson, Roberts & Salinas
Salon 4	84. Providing Mathematics Educators with Technological - Ozgun-Koca, Bos, Edwards, Lee & Mikusa	Tools to Scaffold Teacher Education
Salon 5	85. AMTE's Advocacy Toolkit: Building a Voice for Mathematics Educators - Chval & Mays	98. Preservice Teachers' Different Meanings of Probability using Cuboid Dice - Daiga
Salon 6	86. Ready to Teach: Manipulatives in Mathematics Content Courses - Moore & Jacobs	99. Math Specialists' Needs and Development - Hjalmarson, Bailey & King
Salon 7	87. "Killing with Kindness" and Other Lessons from a Mathematics Equity Mentoring Group - Gregson & Harris	100. Mathematical Content Knowledge Brief Report Session: Preservice Teachers
Salon 8	88. Consequences of Preservice Teachers' Procedural Views of Student Strategies for Multidigit Addition and Subtraction - Aydeniz, Creager, Daiga & Jacobson	101. "I Really Don't Want to Watch My Video:" Examining Psychological and Cognitive Informants of Teachers' Noticing - Cross Francis, Rapacki, Hudson & Dilworth
Salon 9	89. Action Research as Professional Development: Equitable Opportunities for Teachers in the Era of the CCSSM - Herbel-Eisenmann, Koestler & Wager	102. Transformational Geometry in New Middle Grades Textbooks: What do Teachers Need to Know? - Kasmer, Dingman, Olson & Teuscher
Salon 10	90. From Temperature to Translation and Relativity: Understanding Elementary Preservice Teachers' Reasoning About Integers - Wessman-Enzinger	103. Using Published Problem Solving Tasks as a Springboard for Staff Development - Bair, Cady & Stark
Salon 11	91. Concept Mapping; Where Will it Lead? - Poling, Goodson-Espy, Dean & Lynch-Davis	104. Barriers that Impede Technology Implementation: Implications for Professional Development - Pape, Greenberg & Prosser
Salon 12	92. Development of Mathematics Teacher Educators Brief Report Session	105. University of Florida STEM TIPS Project: The Intersection of School, University, and Technology - LaFramenta & Adams
Salon 13	93. Using an Online Forum to Mentor Secondary Mathematics Student Teachers Toward Standards- Based Instruction - Miriti	106. Thinking Outside the Classroom: Exploring the Benefits of Nontraditional Practical Experiences in Mathematics Teacher Education - Paolucci
Salon 14	94. Teachers' Uses of Learning Trajectories to Support Equitable Instruction - Myers	107. Supporting Teachers' Professional Noticing with Technology - Silverman & Klein

43

OVERVIEW OF FRIDAY MORNING, FEBRUARY 13, 2015

	10:15 - 11:30 am
Ballroom B	108. Listening to Students in Changing Classroom Practices: Resistance, Resilience and Context – Id-Deen, Cirillo & Herbel-Eisenmann
Salon 2	109. Teacher and Student Interactions in Technology- Intensive High School Algebra Classrooms - Okumuş, Cayton & Hollebrands
Salon 3	110. Secondary Mathematics Video: Charting Progress on a Shared Journey - Wieman, Chazan, Ellis, Philipp & Rhine
Salon 4	111. Engaging Teachers in Analyzing Core Practices in Mathematics Teaching - Graysay, Konuk, Freeburn & Arbaugh
Salon 5	112. Investigating the Effects of Mathematics Teacher Preparation on Teacher Knowledge and Practice: A Multi-Faceted Approach - Berk, Hiebert, Jansen, Morris, McKenney & Miller
Salon 6	113. Turning an AMTE Presentation into a Mathematics Teacher Educator Submission - Browning, Hillen, Smith & Steele
Salon 7	114. Pedagogical Content Knowledge Brief Report Session: Developing PCK in Preservice Teachers
Salon 8	115. Exploring the Impact of Advanced Mathematics on Secondary Teaching Practices - Wasserman, Casey, Champion, Huey, Sanfratello & Waid
Salon 9	116. The Oklahoma Elementary Mathematics Specialist Certification Program: From Development to Implementation - Reeder, Utley, Conrady, Cassel, Lucas & Redmond- Sanogo
Salon 10	117. Forecasting the Impact and Lifespan of the Common Core's Standards for Mathematical Practice - Courtney & Kosko
Salon 11	118. Learning about Prospective Teachers' Learning about Feedback - Lischka, Kastberg, Hillman & Hartland
Salon 12	119. Addressing Central Challenges in Secondary Mathematics Teacher Preparation: A National Networked Improvement Community - Martin, Lewis, Strutchens & Fernandez
Salon 13	120. The CCSS, Ratios and Proportional Reasoning: The Role of Mathematics Educators - Burrill, Dick, Watanabe & Olson
Salon 14	121. Investigating Associations among Professional Development, Mathematical Knowledge for Teaching, and Pedagogical Content Beliefs - Schoen, Dixon, Tazaz & Childs

Session 812014 AMTE Early Career Award Winner

Ballroom B

Session 85Discussion Session

Salon 5

Reflecting upon Being a Mathematics Teacher Educator

Amanda Jansen, University of Delaware

We will reflect together upon our work as mathematics teacher educators, individually and collectively. What have we learned over the past decade? What do we want to learn? Goals for teachers' learning and directions for our field will be explored.

Session 82

Salon 2

Pedagogical Content Knowledge Individual Session

Promoting Preservice Teachers' Knowledge of Argumentation for Teaching

Chepina Rumsey, Kansas State University Ian Whitacre, Florida State University

The goal of this presentation is to share an innovative, multi-layered hypothetical learning trajectory and instructional sequence focused on mathematical argumentation with mathematics teacher educators who work with elementary preservice teachers.

Session 83

Salon 3

Teacher Professional Development Individual Session

Conceptualizing Sustainability and Factors That Support Teachers Continuing Lesson Study After Infusion of External Resources

Bridget Druken, San Diego State University Susan Nickerson, San Diego State University

We report on factors that support or constrain mathematics teachers who recently participated in a three-year professional development utilizing lesson study to continue to engage in lesson study after their relationship with university faculty ended.

Session 84

Salon 4

Teaching and Learning with Technology Extended Session (8:00 - 10:00 am)

Providing Mathematics Educators with Technological Tools to Scaffold Teacher Education

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

We will discuss different tools and strategies that mathematics educators use when engaging and educating preservice and inservice teachers. Tools we will use include smart pens, virtual classroom environments, online collaborative tools, and screen capture tools. Bring your laptop or iPad!

AMTE's Advocacy Toolkit: Building a Voice for Mathematics Educators

Kathryn Chval, *University of Missouri* Michael Mays, *West Virginia University*

AMTE members consistently face pressures, challenges, changes, and opportunities that influence our field. For example, new state or federal regulations, negative media coverage, or proposed changes in certification or accreditation processes require strong AMTE advocates who are equipped with knowledge, resources, and colleagues to engage in important conversations. The AMTE Emerging Issues Committee has been involved in conversations about an Advocacy Toolkit and other resources that would provide members and affiliates with contacts, resources, tools, and professional development for addressing issues related to mathematics teacher education. Whether the audience is a single individual, a school board, a state legislature, or the media, resources are needed to communicate accurate and consistent messages and to dispel unwarranted controversy regarding the goals of mathematics education in general and the AMTE in particular. Join the Emerging Issues Committee to discuss why advocacy is central to our work, examine examples of helpful resources that currently exist, and identify resources that need to be created to support your particular advocacy needs. AMTE Emerging Issues Committee: Sybilla Beckmann, Kathryn Chval, Karen King, Jennifer Luebeck (chair), Mike Mays, Ed Silver, Marilyn Strutchens

Session 86

Salon 6

Individual Session

Ready to Teach: Manipulatives in Mathematics Content Courses

Sara Delano Moore, ETA hand2mind Judith E. Jacobs, JEJMath, Ltd.

Join us to experience strategies for using manipulatives in K-8 mathematics content courses. Including manipulatives enhances conceptual understanding and models effective pedagogy for the K-8 classroom. Learn about ETA hand2mind resources and connections to commonly used textbooks.

Session 87

Salon 7

Equity and Mathematics Education Individual Session

"Killing with Kindness" and Other Lessons from a Mathematics Equity Mentoring Group

Susan A. Gregson, *University of Cincinnati* Justin Bradley Harris, *University of Cincinnati*

This session reports on the development of "political knowledge for teaching mathematics" (Gutiérrez, 2013) among early-career teachers in a voluntary, university-affiliated mentoring group that brings preservice and recently certified middle grades mathematics teachers together to engage dilemmas of equitable teaching.

Pedagogical Content Knowledge Individual Session

Consequences of Preservice Teachers' Procedural Views of Student Strategies for Multidigit Addition and Subtraction

Fetiye Aydeniz, *Indiana University* Mark Andrew Creager, *Indiana University* Michael Daiga, *Indiana University* Erik Jacobson, *Indiana University*

In this session we will share results about the consequences of preservice teachers' procedural views for interpreting and evaluating student strategies for multidigit addition and subtraction. The presenters will share their findings and discuss implications for teacher education.

Session 89

Salon 9

Salon 8

Teacher Professional Development Discussion Session

Action Research as Professional Development: Equitable Opportunities for Teachers in the Era of the CCSSM

Beth Herbel-Eisenmann, Michigan State University Courtney Koestler, Ohio University Anita Wager, University of Wisconsin, Madison

This discussion session will provide space for participants to learn about and discuss the use of action research as a valuable and equitable form of professional development that supports teacher learning and improves classroom practices.

Session 90 Salon 10

Mathematical Content Knowledge Individual Session

From Temperature to Translation and Relativity: Understanding Elementary Preservice Teachers' Reasoning About Integers

Nicole Wessman-Enzinger, Illinois State University

Temperature is a relevant context for the learning of integers. Elementary PSTs connected the integers to temperature and uncovered mathematical complexities of integer use within this context. Their understandings of translation and relativity will be highlighted in this session.

Session 91 Salon 11

Mathematical Content Knowledge Individual Session

Concept Mapping: Where Will it Lead?

Lisa L. Poling, *Appalachian State University*Tracy J. Goodson-Espy, *Appalachian State University*Chrystal Dean, *Appalachian State University*Kathleen Lynch-Davis, *Appalachian State University*

In this session, we will explore the use of concept mapping to negotiate prospective teachers' understanding of mathematical content related to number and operation. Session 92

Development of Mathematics Teacher Educators Brief Report Session

Effect of Elementary Mathematics Specialist Coursework on Elementary Teachers' Mathematical and Leadership Beliefs

Juliana Utley, Oklahoma State University Stacy Reeder, University of Oklahoma

In this presentation, we share our state's requirements for certification and coursework, discuss the effect of the EMS program on inservice elementary teachers' mathematical beliefs, and solicit discussion from participants about possibilities of future research related to the EMS program.

Lesson Study as a Vehicle to Support the Development of Mathematics Teacher Educators

Angela T. Barlow, Middle Tennessee State University Kristin S. Hartland, Middle Tennessee State University Ameneh Kassaee, Middle Tennessee State University Jeffrey D. Pair, Middle Tennessee State University Teresa A. Schmidt, Middle Tennessee State University

As doctoral students teaching prospective elementary teachers, we participated in a lesson study facilitated by a faculty member. In this session, we share the results of our self-analysis regarding the impact on our development as mathematics teacher educators.

Trends in Mathematics Teacher Education as Reflected in the AMTE Programs, 1997-2014

P. Mark Taylor, *Carson-Newman University* Thomas E. Hodges, *University of South Carolina*

The programs from all annual AMTE meetings (1997-2014) were analyzed for trends in content, format, and focus. The results will be presented as well as an explanation of how the 2015 program fits into the trends.

Session 93

Salon 13

Salon 12

Preservice Teacher Field Experiences Individual Session

Using an Online Forum to Mentor Secondary Mathematics Student Teachers Toward Standards-Based Instruction

Landrea Miriti, Bluegrass Community and Technical College

This study examined a university supervisor's use of an online social networking format to mentor secondary mathematics student teachers toward standards-based instruction. Attendees will compose and discuss their own mentoring responses to actual secondary student teachers' online posts.

Session 94

Salon 14

46

Equity and Mathematics Education Individual Session

Teachers' Uses of Learning Trajectories to Support Equitable Instruction

Marrielle Myers, North Carolina State University

In this session, I share results of a multi-case study, which focused on developing, empirically testing, and refining a framework for the ways in which learning trajectories (LTs) might support equitable instruction in elementary classrooms.

NCTM Presidential Exchange Session

Ballroom B

Salon 2

Salon 3

Session 98
Mathematical Content Knowledge
Individual Session

Salon 5

Salon 6

Salon 7

Preservice Teachers' Different Meanings of Probability using Cuboid Dice

Michael Daiga, Indiana University

What if cube shaped dice were stretched to make rectangular prisms? On what face would you expect the cuboids to land? During this session, participants will roll cuboids and discuss how preservice teachers argued cuboids would roll and land.

Session 99

Development of Mathematics Teacher Educators Individual Session

Math Specialists' Needs and Development

Margret Hjalmarson, *George Mason University* Pamela Rae Bailey, *Mary Baldwin College* Lesley Ann King, *George Mason University*

Participants will learn about professional development provided for mathematics specialists, data collected, analysis, and future plans. Discussions will involve participants in describing the mathematics specialists' trajectory of development and activities that will help to gather data to establish the stages of growth.

Session 100

Mathematical Content Knowledge Brief Report Session

Preservice Secondary Mathematics Teachers' Understanding of Geometry Theorems and Ability in Proof Writing

Tuyin An, Purdue University

This study aims to look in-depth at the nature of preservice secondary mathematics teachers' learning of geometry proofs in order to help them develop proof and reasoning abilities more effectively.

The Connections between Multiplication and Division, and Two Distinct Perspectives on Ratios

Ibrahim Burak Olmez, University of Georgia

This study examines how preservice teachers' understandings of multiplication and division supported and constrained their understandings of ratios and proportional relationships in terms of quantities.

Implementation of Effective Mathematics Teaching Practices

Diane J. Briars, National Council of Teachers of Mathematics

Teaching Matters! NCTM Tools to Support

NCTM's *Principles to Actions: Ensuring Mathematical Success for All* presents eight research-based effective Mathematical Teaching Practices to support all students' attainment of the conceptual understanding, procedural fluency, and proficiency in the habits of mind required for high-level mathematics learning. This session presents the latest set of NCTM professional development tools to increase preservice and inservice teachers' understanding of and ability to implement these practices in the classroom. Resources addressing the Guiding Principles described in *Principles to Actions* that support teachers' enactment of the effective teaching practices will also be presented. We will also discuss other prospective NCTM tools and resources to support teacher educators' work.

Session 96

Mathematics Education Policy and Program Issues Symposium

Affiliates: Becoming Stronger Advocates

Jacqueline Coomes, Eastern Washington University Colleen Eddy, University of North Texas Megan Burton, Auburn University Jean Lee, University of Indianapolis Dana Pomykal Franz, Mississippi State University

The AMTE Affiliate Connections Committee members discuss ways to assist state-level affiliate leaders and members in advocacy efforts. This session connects affiliates to leverage the strengths of local organizations in advocacy efforts. We share current resources to serve affiliate members.

Session 97

Equity and Mathematics Education Individual Session

Prospective Mathematics Teachers' Conceptions of Equitable Mathematics Teaching

Christa Jackson, *Iowa State University* Sarah A. Roberts, *Iowa State University* Alejandra Salinas, *Boston University*

Secondary mathematics prospective teachers were asked to interpret and respond to five quotes related to issues of equity in mathematics education. Most PTs were able to recognize some issues of identity and power in the teaching and learning of mathematics.

Salon 8

Salon 12

Teacher Professional Development Individual Session

"I Really Don't Want to Watch My Video:" Examining Psychological and Cognitive Informants of Teachers' Noticing

Dionne Cross Francis, *Indiana University* Lauren Rapacki, *Indiana University* Rick A. Hudson, *University of Southern Indiana* Lori Dilworth, *Indiana University East*

In this presentation we discuss the ways mathematical knowledge for teaching and teacher efficacy influence four elementary teachers' willingness to engage in video discussions and the ways they attend to aspects of their own practices.

Session 102

Salon 9

Pedagogical Content Knowledge Individual Session

Transformational Geometry in New Middle Grades Textbooks: What do Teachers Need to Know?

Lisa Anne Kasmer, *Grand Valley State University* Shannon W. Dingman, *University of Arkansas* Travis A. Olson, *University of Nevada, Las Vegas* Dawn Teuscher, *Brigham Young University*

PSTs curricular reasoning is necessary to analyze curriculum and make decisions about planning, implementation, and reflecting. This session will provide participants an opportunity to examine textbooks and participate in a curriculum analysis activity that we have used with our PSTs.

Session 103

Salon 10

Teacher Professional Development Individual Session

Using Published Problem Solving Tasks as a Springboard for Staff Development

Sherry Lynn Bair, *Texas A&M University, Corpus Christi* Jo Ann Cady, *University of Tennessee* Walter Stark, *St. Pancras Middle School, Glendale, New York*

Participants explore published problem-solving tasks with the authors, and a classroom teacher who uses the tasks. Classroom uses, teacher-submitted student work, and how the two are related, leads to implications for using the tasks as a springboard to staff development.

Session 104

Salon 11

Teaching and Learning with Technology Individual Session

Barriers that Impede Technology Implementation: Implications for Professional Development

Stephen J. Pape, Johns Hopkins University Cynthia Greenberg, Johns Hopkins University Sherri Prosser, University of Florida

In this presentation, we share mathematics instructors' and students' perceptions of barriers to technology implementation and discourse, two elements of a PD program. The instructors reported perceptions of using technology as a tool for developing discourse and increasing mathematics achievement.

Session 105

School and University Partnerships and Projects Individual Session

University of Florida STEM TIPS Project: The Intersection of School, University, and Technology

Joanne LaFramenta, *University of Florida* Thomasenia Lott Adams, *University of Florida*

This session describes how one university project developed online technology to meet the induction needs of school districts and mentor new STEM teachers. This case study provides a backdrop to discuss the implications of online education.

Session 106

Salon 13

Preservice Teacher Field Experiences Individual Session

Thinking Outside the Classroom: Exploring the Benefits of Nontraditional Practical Experiences in Mathematics Teacher Education

Catherine Paolucci, State University of New York, New Paltz

This session will explore the benefits of non-traditional practical experiences in preservice mathematics teacher education. It will offer examples of alternative experiences and consider their contributions to teacher development in areas such as efficacy, mathematical knowledge for teaching, and reflection.

Session 107

Salon 14

Teacher Professional Development Individual Session

Supporting Teachers' Professional Noticing with Technology

Jason Silverman, *Drexel University* Valerie Klein, *The Math Forum, Drexel University*

We discuss our efforts to support teachers' professional noticing through the use of a custom-designed online environment designed to scaffold individual and collaborative analysis of student mathematical thinking and facilitate formative assessment and individualized feedback.

FRIDAY, FEBRUARY 13, 2015

10:15 AM - 11:30 AM

Session 108

Symposium

Equity and Mathematics Education

Ballroom B

Session 111Pedagogical Content Knowledge
Discussion Session

Salon 4

Listening to Students in Changing Classroom Practices: Resistance, Resilience and Context

Lateefah Id-Deen, *Michigan State University* Michelle Cirillo, *University of Delaware* Beth Herbel-Eisenmann, *Michigan State University*

We will discuss the perspectives students share in order to better understand student resistance and resilience; examine the perspectives and issues that arise from differing contexts; and consider how these stories and perspectives might impact teachers, teaching and teacher education.

Session 109 Salon 2

Teaching and Learning with Technology Symposium

Teacher and Student Interactions in Technology-Intensive High School Algebra Classrooms

Samet Okumuş, North Carolina State University Charity Cayton, East Carolina University Karen Hollebrands, North Carolina State University

This research examines secondary mathematics teachers' interactions with students when implementing common dynamic geometry tasks in 1-1 computing, high school algebra classrooms. Analysis of teacher actions revealed similarities and differences during implementation.

Session 110 Salon 3

Teacher Professional Development Symposium

Secondary Mathematics Video: Charting Progress on a Shared Journey

Rob Wieman, Rowan University Daniel Chazan, University of Maryland Mark W. Ellis, California State University Fullerton Randolph Philipp, San Diego State University Steve Rhine, Pacific University

Presenters will share a number of promising recent developments in the creation of a publicly shared library of video for use in secondary mathematics teacher education. Participants will discuss issues involved in extending this work.

