



Association of Mathematics Teacher Educators

EIGHTEENTH ANNUAL CONFERENCE

PRELIMINARY PROGRAM

Please contact Shannon Driskell (sdriskell1@udayton.edu) regarding the schedule of sessions, or Tim Hendrix (hendrix@meredith.edu) for any other questions.

FEBRUARY 6 - 8, 2014

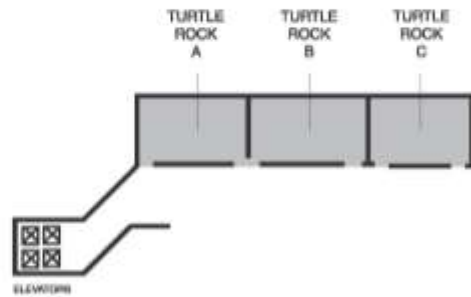
HOTEL IRVINE JAMBOREE CENTER, IRVINE, CALIFORNIA

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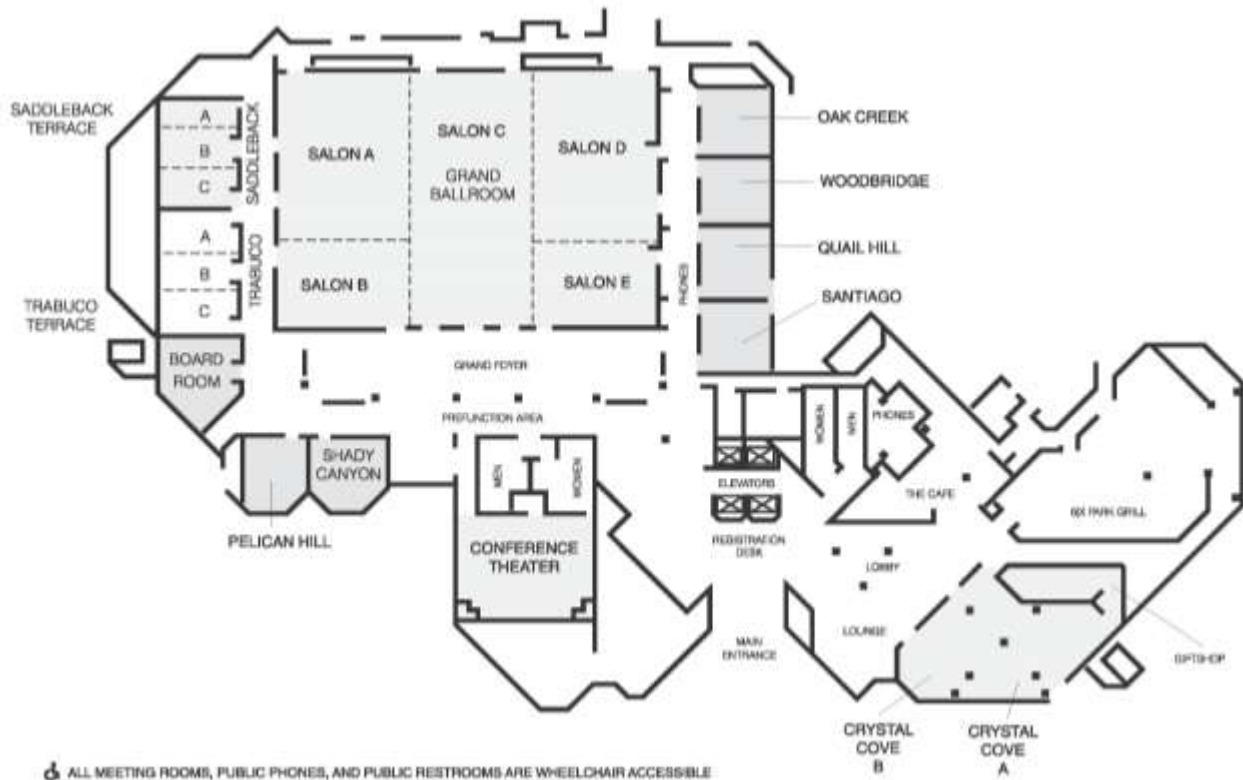
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SECOND FLOOR



FIRST FLOOR (LOBBY LEVEL)



♿ ALL MEETING ROOMS, PUBLIC PHONES, AND PUBLIC RESTROOMS ARE WHEELCHAIR ACCESSIBLE



TABLE OF CONTENTS

Conference Schedule	4
Conference Information	5
AMTE Board of Directors 2013	6
AMTE Eighteenth Annual Conference Committee	7
Acknowledgements	7
Conference Announcements	8
Thursday Lunch Discussion Tables	8
Conference App and Social Media	10
The NTLI Award	11
AMTE Scholarships for Elementary Mathematics Specialists	12
Information about AMTE Affiliates	12
AMTE Affiliates	13
Premium Sponsors	14
AMTE thanks The Math Learning Center, 2014 Gold Sponsor	15
AMTE thanks ETA Hand2Mind, 2014 Gold Sponsor	16
AMTE thanks Conceptua Math, 2014 Gold Sponsor	17
Exhibitors	18
Participate in Thursday's Equity Learn & Reflect Strand	20
Thursday Morning, February 6, 2014	21
Thursday Afternoon, February 6, 2014	28
Learn & Reflect Sessions: PSTs Field Experiences	38
Friday Morning, February 7, 2014	40
Friday Afternoon, February 7, 2014	49
Saturday, February 8, 2014	59
AMTE Events at the 2014 NCTM and NCSM Annual Conferences	76
AMTE's 2015 Annual Conference	76
History of the Judith E. Jacobs Lecture	77
AMTE Leadership	78
Task Forces	78
Publications	78
AMTE 2014 Business Meeting Agenda	81
Susan Gay AMTE Conference Scholarship for Graduate Students	89
CITE: Call for Manuscripts	90
CITE: Call for Reviewers	90
CITE: Call for Readers and Comments	91
Mathematics Teacher Educator: Call for Manuscripts	92



Association of Mathematics
Teacher Educators

CONFERENCE SCHEDULE

*Eighteenth Annual AMTE Conference
February 6 - 8, 2014, Irvine, California*

Wednesday, February 5, 2014

4:00p – 7:00p AMTE Registration Desk Open

Thursday, February 6, 2014

7:00a – 4:30p AMTE Registration Desk Open
9:30a – 4:30p Exhibits Open
9:00a – 10:00a Concurrent Sessions
10:15a – 11:30a Concurrent Sessions
11:30a – 12:45p Lunch and Discussion Tables – Salon C/D/E
12:45p – 1:30p Concurrent Sessions
1:45p – 2:45p Concurrent Sessions
2:45p – 3:15p Break
3:15p – 4:00p Concurrent Sessions
4:30p – 6:00p **General Session – Salon A**

Friday, February 7, 2014

7:00a – 8:00a Breakfast – Salon C/D
7:00a – 8:00a Advocacy Breakfast – Salon E
7:30a – 4:30p AMTE Registration Desk Open
8:00a – 9:00a Concurrent Sessions
8:30a – 4:30p Exhibits Open
9:15a – 10:00a Concurrent Sessions
10:15a – 11:15a Concurrent Sessions
11:15a – 12:45p Lunch and Committee Meetings – Salon C/D/E
12:45p – 1:45p Concurrent Sessions
2:00p – 2:45p Concurrent Sessions
2:45p – 3:15p Break
3:15p – 4:00p Concurrent Sessions
4:30p – 6:00p **Judith E. Jacobs Lecture – Salon A**
6:00p – 7:30p Dinner – Salon C/D/E

Saturday, February 8, 2014

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

CONFERENCE INFORMATION

Conference Registration Desk

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

AMTE Registration Desk Hours:

Wednesday, February 5	4:00p – 7:00p
Thursday, February 6	7:00a – 4:30p
Friday, February 7	7:30a – 4:30p
Saturday, February 8	7:30a – 10:30a

Finding the Conference Area

Conference session rooms are located on the first and second floors of the hotel. Take the elevators to get to the second floor. Meals will be held in Salon C/D/E 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 6 through Saturday, February 8. Information on how to access this system will be provided at the registration table..

Conference attendees who staying at the Hotel Irvine Jamboree Center receive complimentary Internet access in individual guestrooms. Directions on how to access wireless and wired Internet service can be found in each guestroom.

Hotel Parking Information

AMTE has negotiated discounted rates for conference attendees to self-park at the Hotel Irvine Jamboree Center. More information will be available in January. Valet parking is also available at a higher fee.

Options for Thursday Dinner

Check at the AMTE Registration Desk or on the website for information on nearby restaurants..

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, Nadine Bezuk at the conference or via email at nbezuk@mail.sdsu.edu. Thanks to John Wilkins of Cal State Dominguez Hills and Margaret Schroeder of University of Kentucky for serving as our conference photographers.

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 stuff being left in the session rooms and in the conference area.