Engaging Teachers in Analyzing Core Practices in Mathematics Teaching

Duane Graysay, Penn State University Nursen Konuk, Penn State University Ben Freeburn, Penn State University Fran Arbaugh, Penn State University

During this session, participants and presenters will discuss core practices of mathematics teaching and will share strategies for engaging preservice and inservice teachers in analyzing core practices within episodes of teaching.

Session 112 Salon 5

Mathematical Content Knowledge Symposium

Investigating the Effects of Mathematics Teacher Preparation on Teacher Knowledge and Practice: A Multi-Faceted Approach

Dawn Berk, University of Delaware James Hiebert, University of Delaware Amanda Jansen, University of Delaware Anne K. Morris, University of Delaware Kristin McKenney, University of Delaware Emily Miller, University of Delaware

We describe the goals, methods, and findings from a multi-faceted, longitudinal investigation of the effects of K-8 mathematics teacher preparation. Empirical data from five different measures show effects on teachers' knowledge, skills, beliefs, and teaching practices 1-3 years after graduation.

Session 113

Discussion Session

Salon 6

Turning an AMTE Presentation into a Mathematics Teacher Educator Submission

Christine Browning, Western Michigan University Amy Hillen, Kennesaw State University Margaret Smith, University of Pittsburgh Michael Steele, University of Wisconsin, Milwaukee

This session will focus on how to take the key ideas from your AMTE presentation and use them as a framework for a manuscript suitable for publication in the *Mathematics Teacher Educator* (MTE). Members of the MTE Editorial Board will describe critical aspects of the review process and co-authors of an MTE published paper will describe the entire process they went through to turn their AMTE presentation into an MTE article.

Pedagogical Content Knowledge Brief Report Session

Developing Secondary Mathematics Preservice Teachers' Abilities to Interpret and Respond to Students' Mathematical Thinking

Leigh Haltiwanger, Clemson University Amber Simpson, Clemson University

Researchers will share findings from a mixed methods study that examined the relationship between mathematics preservice teachers' abilities to interpret and respond to students' written work. Project results will be shared and the significance of the study will be considered.

Prospective Teachers Developing Professional Noticing Skills as they Engage in a Virtual Field Sequence

Sarah Selmer, West Virginia University

I will discuss a study examining prospective teachers' development of mathematical justifications when they engage in a virtual learning experience. Discussion will focus on current research efforts to study participants' facilitation of related mathematical learning environments with students.

The (Potential) Role of Non-Examples in Supporting Novice Teacher Learning of Core Instructional Practices

Sarah Kate Selling, Stanford University Erin Baldinger, Arizona State University

This presentation explores how a strategically designed non-example, used in conjunction with a video exemplar, might support learning opportunities for novice secondary mathematics teachers around the core instructional practice of eliciting and interpreting student thinking.

Trajectory-Based Measures of Professional Noticing Capacities

Jonathan Norris Thomas, Northern Kentucky University Edna O. Schack, Morehead State University Molly H. Fisher, University of Kentucky Janet Tassell, Western Kentucky University

This session provides information regarding the design and implementation processes of a professional noticing measure with prospective elementary teachers. This measure focused on determining capacities to attend, interpret, and respond appropriately to children's mathematical thinking with respect to numeracy development.

Session 115

Salon 7

Mathematical Content Knowledge Symposium

Exploring the Impact of Advanced Mathematics on Secondary Teaching Practices

Nick Wasserman, Teachers College, Columbia University Stephanie Casey, Eastern Michigan University Joe Champion, Boise State University Maryann Huey, Drake University Andrew Sanfratello, Teachers College, Columbia University Brandie Elisabeth Waid, Teachers College, Columbia University

Studies exploring the role and impact of advanced mathematics on secondary teaching will be presented; topics include CCSS-M, abstract algebra, real analysis, and statistics. Illustrations connected to classroom teaching practices will be examined and implications for mathematics teacher education discussed.

Session 116

Salon 9

Salon 8

Mathematics Education Policy and Program Issues Symposium

The Oklahoma Elementary Mathematics Specialist Certification Program: From Development to Implementation

Stacy Reeder, *University of Oklahoma*Juliana Utley, *Oklahoma State University*Kansas Conrady, *University of Oklahoma*Darlinda Cassel, *University of Central Oklahoma*Carol Lucas, *University of Central Oklahoma*Adrienne Anne Redmond-Sanogo, *Oklahoma State University*

Faculty from 3 universities in our state will share insights about the Oklahoma Elementary Mathematics Education Certification program from the initial development to the implementation. Mathematics educators from across the state collaborated to develop the standards and courses for this certification.

Session 117

Salon 10

Mathematics Education Policy and Program Issues Discussion Session

Forecasting the Impact and Lifespan of the Common Core's Standards for Mathematical Practice

Scott A. Courtney, *Kent State University* Karl Wesley Kosko, *Kent State University*

Participants will engage in activities and discussions designed to make explicit their conceptions of the mathematical practices, what it means to demonstrate engagement in the practices, and their beliefs regarding the potential to authentically assess students' developing mathematical practices.

AMTE 2015 Annual Conference

50

Discussion Session

Learning about Prospective Teachers' Learning about Feedback

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

We share three activities from different mathematics methods courses designed to support prospective teachers (PTs) to build perspective on written formative feedback. The role of the activities in supporting opportunities for PTs to learn to provide feedback is discussed.

Session 119 Salon 12

School and University Partnerships and Projects Symposium

Addressing Central Challenges in Secondary Mathematics Teacher Preparation: A National Networked Improvement Community

W. Gary Martin, Auburn University William James Lewis, University of Nebraska, Lincoln Marilyn E. Strutchens, Auburn University Maria Lorelei Fernandez, Florida International University

A national networked improvement community of school-university partnerships has formed "research action clusters" focused on improving content knowledge, redesigning clinical experiences, and enhancing recruitment to address central challenges in preparing prospective secondary teachers able to effectively teach the Common Core.

The CCSS, Ratios and Proportional Reasoning: The Role of Mathematics Educators

Gail Burrill, Michigan State University Thomas Dick, Oregon State University Tad Watanabe, Kennesaw State University Melfried Olson, University of Hawaii

An interactive discussion will focus on a technology-leveraged approach for building ratio concepts, bringing coherence to developing proportional reasoning. Research can help us inform the practice of teachers with whom we work to make the shifts advocated by the CCSS.

Session 121

Salon 11

Salon 14

Teacher Professional Development Individual Session

Investigating Associations among Professional Development, Mathematical Knowledge for Teaching, and Pedagogical Content Beliefs

Robert Schoen, Florida State University Juli K. Dixon, University of Central Florida Amanda Tazaz, Florida State University Kristopher James Childs, University of Central Florida

We will discuss theoretical frameworks and empirical associations between and within mathematical knowledge for teaching and pedagogical content beliefs. Findings from the first year of a multi-year efficacy study of a professional development program for primary teachers will be shared.



Association of Mathematics Teacher Educators

BALLROOM C/D

LUNCH AND COMMITTEE MEETINGS

AMTE committees have the opportunity to meet face-to-face and share a meal together. Committees may use this time to get to know each other more personally and set goals for future committee meetings this year. A list of the committees that are meeting and table locations are located on pages 11 & 12 of your conference program.

OVERVIEW OF FRIDAY AFTERNOON, FEBRUARY 13, 2015		
	1:00 – 1:45 pm	2:00 – 3:00 pm
Ballroom B	122. The Use of Technology in Education: An Historical Perspective - Sattler	136. A Conversation about Policy Issues in Teacher Education - Robinson & Ball
Salon 2	123. Connecting Methods Courses and Practicum Experiences in Early Childhood Mathematics - Linder & Simpson	137. Building Practice from Research: The Case of Video - Sanchez
Salon 3	124. Hearing the "Whole" Song: Bilingual Third Grade Children Learning about Equivalent Fractions through Mariachi Music - Kalinec-Craig	138. Supporting Professional Growth Through Cognitive Coaching: Our New Approach to Field Supervision - Hasenbank, Gerson & Coffey
Salon 4	125. Coaching: Exploring the Current State of Research ar - Gibbons, Campbell, Luebeck & McGatha	nd Setting Future Research Agendas
Salon 5	126. Towards a Practice to Support K-12 Prospective Math - Earnest, Males, Amador, Dietiker, Drake, Land & Tymins	-
Salon 6	127. Advancing Inclusive Mathematics Education: A Case of Professional Learning - Tan	139. Field Experiences in Mathematics Teacher Education: A Japanese Perspective - Watanabe
Salon 7	128. Teacher Professional Development Brief Report Session: Use of Video	140. Establishing Predictive Validity: Knowledge for Teaching Geometry Assessments - Bush, Peters, Mohr-Schroeder, Ronau & Lee
Salon 8	129. Flipping and Problem-Based Learning in a Geometry Course for Math Majors - Caldwell	141. Identifying and Measuring Equitable Mathematics Teaching Practices - Goffney, Chauvot & Gonzalez
Salon 9	130. Scaling Development of Mathematics Professional Developers - Carney, Brendefur & Hughes	142. Algebraic and Rational Number Reasoning: Elementary Preservice Teachers Transitioning From Words to Symbols - Kirwan, Safak & Wessman-Enzinger
Salon 10	131. A Prototype Partnership to Prepare Elementary Teachers for Grades 4-8 STEM Instruction - Champion	143. Supporting Teachers' Use of Discourse, Dynamic Geometry, and Collaboration in an Online Environment - Powell, Alqahtani & Weimar
Salon 11	132. A State-Wide Collaboration to Develop Elementary School Mathematics Leaders - Schwartz, Morge, Seaman, Starling & Walkowiak	144. Redesigning Elementary Math Methods in the Common Core Era - Disney & Cobbs
Salon 12	133. Middle School Mathematics Teachers' Use of the Five Practices When Implementing High Cognitive Demand Tasks - Candela	145. Equity and Mathematics Education Brief Report Session: Equity and Preservice Teachers
Salon 13	134. A Proposed Learning Trajectory for Preservice Teachers' Understanding of Mathematical Definitions - Molitoris-Miller	146. Math Teachers' Circles: Professional Development that Develops Content Knowledge and Teacher Leadership - Yow & White
Salon 14	135. A 100-Year Retrospective on Mathematics Education Research Focus Areas and Doctoral Programs - Safi	147. Fostering Prospective Teachers' Ability to Engage Future Students in Ambitious Mathematics Learning by Listening Responsively - Callahan

OVERVIEW OF FRIDAY AFTERNOON, FEBRUARY 13, 2015

	3:30 – 4:30 pm
Ballroom B	148. 2015 AMTE Excellence in Teaching Award: Seeing Through Your Students' Eyes - Peterson
Salon 2	149. Promoting Teachers' Covariational Reasoning Through an Interactive Activity - Glassmeyer
Salon 3	150. Making Weekly Assignments Practice-Based: What Approximations of Practice Might Look Like in Methods Classes - Herbst, Crespo, Zazkis, Lim & Rougee
Salon 4	151. Comparing Elementary and Secondary Teachers' Interactive Decision Making: Professional Noticing of Students' Mathematical Thinking - Fredenberg, Philipp & Hawthorne
Salon 5	152. Technology Inclusion in Mathematics Teacher Preparation: Four Decades of Research - Bush, Driskell, Rakes & Ronau
Salon 6	153. Secondary Mathematics Teacher Preparation in/for Urban Environments - Bullock, Anderson & Powell
Salon 7	154. Teacher Professional Development Brief Report Session: Tasks and Problem-Based Learning
Salon 8	155. Understanding Risks and Benefits of Creating and Sustaining a Community of Practice with Varied Participants - Heaton & Carlson
Salon 9	156. Preservice Teachers' Understanding of Sizes of Wholes in Fraction Multiplication - Baek, Tobias, Wickstrom & Safak
Salon 10	157. Elementary Mathematics Specialists: Roles, Responsibilities and Impact. Implications for Teacher Education, and Professional Development - Fennell, Kobett, Swartz & Wray
Salon 11	158. Uses of the Internet to Support Preservice Teacher Learning of Mathematics - Brakoniecki
Salon 12	159. Equity and Mathematics Education Brief Report Session: Equitable Teaching
Salon 13	160. Building Mathematical Modeling Skills Among Secondary Mathematics Teacher Educators Through Professional Development - Groshong, Gomez & Manouchehri
Salon 14	161. Successfully Flipping a Mathematics Content Course for Preservice Teachers: Lessons Learned - Mudzimiri

Session 122 AMATYC Presidential Exchange Session

Ballroom B

The Use of Technology in Education: An Historical **Perspective**

Nancy Sattler, American Mathematical Association of Two Year Colleges

This presenter will discuss changes that have occurred in the classroom from the days of the slide rule through the days of the graphing calculator and the use of the Internet.

Session 123

Salon 2

Preservice Teacher Field Experiences Individual Session

Connecting Methods Courses and Practicum Experiences in Early Childhood Mathematics

Sandra Linder, Clemson University Amber Simpson, Clemson University

This study examines changes in early childhood preservice teachers' mathematics beliefs and connections to enactment following a reflective teaching experience. A mixed-methods multi-phase design is used to examine this experience for 152 participants taking a methods course and concurrent practicum.

Session 124

Salon 3

Equity and Mathematics Education Individual Session

Hearing the "Whole" Song: Bilingual Third Grade **Children Learning about Equivalent Fractions through** Mariachi Music

Crystal Kalinec-Craig, University of Texas, San Antonio

This presentation describes the experiences of a bilingual third grade mathematics teacher as she collaborated with mariachis to implement a Math through Mariachi lesson about the relative value of equivalent fractions and one whole as it related to mariachi music.

Session 125

Salon 4

Teacher Professional Development Extended Session (1:00 - 3:00 pm)

Coaching: Exploring the Current State of Research and **Setting Future Research Agendas**

Lynsey Gibbons, University of Washington Patricia F. Campbell, University of Maryland Jennifer Luebeck, Montana State University Maggie McGatha, University of Louisville

Panelists from three projects will briefly discuss their research on how coaching supports classroom instruction and school-wide reform. These presentations will help to ground participants in a subsequent concentrated discussion addressing current issues in coaching and setting future research agendas.

Session 126

Salon 5

Pedagogical Content Knowledge Extended Session (1:00 - 3:00 pm)

Towards a Practice to Support K-12 Prospective **Mathematics Teachers' Curricular Decision-Making**

Darrell Earnest, University of Massachusetts, Amherst Lorraine Marie Males, University of Nebraska, Lincoln Julie Amador, *University of Idaho* Leslie Dietiker, Boston University Corey Drake, Michigan State University Tonia Land, Drake University Andrew Tyminski, Clemson University

This working group will focus on issues of developing preservice teachers' (PSTs) curriculum decision-making. We seek to engage participants in discussing recent efforts across K-12 methods courses to both investigate and develop PSTs' curricular decisionmaking.

Session 127

Salon 6

Equity and Mathematics Education Individual Session

Advancing Inclusive Mathematics Education: A Case of Professional Learning

Paulo Tan, Indiana University

Despite the push for equity in mathematics education, students with disabilities continue to lack access to and achievement in rich mathematics. This presentation describes a case of professional learning where teachers from two elementary schools engaged in collaborative inquiry on equity.

Session 128

Salon 7

Teacher Professional Development **Brief Report Session**

Modified Lesson Study with Video-Assisted Reflection to Enhance Teacher Practice (MVP)

Samuel Eskelson, University of South Florida

This session reports on teachers' engagement in modified lesson study that includes the use of video to aid their reflection on instruction. The impact of this video-assisted reflection on teachers' subsequent instruction will also be discussed.

Studying the Work of Leading a Mathematics **Discussion: Establishing Mathematical Richness**

Minsung Kwon, University of Michigan Mark Hoover, University of Michigan

Based on the analysis of videotaped lessons of 24 teachers who taught the same mathematical task, this session presents key practices and specific moves for establishing mathematical richness in leading a mathematics discussion.

Salon 8

Session 133Pedagogical Content Knowledge

Teaching and Learning with Technology Individual Session

Flipping and Problem-Based Learning in a Geometry Course for Math Majors

Janet H. Caldwell, Rowan University

Is flipping consistent with problem-based learning? How can it work in a technologically-rich environment? How does it affect student learning? This session will describe experiences in flipping a junior-level geometry course, including instructional strategies and results.

Session 130

Salon 9

Development of Mathematics Teacher Educators Individual Session

Scaling Development of Mathematics Professional Developers

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

We present a framework for knowledge needed by mathematics professional developers, describe our model of identifying and preparing over 24 facilitators for a statewide, mandated mathematics course, and provide evidence of consistent growth in mathematical knowledge for teaching across instructors.

Session 131

Salon 10

School and University Partnerships and Projects Individual Session

A Prototype Partnership to Prepare Elementary Teachers for Grades 4-8 STEM Instruction

Joe Champion, Boise State University

I share initial results from an experimental field-based teacher preparation partnership in which generalist elementary teachers prepare for grades 4-8 STEM teaching through engagement in authentic mathematics and science. Session participants will consider the program design, first year outcomes, and accompanying resources.

Session 132

Salon 11

Teacher Professional Development Individual Session

A State-Wide Collaboration to Develop Elementary School Mathematics Leaders

Catherine Schwartz, *East Carolina University*Shelby P. Morge, *University of North Carolina, Wilmington*Carol E. Seaman, *University of North Carolina, Greensboro*Tina T. Starling, *North Carolina State University*Temple Walkowiak, *North Carolina State University*

We describe a collaboration among seven universities to create, implement, and maintain the North Carolina Elementary Mathematics Add-on License (EMAoL). An overview of the program will be followed by small group discussions surrounding program coursework and dilemmas of practice.

Individual Session

Middle School Mathematics Teachers' Use of the Five Practices When Implementing High Cognitive Demand Tasks

Amber Grace Candela, University of Georgia

This session will provide an overview of a study that examined teachers' perspectives on factors affecting the implementation of high cognitive demand tasks. Participants will engage in discussion framing the implementation of tasks using Smith and Stein's (2011) five practices.

Session 134

Salon 13

Salon 12

Mathematical Content Knowledge Individual Session

A Proposed Learning Trajectory for Preservice Teachers' Understanding of Mathematical Definitions

Susanna Molitoris Miller, Kennesaw State University

I present a learning trajectory involving understanding of mathematical definitions and share results of a teaching experiment with teachers from each stage of the trajectory. Discussion focuses on post-assessment results and their implications for the trajectory and for teacher education.

Session 135

Salon 14

56

Development of Mathematics Teacher Educators Individual Session

A 100-Year Retrospective on Mathematics Education Research Focus Areas and Doctoral Programs

Farshid Safi, College of New Jersey

This session will showcase a detailed longitudinal analysis of the impact that doctorate-granting institutions have had in the development of mathematics teacher educators including an examination of their research focus areas over the last 100 years.

Session 136 *Individual Session*

Ballroom B

Session 140
Pedagogical Content Knowledge
Individual Session

Salon 7

A Conversation about Policy Issues in Teacher Education

Sharon Robinson, American Association of Colleges for Teacher Education

Deborah Loewenberg Ball, University of Michigan

Join Dr. Sharon Robinson, President and Chief Executive Officer of the AACTE, in a discussion of teacher evaluation, program accreditation, teacher certification, and other important issues. This session will include a response from Dr. Deborah Ball, recent recipient of an AACTE award for teacher education. Ample opportunity will also be provided for audience participation and discussion.

Session 137 Salon 2

Development of Mathematics Teacher Educators Individual Session

Building Practice from Research: The Case of Video

Wendy B. Sanchez, Kennesaw State University

A research-based framework is posed that describes important considerations for conducting and reporting scholarly inquiry and building scholarly practice regarding the use of video cases in mathematics methods courses.

Session 138 Salon 3

Preservice Teacher Field Experiences Individual Session

Supporting Professional Growth Through Cognitive Coaching: Our New Approach to Field Supervision

Jon F. Hasenbank, *Grand Valley State University* Hope H. Gerson, *Grand Valley State University* David Coffey, *Grand Valley State University*

We will share our framework for using Cognitive Coaching (not evaluation) as the primary support function for field experiences. By using candidates' personal learning goals to focus observations, debriefings, and reflections, field observations become genuine opportunities for professional growth.

Session 139 Salon 6

Preservice Teacher Field Experiences Individual Session

Field Experiences in Mathematics Teacher Education: A Japanese Perspective

Tad Watanabe, Kennesaw State University

We will discuss and brainstorm how we might tackle the challenges of creating high-quality field experiences for prospective mathematics teachers by using the structures of Japanese mathematics teacher education programs as a mirror to reflect our own practices.

Establishing Predictive Validity: Knowledge for Teaching Geometry Assessments

William S. Bush, *University of Louisville*Susan A. Peters, *University of Louisville*Margaret J. Mohr-Schroeder, *University of Kentucky*Robert N. Ronau, *University of Cincinnati*Carl W. Lee, *University of Kentucky*

The purpose of Geometry Assessments for Secondary Teachers was to develop assessment and observation instruments that measure secondary mathematics teachers' knowledge for teaching geometry, specifically area/volume and similarity/congruence. The assessments were designed with a validity framework for predicting effective teaching and student achievement.

Session 141 Salon 8

Equity and Mathematics Education Individual Session

Identifying and Measuring Equitable Mathematics Teaching Practices

Imani Goffney, *University of Houston* Jennifer Chauvot, *University of Houston* Monica Gonzalez, *University of Houston*

This session shares the findings from a pilot study that is part of a larger project that is developing and studying curricula in which EC-6 teacher preparation programs can prepare elementary teachers for the ambitious and equitable teaching of mathematics.

Session 142 Salon 9

Mathematical Content Knowledge Individual Session

Algebraic and Rational Number Reasoning: Elementary Preservice Teachers Transitioning From Words to Symbols

James Vince Kirwan, *Illinois State University* Elif Safak, *Illinois State University* Nicole Wessman-Enzinger, *Illinois State University*

We will share results from a study designed to investigate preservice teachers' algebraic and rational number reasoning. We anticipate this session being useful for mathematics teacher educators looking for ways to incorporate more algebraic reasoning in their courses.

Salon 10

Teaching and Learning with Technology Individual Session

Supporting Teachers' Use of Discourse, Dynamic Geometry, and Collaboration in an Online **Environment**

Arthur Belford Powell, Rutgers University Muteb M. Algahtani, Rutgers University Stephen Weimar, The Math Forum, Drexel University

We describe a program where secondary teachers develop further their geometrical and dynamic-geometry knowledge for teaching. We then explore how teachers further their students' mathematical practices through discursive interactions using specifically designed, researched dynamic-geometry tasks in an online, collaborative environment.

Session 144

Salon 11

Mathematics Education Policy and Program Issues Individual Session

Redesigning Elementary Math Methods in the Common Core Era

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

Examine one university's journey in redesigning its Elementary Math Methods course to reflect the CCSSM shifts, the demands of SBAC and PARCC, and the state's new evaluation system to prepare its preservice teachers for the changing needs of P-12 schools.

Session 145 Salon 12

Equity and Mathematics Education Brief Report Session

Aspects of Culture: What do Elementary Mathematics **PSTs Attend to When Writing Problems?**

Katie Arndt, University of South Florida Sarah A. van Ingen, University of South Florida

We will discuss the micro skill of attending to various aspects of culture in elementary mathematics problem solving problems. We will explore the complexities of unpacking the ideas of culturally responsive teaching, and learning to write these problems.

Preparing Preservice Math Teachers to Teach for Social Justice through Action Research

Trevor Warburton, University of Utah

During Spring 2014, I taught a group of seven preservice mathematics teachers. Through their action research projects these teachers learned to view their practice through an equity lens. I will present on the work that we did together.

Prospective Elementary Teachers' Productive and Unproductive Beliefs About Equity and Mathematics Teaching and Learning

Anne M. Marshall, Lehman College Kelley E. Buchheister, University of South Carolina

This study examines prospective elementary teachers' beliefs, both productive and unproductive, about access and equity in the teaching and learning of mathematics. The session will include a presentation of results and a discussion of the implications for the field.

Session 146 Salon 13

Teacher Professional Development Individual Session

Math Teachers' Circles: Professional Development that Develops Content Knowledge and Teacher Leadership

Jan A. Yow, *University of South Carolina* Diana White, University of Colorado, Denver

This session shares details about a professional development program for teachers called Math Teachers' Circles (MTCs). The session also offers findings that demonstrate MTCs can develop both content knowledge and teacher leadership. Participants also experience a modified MTC problem solving session.

Session 147

Salon 14

Mathematical Content Knowledge Individual Session

Fostering Prospective Teachers' Ability to Engage **Future Students in Ambitious Mathematics Learning** by Listening Responsively

Kadian M. Callahan, Kennesaw State University

This session will discuss the ways in which developing prospective teachers' skills in listening responsively in a mathematics content course may foster their ability to engage their future students in learning mathematics in ambitious ways.

2015 AMTE Excellence in Teaching Award Winner

Teaching and Learning with Technology **Individual Session**

Salon 5

Seeing Through Your Students' Eyes

Blake Peterson, Brigham Young University

Anticipating students' mathematical thinking is a valuable teaching practice. Learning to anticipate students' thinking requires teachers to see mathematics through their students' eyes. In this talk, I will share some interesting ways students see mathematics and discuss the pedagogical benefits of looking at mathematics through their eyes.

Session 149

Salon 2

Ballroom B

Mathematical Content Knowledge Individual Session

Promoting Teachers' Covariational Reasoning Through an Interactive Activity

David Glassmeyer, Kennesaw State University

In this session I share an interactive activity intended to promote middle school teachers' covariational reasoning. I present evidence from teacher documents and interviews to evaluate and improve the activity for other mathematics teacher educators.

Session 150

Salon 3

Pedagogical Content Knowledge Symposium

Making Weekly Assignments Practice-Based: What Approximations of Practice Might Look Like in **Methods Classes**

Patricio G. Herbst, University of Michigan Sandra Crespo, Michigan State University Rina Zazkis, Simon Fraser University Woong Lim, Kennesaw State University Annick Rougee, University of Michigan

We showcase four projects that have designed and used weekly assignments in methods classes as opportunities to practice some aspects of teaching - either as lesson plays and scripts or as storyboards.

Session 151

Salon 4

Pedagogical Content Knowledge Individual Session

Comparing Elementary and Secondary Teachers' Interactive Decision Making: Professional Noticing of Students' Mathematical Thinking

Mike Fredenberg, San Diego State University Randolph Philipp, San Diego State University Casey Hawthorne, San Diego State University

We will compare factors that shape teachers' interactive decision making in general, and professional noticing in particular, by comparing issues that arise between elementary and secondary school teachers. Implications for teacher preparation and teacher development will be considered.

Technology Inclusion in Mathematics Teacher Preparation: Four Decades of Research

Sarah B. Bush, Bellarmine University Shannon Driskell, University of Dayton Christopher Rakes, University of Maryland, Baltimore County Robert N. Ronau, University of Cincinnati

The rapid expansion of technology integration calls for a rethinking of teaching and learning with current and emerging technologies. This presentation reports an analysis of the impact of technology in mathematics preservice teacher preparation over the past four decades.

Session 153

Session 152

Salon 6

Mathematics Education Policy and Program Issues Discussion Session

Secondary Mathematics Teacher Preparation in/for **Urban Environments**

Erika C. Bullock, University of Memphis Celia Rousseau Anderson, University of Memphis Angiline Powell, University of Memphis

In this discussion session, participants will explore issues related to secondary teacher preparation in and for urban environments. Session participants will address issues including, but not limited to, program design, field experiences, and preservice teacher biases related to urban contexts.

Session 154

Salon 7

Teacher Professional Development Brief Report Session

Analysis of Teacher-Set Tasks

Hea-Jin Lee, Ohio State University, Lima S. Asli Ozgun-Koca, Wayne State University

We share a task-based PD program supporting teachers' knowledge and skills for developing quality mathematics tasks. We present the analysis of teacher-set-tasks and offer ideas for future research. Participants will work on the tasks and reflect on potential student

Planning and Implementing Problem-Based Instruction: Teacher Dilemmas and Difficulties

Leigh A. van den Kieboom, Marquette University Marta T. Magiera, Marquette University

This session will engage teacher educators in conversations about difficulties teachers have planning problem-based instruction. Using results from a professional development program with grades 6-10 teachers, specific attention will be given to the launch of a problem-

Two Learning Spaces, One Task: An Examination of Task Implementation in Chinese and U.S. Classrooms.

Rongjin Huang, Middle Tennessee State University Angela T. Barlow, Middle Tennessee State University Teresa A. Schmidt, Middle Tennessee State University

This study examines two exemplary lessons on the same topic in China and the US from a theory of variation that focuses on the recognition of necessary conditions of learning. The learning opportunities differed in terms of space of variation.

School and University Partnerships and Projects Individual Session

Understanding Risks and Benefits of Creating and Sustaining a Community of Practice with Varied Participants

Ruth M. Heaton, University of Nebraska, Lincoln Mary Alice Carlson, Montana State University

Risks and benefits for teachers, math coaches, administrators, and facilitators emerging from analyses of participants' interactions within real time math teaching, planning and debriefing sessions are examined. Implications for establishing, sustaining, and facilitating similar types of professional communities are discussed.

Salon 9 Session 156

Mathematical Content Knowledge Individual Session

Preservice Teachers' Understanding of Sizes of Wholes in Fraction Multiplication

Jae M. Baek, Illinois State University Jennifer M. Tobias, Illinois State University Megan H. Wickstrom, Montana State University Elif Safak, Illinois State University

This session focuses on elementary preservice teachers' understanding of wholes in the context of fraction multiplication. The presenters will share a classification scheme for strategies and representations, and discuss the connections between understanding of wholes and fraction computations.

Session 157 Salon 10

Development of Mathematics Teacher Educators Individual Session

Elementary Mathematics Specialists: Roles, Responsibilities and Impact. Implications for Teacher **Education, and Professional Development**

Skip Fennell, McDaniel College Beth McCord Kobett, Stevenson University Barbara Swartz, McDaniel College Jon Wray, Association of Maryland Mathematics Teacher Educators

This session will provide opportunities for participants to discuss a multi-year analysis of the responsibilities of elementary mathematics specialists (EMS) from varied perspectives. Discussion opportunities will include implications of this work for preparing EMS and their professional development needs.

Salon 11 Session 158

Teaching and Learning with Technology Individual Session

Uses of the Internet to Support Preservice Teacher **Learning of Mathematics**

Aaron Brakoniecki, Michigan State University

In this session, attendees will be asked to go online to learn unfamiliar mathematics. Results of a study of preservice teachers performing this same task will be presented focusing on their math connections and information-seeking strategies. Laptop use is encouraged.

Salon 12

Equity and Mathematics Education Brief Report Session

Authorizing and Empowering Students' Mathematical Learning: One Teacher's Trajectory

Jennifer Kinser-Traut, University of Arizona Erin Turner, University of Arizona

Using lenses of authority and empowerment, we examine one teacher's understanding and practices related to connecting to children's mathematical thinking and home and community experiences. We discuss patterns and shifts across mathematics methods courses, student teaching, and the first year of teaching.

Inclusive Classrooms: Special and General Education Teachers Working Together for All Students

Vanessa M. Hinton, Auburn University Michel Smith, Auburn University Megan Burton, Auburn University

Participants will examine data from a collaborative mathematics professional development program for teachers co-teaching in inclusive environments. Attendees will discuss reflection prompts, student artifacts, and teacher artifacts to learn about strategies for collaboration.

Teaching "Our" Kids: Unpacking an African-American **Mathematics Teacher's Understanding of** Mathematics Identity, Ability, and Motivation

Toya Jones Frank, George Mason University

This study investigated the particular kinds of knowledge, including content, pedagogical, and sociopolitical, which informed one African-American male mathematics teacher's attention to his students' collective mathematics identity and notions of ability and motivation in predominately African-American middle school classrooms.

Session 160 Salon 13

Teacher Professional Development **Individual Session**

Building Mathematical Modeling Skills Among Secondary Mathematics Teacher Educators Through Professional Development

Kimberly Ann Groshong, The Ohio State University Monelle Joline Gomez, The Ohio State University Azita Manouchehri, The Ohio State University

We report on a year-long PD effort to build content and pedagogical knowledge regarding mathematical modeling for secondary mathematics specialists. This session invites attendees to discuss preparing secondary teachers to solve and implement mathematical modeling tasks in their classrooms.

Session 161 Salon 14

Mathematical Content Knowledge Individual Session

Successfully Flipping a Mathematics Content Course for Preservice Teachers: Lessons Learned

Rejoice Mudzimiri, University of Southern Mississippi

In this presentation, I will share my experiences with flipping a content course for preservice elementary teachers. Particularly, I will share the effectiveness of this strategy, both from the instructor's and the students' perspective, together with plans for future implementation.



Association of Mathematics Teacher Educators

BALLROOM B

JUDITH JACOBS LECTURE

SUPPORTING ELEMENTARY TEACHERS IN DEVELOPING THEIR MATHEMATICS TEACHING

Nadine Bezuk, San Diego State University

What are we, as mathematics teacher educators, doing in our work to support elementary teachers' development of their mathematics teaching? I will share examples of current practices and raise questions about other things we might do, individually and as an organization, to enhance the support elementary teachers receive.

FRIDAY, FEBRUARY 13, 2015

6:30 PM - 7:45 PM



Association of Mathematics Teacher Educators

BALLROOM C/D

AMTE CONFERENCE DINNER



Association of Mathematics Teacher Educators

BALLROOM C/D

AMTE BREAKFAST AND AFFILIATE MEETINGS

Breakfast will be served in **Ballroom C/D**.

AFFILIATE MEETINGS

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 13 – 15 of your conference program.

OVERVIEW OF SATURDAY MORNING, FEBRUARY 14, 2015		
	8:00 - 9:00 am	9:15 - 10:15 am
Ballroom B	162. Fraction Schemes and Operations: A Data-Driven Course Redesign for Prospective PreK-8 Teachers - Lovin, Wilkins, Norton, Siegfried & Stevens	174. Designing Boundary Objects for Learning Trajectories - Edgington, Sztajn, Wilson, Webb & Myers
Salon 2	163. Rethinking Pedagogy: Enhancing Mathematics Teachers' Capacity to Promote the Standards for Mathematical Practice - Franz & Wilburne	175. Supporting Novice Teachers to Lead Discussions that Reach a Mathematical Point - Baldinger, Selling & Virmani
Salon 3	164. Preservice Secondary Teachers' Reflections on Student Thinking about Quadratic and Rational Equations - Hudson	176. Straddling Two Worlds: Co-Creating Teaching-Centered Professional Development - Keiser, Naresh, Edwards, Harper, Cox, D'Ambrosio & Suiter
Salon 4	165. Learning to Use Learning Progressions in Teaching - Suzuka, Clements & Boerst	177. Using Informal Learning Environments to Prepare Preservice Teachers to Work with Struggling Mathematics Learners - Mohr-Schroeder & Jackson
Salon 5	166. Troubling Common Sense Notions of Teacher Education - Wilson & Sutherland	178. Using Reflective Analysis to Modify Mathematical Tasks After Enactment - Tobias, Hillen, Welder, Thanheiser & Feldman
Salon 6	167. Mathematics Teacher Educators' Formative Assessment Views and Practices: Findings from a National Survey - Silver	179. Two Instruments to Discuss the Influence of Gender in the Mathematics Classroom - Siy & Gomez
Salon 7	168. Using Video of Peer Teaching to Examine and Develop 6-12 Prospective Teachers' Noticing - Males & Metzger	180. Tracing the Trajectory of Growth and Development of Mathematics Coaches - Roble, Manouchehri, Appova & Sanjari Pirmahaleh
Salon 8	169. Incorporating Technology to Enhance Teacher Education Lessons and Preservice Teachers' Learning - Nickell	181. Assessing Secondary Preservice Teachers' Practice with a 'Standardized Student' - Hallman-Thrasher & Aaron
Salon 9	170. Culturally Responsive Mathematics Teaching: What Should Teachers Know and How Will They Learn It? - Simic-Muller & Felton-Koestler	182. What Works: The Features of Professional Development Linked to Improvement in Teachers' Mathematical Knowledge - Copur Gencturk & Junk
Salon 10	171. Tracing Mathematical Proficiency for Teaching Multidigit Addition and Subtraction Across Content and Methods Classes - Jacobson, Uzan & Aydeniz	183. Supporting Teachers Using Appropriate Tools Strategically: A Framework for Evaluating and Designing DGS Tasks - Sherman, Cayton & Chandler
Salon 11	172. An Overlooked Perspective on Proportional Relationships: Variable Parts - Beckmann, Izsak & Olmez	184. Middle and Secondary Teachers' Transformative Learning: Measures of Central Tendency - Peters & Miller Bennett
Salon 12	173. Preservice Teacher Field Experiences Brief Report Session: Beliefs, Conceptions & Identity	185. Documenting Proficiency: A Discussion of Standards Based Grading in Math Courses for Future Teachers - Wells & Hasenbank

AMTE 2015 Annual Conference

OVERVIEW OF SATURDAY MORNING, FEBRUARY 13, 2015

	10:30 - 11:30 am
Ballroom B	186. Using Video Clips to Develop Faculty Expertise in Elementary Mathematics Content Courses - Salinas, Feldman, Callis & Chapin
Salon 2	187. Engaging Preservice Teachers in Probing Student Thinking through the Video-Based Model Seeing, Trying, Reflecting (STiR) - Switzer & Teuscher
Salon 3	188. Synchronizing Learning and Teaching: Formative Assessment in Elementary Mathematics - Middleton
Salon 4	189. Why Equity Matters in Mathematics Teacher Education – A Critical Dialogue - Aguirre
Salon 5	190. Developing Touchstones for Secondary Mathematics Methods Courses - Yee & Taylor
Salon 6	191. Discussing the Development of a Mathematically-Focused Observation Instrument - Smith
Salon 7	192. Supporting Preservice Teachers' Ability to Evaluate Children's Arguments - Kline
Salon 8	193. Secondary and Middle Grades Mathematics Teachers' Analysis and Evaluation of Technological Tools - Smith
Salon 9	194. The Gas Problem: Preservice Teachers Approaches to Mathematical Modeling in Methods Courses - Thrasher, Nickell & Keene
Salon 10	195. Building a Statewide Effort to Increase Inservice Teachers' Mathematical Content and Pedagogical Knowledge - Ziegler, Brown & Stumpf
Salon 11	196. Reviewing Yearlong Undergraduate Student Teaching Placements, What We Learned and Who Were All the Learners - Bellman & Amidon
Salon 12	197. Teacher Professional Development Brief Report Session: Models for Effective PD

Salon 5

Salon 6

Salon 7

Session 162

Mathematical Content Knowledge Individual Session **Ballroom B**

Session 166Development of Mathematics Teacher Educators
Discussion Session

Troubling Common Sense Notions of Teacher Education

Patricia Wilson, *University of Georgia* Pierre Sutherland, *University of Georgia*

The session will involve participants in using post-structural tools to deconstruct dichotomies, such as teacher and student or in-school and out-of-school, in an effort to rethink practices in mathematics teacher education and the preparation of teacher educators.

Session 167

Mathematics Education Policy and Program Issues Individual Session

Mathematics Teacher Educators' Formative Assessment Views and Practices: Findings from a National Survey

Edward Silver, University of Michigan

A survey was administered to members of AMTE and NCSM to probe their views and practices, with a particular focus on formative assessment. Findings are presented and tied to current professional and policy discourse about mathematics teaching and teacher education.

Session 168

Pedagogical Content Knowledge Individual Session

Using Video of Peer Teaching to Examine and Develop 6-12 Prospective Teachers' Noticing

Lorraine Marie Males, *University of Nebraska, Lincoln* Michelle Metzger, *University of Nebraska, Lincoln*

This session engages participants in examining how video of peer teaching was used to examine and develop 6-12 prospective teachers' noticing. As part of the session, participants will engage in a simulation of the noticing activity using VoiceThread.

Session 169

Salon 8

2015 AMTE NTLI Award Winner Teaching and Learning with Technology Individual Session

Incorporating Technology to Enhance Teacher Education Lessons and Preservice Teachers' Learning

Jennifer Nickell, North Carolina State University

This session discusses affordances and constraints of incorporating technologies into methods courses to enhance teaching approaches and students' learning of content, pedagogy, and technology. Preservice teachers' reasoning with a task and instructor's pedagogical decisions for incorporating technology will be shared.