AMTE BOARD OF DIRECTORS 2013

President

Fran Arbaugh
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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 EIGHTEENTH ANNUAL CONFERENCE COMMITTEE

Conference Director: Susan Gay, University of Kansas; sgay@ku.edu

Assistant Conference Director: Carol Lucas, University of Central Oklahoma, clucas@uco.edu

Conference Leadership Team

Conference Director: Susan Gay, University of Kansas, sgay@ku.edu

Assistant Conference Director: Carol Lucas, University of Central Oklahoma, clucas@uco.edu

Executive Director: Nadine Bezuk, San Diego State University, nbezuk@mail.sdsu.edu

Suzanne Harper (Chair 2013), Miami University, harpersr@MiamiOH.edu

Shannon Driskell (Chair 2014), University of Dayton, sdriskell1@udayton.edu

Dustin Jones (Chair 2015), Sam Houston State University, dljones@shsu.edu

University of Florida (2012-13), dustinjones@coe.ufl.edu

2014 Annual Conference – Program Committee

2013 – 2014

Shannon Driskell (Chair), University of Dayton, sdriskell1@udayton.edu

Suzanne Harper (immediate past Chair), Miami University, harpersr@MiamiOH.edu

Susan Gay, University of Kansas, sgay@ku.edu (AMTE Board)

2012 – 2014

Michelle Cirillo, University of Delaware, mcirillo@udel.edu

Jeanine Haistings, William Jewell College, haistingsj@william.jewell.edu

Ji-Won Son, The University of Tennessee, sonjiwon@utk.edu

2012 – 2015

Sarah Bush, Bellarmine University, sbush@bellarmine.edu

Melfried Olson, University of Hawaii, melfried@hawaii.edu

David Pugalee, University of North Carolina at Charlotte, David.Pugalee@uncc.edu

2013 – 2016

Ann McCoy, University of Central Missouri, mccoy@ucmo.edu

Robert Powers, University of Northern Colorado, robert.powers@unco.edu

Wendy Smith, University of Nebraska-Lincoln, wsmith5@unl.edu

Peter Holt Wilson, University of North Carolina at Greensboro, phwilson@uncg.edu

ACKNOWLEDGEMENTS

The Eighteenth Annual AMTE Conference would not be possible without the contributions and support of many individuals. AMTE wishes to express its sincere appreciation to:

- All speakers who contributed their time and expertise to make this conference a success;
- The AMTE Board of Directors, Conference Director and Assistant Conference Director, Executive Director, Program Committee, Local Arrangements Committee, and Headquarters staff for providing the time and effort necessary to organize all facets of the conference; and
- Tony Nguyen and Ceci Necochea, San Diego State University, for their support with registration and conference materials.

CONFERENCE ANNOUNCEMENTS

EXHIBITS

- Make sure to **visit the exhibits!** Exhibitors include Conceptua Math, ETA Hand2Mind, the MathLearning Center, W. H. Freeman, John Wiley & Sons, NCSM, Pearson, and TODOS. Exhibits are open from 9:30 am – 4:30 pm on Thursday and 8:30 am – 4:30 pm on Friday. See the Exhibitors Section of this program on pages 18 and 19 for more information.

CONFERENCE APP AND SOCIAL MEDIA

- Be sure to visit [facebook.com/AMTE.net](https://www.facebook.com/AMTE.net) and follow [@AMTENews](https://twitter.com/AMTENews) on Twitter. Download the newly redesigned Conference App to guide your conference experience. See details on page 10.

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 www.amte.net/support-amte

COMMITTEES and AFFILIATES

- **AMTE Committees** will meet during lunch on Friday in Salon C/D/E. See the flyer in your conference folder for table locations for each activity.
- **AMTE Affiliates** will meet during breakfast on Saturday in Salon C/D. See the flyer in your conference folder for table locations for each activity.

THURSDAY LUNCH DISCUSSION TABLES

- Participate in a **discussion table** during lunch on Thursday in Ballroom C/D
- **Topics and table numbers are listed on the next page.** See the flyer in your conference folder for table locations for each activity.
- 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.** Approximately half of the tables in the dining area will be identified with the topics for discussion, and each of these tables will have a facilitator who has 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	Thursday Lunch Discussion Topics	Facilitators
1	Balancing the Roles of Teaching, Research and Service (and Maintaining a Personal Life)	Joanne Masingila, Syracuse University and Jane Wilburne, Penn State University at Harrisburg
2	Connecting with Mathematics Teacher Educators in Institutions with Large Teaching Loads	Rheta Rhubenstein, University of Michigan and Mary Grasseti, Framingham University
3	Connecting with Mathematics Teacher Educators from Small Colleges: When You're the Only One Playing a Multitude of Roles	Beth Kobett, Stevenson University and Chrystal Dean, Appalachian State University
4	Writing for an Audience of Practitioners: Shaping the Approach for Maximum Impact	Anita Wager, University of Wisconsin and Lynsey Gibbons, University of Washington
5	Mathematical Knowledge for Teaching: Research and Practice	Sybilla Beckman, University of Georgia and Dawn Berk, University of Delaware
6	Discourse in the Mathematics Classroom: Continuing the Discussion	Allison Hintz, University of Washington – Bothell and Michael Steele, University of Wisconsin – Milwaukee
7	Mathematics Specialists and Mathematics Coaches: What is the Distinction?	Rebekah Elliot, Oregon State University and Gwyneth Hughes, Boise State University
8	Promoting Equitable Practices in Mathematics Teacher Education	Dorothy White, University of Georgia and Alejandra Salinas, Boston University
9	Enlarging the Sphere: Increasing the Diversity of Mathematics Teachers and Mathematics Teacher Educators	Imani Masters-Goffney, University of Houston and Marta Civil, University of North Carolina
10	Teaching with Technology	Dustin Jones, Sam Houston State University and Travis Olson, University of Nevada – Las Vegas
11	Addressing the Challenges of Implementing the Common Core: Working with Inservice Elementary Teachers	Kathy Morris, Sonoma State University and Stephen Pape, Johns Hopkins University
12	Addressing the Challenges of Implementing the Common Core: Working with Inservice Middle and High School Teachers	Janet Frost, Washington State University and Gary Martin, Auburn University
13	Addressing the Challenges of Implementing the Common Core: Working with Preservice Elementary Teachers	Mathew Felton-Koestler, University of Arizona and Jennifer Tobias, Illinois State University
14	Addressing the Challenges of Implementing the Common Core: Working with Preservice Middle and High School Teachers	Eva Thanheiser, Portland State University and Blake Peterson, Brigham Young University
15	International Perspectives on Mathematics Teacher Education	Catherine Paolucci, National University of Ireland and Nermin Bayazit, Georgia State University
16	Preparing Graduate Students to become Mathematics Teacher Educators: The Role of the Faculty Mentor	Denise Spangler, University of Georgia and Vicki Jacobs, University of North Carolina - Greensboro
17	Mentoring Graduate Students toward the Development of Their Own Research Agendas	Ed Silver, University of Michigan and Dan Chazan, University of Maryland
18	The Job Search Process: Preparing for Job Talks	Lorraine Males, University of Nebraska – Lincoln and Kate Johnson, Brigham Young University
19	The Job Search Process: Helpful Information	Sandra Crespo, Michigan State University and Wendy Aaron, Oregon State University
20	Becoming a Mathematics Teacher Educator: Information for Graduate Students	Alyson Lischka, Middle Tennessee State University and Timothy Boerst, University of Michigan

CONFERENCE APP AND SOCIAL MEDIA

Beginning in January 2014, download the 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

Use **#AMTE2014** to share what is being discussed at AMTE 2014, and help highlight the importance of the work of the Association!

The AMTE Conference App is available for free through



Apple App Store



Google Play App Store

Visit the **Help Desk** @AMTE 2014 for help navigating the 2014 Conference App and to learn about AMTE's presence on social media!

"Like" AMTE on Facebook



@facebook.com/AMTE.net

Follow AMTE on Twitter



@AMTEnews

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

2014 NTLI Award Winners

Steve Rhine - Willamette University - srhine@willamette.edu

Rachel Harrington - Western Oregon University - harringr@wou.edu

Brandon Olszewski - International Society for Technology in Education - brandon@iste.org

The Role of Technology in Increasing Preservice Teachers' Anticipation of Students' Thinking in Algebra

Abstract: The Algebra Thinking Project (ATP) aims to capitalize upon three decades of research on student thinking and misconceptions in algebra to better prepare preservice teachers to anticipate students' thought processes and struggles through project resources.

- 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 2013 EMS Scholarship Recipients!

Lindsey Atkinson, Arlington, VA
Rebecca Fowler, Maryville, MO
Kellie Petrick, Hillsboro, OR

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:



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.

- Look for a Table in the Registration/Exhibit area
 - Hosted by the Affiliates Connections Committee (ACC) – Come meet Members of ACC!
 - Information available about AMTE Affiliates
- Participate in the *Connecting and Empowering AMTE Affiliates* Session
 - Thursday - 12:45pm - 2:45pm, Hyatt Regency/ Oak Creek
 - 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>.

AMTE AFFILIATES

AMTE is proud to acknowledge and welcome members of its 20 affiliated organizations, highlighted in the map below, to the Eighteenth Annual AMTE Conference.