Fraction Schemes and Operations: A Data-Driven Course Redesign for Prospective PreK-8 Teachers

LouAnn Lovin, James Madison University Jesse L. M. Wilkins, Virginia Tech Anderson Norton, Virginia Tech John (Zig) Michael Siegfried, James Madison University Alexis L. Stevens, James Madison University

This session will discuss the mathematical content knowledge of 109 prospective PreK-8 teachers, in particular their fraction schemes and operations. We will share results from our study, along with implications for redesigning PreK-8 mathematics content courses.

Session 163 Salon 2

Teacher Professional Development Individual Session

Rethinking Pedagogy: Enhancing Mathematics Teachers' Capacity to Promote the Standards for Mathematical Practice

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

Facilitation strategies, decision-making tools, and approaches to using student artifacts with classroom teachers participating in two different professional development models will be shared along with the teachers' pedagogical shifts resulting in students' engagement with the Standards for Mathematical Practice.

Session 164

Pedagogical Content Knowledge Individual Session

Preservice Secondary Teachers' Reflections on Student Thinking about Quadratic and Rational Equations

Rick A. Hudson, University of Southern Indiana

The session focuses on a research study examining preservice secondary teachers' (PSTs') knowledge of teaching equation solving. I will share PSTs' responses to tasks involving student thinking about quadratic and rational equations. Implications for teacher education practice will be discussed.

Session 165

Salon 4

Salon 3

Teacher Professional Development Individual Session

Learning to Use Learning Progressions in Teaching

Kara Suzuka, *University of Michigan* Douglas H. Clements, *University of Denver* Tim Boerst, *University of Michigan*

Presenters discuss professional development materials focused on supporting teachers' learning about, and using, student learning progressions in teaching. Specifically participants will engage with research-based learning progressions focused on geometric measurement that are the basis of newly created professional development materials.

Salon 9

Salon 12

Equity and Mathematics Education Discussion Session

Culturally Responsive Mathematics Teaching: What Should Teachers Know and How Will They Learn It?

Ksenija Simic-Muller, *Pacific Lutheran University* Mathew D. Felton-Koestler, *Ohio University*

In this session participants will discuss strategies for preparing preservice and inservice teachers to teach in a culturally responsive way. Discussion will especially focus on mathematical knowledge needed to create an engaging and rigorous curriculum while attending to student backgrounds.

Session 171

Salon 10

Pedagogical Content Knowledge Individual Session

Tracing Mathematical Proficiency for Teaching Multidigit Addition and Subtraction Across Content and Methods Classes

Erik Jacobson, *Indiana University* Erol Uzan, *Indiana University* Fetiye Aydeniz, *Indiana University*

Survey measures of preservice teachers' knowledge and beliefs showed differences between those who took mathematics in a mathematics or education department and between those who had or had not yet taken methods. Participants will discuss implications for teacher preparation.

Session 172

Salon 11

Mathematical Content Knowledge Symposium

An Overlooked Perspective on Proportional Relationships: Variable Parts

Sybilla Beckmann, *University of Georgia* Andrew Izsak, *University of Georgia* Ibrahim Burak Olmez, *University of Georgia*

This session introduces a "variable parts" perspective on proportional relationships, a perspective that has been overlooked by research in mathematics education. Tasks and findings from a study of how future teachers reason with a "variable parts" perspective will be presented.

Session 173

Preservice Teacher Field Experiences Brief Report Session

Connecting Teacher Candidates' Personal Narratives, Beliefs, and Practices Around Mathematics Teaching and Learning

Elizabeth Hartmann, University of Washington, Seattle

This study examined teacher candidates' personal narratives, beliefs, and practices around teaching elementary mathematics. Findings indicate that there may be ways to support teacher candidates in negotiating their personal narratives with beliefs and enactment of high quality practices.

Prospective Teachers' Differing Interpretations of Practice: Professional Identity as a Lens

Carlos Nicolas Gomez, *University of Georgia* AnnaMarie Conner, *University of Georgia*

We present findings from a study investigating the evolving professional identities of two prospective secondary mathematics teachers. Particularly, we compare how the participants' teacher identities framed their perspective on a pattern task enacted during their partnered pre-student-teaching field experience.

"I Feel Like a Boxer:" Student Teachers' Strategies for Alleviating Cognitive Dissonance in the Field

Nermin Bayazit, Georgia State University Stephanie Behm Cross, Georgia State University

The focus of this presentation is on psychological discomforts and practices that might help preservice teachers bridge the gap between conflicting cognitions during field experiences. Practices aimed towards helping preservice teachers avoid settling for the status quo will be highlighted.

Teacher Professional Development Individual Session **Ballroom B**

Salon 2

Salon 3

Preservice Teacher Field Experiences Individual Session

Salon 4

Salon 5

Designing Boundary Objects for Learning Trajectories

Cyndi Edgington, *North Carolina State University*Paola Sztajn, *North Carolina State University*Holt Wilson, *University of North Carolina, Greensboro*Jared Webb, *University of North Carolina, Greensboro*Marrielle Myers, *North Carolina State University*

We explore MTEs' work in designing boundary objects that translate research-based frameworks of students' mathematical thinking into useful tools for teachers. We share our adaptation of learning trajectories and discuss how it promoted shared meaning among researchers and teachers.

Session 175

Pedagogical Content Knowledge Individual Session

Supporting Novice Teachers to Lead Discussions that Reach a Mathematical Point

Erin Baldinger, *Arizona State University* Sarah Kate Selling, *Stanford University* Rajeev Virmani, *University of San Francisco*

This presentation investigates how participating in a cycle of enactment and investigation might support learning opportunities for novice secondary mathematics teachers around the core instructional practice of leading a discussion that reaches a mathematical point.

Session 176

School and University Partnerships and Projects Discussion Session

Straddling Two Worlds: Co-Creating Teaching-Centered Professional Development

Jane M. Keiser, Miami University Nirmala Naresh, Miami University Todd Edwards, Miami University Suzanne Harper, Miami University Dana Christine Cox, Miami University Beatriz Silva D'Ambrosio, Miami University Dianne C. Suiter, Miami University

We hope to foster a community of MTEs that will reflect on conventional PD practices and the importance of co-constructing PD with teachers. We will narrate our PD experiences with K-8 teachers and describe the emergent tensions, dilemmas, and contradictions.

Using Informal Learning Environments to Prepare Preservice Teachers to Work with Struggling Mathematics Learners

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 178

Session 177

Mathematical Content Knowledge Individual Session

Using Reflective Analysis to Modify Mathematical Tasks After Enactment

Jennifer M. Tobias, *Illinois State University* Amy Hillen, *Kennesaw State University* Rachael M. Welder, *Hunter College-CUNY* Eva Thanheiser, *Portland State University* Ziv Feldman, *Boston University*

A critical aspect of task design is the work that occurs after implementation of the task. In this session, participants will analyze artifacts produced by prospective elementary teachers on a fraction comparison task in order to illustrate reflective analysis.

Session 179

Equity and Mathematics Education Individual Session Salon 6

Two Instruments to Discuss the Influence of Gender in the Mathematics Classroom

Eric Siy, *University of Georgia* Carlos Nicolas Gomez, *University of Georgia*

We demonstrate two instruments (gender interrogation checklist and the Suot-Baro scenarios) designed to allow teacher educators a space to discuss gender issues in the mathematics education classroom. The instruments challenge the taken-for-granted nature of gender in the classroom.

Salon 7

Teaching and Lear Individual Session Salon 10

Development of Mathematics Teacher Educators Individual Session

Tracing the Trajectory of Growth and Development of Mathematics Coaches

Amanda Roble, *The Ohio State University*Azita Manouchehri, *The Ohio State University*Aina Appova, *The Ohio State University*S. Azin Sanjari Pirmahaleh, *The Ohio State University*

We summarize survey-based research results aimed to trace the trajectory of development of K-12 mathematics coaches who completed a three-year professional development program focused on increasing their mathematical knowledge and capacity to implement and nurture learner-responsive pedagogy among teachers.

Session 181

Salon 8

Pedagogical Content Knowledge Individual Session

Assessing Secondary Preservice Teachers' Practice with a 'Standardized Student'

Allyson Hallman-Thrasher, *Ohio University* Wendy Rose Aaron, *Oregon State University*

We will share an assessment of teaching practice, built on 'standardized patients' in medical education, that helped us evaluate how preservice secondary teachers respond to student misconceptions. We will share design considerations and lessons learned from a pilot implementation.

Session 182

Salon 9

Teacher Professional Development Individual Session

What Works: The Features of Professional Development Linked to Improvement in Teachers' Mathematical Knowledge

Yasemin Copur Gencturk, *University of Houston* Debra Junk, *University of Texas, Austin*

Using data collected from 583 teachers who participated in various types of professional development activities for a year, we examined the role of various features of these activities in the growth of teachers' mathematical knowledge, as measured by validated instruments.

Session 183 *Teaching and Learning with Technology*

Supporting Teachers Using Appropriate Tools Strategically: A Framework for Evaluating and Designing DGS Tasks

Milan F. Sherman, *Drake University* Charity Cayton, *East Carolina University* Kayla Chandler, *North Carolina State University*

In this session we describe a framework for supporting mathematics teachers in evaluating and designing dynamic geometry tasks. Participants will use the framework to evaluate dynamic geometry tasks, and we will report on research associated with its use by teachers.

Session 184

Salon 11

Mathematical Content Knowledge Individual Session

Middle and Secondary Teachers' Transformative Learning: Measures of Central Tendency

Susan A. Peters, *University of Louisville* Victoria A. Miller Bennett, *University of Louisville*

This study investigates how dilemma, critical reflection, and rational discourse affect middle and secondary teachers' reasoning about average. Framed by transformation theory, the study highlights how engagement with PD activities focused on these elements can enhance teachers' statistical understandings.

Session 185

Salon 12

Mathematical Content Knowledge Discussion Session

Documenting Proficiency: A Discussion of Standards Based Grading in Math Courses for Future Teachers

Pamela J. Wells, *Grand Valley State University* Jon F. Hasenbank, *Grand Valley State University*

Elementary teachers have been using SBG for years. What are they learning about their students that a points-based system would miss? Why might we use this in teacher preparation courses? Share your ideas and learn from others' experiences with SBG.

Salon 5

Session 186 Ballroom B

Development of Mathematics Teacher Educators Individual Session

Using Video Clips to Develop Faculty Expertise in Elementary Mathematics Content Courses

Alejandra Salinas, *Boston University* Ziv Feldman, *Boston University* Laura Callis, *Boston University* Suzanne H. Chapin, *Boston University*

Video clips of faculty teaching mathematics lessons to prospective elementary teachers were analyzed according to a researcher-developed framework. In this session, participants will analyze the feasibility of using this framework to support instructors in developing their practice.

Session 187 Salon 2

Pedagogical Content Knowledge Individual Session

Engaging Preservice Teachers in Probing Student Thinking through the Video-Based Model Seeing, Trying, Reflecting (STIR)

John M. Switzer, *Texas Christian University* Dawn Teuscher, *Brigham Young University*

The iterative video-based See it, Try it, and Reflect on it (STiR) model of enabling the study of practice was implemented in methods courses at two universities. We share our findings that the model promotes preservice teachers' learning as they probe student thinking.

Session 188 Salon 3

School and University Partnerships and Projects Individual Session

Synchronizing Learning and Teaching: Formative Assessment in Elementary Mathematics

Catharina W. Middleton, East Carolina University

Findings and implications of a research study of elementary teachers' implementation of a formative assessment and intervention process will be presented. The program structure, research and intervention methods, and results for a project involving approximately 350 students will be shared.

Session 189 Salon 4

Discussion Session

Why Equity Matters in Mathematics Teacher Education – A Critical Dialogue

Julia Aguirre, *University of Washington*The purpose of this session is to engage in a critical dialogue around equity in mathematics teacher education. This is an opportunity for participants to share insights/concerns/ideas related to sessions attended as well as your own work in mathematics teacher education. The following focus questions will frame the discussion.

- Is attending to equity a demographic or mathematics urgency in mathematics teacher education?
- How does our work in mathematics teacher education address race, class, gender, culture, language, (dis)abilities, and justice?
- In what ways do privilege and oppression play out in learning to teach mathematics?

Session 190

Pedagogical Content Knowledge Discussion Session

Developing Touchstones for Secondary Mathematics Methods Courses

Sean P. Yee, *University of South Carolina* Megan Westwood Taylor, *Sonoma State University*

Secondary mathematics education methods instructors (n=116) from American universities completed a survey describing how 41 pre-selected, research-based touchstones were valued within their curriculum. Participants will analyze the results, create extensions for future research, and discuss implications for mathematics education.

Session 191 Salon 6

Mathematics Education Policy and Program Issues Discussion Session

Discussing the Development of a Mathematically-Focused Observation Instrument

Wendy Smith, University of Nebraska, Lincoln

The purpose of this discussion session is to engage the audience in rich discussion about how to effectively document mathematical teaching practices through live observations, particularly in light of NCTM's *Principles to Actions*.

Session 192 Salon 7

Pedagogical Content Knowledge Individual Session

Supporting Preservice Teachers' Ability to Evaluate Children's Arguments

Kate Kline, Western Michigan University

In this session, participants will discuss issues related to supporting preservice elementary school teachers to consider what it takes to enact CCSSM Mathematical Practice #3: students construct viable arguments and critique the reasoning of others.

Session 193 Salon 8
Teaching and Learning with Technology

Teaching and Learning with Technology Individual Session

Secondary and Middle Grades Mathematics Teachers' Analysis and Evaluation of Technological Tools

Ryan C. Smith, University of Georgia

In this presentation, we will examine what middle grades and secondary mathematics teachers value when evaluating technological tools. I will share ideas and activities about how we can take this into account to best prepare teachers to teach with technology.

AMTE 2015 Annual Conference

Session 194

Mathematical Content Knowledge Individual Session

The Gas Problem: Preservice Teachers' Approaches to Mathematical Modeling in Methods Courses

Emily Thrasher, *North Carolina State University* Jennifer Nickell, *North Carolina State University* Karen Allen Keene, *North Carolina State University*

This session will focus on one institution's results of beginning to incorporate the modeling practice standard and content standard into its methods courses and the recommendations that have resulted. A mathematical modeling task and student work will be shared.

Session 195

Salon 10

Salon 9

Mathematical Content Knowledge Individual Session

Building a Statewide Effort to Increase Inservice Teachers' Mathematical Content and Pedagogical Knowledge

Jeff Ziegler, *Brookhill Institute of Mathematics* Sara Brown, *Brookhill Institute of Mathematics* Kathryn Stumpf, *Brookhill Institute of Mathematics*

We will share our experience developing a program to increase K-12 teachers' mathematical content and pedagogical knowledge in Wisconsin, obstacles encountered and overcome, lessons learned, achievements, and anticipated future challenges. Participants will be encouraged to share suggestions and feedback.

Session 196

Salon 11

Preservice Teacher Field Experiences Individual Session

Reviewing Yearlong Undergraduate Student Teaching Placements, What We Learned and Who Were All the Learners

Allan Bellman, *University of Mississippi* Joel Amidon, *University of Mississippi*

We'll discuss three years of implementation of a yearlong student teaching placement where undergraduates taught from August to May in their placement schools. The focus will be on all involved and what they learned, not only the student teachers.

Session 197

Teacher Professional Development Brief Report Session

Effective Professional Development for Mathematics Teachers

Salon 12

Richelle Marynowski, University of Lethbridge

Characteristics of a model of professional development (PD) for mathematics teachers will be presented and discussed in this session. Effective PD characteristics are based on a research project exploring aspects of coaching that embedded the PD in everyday teacher practice.

Professional Development, PCK Growth, Intercultural Competence, and Student Growth on a State Mathematics Assessment

Melissa Troudt, *University of Northern Colorado* Robert Powers, *University of Northern Colorado*

This report summarizes an investigation of how the factors of teacher participation in a professional development program, teacher pedagogical knowledge for teaching secondary mathematics, and teacher intercultural competence relate to student growth on a mathematics achievement test.

Teacher Noticing of Mathematical Practices in Sustained Professional Development

Kathleen Melhuish, Portland State University Jodi Fasteen, Portland State University Eva Thanheiser, Portland State University Andrew Marcell Riffel, Portland State University

We examine how sustained, in-school professional development focuses teachers' attention on children's mathematical thinking, with an intention of helping teachers to characterize and promote discourse on generalizing and justifying.

SATURDAY, FEBRUARY 14, 2015

11:30 AM - 1:30 PM



Association of Mathematics Teacher Educators

BALLROOM C/D

LUNCH AND BUSINESS MEETING

Join us for the Annual AMTE Business Meeting during lunch, President Fran Arbaugh presiding.

AMTE 2015 Annual Conference

70

INDEX OF SPEAKERS

Α

Aaron, Wendy Rose	Oregon State University	wendy.aaron@oregonstate.edu	181
Adams, Thomasenia Lott	University of Florida	tla@coe.ufl.edu	105
Adkins, Amy Beth	University of Nevada, Las Vegas	adkinsa5@unlv.nevada.edu	6
Aguirre, Julia	University of Washington	jaguirre@u.washington.edu	189
Ahrendt, Sue	University of Wisconsin River Falls	sue.ahrendt@uwrf.edu	27
Alibegovic, Emina	University of Utah	emina@math.utah.edu	43
Allsopp, David	University of South Florida	dallsopp@usf.edu	73
Algahtani, Muteb M.	Rutgers University	muteb.algahtani@gse.rutgers.edu	143
Amador, Julie	University of Idaho	jamador@uidaho.edu	56, 126
Amidon, Joel	University of Mississippi	jcamidon@go.olemiss.edu	43, 196
Aming-Attai, Rachael	University of Indianapolis	amingattair@uindy.edu	14, 56
An, Tuyin	Purdue University	ant@purdue.edu	100
Anderson, Celia Rousseau	University of Memphis	croussea@memphis.edu	153
Appova, Aina	The Ohio State University	appova.1@osu.edu	68, 180
Apraiz, Kristen	University of Florida	kapraiz@coe.ufl.edu	18
Arbaugh, Fran	Penn State University	arbaugh@psu.edu	17. 111
Arndt, Katie	University of South Florida	klarndt@mail.usf.edu	145
Aydeniz, Fetiye	Indiana University	faydeniz@umail.iu.edu	88, 171
-	•	•	•

В

	.		
Baek, Jae M.	Illinois State University	jbaek@ilstu.edu	156
Bailey, Pamela Rae	Mary Baldwin College	prbailey@mbc.edu	99
Bair, Sherry Lynn	Texas A&M University, Corpus Christi	sherry.bair@tamucc.edu	103
Baldinger, Erin	Arizona State University	eebaldinger@asu.edu	114, 175
Ball, Deborah Loewenberg	University of Michigan	dball@umich.edu	16, 136
Bargagliotti, Anna	Loyola Marymount University	abargag@gmail.com	64
Barlow, Angela T.	Middle Tennessee State University	angela.barlow@mtsu.edu	92, 154
Barmore, Johanna	Harvard University	JoBarmore@gmail.com	20
Bartell, Tonya	Michigan State University	tbartell@msu.edu	21, 61
Bass, Hyman	University of Michigan	hybass@umich.edu	63
Bay-Williams, Jennifer M.	University of Louisville	j.baywilliams@louisville.edu	33
Bayazit, Nermin	Georgia State University	nbayazit@gsu.edu	173
Beckmann, Sybilla	University of Georgia	sybilla@math.uga.edu	172
Bellman, Allan	University of Mississippi	abellman@olemiss.edu	196
Bennett, Cory A.	Idaho State University	benncor3@isu.edu	24
Berk, Dawn	University of Delaware	berk@udel.edu	112
Bezuk, Nadine	San Diego State University	nbezuk@mail.sdsu.edu	Judith Jacobs Lecture
Bieda, Kristen	Michigan State University	kbieda@msu.edu	43
Bleiler, Sarah K.	Middle Tennessee State University	sarah.bleiler@mtsu.edu	62
Boerst, Tim	University of Michigan	tboerst@umich.edu	16, 165
Bos, Beth	Texas State University	bethbbos@hotmail.com	84
Bose, Enakshi	University of Pennsylvania	ebose@gse.upenn.edu	24
Bostic, Jonathan David	Bowling Green State University	bosticj@bgsu.edu	42
Bowers, Janet	San Diego State University	jbowers@mail.sdsu.edu	10
Boyle, Justin David	University of New Mexico	boylej@unm.edu	62
Brakoniecki, Aaron	Michigan State University	brakoni1@msu.edu	158
Bray, Wendy	University of Central Florida	Wendy.Bray@ucf.edu	60
Brendefur, Jonathan	Boise State University	jbrendef@boisestate.edu	130
Briars, Diane J.	National Council of Teachers of Mathematics	dbriars@nctm.org	95
Brown, Sara	Brookhill Institute of Mathematics	sara.brown@brookhillmath.org	22, 195
Browning, Christine	Western Michigan University	christine.browning@wmich.edu	113
Buchheister, Kelley E.	University of South Carolina	buchheis@mailbox.sc.edu	145
Bullock, Erika C.	University of Memphis	Erika.Bullock@memphis.edu	153
Burrill, Gail	Michigan State University	burrill@msu.edu	120
Burton, Megan	Auburn University	megan.burton@auburn.edu	96, 159
Bush, Sarah B.	Bellarmine University	sbush@bellarmine.edu	152
Bush, William S.	University of Louisville	bill.bush@louisville.edu	140

C

Cady, Jo Ann	University of Tennessee	jcady@utk.edu	103
Caldwell, Janet H.	Rowan University	caldwell@rowan.edu	129
Callahan, Kadian M.	Kennesaw State University	kmcallahan@kennesaw.edu	147
Callis, Laura	Boston University	lkcallis@bu.edu	186
Campbell, Patricia F.	University of Maryland	patc@umd.edu	125
Candela, Amber Grace	University of Georgia	amber_candela@hotmail.com	133
Carlson, Mary Alice	Montana State University	mary.carlson@huskers.unl.edu	155
Carney, Michele	Boise State University	michelecarney@boisestate.edu	130
Carreras-Jusino, Angel M.	University of Georgia	amcarr@uga.edu	35
Carson, Cynthia	University of Rochester	Cynthia.Carson@warner.rochester.edu	3
Casa, Tutita M.	University of Connecticut	tutita.casa@uconn.edu	26
Case, Catherine	University of Florida	ccase@ufl.edu	64
Casey, Stephanie	Eastern Michigan University	scasey1@emich.edu	4, 115
Cassel, Darlinda	University of Central Oklahoma	dcassel2@uco.edu	116
Cayton, Charity	East Carolina University	caytonc@ecu.edu	109, 183
Champion, Joe	Boise State University	joechampion@boisestate.edu	115, 131
Chandler, Kayla	North Carolina State University	kcchand2@ncsu.edu	183
Chao, Theodore	Harvard University	tchao@utexas.edu	36
Chapin, Suzanne H.	Boston University	schapin@bu.edu	186
Chauvot, Jennifer	University of Houston	jchauvot@uh.edu	141
Chazan, Daniel	University of Maryland	dchazan@umd.edu	43, 110
Childs, Kristopher James	University of Central Florida	kristopher.childs@ucf.edu	121
Chval, Kathryn	University of Missouri	chvalkb@missouri.edu	85
Cirillo, Michelle	University of Delaware	mcirillo@udel.edu	61, 108
Clements, Douglas H.	University of Denver	Douglas.Clements@du.edu	165
Cobbs, Georgia Ann	University of Montana	georgia.cobbs@mso.umt.edu	144
Coffey, David	Grand Valley State University	coffeyd@gvsu.edu	138
Conner, AnnaMarie	University of Georgia	aconner@uga.edu	173
Conner, Kimberly	University of Missouri	kachz9@mail.missouri.edu	54
Coomes, Jacqueline	Eastern Washington University	jcoomes@ewu.edu	96
Cooper, Sandi	Baylor University	sandra_cooper@baylor.edu	11
Copur Gencturk, Yasemin	University of Houston	ycopur-gencturk@uh.edu	25, 182
Corey, Doug	Brigham Young University	corey@mathed.byu.edu	69
Courtney, Scott A.	Kent State University	scourtn5@kent.edu	117
Cox, Dana Christine	Miami University	dana.cox@MiamiOH.edu	176
Craig, Jeffrey	Michigan State University	craigjef@msu.edu	5
Cramer, Kathleen	University of Minnesota	crame013@umn.edu	27
Creager, Mark Andrew	Indiana University	macreage@indiana.edu	88
Crespo, Sandra	Michigan State University	crespo@msu.edu	150
Cross, Stephanie Behm	Georgia State University	scross@gsu.edu	173
Cross Francis, Dionne	Indiana University	dicross@indiana.edu	101

D

D'Ambrosio, Beatriz Silva	Miami University	dambrobs@miamioh.edu	15, 176
Daiga, Michael	Indiana University	mdaiga@indiana.edu	88, 98
de Araujo, Zandra	University of Missouri	dearaujoz@missouri.edu	29, 56
Dean, Chrystal	Appalachian State University	deanco@appstate.edu	91
DeLeeuw, William	University of Missouri	wwdg24@mail.missouri.edu	54
DeVaul, Lina	University of Nevada, Las Vegas	zangl@unlv.nevada.edu	6
Dick, Lara	Bucknell University	scootie49@hotmail.com	32
Dick, Thomas	Oregon State University	tpdick@math.oregonstate.edu	120
Diemert, Kacey Marie	Lewis-Clark State College	Mathkc@gmail.com	52
Dietiker, Leslie	Boston University	dietiker@bu.edu	126
Dilworth, Lori	Indiana University East	lcdilwor@iue.edu	101
Dingman, Shannon W.	University of Arkansas	sdingman@uark.edu	102
Disney, Andria	University of Montana	andria.disney@umontana.edu	144
Dixon, Juli K.	University of Central Florida	juli.dixon@ucf.edu	65, 121
Dollard, Clark	Metropolitan State University, Denver	cdollard@msudenver.edu	70
Dove, Anthony Michael	Radford University	adove3@radford.edu	46
Drake, Corey	Michigan State University	cdrake@msu.edu	3, 126
Driskell, Shannon	University of Dayton	sdriskell1@udayton.edu	152
Druken, Bridget	San Diego State University	bridgetkdruken@gmail.com	83
DuCloux, Kanita Kimmons	Western Kentucky University	kducloux@gmail.com	35

E

	E		
Earnest, Darrell Eddy, Colleen Edelman, Jennifer Edgington, Cyndi Edson, Alden J. Edwards, Todd Ellis, Mark W. Empson, Susan Enderson, Mary C. Eskelson, Samuel Estapa, Anne	University of Massachusetts, Amherst University of North Texas University of West Georgia North Carolina State University Michigan State University Miami University California State University Fullerton University of Texas, Austin Old Dominion University University of South Florida Iowa State University	dearnest@educ.umass.edu Colleen.Eddy@unt.edu jedelman@westga.edu cpedging@ncsu.edu edsona@msu.edu edwardm2@miamioh.edu mellis@fullerton.edu empson@austin.utexas.edu menderso@odu.edu eskelson@usf.edu aestapa@iastate.edu	126 96 37 174 47 84, 176 110 54 8 73, 128
	F		
Farmer, Susanna Owens Fasteen, Jodi Feldman, Ziv Felton-Koestler, Mathew D. Fennell, Skip Fernandez, Maria Lorelei Ferrini-Mundy, Joan Fisher, Molly H. Frank, Toya Jones Franz, Dana Pomykal Fredenberg, Mike Freeburn, Ben Friel, Susan N.	University of Michigan Portland State University Boston University Ohio University McDaniel College Florida International University National Science Foundation University of Kentucky George Mason University Mississippi State University San Diego State University Penn State University University of North Carolina, Chapel Hill	susanna.farmer@gmail.com jfasteen@gmail.com zfeld@bu.edu felton@ohio.edu ffennell@mcdaniel.edu mfernan@fiu.edu jferrini@nsf.gov molly.fisher@uky.edu tfrank4@gmu.edu df76@colled.msstate.edu mikefredenberg@yahoo.com byf5045@psu.edu sfriel@email.unc.edu	16 45, 197 178, 186 9, 170 157 119 31, 80 114 159 96, 163 151 111
	G		
Galindo, Enrique Gault, Rebecca Gerson, Hope H. Gibbons, Lynsey Giné, Roser Glassmeyer, David Goffney, Imani Gojak, Linda M. Gomez, Carlos Nicolas Gomez, Monelle Joline Gonzalez, Dario Andres Gonzalez, Monica Goodell, Joanne Elizabeth Goodson-Espy, Tracy J. Grant, Melva R. Graysay, Duane Greenberg, Cynthia Gregson, Susan A. Groshong, Kimberly Ann Grosser-Clarkson, Dana Lynn	Indiana University University of Central Florida Grand Valley State University University of Washington Lesley University Kennesaw State University University of Houston John Carroll University University of Georgia The Ohio State University University of Georgia University of Houston Cleveland State University Appalachian State University Penn State University Johns Hopkins University University of Cincinnati The Ohio State University University of Maryland	egalindo@indiana.edu rebecca.gault@knights.ucf.edu gersonh@gvsu.edu lgibbons@uw.edu rgine16@gmail.com dglassme@kennesaw.edu idgoffney@uh.edu lgojak@icloud.com cgome00@uga.edu Gomez.159@osu.edu darioagm@uga.edu mladolphus@uh.edu j.goodell@csuohio.edu goodsonespyt@appstate.edu mgrant@odu.edu dtg105@psu.edu cgreenberg@jhu.edu susan.gregson@uc.edu groshong.4@osu.edu dgrosser@umd.edu	1 65 138 55, 125 44 149 141 40 173, 179 160 35 141 76 91 8 111 104 87 160 58
	н		
Hallman-Thrasher, Allyson Haltiwanger, Leigh Hanby, Kristi L. Harbour, Kristin Harper, Suzanne Harris, Justin Bradley Harris, Pamela	Ohio University Clemson University University of Michigan University of Louisville Miami University University of Cincinnati University of Texas, Austin	hallman@ohio.edu haltiwa@clemson.edu khanby@umich.edu kristin.harbour@louisville.edu harpersr@MiamiOH.edu Harri2jb@mail.uc.edu pharris@byu.net	181 114 75 72 176 87 57

Hartman, Kiratin S. Middle Frencese State University Hartmann, Lisabaeth Hartmann, Elabaeth Hartmann, Elabaeth Hartmann, Elabaeth Hartmann, Elabaeth Haydron, Casey Son Dieg State University Haydron, Carole Haydron, Rongine Haydron, Good Haydron Haydron, Carole Haydron, Rongine Haydron, Rongine Haydron, Rongine Haydron, Rongine Haydron, Carole Haydron, Rongine Haydron, Rong				
Hartmann, Elizabeth University of Washington, Seattle Ishant@uve.edu 173 183 185 1	Hartland, Kristin S.	Middle Tennessee State University	kristin.hartland@mtsu.edu	92. 118
Hasenbank, Jon F. Grand Valley State University case-phankeligemal.com 18.18 Hawthorne, Gasey San Diegs State University case-phankersphon.com 15.1 Hawthor, Carole Hawthorne, Garey Carole Hawthorne, San Diegs State University case-phankersphon.com 15.1 Hawthorne, Carole Hawth		•		•
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Keene, Karen AllenNorth Carolina State Universitykaren_keene@ncsu.edu194Keiser, Jane M.Miami Universitykeiserjm@miamioh.edu176Kennedy, Dave I.Shippensburg University of Pennsylvaniadikenn@ship.edu49Kim, SominUniversity of Georgiasomin84@uga.edu7King, KarenNational Science Foundationkking@nsf.gov31,80King, Lesley AnnGeorge Mason Universitylesleyking27@hotmail.com99Kinser-Traut, JenniferUniversity of Arizonajkinser@email.arizona.edu159Kirwan, James VinceIllinois State Universityjvkirwa@ilstu.edu142Klein, ValerieThe Math Forum, Drexel Universityvek25@drexel.edu107Kline, KateWestern Michigan Universitykate.kline@wmich.edu192Knapp, MelindaBend-LaPine School District, Oregonmelinda.knapp@bend.k12.or.us39Ko, Yi-YinIndiana State Universitywinnie.ko@indstate.edu62			•	•
Keiser, Jane M.Miami Universitykeiserjm@miamioh.edu176Kennedy, Dave I.Shippensburg University of Pennsylvaniadikenn@ship.edu49Kim, SominUniversity of Georgiasomin84@uga.edu7King, KarenNational Science Foundationkking@nsf.gov31,80King, Lesley AnnGeorge Mason Universitylesleyking27@hotmail.com99Kinser-Traut, JenniferUniversity of Arizonajkinser@email.arizona.edu159Kirwan, James VinceIllinois State Universityjvkirwa@ilstu.edu142Klein, ValerieThe Math Forum, Drexel Universityvek25@drexel.edu107Kline, KateWestern Michigan Universitykate.kline@wmich.edu192Knapp, MelindaBend-LaPine School District, Oregonmelinda.knapp@bend.k12.or.us39Ko, Yi-YinIndiana State Universitywinnie.ko@indstate.edu62				
Kennedy, Dave I.Shippensburg University of Pennsylvaniadikenn@ship.edu49Kim, SominUniversity of Georgiasomin84@uga.edu7King, KarenNational Science Foundationkking@nsf.gov31, 80King, Lesley AnnGeorge Mason Universitylesleyking27@hotmail.com99Kinser-Traut, JenniferUniversity of Arizonajkinser@email.arizona.edu159Kirwan, James VinceIllinois State Universityjvkirwa@ilstu.edu142Klein, ValerieThe Math Forum, Drexel Universityvek25@drexel.edu107Kline, KateWestern Michigan Universitykate.kline@wmich.edu192Knapp, MelindaBend-LaPine School District, Oregonmelinda.knapp@bend.k12.or.us39Ko, Yi-YinIndiana State Universitywinnie.ko@indstate.edu62	· · · · · · · · · · · · · · · · · · ·		-	
Kim, SominUniversity of Georgiasomin84@uga.edu7King, KarenNational Science Foundationkking@nsf.gov31, 80King, Lesley AnnGeorge Mason Universitylesleyking27@hotmail.com99Kinser-Traut, JenniferUniversity of Arizonajkinser@email.arizona.edu159Kirwan, James VinceIllinois State Universityjvkirwa@ilstu.edu142Klein, ValerieThe Math Forum, Drexel Universityvek25@drexel.edu107Kline, KateWestern Michigan Universitykate.kline@wmich.edu192Knapp, MelindaBend-LaPine School District, Oregonmelinda.knapp@bend.k12.or.us39Ko, Yi-YinIndiana State Universitywinnie.ko@indstate.edu62	Keiser, Jane M.	Miami University	keiserjm@miamioh.edu	176
King, KarenNational Science Foundationkking@nsf.gov31, 80King, Lesley AnnGeorge Mason Universitylesleyking27@hotmail.com99Kinser-Traut, JenniferUniversity of Arizonajkinser@email.arizona.edu159Kirwan, James VinceIllinois State Universityjvkirwa@ilstu.edu142Klein, ValerieThe Math Forum, Drexel Universityvek25@drexel.edu107Kline, KateWestern Michigan Universitykate.kline@wmich.edu192Knapp, MelindaBend-LaPine School District, Oregonmelinda.knapp@bend.k12.or.us39Ko, Yi-YinIndiana State Universitywinnie.ko@indstate.edu62	Kennedy, Dave I.	Shippensburg University of Pennsylvania	dikenn@ship.edu	49
King, KarenNational Science Foundationkking@nsf.gov31, 80King, Lesley AnnGeorge Mason Universitylesleyking27@hotmail.com99Kinser-Traut, JenniferUniversity of Arizonajkinser@email.arizona.edu159Kirwan, James VinceIllinois State Universityjvkirwa@ilstu.edu142Klein, ValerieThe Math Forum, Drexel Universityvek25@drexel.edu107Kline, KateWestern Michigan Universitykate.kline@wmich.edu192Knapp, MelindaBend-LaPine School District, Oregonmelinda.knapp@bend.k12.or.us39Ko, Yi-YinIndiana State Universitywinnie.ko@indstate.edu62				7
King, Lesley AnnGeorge Mason Universitylesleyking27@hotmail.com99Kinser-Traut, JenniferUniversity of Arizonajkinser@email.arizona.edu159Kirwan, James VinceIllinois State Universityjvkirwa@ilstu.edu142Klein, ValerieThe Math Forum, Drexel Universityvek25@drexel.edu107Kline, KateWestern Michigan Universitykate.kline@wmich.edu192Knapp, MelindaBend-LaPine School District, Oregonmelinda.knapp@bend.k12.or.us39Ko, Yi-YinIndiana State Universitywinnie.ko@indstate.edu62				31.80
Kinser-Traut, JenniferUniversity of Arizonajkinser@email.arizona.edu159Kirwan, James VinceIllinois State Universityjvkirwa@ilstu.edu142Klein, ValerieThe Math Forum, Drexel Universityvek25@drexel.edu107Kline, KateWestern Michigan Universitykate.kline@wmich.edu192Knapp, MelindaBend-LaPine School District, Oregonmelinda.knapp@bend.k12.or.us39Ko, Yi-YinIndiana State Universitywinnie.ko@indstate.edu62	_			· · · · · · · · · · · · · · · · · · ·
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Klein, ValerieThe Math Forum, Drexel Universityvek25@drexel.edu107Kline, KateWestern Michigan Universitykate.kline@wmich.edu192Knapp, MelindaBend-LaPine School District, Oregonmelinda.knapp@bend.k12.or.us39Ko, Yi-YinIndiana State Universitywinnie.ko@indstate.edu62				
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	Kobett, Beth McCord	Stevenson University	bkobett@stevenson.edu	157