Affiliate

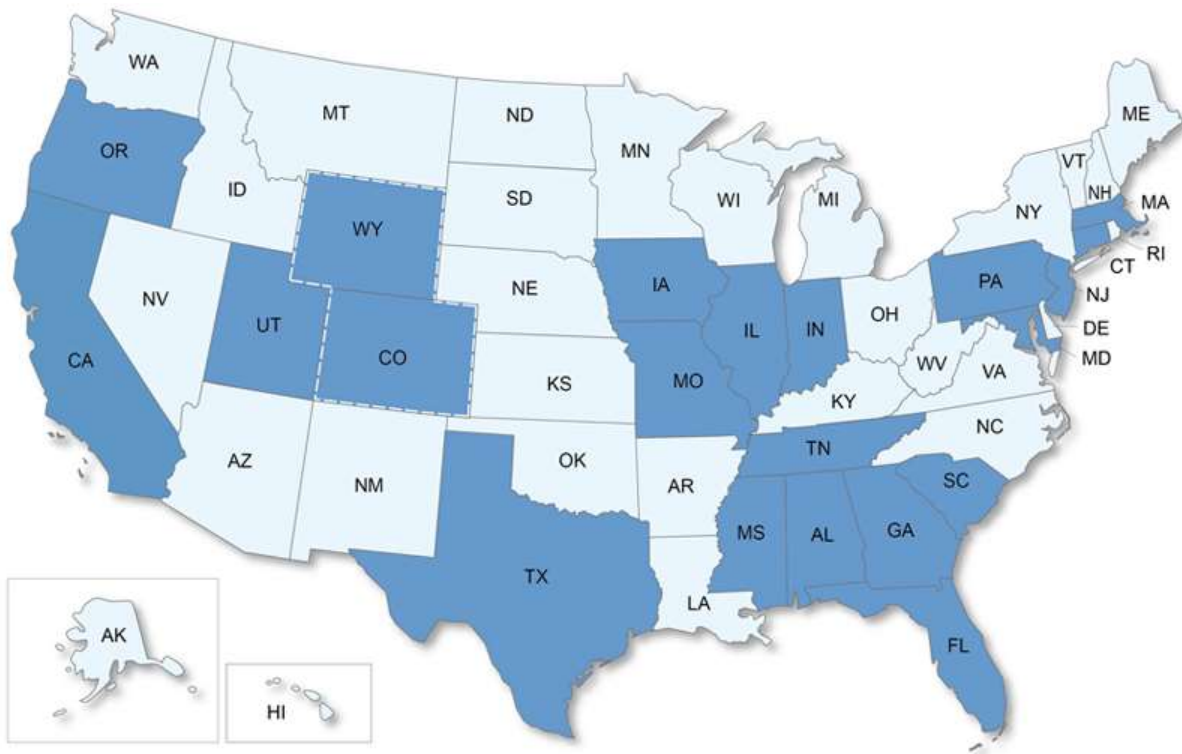
- Illinois Mathematics Teacher Educators
- Utah Association of Mathematics Teacher Educators
- Florida Association of Mathematics Teacher Educators
- California Association of Mathematics Teacher Educators
- Association of Mathematics Teacher Educators of Connecticut
- Georgia Association of Mathematics Teacher Educators
- Tennessee Association of Mathematics Teacher Educators
- Association of Mathematics Teacher Educators--Texas
- Pennsylvania Association of Mathematics Teacher Educators
- Massachusetts Mathematics Association of Teacher Educators
- Missouri Mathematics Association for Advancement of Teacher Training
- South Carolina Association of Mathematics Teacher Educators
- New Jersey Association of Mathematics Teacher Educators
- Rocky Mountain Association of Mathematics Teacher Educators
- Teachers of Teachers of Mathematics, Oregon
- Mississippi Association of Mathematics Teacher Educators
- Association of Mathematics Teacher Educators of Alabama
- Iowa Association of Mathematics Teacher Educators
- Association of Maryland Mathematics Teacher Educators
- Hoosier Association of Mathematics Teacher Educators

Acronym

- IMTE
- UAMTE
- FAMTE
- CAMTE
- AMTEC
- GAMTE
- TAMTE
- AMTE-TX
- PAMTE
- MassMATE
- (MAT)²
- SCAMTE
- NJAMTE
- RMAMTE
- TOTOM
- MAMTE
- AMTEA
- IAMTE
- AMMTE
- HAMTE

Region

- Illinois
- Utah
- Florida
- California
- Connecticut
- Georgia
- Tennessee
- Texas
- Pennsylvania
- Massachusetts
- Missouri
- South Carolina
- New Jersey
- Rocky Mountain Area
- Oregon
- Mississippi
- Alabama
- Iowa
- Maryland
- Indiana



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.



Association of Mathematics
Teacher Educators

PREMIUM SPONSORS

AMTE thanks this year's Premium Sponsors for providing invaluable support for our conference and our organization's activities and initiatives.

Gold Sponsor – Brookhill Foundation

The Brookhill Foundation supports the teaching and learning of mathematics with emphasis on Elementary Mathematics Specialists initiatives through AMTE and the Elementary Mathematics Specialists and Teacher Leader Project. New this year is a grant to AMTE for the STAR fellow program. In addition to EMS initiatives Brookhill has funded the development of the progression documents to support the CCSSM, worked with CBMS in support of the MET2 and national forums. A program of the foundation is the Wisconsin Statewide Mathematics Initiative (WSMI) with a focus on professional development. Seven courses have been developed around the content and practice standards of the CCSSM and the progression documents. Each course is 30 hours and includes K-12 district teams, administrators, leadership development, and action plans.

Gold Sponsor – Conceptua Math

Conceptua® Math is an elementary and middle school, digital Common Core curriculum that transforms the teaching and learning of mathematics. The curriculum provides online core instruction, visual models, story problems, classroom discussion guides, and real world investigations — all with immediate data and reporting. With Conceptua Math, students use multiple visual models and contextual learning to cultivate their understanding of math topics and engage in rich classroom discussions as they apply the Common Core Standards of Mathematical Practice to think critically, express themselves, and discuss ideas with others. Conceptua Math's *Adaptive Teaching* provides teachers with the tools and support to ensure that all students learn and grow at their own pace.

Gold Sponsor – ETA/hand2mind

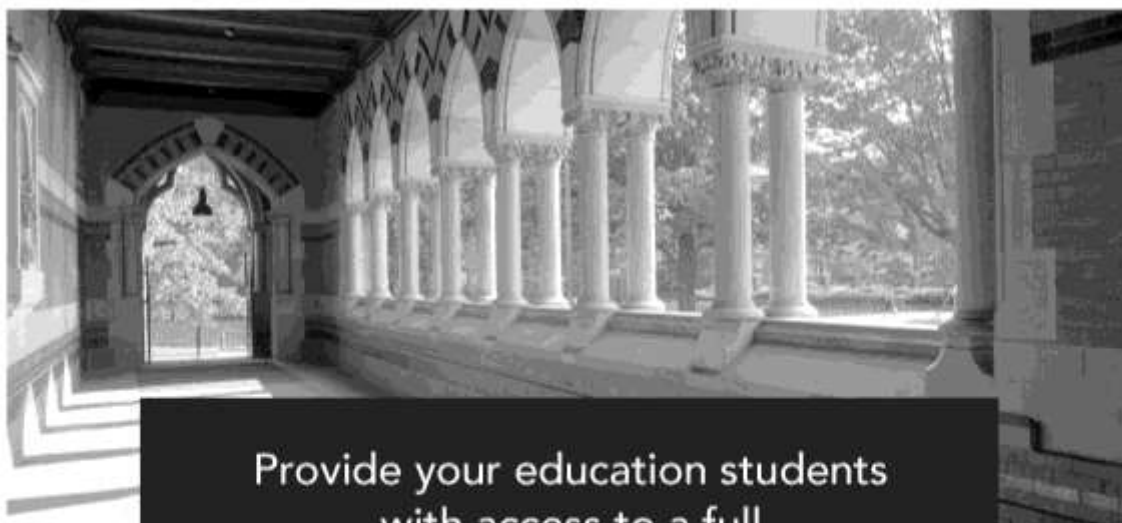
ETA hand2mind is pleased to provide the hands-on learning resources and manipulatives used in AMTE sessions. With educational and supplemental materials that enrich teaching and engage students in math, science, reading, and early childhood, ETA hand2mind offers proven hands-on solutions for PreKindergarten through grades 12. Programs can include both traditional and interactive digital manipulatives, as well as take-home tools so learning can continue beyond classroom walls.

Gold Sponsor – Math Learning Center

The Math Learning Center is the founding sponsor of the Elementary Mathematics Specialist (EMS) Awards. The recipients of these awards receive funding to enhance their mathematics knowledge, teaching, and leadership by enrolling in university coursework that will result in becoming a certified elementary mathematics specialist.

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. Our products and services are used by educators throughout the United States and in several international locations.

AMTE THANKS THE MATH LEARNING CENTER, 2014 GOLD SPONSOR



Provide your education students
with access to a full
K–5 math curriculum

Bridges University Program

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

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 booth.



AMTE THANKS ETA HAND2MIND, 2014 GOLD SPONSOR

Prepare preservice teachers for the power of hands-on materials!

Together we can help inspire the next generation of teachers through building deep knowledge of mathematics using hands-on learning.

Support your preservice teachers with resources that allow them to teach with confidence on Day One.

- Math manipulatives (including NEW fractions manipulatives)
- Easy-to-use teacher resource guides
- Preservice teacher manipulative kits

▶ **Stop by our exhibit table or visit hand2mind.com/AMTE to learn more!**

Join us!