AMTE 2015 Annual Conference

74

Koestler, Courtney	Ohio University	koestler@ohio.edu	89
Konuk, Nursen	Penn State University	nuk142@psu.edu	111
Kosko, Karl Wesley	Kent State University	kwkosko@gmail.com	56, 117
Krehbiel, Ken	National Council of Teachers of Mathematics	kkrehbiel@nctm.org	80
Krupa, Erin	Montclair State University	krupae@mail.montclair.edu	4, 70
Kwon, Minsung	University of Michigan	mskwon@umich.edu	128
	ı		
	-		
LaFramenta, Joanne	University of Florida	jlafra@coe.ufl.edu	105
Lai, Yvonne	University of Nebraska, Lincoln	yvonnexlai@unl.edu	49
Land, Tonia	Drake University	tonia.land@drake.edu	54, 126
Leatham, Keith	Brigham Young University	kleatham@mathed.byu.edu	37, 54
Lee, Carl W.	University of Kentucky	lee@ms.uky.edu	140
Lee, Hea-Jin	Ohio State University, Lima	lee.1129@osu.edu	154
Lee, Jean	University of Indianapolis	jslee@uindy.edu	14, 96
Lee, Mi Yeon	Arizona State University	mlee115@asu.edu	84
Lesseig, Kristin	Washington State University Vancouver	kristin.lesseig@vancouver.wsu.edu	4
Lewis, William James	University of Nebraska, Lincoln	jlewis@math.unl.edu	119
Lim, Woong	Kennesaw State University	wlim2@kennesaw.edu	23, 150
Linder, Sandra	Clemson University	sandram@clemson.edu	123
Lingo, Amy	University of Louisville	amy.lingo@louisville.edu	72
Lischka, Alyson E.	Middle Tennessee State University	Alyson.Lischka@mtsu.edu	118
Liu, Yating	Old Dominion University	y1liu@odu.edu	8
Lloyd, Gwendolyn	Penn State University	lloyd@psu.edu	51
Lovin, LouAnn	James Madison University	lovinla@jmu.edu	162
Lucas, Carol	University of Central Oklahoma	clucas@uco.edu	116
Luebeck, Jennifer	Montana State University	luebeck@math.montana.edu	13, 125
Lynch, Courtney	Penn State University	cml320@psu.edu	51
Lynch, Jeremy	Slippery Rock University	jeremy.lynch@sru.edu	71
Lynch, Sararose	Westminster College	lynchsd@westminster.edu	71
Lynch-Davis, Kathleen	Appalachian State University	lynchrk@appstate.edu	15, 91
	М		
Magiera, Marta T.	M Marquette University	marta.magiera@marquette.edu	154
Magiera, Marta T. Males, Lorraine Marie	Marquette University	marta.magiera@marquette.edu Imales2@unl.edu	154 126, 168
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Males, Lorraine Marie Manouchehri, Azita	Marquette University University of Nebraska, Lincoln The Ohio State University	lmales2@unl.edu manouchehri.1@osu.edu	126, 168 160, 180
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Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University	lmales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu	126, 168 160, 180 145 119
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Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary Marynowski, Richelle Mason, Marguerite Mary	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University University of Lethbridge College of William and Mary	lmales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu richelle.marynowski@uleth.ca mmmaso@wm.edu	126, 168 160, 180 145 119 197 30
Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary Marynowski, Richelle Mason, Marguerite Mary Matney, Gabriel	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University University of Lethbridge College of William and Mary Bowling Green State University	Imales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu richelle.marynowski@uleth.ca mmmaso@wm.edu gmatney@bgsu.edu	126, 168 160, 180 145 119 197 30 42
Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary Marynowski, Richelle Mason, Marguerite Mary Matney, Gabriel Mays, Michael	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University University of Lethbridge College of William and Mary Bowling Green State University West Virginia University	Imales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu richelle.marynowski@uleth.ca mmmaso@wm.edu gmatney@bgsu.edu mmays@wvu.edu	126, 168 160, 180 145 119 197 30 42 85
Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary Marynowski, Richelle Mason, Marguerite Mary Matney, Gabriel Mays, Michael McGatha, Maggie	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University University of Lethbridge College of William and Mary Bowling Green State University West Virginia University University of Louisville	Imales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu richelle.marynowski@uleth.ca mmmaso@wm.edu gmatney@bgsu.edu mmays@wvu.edu maggie.mcgatha@louisville.edu	126, 168 160, 180 145 119 197 30 42 85 33, 125
Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary Marynowski, Richelle Mason, Marguerite Mary Matney, Gabriel Mays, Michael McGatha, Maggie McIntyre, Leighton C.	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University University of Lethbridge College of William and Mary Bowling Green State University West Virginia University University of Louisville University of Georgia	Imales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu richelle.marynowski@uleth.ca mmmaso@wm.edu gmatney@bgsu.edu mmays@wvu.edu maggie.mcgatha@louisville.edu mr1mcint@uga.edu	126, 168 160, 180 145 119 197 30 42 85 33, 125
Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary Marynowski, Richelle Mason, Marguerite Mary Matney, Gabriel Mays, Michael McGatha, Maggie McIntyre, Leighton C. McKenney, Kristin	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University University of Lethbridge College of William and Mary Bowling Green State University West Virginia University University of Louisville University of Georgia University of Delaware	Imales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu richelle.marynowski@uleth.ca mmmaso@wm.edu gmatney@bgsu.edu mmays@wvu.edu maggie.mcgatha@louisville.edu mr1mcint@uga.edu kmckenne@udel.edu	126, 168 160, 180 145 119 197 30 42 85 33, 125 7
Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary Marynowski, Richelle Mason, Marguerite Mary Matney, Gabriel Mays, Michael McGatha, Maggie McIntyre, Leighton C. McKenney, Kristin McLeod, Kevin	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University University of Lethbridge College of William and Mary Bowling Green State University West Virginia University University of Louisville University of Georgia University of Delaware University of Wisconsin, Milwaukee	Imales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu richelle.marynowski@uleth.ca mmmaso@wm.edu gmatney@bgsu.edu mmays@wvu.edu maggie.mcgatha@louisville.edu mr1mcint@uga.edu kmckenne@udel.edu kevinm@uwm.edu	126, 168 160, 180 145 119 197 30 42 85 33, 125 7 112
Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary Marynowski, Richelle Mason, Marguerite Mary Matney, Gabriel Mays, Michael McGatha, Maggie McIntyre, Leighton C. McKenney, Kristin McLeod, Kevin Melhuish, Kathleen	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University University of Lethbridge College of William and Mary Bowling Green State University West Virginia University University of Louisville University of Georgia University of Delaware University of Wisconsin, Milwaukee Portland State University	Imales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu richelle.marynowski@uleth.ca mmmaso@wm.edu gmatney@bgsu.edu mmays@wvu.edu maggie.mcgatha@louisville.edu mr1mcint@uga.edu kmckenne@udel.edu kevinm@uwm.edu melhuish@pdx.edu	126, 168 160, 180 145 119 197 30 42 85 33, 125 7 112 22
Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary Marynowski, Richelle Mason, Marguerite Mary Matney, Gabriel Mays, Michael McGatha, Maggie McIntyre, Leighton C. McKenney, Kristin McLeod, Kevin Melhuish, Kathleen Metzger, Michelle	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University University of Lethbridge College of William and Mary Bowling Green State University West Virginia University University of Louisville University of Georgia University of Delaware University of Wisconsin, Milwaukee Portland State University University of Nebraska, Lincoln	Imales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu richelle.marynowski@uleth.ca mmmaso@wm.edu gmatney@bgsu.edu mmays@wvu.edu maggie.mcgatha@louisville.edu mr1mcint@uga.edu kmckenne@udel.edu kevinm@uwm.edu melhuish@pdx.edu mmetzger613@gmail.com	126, 168 160, 180 145 119 197 30 42 85 33, 125 7 112 22 197 168
Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary Marynowski, Richelle Mason, Marguerite Mary Matney, Gabriel Mays, Michael McGatha, Maggie McIntyre, Leighton C. McKenney, Kristin McLeod, Kevin Melhuish, Kathleen Metzger, Michelle Middleton, Catharina W.	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University University of Lethbridge College of William and Mary Bowling Green State University West Virginia University University of Louisville University of Georgia University of Delaware University of Wisconsin, Milwaukee Portland State University University of Nebraska, Lincoln East Carolina University	Imales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu richelle.marynowski@uleth.ca mmmaso@wm.edu gmatney@bgsu.edu mmays@wvu.edu maggie.mcgatha@louisville.edu mr1mcint@uga.edu kmckenne@udel.edu kevinm@uwm.edu melhuish@pdx.edu mmetzger613@gmail.com middletonc14@ecu.edu	126, 168 160, 180 145 119 197 30 42 85 33, 125 7 112 22 197 168 188
Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary Marynowski, Richelle Mason, Marguerite Mary Matney, Gabriel Mays, Michael McGatha, Maggie McIntyre, Leighton C. McKenney, Kristin McLeod, Kevin Melhuish, Kathleen Metzger, Michelle Middleton, Catharina W. Mikusa, Michael	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University University of Lethbridge College of William and Mary Bowling Green State University West Virginia University University of Louisville University of Georgia University of Delaware University of Wisconsin, Milwaukee Portland State University University of Nebraska, Lincoln East Carolina University The Ohio State University University of Delaware University of Delaware University of Indianapolis	Imales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu richelle.marynowski@uleth.ca mmmaso@wm.edu gmatney@bgsu.edu mmays@wvu.edu maggie.mcgatha@louisville.edu mr1mcint@uga.edu kmckenne@udel.edu kevinm@uwm.edu melhuish@pdx.edu mmetzger613@gmail.com middletonc14@ecu.edu mikusa.12@osu.edu	126, 168 160, 180 145 119 197 30 42 85 33, 125 7 112 22 197 168 188 84
Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary Marynowski, Richelle Mason, Marguerite Mary Matney, Gabriel Mays, Michael McGatha, Maggie McIntyre, Leighton C. McKenney, Kristin McLeod, Kevin Melhuish, Kathleen Metzger, Michelle Middleton, Catharina W. Mikusa, Michael Miller, Emily	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University University of Lethbridge College of William and Mary Bowling Green State University West Virginia University University of Louisville University of Georgia University of Delaware University of Wisconsin, Milwaukee Portland State University University of Nebraska, Lincoln East Carolina University The Ohio State University University of Delaware	Imales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu richelle.marynowski@uleth.ca mmmaso@wm.edu gmatney@bgsu.edu mmays@wvu.edu maggie.mcgatha@louisville.edu mr1mcint@uga.edu kmckenne@udel.edu kevinm@uwm.edu melhuish@pdx.edu mmetzger613@gmail.com middletonc14@ecu.edu Ekmiller@udel.edu	126, 168 160, 180 145 119 197 30 42 85 33, 125 7 112 22 197 168 188 84
Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary Marynowski, Richelle Mason, Marguerite Mary Matney, Gabriel Mays, Michael McGatha, Maggie McIntyre, Leighton C. McKenney, Kristin McLeod, Kevin Melhuish, Kathleen Metzger, Michelle Middleton, Catharina W. Mikusa, Michael Miller, Emily Miller, Travis K.	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University University of Lethbridge College of William and Mary Bowling Green State University West Virginia University University of Louisville University of Georgia University of Delaware University of Wisconsin, Milwaukee Portland State University University of Nebraska, Lincoln East Carolina University The Ohio State University University of Delaware University of Delaware University of Indianapolis	Imales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu richelle.marynowski@uleth.ca mmmaso@wm.edu gmatney@bgsu.edu mmays@wvu.edu maggie.mcgatha@louisville.edu mr1mcint@uga.edu kmckenne@udel.edu kevinm@uwm.edu melhuish@pdx.edu mmetzger613@gmail.com middletonc14@ecu.edu Ekmiller@udel.edu tmiller@uindy.edu	126, 168 160, 180 145 119 197 30 42 85 33, 125 7 112 22 197 168 188 84 112 53
Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary Marynowski, Richelle Mason, Marguerite Mary Matney, Gabriel Mays, Michael McGatha, Maggie McIntyre, Leighton C. McKenney, Kristin McLeod, Kevin Melhuish, Kathleen Metzger, Michelle Middleton, Catharina W. Mikusa, Michael Miller, Emily Miller, Travis K. Miller Bennett, Victoria A. Mills, Valerie Mintos, Alexia	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University University of Lethbridge College of William and Mary Bowling Green State University West Virginia University University of Louisville University of Georgia University of Pelaware University of Wisconsin, Milwaukee Portland State University University of Nebraska, Lincoln East Carolina University The Ohio State University University of Delaware University of Delaware University of Indianapolis University of Louisville National Council of Supervisors of Mathematics Purdue University	Imales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu richelle.marynowski@uleth.ca mmmaso@wm.edu gmatney@bgsu.edu mmays@wvu.edu maggie.mcgatha@louisville.edu mr1mcint@uga.edu kmckenne@udel.edu kevinm@uwm.edu melhuish@pdx.edu mmetzger613@gmail.com middletonc14@ecu.edu mikusa.12@osu.edu Ekmiller@uindy.edu vamill01@louisville.edu valerie.mills@oakland.k12.mi.us amintos@purdue.edu	126, 168 160, 180 145 119 197 30 42 85 33, 125 7 112 22 197 168 188 84 112 53 184 66 5
Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary Marynowski, Richelle Mason, Marguerite Mary Matney, Gabriel Mays, Michael McGatha, Maggie McIntyre, Leighton C. McKenney, Kristin McLeod, Kevin Melhuish, Kathleen Metzger, Michelle Middleton, Catharina W. Mikusa, Michael Miller, Emily Miller, Travis K. Miller Bennett, Victoria A. Mills, Valerie	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University University of Lethbridge College of William and Mary Bowling Green State University West Virginia University University of Louisville University of Georgia University of Delaware University of Wisconsin, Milwaukee Portland State University University of Nebraska, Lincoln East Carolina University The Ohio State University University of Delaware University of Delaware University of Indianapolis University of Louisville National Council of Supervisors of Mathematics	Imales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu richelle.marynowski@uleth.ca mmmaso@wm.edu gmatney@bgsu.edu mmays@wvu.edu maggie.mcgatha@louisville.edu mr1mcint@uga.edu kmckenne@udel.edu kevinm@uwm.edu melhuish@pdx.edu mmetzger613@gmail.com middletonc14@ecu.edu mikusa.12@osu.edu Ekmiller@uindy.edu vamill01@louisville.edu valerie.mills@oakland.k12.mi.us	126, 168 160, 180 145 119 197 30 42 85 33, 125 7 112 22 197 168 188 84 112 53 184 66
Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary Marynowski, Richelle Mason, Marguerite Mary Matney, Gabriel Mays, Michael McGatha, Maggie McIntyre, Leighton C. McKenney, Kristin McLeod, Kevin Melhuish, Kathleen Metzger, Michelle Middleton, Catharina W. Mikusa, Michael Miller, Emily Miller, Travis K. Miller Bennett, Victoria A. Mills, Valerie Mintos, Alexia	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University University of Lethbridge College of William and Mary Bowling Green State University West Virginia University University of Louisville University of Georgia University of Pelaware University of Wisconsin, Milwaukee Portland State University University of Nebraska, Lincoln East Carolina University The Ohio State University University of Delaware University of Delaware University of Supervisors of Mathematics Purdue University Bluegrass Community and Technical College Boston College	Imales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu richelle.marynowski@uleth.ca mmmaso@wm.edu gmatney@bgsu.edu mmays@wvu.edu maggie.mcgatha@louisville.edu mr1mcint@uga.edu kmckenne@udel.edu kevinm@uwm.edu melhuish@pdx.edu mmetzger613@gmail.com middletonc14@ecu.edu mikusa.12@osu.edu Ekmiller@uindy.edu vamill01@louisville.edu valerie.mills@oakland.k12.mi.us amintos@purdue.edu	126, 168 160, 180 145 119 197 30 42 85 33, 125 7 112 22 197 168 188 84 112 53 184 66 5
Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary Marynowski, Richelle Mason, Marguerite Mary Matney, Gabriel Mays, Michael McGatha, Maggie McIntyre, Leighton C. McKenney, Kristin McLeod, Kevin Melhuish, Kathleen Metzger, Michelle Middleton, Catharina W. Mikusa, Michael Miller, Emily Miller, Travis K. Miller Bennett, Victoria A. Mills, Valerie Mintos, Alexia Miriti, Landrea	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University University of Lethbridge College of William and Mary Bowling Green State University West Virginia University University of Louisville University of Georgia University of Delaware University of Wisconsin, Milwaukee Portland State University University of Nebraska, Lincoln East Carolina University The Ohio State University University of Delaware University of Delaware University of State University University of State University University of State University University of Supervisors of Mathematics Purdue University Bluegrass Community and Technical College	Imales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu richelle.marynowski@uleth.ca mmmaso@wm.edu gmatney@bgsu.edu maggie.mcgatha@louisville.edu mr1mcint@uga.edu kmckenne@udel.edu kevinm@uwm.edu melhuish@pdx.edu mmetzger613@gmail.com middletonc14@ecu.edu mikusa.12@osu.edu Ekmiller@uindy.edu vamill01@louisville.edu valerie.mills@oakland.k12.mi.us amintos@purdue.edu landrea.miriti@kctcs.edu	126, 168 160, 180 145 119 197 30 42 85 33, 125 7 112 22 197 168 188 84 112 53 184 66 5
Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary Marynowski, Richelle Mason, Marguerite Mary Matney, Gabriel Mays, Michael McGatha, Maggie McIntyre, Leighton C. McKenney, Kristin McLeod, Kevin Melhuish, Kathleen Metzger, Michelle Middleton, Catharina W. Mikusa, Michael Miller, Emily Miller, Travis K. Miller Bennett, Victoria A. Mills, Valerie Mintos, Alexia Miriti, Landrea Mitchell, Rebecca	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University University of Lethbridge College of William and Mary Bowling Green State University West Virginia University University of Louisville University of Georgia University of Pelaware University of Wisconsin, Milwaukee Portland State University University of Nebraska, Lincoln East Carolina University The Ohio State University University of Delaware University of Delaware University of Supervisors of Mathematics Purdue University Bluegrass Community and Technical College Boston College	Imales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu richelle.marynowski@uleth.ca mmmaso@wm.edu gmatney@bgsu.edu mmays@wvu.edu maggie.mcgatha@louisville.edu mr1mcint@uga.edu kmckenne@udel.edu kevinm@uwm.edu melhuish@pdx.edu mmetzger613@gmail.com middletonc14@ecu.edu mikusa.12@osu.edu Ekmiller@uindy.edu vamill01@louisville.edu valerie.mills@oakland.k12.mi.us amintos@purdue.edu landrea.miriti@kctcs.edu rebecca.mitchell@bc.edu	126, 168 160, 180 145 119 197 30 42 85 33, 125 7 112 22 197 168 188 84 112 53 184 66 5 93 20
Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary Marynowski, Richelle Mason, Marguerite Mary Matney, Gabriel Mays, Michael McGatha, Maggie McIntyre, Leighton C. McKenney, Kristin McLeod, Kevin Melhuish, Kathleen Metzger, Michelle Middleton, Catharina W. Mikusa, Michael Miller, Emily Miller, Travis K. Miller Bennett, Victoria A. Mills, Valerie Mintos, Alexia Miriti, Landrea Mitchell, Rebecca Mitten, Carolyn	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University University of Lethbridge College of William and Mary Bowling Green State University West Virginia University University of Louisville University of Georgia University of Delaware University of Wisconsin, Milwaukee Portland State University University of Nebraska, Lincoln East Carolina University The Ohio State University University of Delaware University of Delaware University of Supervisors of Mathematics Purdue University Bluegrass Community and Technical College Boston College University of Florida	Imales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu richelle.marynowski@uleth.ca mmmaso@wm.edu gmatney@bgsu.edu mmays@wvu.edu maggie.mcgatha@louisville.edu mr1mcint@uga.edu kevinm@uwm.edu melhuish@pdx.edu mmetzger613@gmail.com middletonc14@ecu.edu mikusa.12@osu.edu Ekmiller@uindy.edu vamill01@louisville.edu valerie.mills@oakland.k12.mi.us amintos@purdue.edu landrea.miriti@kctcs.edu rebecca.mitchell@bc.edu cmitten@ufl.edu m.mohr@uky.edu gmojica@email.unc.edu	126, 168 160, 180 145 119 197 30 42 85 33, 125 7 112 22 197 168 188 84 112 53 184 66 5 93 20 41
Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary Marynowski, Richelle Mason, Marguerite Mary Matney, Gabriel Mays, Michael McGatha, Maggie McIntyre, Leighton C. McKenney, Kristin McLeod, Kevin Melhuish, Kathleen Metzger, Michelle Middleton, Catharina W. Mikusa, Michael Miller, Emily Miller, Travis K. Miller Bennett, Victoria A. Mills, Valerie Mintos, Alexia Miriti, Landrea Mitchell, Rebecca Mitten, Carolyn Mohr-Schroeder, Margaret J.	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University University of Lethbridge College of William and Mary Bowling Green State University West Virginia University University of Louisville University of Georgia University of Pelaware University of Wisconsin, Milwaukee Portland State University University of Nebraska, Lincoln East Carolina University The Ohio State University University of Delaware University of Delaware University of Supervisors of Mathematics Purdue University Bluegrass Community and Technical College Boston College University of Florida University of Kentucky	Imales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu richelle.marynowski@uleth.ca mmmaso@wm.edu gmatney@bgsu.edu mmays@wvu.edu maggie.mcgatha@louisville.edu mr1mcint@uga.edu kmckenne@udel.edu kevinm@uwm.edu melhuish@pdx.edu mmetzger613@gmail.com middletonc14@ecu.edu mikusa.12@osu.edu Ekmiller@uindy.edu vamill01@louisville.edu valerie.mills@oakland.k12.mi.us amintos@purdue.edu landrea.miriti@kctcs.edu rebecca.mitchell@bc.edu cmitten@ufl.edu m.mohr@uky.edu	126, 168 160, 180 145 119 197 30 42 85 33, 125 7 112 22 197 168 188 84 112 53 184 66 5 93 20 41 140, 177
Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary Marynowski, Richelle Mason, Marguerite Mary Matney, Gabriel Mays, Michael McGatha, Maggie McIntyre, Leighton C. McKenney, Kristin McLeod, Kevin Melhuish, Kathleen Metzger, Michelle Middleton, Catharina W. Mikusa, Michael Miller, Emily Miller, Travis K. Miller Bennett, Victoria A. Mills, Valerie Mintos, Alexia Miriti, Landrea Mitchell, Rebecca Mitten, Carolyn Mohr-Schroeder, Margaret J. Mojica, Gemma Molitoris-Miller, Susanna Monson, Debra	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University University of Lethbridge College of William and Mary Bowling Green State University West Virginia University University of Louisville University of Georgia University of Delaware University of Wisconsin, Milwaukee Portland State University University of Nebraska, Lincoln East Carolina University The Ohio State University University of Delaware University of Delaware University of State University University of Flouisville National Council of Supervisors of Mathematics Purdue University Bluegrass Community and Technical College Boston College University of Florida University of North Carolina, Chapel Hill Kennesaw State University University of St. Thomas	Imales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu richelle.marynowski@uleth.ca mmmaso@wm.edu gmatney@bgsu.edu mmays@wvu.edu maggie.mcgatha@louisville.edu mr1mcint@uga.edu kevinm@uwm.edu melhuish@pdx.edu mmetzger613@gmail.com middletonc14@ecu.edu mikusa.12@osu.edu Ekmiller@uindy.edu vamill01@louisville.edu valerie.mills@oakland.k12.mi.us amintos@purdue.edu landrea.miriti@kctcs.edu rebecca.mitchell@bc.edu cmitten@ufl.edu m.mohr@uky.edu gmojica@email.unc.edu smolitor@kennesaw.edu debbie.monson@stthomas.edu	126, 168 160, 180 145 119 197 30 42 85 33, 125 7 112 22 197 168 188 84 112 53 184 66 5 93 20 41 140, 177
Males, Lorraine Marie Manouchehri, Azita Marshall, Anne M. Martin, W. Gary Marynowski, Richelle Mason, Marguerite Mary Matney, Gabriel Mays, Michael McGatha, Maggie McIntyre, Leighton C. McKenney, Kristin McLeod, Kevin Melhuish, Kathleen Metzger, Michelle Middleton, Catharina W. Mikusa, Michael Miller, Emily Miller, Travis K. Miller Bennett, Victoria A. Mills, Valerie Mintos, Alexia Miriti, Landrea Mitchell, Rebecca Mitten, Carolyn Mohr-Schroeder, Margaret J. Mojica, Gemma Molitoris-Miller, Susanna	Marquette University University of Nebraska, Lincoln The Ohio State University Lehman College Auburn University University of Lethbridge College of William and Mary Bowling Green State University West Virginia University University of Louisville University of Georgia University of Pelaware University of Wisconsin, Milwaukee Portland State University University of Nebraska, Lincoln East Carolina University The Ohio State University University of Delaware University of Delaware University of Supervisors of Mathematics Purdue University Bluegrass Community and Technical College Boston College University of Kentucky University of North Carolina, Chapel Hill Kennesaw State University	Imales2@unl.edu manouchehri.1@osu.edu anne.m.marshall@gmail.com martiwg@auburn.edu richelle.marynowski@uleth.ca mmmaso@wm.edu gmatney@bgsu.edu mmays@wvu.edu maggie.mcgatha@louisville.edu mr1mcint@uga.edu kmckenne@udel.edu kevinm@uwm.edu melhuish@pdx.edu mmetzger613@gmail.com middletonc14@ecu.edu mikusa.12@osu.edu Ekmiller@uindy.edu vamill01@louisville.edu valerie.mills@oakland.k12.mi.us amintos@purdue.edu landrea.miriti@kctcs.edu rebecca.mitchell@bc.edu cmitten@ufl.edu m.mohr@uky.edu gmojica@email.unc.edu smolitor@kennesaw.edu	126, 168 160, 180 145 119 197 30 42 85 33, 125 7 112 22 197 168 188 84 112 53 184 66 5 93 20 41 140, 177 12