Session: Manipulatives in Methods:
Partnering with ETA hand2mind

Speaker: Sara Delano Moore, Ph.D.,
ETA hand2mind Director of
Mathematics and Science

Date: Friday, February 7, 2014

Time: 8:00 a.m. – 9:00 a.m.

Location: Hotel Irvine Jamboree
Center –Trabuco



ETA hand2mind
hands-on learning
for growing minds

hand2mind.com
800.445.5985

Connect with us.    

AMTE THANKS CONCEPTUA MATH, 2014 GOLD SPONSOR



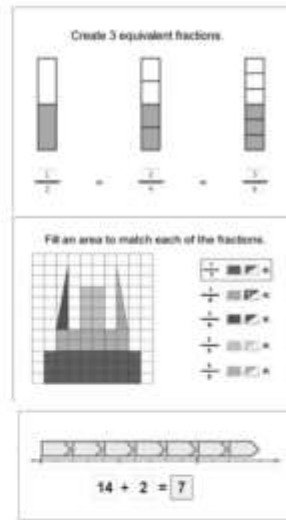
Students Thrive Rich Classroom Discussions. Visual and Conceptual Learning.

Conceptua Math is an elementary and middle school, digital Common Core curriculum that transforms the teaching and learning of mathematics. The program features:

- online, core instruction
- visual models
- story problems
- classroom discussion guides
- real world investigations
- immediate data and reporting

Visual and Conceptual Learning, Intrinsically Motivating

Conceptua[®] Math engages students through effective pedagogy and the joy of successful learning. Students use multiple visual models and contextual learning to cultivate their understanding of math topics.



Rich Classroom Conversations

With Conceptua Math, students thoughtfully engage in mathematical discourse on a daily basis. They apply the Common Core Standards of Mathematical Practice as they think critically, express themselves, and discuss the ideas of others.

Adaptive Teaching for Differentiated Instruction

All students learn and grow at their own pace, and struggling students need extra attention and time on task. Conceptua Math provides the teacher with tools and support to make this a seamless and harmonious part of the classroom experience.



Keep the Teacher in the Equation![™]
www.conceptuamath.com



EXHIBITORS

AMTE thanks this year's Exhibitors for providing support for our conference.

Exhibitor Name	Materials
Conceptua® Math	Conceptua® Math is an elementary and middle school, digital Common Core curriculum that transforms the teaching and learning of mathematics. The curriculum provides online core instruction, visual models, story problems, classroom discussion guides, and real world investigations — all with immediate data and reporting.
ETA/hand2mind	With educational and supplemental materials that enrich teaching and engage students in math, science, reading, and early childhood, ETA hand2mind offers proven hands-on solutions for PreKindergarten through grades 12. Programs can include both traditional and interactive digital manipulatives, as well as take-home tools so learning can continue beyond classroom walls.
John Wiley & Sons	John Wiley & Sons has been a leader in educational publishing for over 200 years. Stop by the Wiley booth to see the latest editions of <i>The Heart of Mathematics: An Invitation to Effective Thinking</i> , 4th Edition by Edward B. Burger and Michael Starbird, and <i>Quantitative Reasoning: Tools for Today's Informed Citizen</i> , 2nd Edition by Alicia Sevilla and Kay Somers. Also, preview books in Liberal Arts Math, Quantitative Reasoning, Geometry, and Math for Teachers as well as exciting offerings in Math Methods from Robert Reys, Mary Lindquist, Diana V. Lambdin, and Nancy L. Smith and Joan Cohen Jones.
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.
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 Indicators for Mathematics Education Leaders (PRIME) Framework. Also learn about NCSM professional learning opportunities scheduled for 2014, with emphasis on leadership development and interpreting and implementing the Common Core State Standards for Mathematics.
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 bestselling 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.
TODOS	TODOS: Mathematics for ALL advocates for an equitable and high quality mathematics education for all students — in particular, Hispanic/Latino students — by increasing the equity awareness of educators and their ability to foster students' proficiency in rigorous and coherent mathematics.
W. H. Freeman	Authoritative for instructors, engaging for students, W.H. Freeman's textbooks and media across the mathematics curriculum emphasize both conceptual and computational skills. W.H. Freeman's mathematics textbooks and media help students go beyond number-crunching to explore the real-world impact of the statistics profession. Available online and through a variety of print formats, W.H. Freeman's list is highly selective, allowing us to devote unparalleled time and attention to each course and title.

PARTICIPATE IN THURSDAY'S EQUITY LEARN & REFLECT STRAND

A Learn & Reflect strand focused on equity is part of this year's conference. The strand, organized using a structure similar to the one used by NCTM, begins with Thursday's first session at 9:00 a.m. At the beginning of this session, five reflection questions will be posed for attendees to consider as they attend the set of sessions designated as part of the Equity Learn & Reflect strand. People who are interested will attend all of these sessions together. They will end the strand by gathering at the final session on Thursday from 3:15 to 4:00 p.m. to participate in small-group discussions about the reflection questions. These discussions will be led by the AMTE Equity Task Force members and speakers from the strand.

Reflection Questions (posed by Equity Task Force)

1. What experiences and expertise do you bring to work related to equity and teacher education that you would be willing to share?
2. As you move through sessions, what are some things that surprise you? What might those surprises tell you about what you believe, value, or assume to be true about equity issues?
3. Doing work related to equity is complex. Given your context, what are some dilemmas/tensions that you are grappling with after learning from the work of others in these sessions?
4. Certain populations of students have been historically marginalized in mathematics. How can we talk about these issues and the needs of specific learners, while avoiding labels and categorizations?
5. What are the pressing issues that could potentially have a real impact on your work, your colleagues' work and your students in mathematics education?

Equity-Designated Learn & Reflect Sessions

Thursday Session	Title	Presenter(s)
Session 6 9:00-10:00 Saddleback	Tools for Engaging Preservice and Practicing Teachers in Connecting Mathematical Practices with Strategies for ELLs	Jennifer Bay-Williams, Latricia Bronger, Maggie McGatha
Session 16 10:15-11:30 Conference Theater	Presentation #1: Assessing the Mathematical Learning Needs of Students at Consistently Low Performing Elementary Schools Presentation #2: Equitable spaces in early career high school mathematics teachers' classrooms Presentation #3: Developing knowledge for equitable teaching Presentation #4: Evolving prompts to elicit preservice teachers' conceptions of equity in mathematics education	Presentation #1: Elham Kazemi, Lynsey Gibbons, Noelle Preszler Presentation #2: Ayanna Perry Presentation #3: Imani Goffney Presentation #4: Alejandra Salinas, Christa Jackson, Sarah Roberts
Session 30 10:15-11:30a Woodbridge	Enacting video analysis to develop PSTs' noticing and focus on equity: MTE decisions and moves	Amy Roth McDuffie, Mary Foote, Corey Drake, Erin Turner, Julia Aguirre, and Tonya Bartell
Session 32 12:45-2:45 p (extended session) Crystal Cove	Cases for teacher educators: Facilitating conversations with prospective teachers about inequities in mathematics classrooms	Joi Spencer, Imani Goffney, Mathew Felton, Kristen Bieda, Dorothy White, Julia Aguirre, Sandra Crespo, Marta Civil, Judit Moschkovich, M. Lynn Breyfogle
Session 36 12:45-1:30 p Saddleback	Understanding communication in the practice of standards in classrooms with bilingual students	William Zahner, Craig Willey
Session 54 1:45-2:45p Trabuco	Disrupting deficit thinking: Infusing innovative approaches to special education into mathematics teacher education	Rachel Lambert
Session 67 Salon 3 3:15 – 4:00p Shady Canyon	Reflection and Action: Debriefing on the Equity Strand	AMTE Equity Task Force Members