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Morris, Anne K.	University of Delaware	abmorris@udel.edu	112
Mudzimiri, Rejoice	University of Southern Mississippi	rejoice.mudzimiri@usm.edu	161
Murray, Eileen Myers, Marrielle	Harvard University North Carolina State University	drmurraye@gmail.com marrielle.myers@gmail.com	36 94, 174
Myers, Marrielle	North Carolina State Oniversity	marrielle.myers@gmail.com	94, 174
	N		
Nagle, Courtney	Penn State Erie, The Behrend College	crt12@psu.edu	51
Naresh, Nirmala	Miami University	nareshn2@miamioh.edu	2, 176
Newton, Jill	Purdue University	janewton@purdue.edu	5, 50
Nickell, Jennifer	North Carolina State University	jnickel@ncsu.edu snickerson@mail.sdsu.edu	169, 194
Nickerson, Susan Nielsen, Lynne	San Diego State University Louisiana Tech University	nielsen@latech.edu	83 60
Norton, Anderson	Virginia Tech	norton3@vt.edu	162
Novak, Jodie	University of Northern Colorado	jodie.novak@unco.edu	21, 61
	•		
	0		
Ochieng, Mary Achieng Okumuş, Samet	Western Michigan University North Carolina State University	maryachieng.ochieng@wmich.edu sokumus@ncsu.edu	37 109
Olmez, Ibrahim Burak	University of Georgia	i.burakolmez@hotmail.com	100, 172
Olson, Judith	University of Hawaii	jkolson@hawaii.edu	77
Olson, Melfried	University of Hawaii	melfried@hawaii.edu	77, 120
Olson, Travis A. Ortiz, Enrique	University of Nevada, Las Vegas University of Central Florida	travis.olson@unlv.edu enrique.ortiz@ucf.edu	77, 102 78
Ozgun-Koca, S. Asli	Wayne State University	aokoca@wayne.edu	84, 154
	Р		
Pair, Jeffrey D.	Middle Tennessee State University	jeffrey.pair@mtsu.edu	92
Paolucci, Catherine	State University of New York, New Paltz	paoluccic@gmail.com	106
Pape, Stephen J. Parker, Frieda	Johns Hopkins University University of Northern Colorado	Stephen.Pape@jhu.edu catherine.parker@unco.edu	104 21
Perry, Debbie Hunter	Midway Independent School District, Texas	debbie.perry@midwayisd.org	11
Peters, Susan A.	University of Louisville	s.peters@louisville.edu	140, 184
Peterson, Blake	Brigham Young University	blake@byu.edu	54, 148
Philipp, Randolph Poling, Lisa L.	San Diego State University Appalachian State University	rphilipp@mail.sdsu.edu polingll@appstate.edu	110, 151 91
Powell, Angiline	University of Memphis	apowell3@memphis.edu	153
Powell, Arthur Belford	Rutgers University	powellab@andromeda.rutgers.edu	143
Powers, Robert Prosser, Sherri	University of Northern Colorado University of Florida	robert.powers@unco.edu sprosser@ufl.edu	28, 197 104
11033et, Jiletti	Offiversity of Florida	sprosser@un.edu	104
	Q		
Quebec Fuentes, Sarah	Texas Christian University	s.quebec.fuentes@tcu.edu	79
	·	·	
	R		
Rakes, Christopher	University of Maryland, Baltimore County	christopher.rakes@gmail.com	152
Rapacki, Lauren	Indiana University	lrapacki@indiana.edu	101
Redmond-Sanogo, Adrienne Reeder, Stacy	Oklahoma State University University of Oklahoma	adrienne.redmond@okstate.edu reeder@ou.edu	116 92, 116
Reys, Robert	University of Missouri	reysr@missouri.edu	70
Rhine, Steve	Pacific University	steverhine@yahoo.com	110
Riffel, Andrew Marcell	Portland State University	riffel@pdx.edu	197 97
Roberts, Sarah A. Robinson, Sharon	lowa State University American Assoc. of Colleges for Teacher Education	sarahann.roberts@gmail.com srobinson@aacte.org	80, 136
	sites and the same of the same	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	23, 130

AMTE 2015 Annual Conference

Roble, Amanda	The Ohio State University	roble.9@osu.edu	180
Ronau, Robert N.	University of Cincinnati	robert.ronau@uc.edu	140, 152
Roth McDuffie, Amy	Washington State University Tri-Cities	mcduffie@tricity.wsu.edu	3
Rougee, Annick	University of Michigan	arougee@umich.edu	59, 150
Ruggles, Krista	University of Florida	kristaruggles@ufl.edu	18
Rumsey, Chepina	Kansas State University	chepina@ksu.edu	82
	S		
Safak, Elif	Illinois Stata University	esafak@ilstu.edu	142, 156
Safi, Farshid	Illinois State University	safi@tcnj.edu	142, 136
Sahin, Nesrin	College of New Jersey University of Central Florida	sahin@knights.ucf.edu	65
Salinas, Alejandra	Boston University	salinas@bu.edu	97, 186
Samuels, Shari	Montana State University	miller@math.montana.edu	57, 160
Sanchez, Wendy B.	Kennesaw State University	wsanchez@kennesaw.edu	137
Sanfratello, Andrew	Teachers College, Columbia University	asanfratello@gmail.com	115
Sanjari Pirmahaleh, S. Azin	The Ohio State University	sanjaripirmahaleh.1@osu.edu	180
Sattler, Nancy	American Mathematical Assoc. of Two Year Colleges	nsattler@terra.edu	122
Schack, Edna O.	Morehead State University	e.schack@morehead-st.edu	114
Schmidt, Teresa A.	Middle Tennessee State University	tschmidt@mtsu.edu	92, 154
Schock, Bridget	University of Wisconsin, Milwaukee	Schockbx@milwaukee.k12.wi.us	
Schoen, Robert	Florida State University	rschoen@lsi.fsu.edu	60, 121
Schultz, Kyle T.	James Madison University	schultkt@jmu.edu	24
Schwartz, Catherine	East Carolina University	schwartzca@ecu.edu	132
Seaman, Carol E.	University of North Carolina, Greensboro	ceseaman@uncg.edu	132
Seehausen, Alees Teel	University of Northern Colorado	alees.seehausen@unco.edu	28
Selling, Sarah Kate	Stanford University	sselling@stanford.edu	114, 175
Selmer, Sarah	West Virginia University	sarah.selmer@mail.wvu.edu	114
Shaughnessy, Meghan	University of Michigan	mshaugh@umich.edu	16
Sherman, Diana	University of Michigan	shdiana@umich.edu	49, 58
Sherman, Milan F.	Drake University	milan.sherman@drake.edu	183
Shih, Jeffrey	University of Nevada, Las Vegas	jeffrey.shih@unlv.edu	6
Shippee, Eric	College of William and Mary	Ewship@wm.edu	30
Siegfried, John (Zig) Michael	James Madison University	siegfrjm@jmu.edu	162
Silver, Edward	University of Michigan	easilver@umich.edu silverman@drexel.edu	167 107
Silverman, Jason	Drexel University Pacific Lutheran University	_	170
Simic-Muller, Ksenija Simpson, Amber	Clemson University	simicmka@plu.edu amsimps@g.clemson.edu	114, 123
Singer, Susan Rundell	National Science Foundation	srsinger@nsf.gov	31
Siy, Eric	University of Georgia	ericsiy@uga.edu	179
Sjostrom, Mary Pat	Chaminade University	sjostrom.chaminade@gmail.con	
Slate Young, Erica	University of Alabama, Huntsville	ers0008@uah.edu	58
Smith, Margaret	University of Pittsburgh	pegs@pitt.edu Thur	sday General Session, 113
Smith, Michel	Auburn University	smith01@auburn.edu	159
Smith, Ryan C.	University of Georgia	smithryc@uga.edu	7, 193
Smith, Wendy	University of Nebraska, Lincoln	wsmith5@unl.edu	191
Snider, Rachel B.	University of Michigan	rsnider@umich.edu	59
Somers, John	University of Indianapolis	jsomers@uindy.edu	14
Son, Ji-Won	University at Buffalo, State University of New York	jiwonson@buffalo.edu	23
Spangler, Denise A.	University of Georgia	dspangle@uga.edu	64, 70
Staples, Megan	University of Connecticut	megan.staples@uconn.edu	50
Stark, Walter	St. Pancras Middle School, Glendale, New York	drofmath@aol.com	103
Starling, Tina T.	North Carolina State University	tina_starling@ncsu.edu	132
Steckroth, Jeffrey John	Christopher Newport University	jeffrey.steckroth@cnu.edu	67
Steele, Michael	University of Wisconsin, Milwaukee	steelem@uwm.edu	22, 113
Stehr, Eryn M.	Michigan State University	stehrery@msu.edu	5
Stevens, Alexis L.	James Madison University Michigan Tachnological University	stevenal@jmu.edu stockero@mtu.edu	162 37, 54
Stockero, Shari L.	Michigan Technological University	strutme@auburn.edu	119
Strutchens, Marilyn E. Stumpf, Kathryn	Auburn University Brookhill Institute of Mathematics	kathy.stumpf@brookhillmath.or	
Suiter, Dianne C.	Miami University	Diannecsuiter@gmail.com	176
Sun, Li	University of Houston	l.sun730@gmail.com	25
Sutherland, Pierre	University of Georgia	psuth@uga.edu	166
Suzuka, Kara	University of Michigan	ksuzuka@umich.edu	165
Swartz, Barbara	McDaniel College	bswartz@mcdaniel.edu	157
	-		

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180

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Roble, Amanda

Switzer, John M. Sztajn, Paola	Texas Christian University North Carolina State University	j.switzer@tcu.edu psztajn@ncsu.edu	187 32, 174
	T		
Tan, Paulo Tapp, Laura Elizabeth Kathryn Tassell, Janet Taylor, Cynthia Taylor, Megan Westwood Taylor, P. Mark Tazaz, Amanda Teuscher, Dawn Thanheiser, Eva Thomas, Amanda Thomas, Christine Thomas, Jonathan Norris Thompson, Denisse R. Thrasher, Emily Thunder, Kateri Tobias, Jennifer M. Trinter, Christine Troudt, Melissa Tucker, Claudette Denise Turner, Erin Tyminski, Andrew	Indiana University University of Central Florida Western Kentucky University Millersville University of Pennsylvania Sonoma State University Carson-Newman University Florida State University Brigham Young University Portland State University Penn State Harrisburg Georgia State University Northern Kentucky University University of South Florida North Carolina State University James Madison University Illinois State University Virginia Commonwealth University University of Northern Colorado University of Georgia University of Arizona Clemson University	paultan@indiana.edu laura.tapp@knights.ucf.edu janet.tassell@wku.edu cynthia.taylor@millersville.edu ilovemath@mac.com ptaylor@cn.edu atazaz@lsi.fsu.edu dawn.teuscher@byu.edu evat@pdx.edu alt20@psu.edu cthomas11@gsu.edu thomasj13@nku.edu Thompson@tempest.coedu.usf.edu epthrash@ncsu.edu thundekg@jmu.edu jtobias@ilstu.edu ctrinter@vcu.edu melissa.goss@unco.edu cdtucker@uga.edu eturner@email.arizona.edu amt23@clemson.edu	127 65 114 68 190 92 60, 121 102, 187 178, 197 47 17 114 74 194 24 156, 178 48 197 35 159
	U		
Usiskin, Zalman Utley, Juliana Uzan, Erol	University of Chicago Oklahoma State University Indiana University	z-usiskin@uchicago.edu juliana.utley@okstate.edu eroluzan@indiana.edu	38 92, 116 1, 171
	V		
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	W		
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AMTE 2015 Annual Conference

White, Diana White, Dorothy Y. White, Tracy Foote Wickstrom, Megan H. Wieman, Rob Wilburne, Jane M. Wilkerson, Trena Wilkins, Jesse L. M. Williams, Madelyn Wilson, Holt Wilson, Patricia Wolfe, Christopher B. Wray, Jon	University of Colorado, Denver University of Georgia North Carolina State University Montana State University Rowan University Penn State Harrisburg Baylor University Virginia Tech University of Connecticut University of North Carolina, Greensboro University of Georgia Saint Leo University Assoc. of Maryland Mathematics Teacher Educators	diana.white@ucdenver.edu dywhite@uga.edu tsfoote@ncsu.edu megawicks@gmail.com gomathman@yahoo.com jmw41@psu.edu Trena_Wilkerson@baylor.edu wilkins@vt.edu madelyn.williams@uconn.edu phwilson@uncg.edu pswilson@uga.edu Chrisbwolfe@gmail.com jon_wray@hcpss.org	146 35 32 156 110 41, 163 11 162 26 174 166 60 157
	Х		
Xie, Jinxia	Syracuse University	jxie04@syr.edu	77
	Υ		
Yee, Sean P. Young, Jamaal Rashad Yow, Jan A.	University of South Carolina University of North Texas University of South Carolina	seanpyee@gmail.com jamaal.young@unt.edu jyow@sc.edu	62, 190 6 146
	Z		
Zahner, William Zazkis, Rina Ziegler, Jeff Zorin, Barbara	Boston University Simon Fraser University Brookhill Institute of Mathematics University of South Florida, St. Petersburg	wzahner@bu.edu zazkis@sfu.ca jeff.ziegler@brookhillmath.org drbzorin@gmail.com	43 150 195 74

AMTE EVENTS AT THE 2015 NCTM & NCSM ANNUAL CONFERENCES

APRIL 15 - 18, 2015 IN BOSTON, MASSACHUSETTS

AMTE SPECIAL INTEREST SESSION AT THE NCSM CONFERENCE

Wednesday afternoon, April 15, 2015 3:30 – 4:30 PM Room Location TBA The Boston Convention & Exhibition Center

AMTE RECEPTION AT THE NCTM CONFERENCE

Thursday, April 16, 2015 6:00 - 7:30 pm Room Location TBA The Westin Boston Waterfront

All members and interested persons are invited to attend.

For more detailed information, please visit **amte.net**

AMTE'S 2016 ANNUAL CONFERENCE

We invite you to attend and speak at next year's Twentieth Annual AMTE Conference, which will be held on January 28 – 30, 2016, in Irvine, California. The *Call for Proposals* will be available on the AMTE website (www.amte.net) by March 1, 2015, and in the next issue of *AMTE Connections*. Shannon Dingman of University of Arkansas (sdingman@uark.edu) is the Program Chair.

The deadline for submitting proposals for the 2016 Annual Conference is May 15, 2015.

Visit amte.net for updated information about the 2016 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 of Talk
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

AMTE STANDING COMMITTEES

AFFILIATE CONNECTIONS COMMITTEE

2012 - 2015

Jacqueline Coomes (Chair, 2014), Eastern Washington University, jcoomes@mail.ewu.edu Dana Franz, Mississippi State University, dana.pomykal.franz@colled.msstate.edu

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, University of Indianapolis, jslee@uindy.edu

2015 - 2018

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COMMUNICATIONS COMMITTEE

2012 - 2015

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2015 - 2018

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2012 - 2015

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2013 - 2016

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EMERGING ISSUES COMMITTEE

2013 - 2015

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2015 - 2018

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2013 - 2016

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2014 - 2017

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2015 - 2018

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2013 - 2016

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Makini Sutherland, University of Central Florida
Laura Tapp, University of Central Florida

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Jia He, Michigan State University Timothy Hendrix, Meredith College

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Erik Jacobson, Indiana University

Naomi Jessup, The University of North Carolina at

Greensboro

Lisa Jilk, University of Washington

Heather Johnson, University of Colorado, Denver

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Mark Koester, MSU Denver
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Yating Liu, Old Dominion University

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Giang-Nguyen Nguyen, University of West Florida

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County

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Stacy Reeder, University of Oklahoma

Ginger Rhodes, University of North Carolina Wilmington

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Kyle Schultz, James Madison University Ruthmae Sears, University of South Florida Sarah Selmer, West Virginia University

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Tod Shockey, University of Toledo Mary Pat Sjostrom, Chaminade University

David Slavit, Washington State University Vancouver

Monica Smith, Penn State University Ryan Smith, University of Georgia

Wendy Smith, University of Nebraska, Lincoln

Rachel Snider, University of Michigan

Ji-Won Son, University at Buffalo, State University of New York

YORK

Tina Starling, North Carolina State University Jeffrey Steckroth, Christopher Newport University Shari Stockero, Michigan Technological University

Barbara Swartz, McDaniel College

Sylvia Taube, Sam Houston State University

Cynthia Taylor, Millersville University of Pennsylvania

P. Mark Taylor, Carson-Newman University Hartono Tjoe, Penn State University Andrew Tyminski, Clemson University Juliana Utley, Oklahoma State University

Janet Walker, Indiana University of Pennsylvania

Jennifer Ward, University of South Florida

Jared Webb, University of North Carolina, Greensboro

Pamela Wells, Grand Valley State University Judy Werner, Slippery Rock University Ann Wheeler, Texas Woman's University Janet White, Millersville University Jane Wilburne, Penn State Harrisburg Trena Wilkerson, Baylor University

Aaron Wilson, The University of Texas-Pan American Holt Wilson, University of North Carolina, Greensboro

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AMTE 2015 Annual Conference 90

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CONNECTIONS NEWSLETTER

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Term: (through 2017)

Co-Editor: Michael Todd Edwards, Miami University, edwardm2@miamioh.edu

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2015 - 2018

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AMTE Board Member, 2014

Christine Browning, Western Michigan University, christine.browning@wmich.edu



AMTE 2015 BUSINESS MEETING AGENDA

Saturday, February 14, 2015 Rosen Plaza Hotel, Orlando, FL

A. Welcome

B. Approval of the Minutes

C. Treasurer & Membership Report

D. Committee and Task Force Reports

Committees:

Affiliates Connections

Awards

Communications

Constitution and Bylaws

Emerging Issues

Membership

Mentoring

STaR Program

Nominations and Elections

Professional Development

Program

Research

Technology (and NTLI Award)

E. Publications

Mathematics Teacher Educator Journal

Connections Newsletter

CITE Journal

F. New Affiliate Announcement MI-AMTE

G. Conferences

H. Recognitions

Program & Local Arrangements Committee Chairs Outgoing Board Members & Committee Chairs

I. Other Business

J. Installation of new Board Members

K. 2015 Strategic Priorities & Announcements

L. Adjournment

Fran Arbaugh

Nicole Rigelmann

Suzanne Harper, Tim Hendrix

Jacqueline Coomes, Chair

Courtney Koestler, Chair

Jo Ann Cady, Chair

Jane Cushman, Chair

Jennifer Luebeck, Chair

Travis Miller, Chair

Angela Barlow, Chair

Barbara Reys, Bob Reys, Co-chairs

Karen Karp, Chair

Dorothy White, Chair

Dusty Jones, Chair

Mary Foote, Chair

S. Asli Ozgun-Koca, Chair

Laura Van Zoest, Panel Chair

Babette Benken, Editor

Denny St. John, Michael Todd Edwards,

Co-Editors

Fran Arbaugh

Susan Gay

Tim Hendrix & Fran Arbaugh

Fran Arbaugh

Christine Thomas



MINUTES AMTE 2014 BUSINESS MEETING

Saturday, February 8, 2014 Irvine, CA

Fran Arbaugh, President, called the meeting to order at 12:17 pm.