THURSDAY MORNING, FEBRUARY 6, 2014

	9:00 - 10:00 am	10:15 - 11:30 am
Conference Theater	1. <i>Mathematical Content Knowledge Brief Reports Session</i>	16. <i>Equity Brief Reports Learn and Reflect Strand</i>
Crystal Cove	2. <i>Preparing Better Teachers: Multiple Perspectives on Secondary Mathematics Certification</i> - Smith, Swidler, Males, Larson & Pinquoch	17. <i>Using Rich Media to Infuse a Practice-Based Orientation throughout our University-Based Teacher Education Programs</i> - Chazan, Alibegovic, Bieda, Clark, Crespo, Herbst & Masingila
Oak Creek	3. <i>Preservice Teachers Learning to Respond Based on Children's Mathematical Understanding</i> - Gichobi	18. <i>Modifying Children's Mathematical Tasks for Use in Content Courses for Prospective Elementary Teachers</i> - Hillen, Olanoff, Welder, Feldman, Tobias & Thanheiser
Pelican Hill	4. <i>Supporting a District's Race to the Top: Conducting Ongoing Professional Development in High-Poverty Schools</i> - Bamberger & Langrall	19. <i>Preservice Teachers Field Experiences Brief Reports Session</i>
Quail Hill	5. <i>Implications of Deeply Digital Instructional Materials for TPACK</i> - Edson & Hirsch	20. <i>Empowering Teachers in the Content and Delivery of a Summer Mathematics Institute</i> - Ives, Moore & Tintera
Saddleback	6. <i>Tools for Engaging Preservice and Practicing Teachers in Connecting Mathematical Practices with Strategies for ELLs</i> - Bay-Williams, McGatha & Kobett	21. <i>Methods Textbooks: Mathematics Teachers Educators' Struggles to Choose and Use</i> - Harkness & Brass
Salon A	7. <i>Enhancing Mathematics Teaching and Learning in Urban Schools: Researching the Studio Classroom Professional Development Approach</i> - Thanheiser, Shaughnessy, Foreman, Fredericks & Fasteen	22. <i>Formative Assessment: A Key Element in Fostering the Mathematical Success of All Students</i> - Adams, Franke, Karp, Confrey, Smith & Silver
Salon B	8. <i>Coordinating Assessments of Mathematics Teaching Practices and Mathematical Knowledge for Teaching</i> - Boerst, Shaughnessy & Ball	23. <i>Understanding Students' Pre- and Post-Instructional Conceptions of Integers and the Implications for Teacher Educators</i> - Lamb, Bishop, Whitacre & Bagley
Santiago	9. <i>Using Project-Based Learning to Teach Algebraic Thinking in Elementary Mathematics Methods</i> - Lee & Yoder	24. <i>Conceptua Math & AMTE: A Partnership to Bring High-Quality, Digital Elementary Math Instruction to AMTE Members</i> - Khalsa
Shady Canyon	10. <i>Prospective Teachers Learning to Use the Five Practices to Facilitate CGI: The Case of Grace</i> - Wright & Mojica	25. <i>Research on Secondary Mathematics Teacher Preparation</i> - Winsor, Barker, Preston, Casey & Enderson
Trabuco	11. <i>Design, Tools and Implications for Developing Preservice Teachers' Noticing of Student Thinking</i> - Henry, Guarino, Sun & Yeh	26. <i>Teacher-Captured Video: Tools, Opportunities and Challenges</i> - Sherin, Dyer, van Es, Sun, Stockero & Van Zoest

Rock ATurtle	12. <i>A Professional Development Framework to Support Instructor Facilitated Student Engagement in Post-Secondary Mathematics Courses</i> - Beisiegel	27. <i>Preparing Mathematics Teachers to Teach Modeling</i> - Chesler & Chang
Rock BTurtle	13. <i>Supporting Elementary Mathematics Discourse: Results from a Teacher Professional Development Field Test</i> - Moffett, Nelson & Heck	28. <i>Using the Structural Components of Number to Understand Fractions in the CCSS</i> - Ismail, Carney & Krone
Rock CTurtle	14. <i>Assessing the Long-Term Impact of Professional Development on Classroom Practices of High School Math Teachers</i> - Copur-Gencturk	29. <i>How Good is the Latest Math App? Wait There's Another One! Evaluating Math Apps</i> - Kotelawala
Woodbridge	15. <i>Role-Playing the Standards for Mathematical Practice: A Professional Development Tool</i> - Bostic	30. <i>Enacting Video Analysis to Develop PSTs' Noticing and Focus on Equity: MTE Decisions and Moves</i> - Roth McDuffie, Foote, Drake, Turner & Aguirre

Session 1 **Conference Theater**
Mathematical Content Knowledge
Brief Reports Session

Mathematics Teacher's Perceptions of the Nature of Mathematics

Jessica James Hale, *Georgia State University*
 Nermin Tosmur-Bayazit, *Georgia State University*
 Stephanie Cross, *Georgia State University*

This brief report will focus on a qualitative study investigating how 70 inservice secondary mathematics teachers define mathematics. Participants and presenters will engage in discussion about how these teachers' definitions may impact the teaching and learning of mathematics.

Retaining and Supporting Nontraditional Future High School Mathematics Teachers

Judith Quander, *University of Houston*
 Jacqueline Sack, *University of Houston*

We will describe efforts to support nontraditional mathematics majors earning secondary mathematics teacher certification. We present on our Noyce-funded scholarship program that prepares students for secondary mathematics teaching in urban schools and helps them to successfully complete their undergraduate mathematics degree.

Session 2 **Crystal Cove**
School and University Partnerships and Projects
Symposium

Preparing Better Teachers: Multiple Perspectives on Secondary Mathematics Certification

Wendy Smith, *University of Nebraska-Lincoln*
 Stephen Swidler, *University of Nebraska-Lincoln*
 Lorraine M. Males, *University of Nebraska-Lincoln*
 Brent G. Larson, *Omaha Public Schools*
 Brianna Pinquoch, *Omaha Central & University of Nebraska-Lincoln*

The purpose of this symposium is to bring together the perspectives and voices of a preservice teacher, her cooperating teacher, and university faculty, as we discuss a 14-month post-baccalaureate master's degree plus certification program for secondary mathematics teachers.

Session 3 **Oak Creek**
Pedagogical Content Knowledge
Individual Session

Preservice Teachers Learning to Respond Based on Children's Mathematical Understanding

Mary Njeri Gichobi, *Iowa State University*

This presentation reports the efforts of one mathematics education team which purposefully developed PSTs' capacity to use children's mathematical understanding to select and pose mathematical tasks. Participants will discuss the activities used in the course and implications to teacher preparation.

Session 4 **Pelican Hill**
Teacher Professional Development
Individual Session

Supporting a District's Race to the Top: Conducting Ongoing Professional Development in High-Poverty Schools

Honi Joyce Bamberger, *Towson University*
 Cynthia Langrall, *Illinois State University*

Presenters will share how a successful professional development model was adapted and implemented in one school district to develop mathematics leaders, address the Common Core State Standards, and adhere to the requirements of Race to the Top - District funding.

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

Implications of Deeply Digital Instructional Materials for TPACK

Alden J. Edson, *Western Michigan University*
 Christian R. Hirsch, *Western Michigan University*

This interactive session examines features of a deeply digital instructional unit on binomial distributions and statistical inference and summarizes findings from a design experiment with a focus on teacher and student roles. Collectively, we will discuss implications for TPACK.

Session 6 **Saddleback**
Equity and Mathematics Education
Individual Session

Tools for Engaging Preservice and Practicing Teachers in Connecting Mathematical Practices with Strategies for ELLs

Jennifer Bay-Williams, *University of Louisville*
 Maggie B. McGatha, *University of Louisville*
 Beth McCord Kobett, *Stevenson University*

The Mathematical Practices align with strategies to support ELLs. We will share a framework that connects Mathematical Practices to shifts in classroom practice and explore lesson planning, teaching and reflecting tools focused on supporting and challenging ELLs.

Session 7 **Salon A**
Teacher Professional Development
Individual Session

Enhancing Mathematics Teaching and Learning in Urban Schools: Researching the Studio Classroom Professional Development Approach

Eva Thanheiser, *Portland State University*
 J. Michael Shaughnessy, *Portland State University*
 Linda Cooper Foreman, *Teachers Development Group*
 Julie Fredericks, *Teachers Development Group*
 Jodi Fasteen, *Portland State University*

We will share (a) a novel professional development model comprised of traditional professional development workshops in conjunction with lesson study elements and live coaching, (b) a study designed to rigorously test the efficacy of this model, and (c) initial results.

Session 8 **Salon B**
Mathematical Content Knowledge

Individual Session

Coordinating Assessments of Mathematics Teaching Practices and Mathematical Knowledge for Teaching

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

It is crucial to assess beginning teachers' use of mathematical knowledge in teaching and their skill with teaching practices. This session focuses on assessments that appraise such knowledge and skill and also the coordinated use of those assessments.

Session 9 **Santiago** **Pedagogical Content Knowledge** **Individual Session**

Using Project-Based Learning to Teach Algebraic Thinking in Elementary Mathematics Methods

Jean Lee, *University of Indianapolis*
Gina Borgioli Yoder, *Indiana University at Indianapolis*

We share a project-based learning unit supporting elementary preservice teachers' (PSTs') understanding of high-level algebraic thinking tasks. We share analyses of PSTs' tasks, reflect on lessons learned, and offer ideas for unit modifications and future research.

Session 10 **Shady Canyon** **Preservice Teacher Field Experiences** **Individual Session**

Prospective Teachers Learning to Use the Five Practices to Facilitate CGI: The Case of Grace

Stephanie Anne Wright, *The University of North Carolina at Chapel Hill*
Gemma Mojica, *The University of North Carolina at Chapel Hill*

Participants will discuss how mathematics teacher educators can support prospective teachers as they learn to utilize the Five Practices (Smith & Stein, 2011) in facilitating mathematically rich discussions around CGI fraction work. Session organizers will share examples developed from research.

Session 11 **Trabuco** **Teaching and Learning with Technology** **Individual Session**

Design, Tools and Implications for Developing Preservice Teachers' Noticing of Student Thinking

Jody Guarino, *University of California, Irvine*
Valerie J. Henry, *University of California Irvine*
Jennifer Sun, *University of California, Irvine*
Cathery Yeh, *University of California, Irvine*

This session will introduce and share findings of three technology-enhanced environments for helping preservice teachers learn to notice student thinking. Participants will engage in analyzing student work to identify evidence to support claims about students' mathematical thinking.

Session 12 **Turtle Rock A** **Teacher Professional Development** **Discussion Session**

A Professional Development Framework to Support Instructor Facilitated Student Engagement in Post-Secondary Mathematics Courses

Mary Beisiegel, *Oregon State University*

The creation and dissemination of professional development that supports instructor-facilitated student engagement in mathematical practices will be presented. Audience members will be asked to respond to the materials and to questions that explore important elements of professional development.

Session 13 **Turtle Rock B** **Teacher Professional Development** **Individual Session**

Supporting Elementary Mathematics Discourse: Results from a Teacher Professional Development Field Test

Gwendolyn Moffett, *Horizon Research, Inc.*
Courtney Layne Nelson, *Horizon Research, Inc.*
Daniel J. Heck, *Horizon Research, Inc.*

We describe results from a field test of grade 2 professional development that adapted effective literacy discourse strategies for use in mathematics instruction. Discussion will examine reasons for shifts in participating teachers' knowledge, beliefs, and practices related to mathematics discourse.

Session 14 **Turtle Rock C** **School and University Partnerships and Projects** **Individual Session**

Assessing the Long-Term Impact of Professional Development on Classroom Practices of High School Math Teachers

Yasemin Copur-Gencturk, *University of Houston*

We examined the effects of content-based professional development on the instructional practices of high school mathematics teachers. Analysis of 5 years of classroom observation data collected from 49 teachers shed light on how various aspects of instruction changed over time.

Session 15 **Woodbridge** **Teacher Professional Development** **Individual Session**

Role-playing the Standards for Mathematical Practice: A Professional Development Tool

Jonathan David Bostic, *Bowling Green State University*

This session will explore role-play as a tool to support teachers' sense-making of the Standards for Mathematical Practice. Attendees will learn about this activity, reflect on teachers' role-plays, and discuss implications for Common Core-focused professional development.

Session 16
Equity and Mathematics Education
Brief Reports Session

Conference Theater

Assessing the Mathematical Learning Needs of Students at Consistently Low Performing Elementary Schools

Elham Kazemi, *University of Washington*
 Lynsey Gibbons, *University of Washington*
 Noelle Conforti Preszler, *University of Washington*

This session examines how mathematics educators measured the learning needs of students at a low achieving elementary school and explores how data on students' reasoning informed professional development, guided classroom instruction, and assessed the impact of PD on student learning.

Equitable Spaces in Early-Career High School Mathematics Teachers' Classrooms

Ayanna Perry, *North Carolina State University*

Findings from a study investigating how early-career mathematics teachers support students' opportunities to learn mathematics will be presented. Participants will engage in focused dialogue related to how common teacher practices provide equitable learning spaces for all students.

Developing Mathematical Knowledge for Equitable Teaching

Imani Goffney, *University of Houston*

This presentation shares results from a pilot study using an observational tool that is designed to identify and measure preservice teachers' abilities to identify equitable and ambitious teaching practices through classroom video.

Evolving Prompts to Elicit Preservice Teachers' Conceptions of Equity in Mathematics Education

Alejandra Salinas, *Boston University*
 Christa Jackson, *University of Kentucky*
 Sarah Roberts, *Iowa State University*

This study aims to describe the cycle of writing and then enacting in secondary mathematics methods courses one task that was meant to elicit and build upon preservice teachers' existing knowledge and beliefs of equity in mathematics education.

Session 17
Pedagogical Content Knowledge
Symposium

Crystal Cove

Using Rich Media to Infuse a Practice-Based Orientation throughout our University-Based Teacher Education Programs

Daniel Chazan, *University of Maryland*
 Emina Alibegovic, *University of Utah*
 Kristen Bieda, *Michigan State University*
 Lawrence M. Clark, *University of Maryland*
 Sandra Crespo, *Michigan State University*
 Pat Herbst, *University of Michigan*
 Joanna O. Masingila, *Syracuse University*

Presenters in this working group will share initial designs for blended-learning modules that infuse a practice-based orientation to content courses, methods courses, and internship experiences. Participants will examine two modules in depth and provide feedback on those

modules.

Session 18
Mathematical Content Knowledge
Symposium

Oak Creek

Modifying Children's Mathematical Tasks for Use in Content Courses for Prospective Elementary Teachers

Amy F. Hillen, *Kennesaw State University*
 Dana Olanoff, *Widener University*
 Rachael Welder, *Hunter College - City University of New York*
 Ziv Feldman, *Boston University*
 Jennifer M. Tobias, *Illinois State University*
 Eva Thanheiser, *Portland State University*

We consider the potential of using tasks designed for children in content courses for prospective elementary teachers and the modifications that might be needed for this audience. Participants are invited to bring an elementary task to modify during the workshop.

Session 19
Preservice Teacher Field Experiences
Brief Reports Session

Pelican Hill

A Clinical Elementary Education Program: Impact on Mathematical Knowledge and Teacher Efficacy

Ann McCoy, *University of Central Missouri*

The proposed presentation provides information about a clinical pathway model developed by one university and the planned study of the impact of this model on the mathematical knowledge for teaching and teacher efficacy of the prospective teachers choosing this pathway.

How Do Preservice Teachers Pursue Students' Mathematical Thinking in Formative Assessment Interviews?

Mi Yeon Lee, *Arizona State University*

To explore how PSTs understand children's mathematical thinking, a case study was conducted with eight PSTs enrolled in an innovative field experience. This study highlights the value of clinical interviews in a field experience and the importance of predictive abilities.

Models for Implementing Lesson Study in a Secondary Mathematics Methods Course

Stephen Bismarck, *University of South Carolina Upstate*
 Angel Rowe Abney, *Georgia College*

Typically secondary mathematics preservice teachers do not engage in the practice of lesson study until they have a classroom of their own. The presenters will detail two models for implementing lesson study into mathematics methods courses and discuss preliminary findings.

Enhancing Preservice Teacher Field Experiences with Mentor Guided Lesson Study

Jennifer Nimitz, *Michigan State University*

This study presents two cases of lesson studies conducted by mentor teachers and preservice teachers during required mathematics education field experiences. I examine whether lesson study fosters

the mentor and preservice teachers' collaboration and discussions around mathematics teaching and learning.

Session 20 **Quail Hill**
Teacher Professional Development
Discussion Session

Empowering Teachers in the Content and Delivery of a Summer Mathematics Institute

Sarah E. Ives, *Texas A&M University-Corpus Christi*
Kimberly Ginsburg Moore, *Texas A&M University-Corpus Christi*
George Tintera, *Texas A&M University-Corpus Christi*

This session will use the details of a professional development project in algebra transition across grades and vertical school teams to generate discussion regarding the balance of roles of district goals, providers, participants, and school year curricula in professional development.

Session 21 **Saddleback**
AMTE Gold Sponsor Session
Individual Session

Conceptua Math & AMTE: A Partnership to Bring High-Quality, Digital Elementary Math Instruction to AMTE Members

Arjan Khalsa, *Conceptua Math*

This training session will provide AMTE members with the training and tools necessary to implement their free license of Conceptua® Math. Conceptua Math is an elementary and middle school, digital Common Core classroom curriculum that provides online core instruction, visual models, story problems, discussion guides, and real world investigations. With Conceptua Math, students use multiple visual models and contextual learning to cultivate their understanding of math topics and engage in rich classroom discussions. Conceptua Math's *Adaptive Teaching* provides teachers with the tools and support to ensure that all students learn and grow at their own pace. In this session, participants will receive training on the curriculum, outline steps for immediate implementation, and review resources for use in schools with students.

Session 22 **Salon A**
Mathematics Policy and Program Issues
Symposium

Formative Assessment: A Key Element in Fostering the Mathematical Success of All Students

Edward Silver, *University of Michigan*
Thomaseia L. Adams, *University of Florida*
Megan Franke, *University of California, Los Angeles*
Karen Karp, *University of Louisville*
Jere Confrey, *Amplify Learning & North Carolina State University*
Margaret Smith, *University of Pittsburgh*

In this session, panel members will discuss formative assessment as a key element of pedagogical strategies dubbed to increase the mathematical success of all students.

Session 23 **Salon B**
Pedagogical Content Knowledge
Symposium

Understanding Students' Pre- and Post-Instructional Conceptions of Integers and the Implications for Teacher Educators

Lisa Lamb, *San Diego State University*
Jessica Bishop, *University of Georgia*
Ian Whitacre, *Florida State University*
Spencer Bagley, *San Diego State University*

We will draw upon analyses of 160 clinical interviews to share students' conceptions of integers. Our goal is to engage participants in discussing how to use this information to support work with practicing and prospective teachers.

Session 24 **Santiago**
Development of Mathematics Teacher Educators
Discussion Session

Methods Textbooks: Mathematics Teachers Educators' Struggles to Choose and Use

Shelly Sheats Harkness, *University of Cincinnati*
Amber Brass, *Arizona State University*

We struggle with choosing methods textbooks and helping preservice teachers understand the value of what they read. Share your ideas and help us grapple with these struggles. Results of a textbook survey and analysis will be shared.

Session 25 **Shady Canyon**
Mathematics Education Policy and Program Issues
Symposium

Research on Secondary Mathematics Teacher Preparation

Matthew Winsor, *Illinois State University*
David Barker, *Illinois State University*
Ron Preston, *East Carolina University*
Stephanie Casey, *Eastern Michigan University*
Mary C. Enderson, *Old Dominion University*

The purpose of this working group is to promote a collaborative Secondary Mathematics Teacher Preparation (SMTP) research agenda that can serve as a catalyst for understanding and improving secondary mathematics teacher preparation.