Welcome

Fran Arbaugh welcomed the membership.

Approval of the Minutes

Maggie McGatha, Secretary, called for any changes to the 2013 Business Meeting minutes and there were none. Jenny Bay-Williams moved to accept the minutes, Chrystal Dean seconded. Unanimously approved.

Treasurer Report

Suzanne Harper, Treasurer, presented the expenditures and income from July 1, 2013 to January 31, 2014. Our budget for the year is \$74,050 and we have brought in \$64,870 so far. Expenses so far this year are \$31,170. In 2010 the board recommended that we have \$90,000 on reserve. We currently have \$101,281.60 on reserve.

Membership Report

Nadine Bezuk, Executive Director, presented the Membership report. Our current membership is 947. We have over 200 graduate student members and 17 emeritus members. Nadine reminded the membership that we have a Membership Drive in progress until April 15.

Committee and Task Force Reports Committees:

Affiliates Connections

Christine Walker, Chair, thanked the committee for their work. Carol Fry Bolin has completed her service to the committee; Alejandra Salinas and Jean Lee begin their tenure on the committee. The new chair of the committee is Jacqueline Coomes. Fran thanked Christine for her service as chair and presented her with a plaque.

Committee Activities:

• Hosted a conference session and focused their work this year on advocacy for the affiliates

<u>Awards</u>

Courtney Koestler, Chair, thanked the committee for their work. Diana Erchick and Kathleen Lynch-Davis have completed their service to the committee; Bethany Noblitt and Stephanie Livers begin their tenure on the committee. Courtney Koestler will serve as chair again this year.

Committee Activities:

- Courtney reminded the membership that next year's awards are the Early Career and Excellence in Teaching in Teacher Education Awards. Information about the awards are on the website.
- AMTE has two scholarship opportunities for the membership: Susan Gay Graduate Student Travel and Elementary Mathematics Specialist. The committee encourages the membership to nominate people for the awards and scholarships.

Communications

Travis Olson, Chair, thanked the committee for their work. Laura McLeman and John (Zig) Siefried have completed their service to the committee; Lorraine Mills and Tracy Goodson-Espy begin their tenure on the committee. The new chair of the committee is Jo Ann Cady. Fran thanked Travis for his service as chair and presented him with a plague.

Committee Activities:

- Found and implemented a new Conference App better suitable for our conference
- Working to foster and sustain a presence on Facebook and Twitter
- Organized a Help Desk for this conference to facilitate working through issues with the Conference App, and with Social Media

Constitution and Bylaws

Chrystal Dean, Member, thanked the committee for their work. Melva Grant and Azita Manoucherhri begin their tenure on the committee. Jane R. Cushman will serve as the chair again this year.

Committee Activities:

• There were no changes to the Constitution and Bylaws this year.

Emerging Issues

Francis (Skip) Fennell, Chair, thanked the committee for their work. W. Gary Martin has completed his service to the committee; Kathryn Chval and Marilyn Strutchens begin their tenure on the committee. The new chair of the committee is Jennifer Luebeck. Fran thanked Skip for his service as chair and presented him with a plaque.

Committee Activities:

- Provided a response to the draft report of the CAEP Commission Report
- Issued a statement on the release of the NCTO report on teacher education.
- Submitted a motion to the AMTE Board about the NCTM's Principles to Action document.
- Created and sent a proposed AMTE position statement related to the CCSS-M to the AMTE Board.
- Helped to initiate an Emerging Issues "tab" on the AMTE Website. Use it!!
- Hosted advocacy-related sessions at the 2014 Conference: Advocacy Breakfast, Advocacy Toolkit Session;
 What it means to be a Math Educator

For next vear

- Decide how to populate the EIC "tab" on the website
- Continue to examine how AMTE can grow and gain recognition as an important voice in the field.

Membership

Travis Miller, Chair, thanked the committee for their work. Andrew Tyminski and Adele Hanlon have completed their service to the committee; Jonathan Bostic and Jane Kaiser begin their tenure on the committee. Travis Miller will serve as the chair of the committee again this year.

Committee Activities:

• Membership Drive that runs through April 15.

Mentoring

Angela Barlow, Chair, thanked the committee for their work. Hilda Borko and Jeremy Winters have completed their service to the committee; Jennifer Chauvot and Dave Kennedy begin their tenure on the committee. Angela Barlow will serve as the chair of the committee again this year.

Conference Activities:

- Discussion tables
- Reception for graduate students and early career MTEs
- Dining out options
- New upcoming mentoring activity for Summer 2014

STaR Program

Anita Wager, Member, thanked the committee for their work. Jeff Wanko, Denise Spangler, and Sue Peters begin their tenure on the committee. Barbara and Bob Reys will serve as co-chairs of the committee again this year.

Committee Activities:

- Spring: Solicited donations to continue the program (\$38,000 pledged)
- Summer: Held STaR Institute for 4th cohort (33 early career MTEs)
- Fall: Recruited 5th cohort of Fellows (50 applications, 30 confirmed Fellows)
- To date, the STaR program has served 148 Fellows at 113 institutions in 41 states
- Denise Spangler and Jeff Wanko are new Co-Directors

Nominations and Elections

Fran Arbaugh, President, thanked the committee for their work. Susan Gregson and Maggie Niess have completed their service to the committee; Adam Feldhaus and Margaret Mohr-Schroeder begin their tenure on the committee. The new chair of the committee is Karen Karp. Fran thanked Maggie Niess for her service as chair and will send her a plaque.

Committee Activities

- Established on-line nominations and applications process
- Thank the members who were willing to be nominated for multiple positions.
- Encourage the membership to actively consider their candidacy for the officers for 2014: Treasurer and Board Member-at-Large
- Encourage the membership to begin thinking about running for President in 2015.

Professional Development Committee

Michael Steele, member, thanked the committee for their work. Amy Hillen and Mark Thames begin their tenure on the committee. Dorothy White will serve as chair of the committee again this year.

Committee Activities:

- Organized 5 webinars for 2013-14
- Organized the Learn and Reflect Strands
 - o Preservice Teachers' Field Experiences Strand for the 2014 AMTE Conference

Conference Program

Shannon Driskell, Chair, thanked committee members for the hard work on the conference. Farshid Safi, Stacy Reeder, David Slavit, and Jill Newton begin their tenure on the committee. The chair of the 2015 committee is Dustin Jones. Fran thanked Shannon Driskell for her service as chair and presented her with a plaque.

Conference Activities:

- 407 submitted proposals (48% accepted)
- 205 sessions
- 429 presenters
- 134 proposal reviewers
- AMTE 2015 Proposal Deadline May 15, 2014

Fran presented plaques to the Local Arrangements Co-Chairs, Mark Ellis and Susan Glassett Farrelly

Research

Mary Foote, Chair, thanked the committee for their work. Corey Drake and Amy Roth McDuffie have completed their service to the committee; Matthew Felton-Koestler and Janet Frost begin their tenure on the committee. Mary Foote will serve as chair again this year.

Committee Activities:

- Restructured the Research tab on the AMTE website. New areas:
 - o Useful Articles (of interest to members)
 - Getting Personal (interviews with mathematics teacher educators)
 - News and Updates (upcoming dates of interest to community; NSF deadlines of interest to the community
- Revised committee charge, which was approved by the AMTE Board

Technology (and NTLI Award)

Fran Arbaugh, President, thanked committee for their work. Ginny Keen, and Mi Yeoon Lee begin their tenure on the committee. Fran thanked Margaret Mohr-Schroder for her service as chair and will send her a plaque. The new chair of the committee is Asli Ozgun-Koca.

Committee Activities:

- Had 3 submissions for the NTLI Award. This year's awardee (co-presenters): Steve Rhine, Rachel Harrington, and Brandon Olszewski
- Presented a Technology Workshop Session led by Hollylynne Lee-North Carolina State University Goals for 2014:
 - Develop a stronger relationship with CITE Journal and the Publications Committee
 - Continue the Technology Workshop session at the annual conference

Equity Task Force

Fran Arbaugh, President, thanked the task force members for their work. Rochelle Gutierrez and Beth Herbel-Eisenmann will continue as co-chairs of the task force this year.

Task Force Activities:

- Continued offering a professional development session for methods instructors at the annual conference
- Developed the Reflect and Learn Strand for the annual conference
- Developed and offered an equity-focused workshop for STaR participants

Publications

Mathematics Teacher Educator Journal

Denise Spangler, Chair, thanked the members of the editorial board and welcomed Laura Van Zoest, as the new chair for this year. A new editorial team begins in 2015. The editor will be Sandra Crespo and the associate editor will be Kristen Bieda.

Editorial Panel Activities:

- Published 3 issues thus far
- Volume 2, Issue 2 coming in early March
- AMTE webinar on writing for MTE is archived on AMTE Website

Connections Newsletter

Trena Wilkerson, Editor, thanked the editorial panel for their work. Lorraine Gregory has completed her service to the committee; Daniel Ilaria and Maggie Niess begin their tenure on the editorial team. Babette Benken is the new editor. Trena reminded the membership to write for the newsletter. It is a peer-reviewed process. There is additional information on the website.

CITE Journal

Fran encouraged the membership to submit articles for the CITE. Doug Lapp and Michael Todd Edwards are the co-editors for 2014. Doug asked the membership to consider serving as a reviewer. Because it is an online journal you can include links to video, etc.

New Affiliate

Fran recognized the AMTE-NC as the newest AMTE Affiliate, our 22nd affiliate.

Conferences

Susan Gay, Conference Director, thanked the hotel and wait staff for their support during the conference. Susan thanked the membership for their attendance at the conference and invited them to attend the 2015 conference in Orlando. FL.

Recognitions

Outgoing Board & Committee Members

Fran Arbaugh thanked outgoing Board members Beth Herbel-Eisenmann (Member At-large), Maggie McGatha (Secretary), Trena Wilkerson (Newsletter Editor), and Marilyn Strutchens (past-president) for their service.

Fran recognized Nadine Bezuk for her 12 years of service as the Executive Director. She presented Nadine with a "bouquet" of written notes of appreciation from the membership as well as a clock for her "timeless" service. Nadine served as Executive Director, from September 2001 – February 2014; NCTM Representative from April 1999 – September 2001; Immediate Past President from January 1999 – February 2000; President from April 1997 – January 1999; President-elect from April 1996 - April 1997; and Treasurer from April 1994 - April 1996.

Fran recognized Tim Hendrix as the Website Director for the past four years and introduced him as the new Executive Director.

Fran recognized Marilyn Strutchens for her service to the organization as President-elect, President, and Past-President. She reminded the membership that Marilyn will still be actively involved in AMTE. She is representing AMTE in the Illustrative Mathematics Project, the Formative Assessment Group with NCTM and NCSM, and the Emerging Issues Committee.

Other Business

Installation of new Board Members

Fran Arbaugh welcomed incoming Board members Christine Thomas (President-elect), Tim Boerst (Member-At-Large), Nicole Rigelman (Secretary) and Babette Benken (Newsletter Editor)

Review of 2013 Strategic Priorities

Fran reviewed the 2013 Board Priorities of (1) Positioning AMTE as a vocal and influential participant in national policy initiatives regarding mathematics teacher education, and (2) Focusing explicit attention on the connections among mathematics teacher education research, practice, and policy.

2014 Strategic Priorities & Announcements

Fran Arbaugh outlined the following Action Priorities for 2014:

- 1. Connecting with members year round (AMTE it's not just the conference!)
- 2. Enhancing the suite of AMTE membership benefits for early career mathematics teacher educators' professional development

Adjournment

Fran adjourned the meeting at 1:20 pm.

Respectfully submitted by Maggie McGatha



AMTE AWARDS:

EXCELLENCE IN MATHEMATICS TEACHER EDUCATION AWARD

2016 NADINE BEZUK AWARD FOR EXCELLENCE IN LEADERSHIP & SERVICE IN MATHEMATICS TEACHER EDUCATION

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, research). The recipient will give a featured presentation at the AMTE Annual Conference in the year they receive the award.

The 2016 Nadine Bezuk Award for Excellence in Leadership & Service in Mathematics Teacher Education is intended to recognize a colleague for a unique contribution in leadership and service that has made a significant and lasting contribution to the field of mathematics teacher education. The nominee shall have demonstrated commitment to mathematics teacher education through 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, writing and participating in grants, conferences, symposia, academies, supervisor of a student affiliate organization).
- 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 (local, state, national level).
- e. An unusual commitment to the support of mathematics teachers in the field (such as distinctive mentoring experiences)

CRITERIA FOR THE NADINE BEZUK EXCELLENCE IN LEADERSHIP & SERVICE AWARD

The nominee for the Nadine Bezuk Excellence in Leadership and Service 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 THE NADINE BEZUK EXCELLENCE IN LEADERSHIP & SERVICE 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. Multiple authored letters 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 2015 for more information of where to upload.

DEADLINE FOR NOMINATIONS

Nominations for the Nadine Bezuk Excellence in Leadership and Service Award must be received by October 15, 2015.

Please be sure that the nomination materials are clearly labeled with the name of the nominee.



AMTE AWARDS: EARLY CAREER AWARD

2016 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 an active AMTE member and mathematics teacher educator practicing 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 his or her 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 <u>two</u>) 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. The file should be uploaded to the AMTE Awards website. See http://amte.net/about/awards in summer 2015 for more information of where to upload.

Please be sure that all items in the nomination materials are clearly labeled with the name of the nominee.

DEADLINE FOR NOMINATIONS

Nominations for the Early Career Award must be received by October 15, 2015.



SUSAN GAY AMTE CONFERENCE SCHOLARSHIP FOR GRADUATE STUDENTS

2016 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 memberat-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 content 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, 2015: Applications due.
- September 1, 2015: 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:

Http://amte.net/about/awards/susangayscholarship

IN THE APPLICATION, PLEASE PROVIDE THE FOLLOWING INFORMATION:

Part A

- 1. Name
- 2. Mailing Address
- 3. Fmail
- 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

- 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



CONTEMPORARY ISSUES IN TECHNOLOGY AND MATHEMATICS TEACHER EDUCATION

http://www.citejournal.org

CITE: CALL FOR MANUSCRIPTS

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 are 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://site.aace.org/newpubs/index.cfm?fuseaction=Info.CITEEntrance). Inquiries about potential manuscript topics are welcomed.

The following are examples of works published in *CITE-Math*. Note that the second article includes embedded video, thus capitalizing on the online aspects of the journal. Prospective authors are encouraged to include interactive artifacts with manuscripts they submit.

Roy, G. J., Vanover, C., Fueyo, V., & Vahey, P. (2012). Providing professional support to teachers who are implementing a middle school mathematics digital unit. *Contemporary Issues in Technology and Teacher Education*, *12*(2). Retrieved from http://www.citejournal.org/vol11/iss3/mathematics/article1.cfm

Lee, H. S., Kersaint, G., Harper, S., Driskell, S. O., & Leatham, K. R. (2012). Teachers' statistical problem solving with dynamic technology: Research results across multiple institutions. *Contemporary Issues in Technology and Teacher Education*, 12(3). Retrieved from http://www.citejournal.org/vol11/iss3/mathematics/article1.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 review.

INTERESTED?

Please go to http://site.aace.org/newpubs/index.cfm?fuseaction=Info.CITEEntrance and provide information online. You will need to select CITE-Math as the journal you are willing to review. After you have completed the online form, please send an email to one of the CITE-Math co-editors, Doug Lapp (lapp1da@cmich.edu) or Todd Edwards (m.todd.edwards@gmail.com) with responses to the following questions:

- What are your areas of expertise in mathematics education, technology, and research?
- What types of articles do you feel particularly able to review?
- Are there other things that you might tell us that will help us send you the most appropriate articles to review? Include other areas you know well, experiences that might be useful, etc.

Please contact Doug Lapp at lapp1da@cmich.edu 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, 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
- 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 issues: 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.

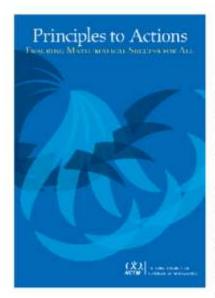
Please submit manuscripts using the online manuscript submission and review system at http://mte.msubmit.net.

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 editorship will transition on May 1, 2015 from the 2011-2015 editor, Margaret (Peg) Smith, University of Pittsburgh, to the 2015-2018 editor, Sandra Crespo, Michigan State University.

To volunteer to be a reviewer or to learn more about *MTE*, please visit www.nctm.org/mte.

A more detailed version of the call for manuscripts is also available at this site

CALL FOR MANUSCRIPTS



Mathematics Teacher Educators

How can Principles to Actions: Ensuring Mathematical Success for All be used to design learning experiences for teachers? What impact do these experiences have on teachers and their students?

Principles to
Actions: Ensuring
Mathematical
Success for
All is based
upon research
about effective

mathematics teaching practices that are at the core of the work of mathematics teacher educators. The *Principles to Actions* document makes explicit and accessible key components of effective mathematics teaching. As such, *Principles to Actions* coalesces and draws attention to many important ideas that mathematics teacher educators have been implementing in their work for decades (e.g., worthwhile tasks, purposeful questioning, productive struggle, and using student thinking).

The Editorial Panel of Mathematics Teacher Educator encourages teacher educators to submit manuscripts that do two things: (1) describe learning experiences they have designed using the Principles to Actions: Ensuring Mathematical Success for All document; and (2) provide evidence of how these experiences have enhanced the

knowledge, beliefs, or practices of preservice or in-service teachers.

The Mathematics Teacher Educator is a journal dedicated to building a professional knowledge base for mathematics teacher educators that stems from, develops, and strengthens practitioner knowledge. All manuscripts should contain a description of the relevant problem or issue that is addressed, the methods/interventions/tools that were used, the means by which these methods/ interventions/tools and their results were studied and documented, and the application of the results to practice (both the authors' practice and the larger community). Manuscripts for this call should provide clear evidence of the impact the use of the Principles to Actions document-related experience has had on mathematics teachers' knowledge, beliefs, or practice. More details about submitting to the journal are provided at www.nctm.org/mte.

Please identify manuscripts for this special call by listing "Principles to Actions" as a keyword during the submission process. **September 1, 2015** is the deadline for this call.

A joint publication of the National Council of Teacher of Mathematics and the Association of Mathematics Teacher Educators







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