Session 26 **Trabuco**
Teaching and Learning with Technology
Symposium

Teacher-Captured Video: Tools, Opportunities and Challenges

Miriam Gamoran Sherin, *Northwestern University*
Elizabeth B. Dyer, *Northwestern University*
Elizabeth van Es, *University of California, Irvine*
Jennifer Sun, *University of California, Irvine*
Shari L. Stockero, *Michigan Technological University*
Laura R. Van Zoest, *Western Michigan University*

This session examines teacher-captured video for professional development. We examine new tools for video capture and analysis. We discuss challenges for teachers in capturing and selecting video and implications for teacher educators in supporting teachers' study of their own practice.

Session 27
Mathematical Content Knowledge
Discussion Session

Turtle Rock A

Preparing Mathematics Teachers to Teach Modeling

Joshua Chesler, *California State University, Long Beach*
Jen-Mei Chang, *California State University, Long Beach*

Modeling is both a practice standard and a conceptual category in the CCSSM. It presents unique challenges for teacher preparation. We will explore the question: How can we prepare mathematics teachers to teach modeling as envisioned in the CCSSM?

Session 28
Teacher Professional Development
Individual Session

Turtle Rock B

Using the Structural Components of Number to Understand Fractions in the CCSS

Jackie Ismail, *Boise State University*
Michele Carney, *Boise State University*
Keith Krone, *Boise State University*

This interactive session uses the structural components of number and iconic representations as a framework to assist participants in understanding the fraction standards in Grades 3-6 with a format that can be replicated across multiple professional development environments.

Session 29
Teaching and Learning with Technology
Individual Session

Turtle Rock C

How Good is the Latest Math App? Wait There's Another One! Evaluating Math Apps

Usha Kotelawala, *Fordham University*

This session will share the work of a team of four researchers who have developed a tool for evaluating math apps. Participants will have the opportunity to search with the tool and utilize the tool for evaluating a math app.

Session 30
Equity and Mathematics Education
Individual Session

Woodbridge

Enacting Video Analysis to Develop PSTs' Noticing and Focus on Equity: MTE Decisions and Moves

Amy M. Roth McDuffie, *Washington State University Tri-Cities*
Mary Q. Foote, *Queens College, City University of New York*
Corey Drake, *Michigan State University*
Erin Elizabeth Turner, *The University of Arizona*
Julia Aguirre, *University of Washington Tacoma*

Teacher educators share findings from a multi-university research project in which we designed and facilitated a video analysis activity intended to support the development of prospective teachers' noticing with a focus on equity in culturally and linguistically diverse classrooms.

THURSDAY AFTERNOON, FEBRUARY 6, 2014

	12:45 - 1:30 pm	1:45 - 2:45 pm	3:15 - 4:00 pm
Theater Conference	31. <i>Pedagogical Content Knowledge Brief Reports Session</i>	46. <i>Knowledge Domains and the Practice of Mathematics Teacher Educating</i> - Zollinger	58. <i>Teaching and Learning with Technology Brief Reports Session</i>
Cove Crystal	32. <i>Cases for Teacher Educators: Facilitating Conversations with Prospective Teachers about Inequities in Mathematics Classrooms</i> - Spencer, Goffney, Felton, Bieda, White, Aguirre, Crespo, Civil & Breyfogle		59. <i>Supporting Preservice Teachers' Planning of Discourse-Rich Instruction Using the Lesson Decision Plan</i> - Casa
Creek Oak	33. <i>Connecting and Empowering AMTE Affiliates</i> - Walker, Eddy, Williams, Bohlin, Franz & Burton		60. <i>Professional Development Shifts in Mathematics Education Technology</i> - Driskell, Bush, Rakes, Niess & Pugalee
Hill Pelican	34. <i>Productive Dispositions for Teaching and Thriving in Mathematics Project-Based Learning</i> - Lee, Hudson & Cross	47. <i>The Sixth Sense: Drawing Inferences from Student Work</i> - Jones, Lannin & Chval	61. <i>Integrating Knowledge: A Model of Secondary Mathematics Teacher Preparation</i> - Barker, Winsor, O'Hanlon & Kirwan
Hill Quail	35. <i>Supporting Secondary Preservice Teachers to Develop Technology and Pedagogy Content Knowledge</i> - Galindo	48. <i>Assessment for Learning Goes Digital: Voicing Preservice Teachers' Mathematical Justifications</i> - Browning, Edson & Rogers	62. <i>A Guided-Inquiry Approach Supporting Preservice Elementary Teachers' Development of a Mathematics Teacher Knowledge Framework</i> - Quebec Fuentes & Switzer
Saddle back	36. <i>Understanding Communication in the Practice Standards in Classrooms with Bilingual Students</i> - Zahner & Willey	49. <i>Partnership to Design a Middle School Mathematics Teacher Preparation Program from the Ground Up</i> - Kersaint, Sears & Krajcevski	63. <i>Conjecturing a Linear Equation, Inequalities, and Functions Learning Trajectory for Teacher Education</i> - Fonger
Salon A	37. <i>Developing Proficiency with Basic Facts</i> - Gojak	50. <i>What Does it Mean to be a Mathematics Educator in 2014?</i> - King, Fennell, Strutchens, Beckmann, Martin & Mays	64. <i>Understanding the Role of Local Video in the Context of Professional Development</i> - Brown, Ambrose, Orosco & Coddington
Salon B	38. <i>The Role of Representation in Conceptual Understanding of Number</i> - Vig & Murray	51. <i>An Analysis of Mathematical Content Knowledge for Teaching</i> - Siegfried, Philipp, Jacobs, Lamb, Bishop, Nanna & Hawthorne	65. <i>Supporting Preservice Teachers' Ability to Notice: An Online Platform for Understanding Children's Mathematical Thinking</i> - Castro Superfine, Fisher & Bragelman
Santiago	39. <i>Fractions, Algorithms, Story Problems, and Families: Learning to Teach Math in a 5th Grade Classroom</i> - McCloskey, Lloyd & Lynch	52. <i>Online Professional Development Resources for the CCSS-M Standards for Mathematical Practice</i> - Rossi Becker, Brown & Hakansson	66. <i>Using Book Study to Promote Prospective Elementary Teachers' Knowledge of Children's Mathematical Thinking</i> - Mojica & Wright

Shady Canyon	40. <i>Coaching Elementary University Supervisors to Provide Mathematics Support</i> - Livers	53. <i>The Nature of University Supervisor Feedback: What is Being Acknowledged in the Mathematics Classroom?</i> - Schwartz, Poling & Walkowiak	67. <i>Reflection and Action: Debriefing on the Equity Strand</i> - AMTE Equity Task Force Members
Trabuco	41. <i>Connecting Professional Development to Practice: How Do Teachers Respond to this Activity?</i> - McAneny & Cirillo	54. <i>Disrupting Deficit Thinking: Infusing Innovative Approaches to Special Education into Mathematics Teacher Education</i> - Lambert	68. <i>The Impact of Teachers' Knowledge of Group Theory on Teaching Practices</i> - Wasserman & Stockton
Rock ATurtle	42. <i>Preservice Mathematics Teachers' Perceptions and Thinking in Proving and Arguing in Mathematics</i> - Rice	55. <i>Examining the Effects of Mathematics Teacher Preparation on Teachers' Classroom Practice</i> - Jansen, Berk & Meikle	69. <i>An Emerging Framework to Characterize Interactions Between Teachers' Pedagogical Goals and Mathematical Knowledge for Teaching</i> - Marfai
Rock BTurtle	43. <i>Analyzing PSTs' Instructional Decisions through Cultural Historical Activity Theory</i> - Kasmer	56. <i>Massive Open Online Courses for Mathematics Educators: Results from a Learning Trajectory-Based MOOC</i> - Avineri, Ng & Maloney	70. <i>Toward Robust Understanding of Algebra: Using an Algebra-Specific Observational Protocol to Prompt Reflection on Instruction</i> - Lepak, Wernet, Hu & Ayieko
Rock CTurtle	44. <i>Developing Pedagogical Content Knowledge via the Smarter Balanced Assessments: Toward a Model for Professional Development</i> - Taylor		71. <i>Preservice Field Experience: An Effective Site for Learning the Meta-Process of Applying Research to Practice</i> - van Ingen
Woodbridge	45. <i>The Impact of Long-Term Professional Development on High School Algebra Teachers' Content Knowledge and Practices</i> - Benken	57. <i>Interpreting the CCSSM: A Comparative Study of Elementary and Secondary Mathematics Teachers' Perceptions</i> - Gaddy, Baxter, Gerstenschlager, Barlow & Willingham	72. <i>Collaboratively Planning and Teaching a 5E-Lesson Aligned with CCSS in an Elementary Mathematics Methods Course</i> - Rumsey

Session 31 **Conference Theater**
Pedagogical Content Knowledge
Brief Reports Session

An Analysis of Mathematical Tasks Using a Lens of Problem Solving

Krystal Barber, *Syracuse University*

Using a case study approach, I explore the use of mathematical tasks and problem solving in two elementary school classrooms. I investigate how teachers choose and implement mathematical tasks and how students solve problems that require significant cognitive demand.

Creating and Evaluating the Effectiveness of a Two-Course Sequence of Elementary Mathematics Methods

Elaine A. Tuft, *Utah Valley University*
 Vessela Ilieva, *Utah Valley University*

This presentation will address why we require two elementary mathematics methods courses in our teacher preparation program, the way the courses were designed, and how they are affecting prospective elementary teachers' attitudes toward and conceptions of mathematics and teaching mathematics.

Session 32 **Crystal Cove**
Equity and Mathematics Education
Extended Session (12:45 – 2:45pm)

Cases for Teacher Educators: Facilitating Conversations with Prospective Teachers about Inequities in Mathematics Classrooms

Joi A. Spencer, *University of San Diego*
 Imani Goffney, *University of Houston*
 Mathew D. Felton, *The University of Arizona*
 Kristen Bieda, *Michigan State University*
 Dorothy Y. White, *University of Georgia*
 Julia Aguirre, *University of Washington Tacoma*
 Sandra Crespo, *Michigan State University*
 Marta Civil, *The University of North Carolina at Chapel Hill*
 M. Lynn Breyfogle, *Bucknell University*

Participants will engage with case scenarios featuring dilemmas mathematics teacher educators face when teaching about privilege and oppression in mathematics classrooms in their content and methods courses. Presenters share their framework for managing these challenging conversations with prospective teachers.

Session 33 **Oak Creek**
Mathematics Education Policy and Program Issues
Extended Session (12:45 – 2:45pm)

Connecting and Empowering AMTE Affiliates

Christine Walker, *Utah Valley University*
 Colleen Eddy, *University of North Texas*
 Desha Williams, *Kennesaw State University*
 Carol Fry Bohlin, *California State University, Fresno*
 Dana Franz, *Mississippi State University*
 Megan Burton, *Auburn University*

Affiliate leaders, participants, and AMTE Affiliate Connections

Committee members will discuss issues, share useful information and ideas, communicate lessons learned, as well as generate new ideas to initiate and grow AMTE affiliates during this interactive session.

Session 34 **Pelican Hill**
Teacher Professional Development
Individual Session

Productive Dispositions for Teaching and Thriving in Mathematics Project-Based Learning

Dionne Indera Cross, *Indiana University*
 Jean Lee, *University of Indianapolis*
 Rick A. Hudson, *University of Southern Indiana*

In this presentation, we discuss the findings of our study of middle school teachers' implementation of two PBL statistics units. We highlight the role dispositions play in teachers' attitudes toward PBL and the likelihood they will implement PBL successfully.

Session 35 **Quail Hill**
Teaching and Learning with Technology
Individual Session

Supporting Secondary Preservice Teachers to Develop Technology and Pedagogy Content Knowledge

Enrique Galindo, *Indiana University*

I will report on the development and implementation of a Technology Portfolio assessment that can be used to both support secondary mathematics preservice teachers to develop their TPACK and to provide evidence about their knowledge and skills in this domain.

Session 36 **Saddleback**
Equity and Mathematics Education
Individual Session

Understanding Communication in the Practice Standards in Classrooms with Bilingual Students

William Zahner, *Boston University*
 Craig Willey, *Indiana University-Indianapolis*

This session examines implications of two CCSSM practice standards for emergent bilingual learners. Two case studies are examined using a framework on culturally relevant mathematics instruction (Aguirre & Zavala, 2013). Audience members will discuss implications for promoting equitable instruction.

Session 37 **Salon A**
Presidential Exchange Series
Individual Session

Developing Proficiency with Basic Facts

Linda M. Gojak, *President, National Council of Teachers of Mathematics*

Classroom teachers should support mastering basic facts through strategic thinking rather than rote memorization. Most preservice teachers have not experienced this approach to learning facts. Here are some ways to develop this pedagogy in elementary teacher preparation as well as to make connections to other number concepts.

Session 38 Salon B
Pedagogical Content Knowledge
Individual Session

The Role of Representation in Conceptual Understanding of Number

Rozy Vig, *Harvard University*
Eileen Murray, *Harvard University*

Mathematics teacher educators have long advocated for the use of models and representations, but would benefit from a better understanding of how teachers engage with these tools. This session helps illuminate issues related to supporting teachers in their practice.

Session 39 Santiago
Preservice Teacher Field Experiences
Individual Session

Fractions, Algorithms, Story Problems, and Families: Learning to Teach Math in a 5th Grade Classroom

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

We share results from a study of a 5th-grade classroom in which a student teacher and her mentor taught lessons about fraction operations. Using the theoretical framework of ritual, we analyze the culturally-embedded nature of their teaching practices.

Session 40 Shady Canyon
Development of Mathematics Teacher Educators
Individual Session

Coaching Elementary University Supervisors to Provide Mathematics Support

Stefanie D. Livers, *University of Alabama*

A critical influence on teacher candidates is the university supervisor. This mixed methods study revealed that professional development for university supervisors in the areas of mathematics and coaching strategies does make a difference in teacher candidate beliefs and instructional practice.

Session 41 Trabuco
Teacher Professional Development
Individual Session

Connecting Professional Development to Practice: How Do Teachers Respond to this Activity?

Kathleen (Taffy) McAneny, *University of Delaware*
Michelle Cirillo, *University of Delaware*

We present the results of a study conducted with teachers engaged in a professional development program centered on discourse in secondary mathematics classrooms. We explore teachers' responses when connecting the research ideas learned in professional development to their practice.

Session 42 Turtle Rock A
Mathematical Content Knowledge
Individual Session

Preservice Mathematics Teachers' Perceptions and Thinking in Proving and Arguing in Mathematics

Lisa Rice, *University of Wyoming*

Findings and implications of research conducted with preservice secondary mathematics teachers about their perceptions and thinking in proving and arguing will be presented. Activities and discussions will be incorporated into the session.

Session 43 Turtle Rock B
Preservice Teacher Field Experiences
Individual Session

Analyzing PSTs' Instructional Decisions through Cultural Historical Activity Theory

Lisa Anne Kasmer, *Grand Valley State University*

Cultural-Historical Activity Theory (CHAT) is a framework that situates the activity and analysis of PSTs' cycles of tensions, instructional planning, lesson enactment, and reflection on their teaching. In this session, the results from a study that uses CHAT will be shared.

Session 44 Turtle Rock C
Pedagogical Content Knowledge
Extended Session (12:45 – 2:45pm)

Developing Pedagogical Content Knowledge via the Smarter Balanced Assessments: Toward a Model for Professional Development

Megan Westwood Taylor, *Sonoma State University*

Participants will engage with released Smarter Balanced tasks and discuss the use of such tasks in professional development settings for the development of PCK. Data from the session will be used to design a professional development experience for inservice teachers.

Session 45 Woodbridge
Mathematical Content Knowledge
Individual Session

The Impact of Long-Term Professional Development on High School Algebra Teachers' Content Knowledge and Practices

Babette M. Benken, *California State University, Long Beach*

In this session I will share elements of and results from a long-term PD project and study that sought to improve high school algebra teachers' content knowledge and teaching practices in a large, urban district.

Session 46 **Conference Theater**
Development of Mathematics Teacher Educators
Individual Session

Knowledge Domains and the Practice of Mathematics Teacher Educating

Scott Zollinger, *The Ohio State University*

This study examined knowledge domains used by mathematics teacher educators as they designed and implemented pedagogical experiences for preservice and inservice teachers. This presentation focuses on a discussion of the sources from which they drew as they interacted with learners.

Session 47 **Pelican Hill**
Pedagogical Content Knowledge
Individual Session

The Sixth Sense: Drawing Inferences from Student Work

Dustin Jones, *Sam Houston State University*
 John K. Lannin, *University of Missouri-Columbia*
 Kathryn B. Chval, *University of Missouri-Columbia*

We will share students' work on a task related to fractions and a related activity designed to help teachers draw inferences on what these students may understand about fractions.

Session 48 **Quail Hill**
Teaching and Learning with Technology
Individual Session

Assessment for Learning Goes Digital: Voicing Preservice Teachers' Mathematical Justifications

Christine Browning, *Western Michigan University*
 Alden J. Edson, *Western Michigan University*
 Diane Renee Rogers, *Western Michigan University*

Through a lens of assessment for learning, this session will examine video-recorded justifications taken from a technology-supported algebra classroom focused on the development of preservice teachers' mathematical content knowledge and their use of CCSSM Mathematical Practices.

Session 49 **Saddleback**
School and University Partnerships and Projects
Discussion Session

Partnership to Design a Middle School Mathematics Teacher Preparation Program from the Ground Up

Gladis Kersaint, *University of South Florida*
 Ruthmae Sears, *University of South Florida*
 Mile Krajcevski, *University of South Florida*

We will describe a collaborative effort to develop a middle school mathematics teacher preparation program that attends to national recommendations and standards (CCSSM, NCATE blue panel report, MTEP guidelines, AMLE, CAEP). Complexities, challenges, and opportunities will be discussed.

Session 50 **Salon A**
Mathematics Education Policy and Program Issues

Discussion Session

What Does it Mean to be a Mathematics Educator in 2014?

Karen King, *National Science Foundation*
 Skip Fennell, *McDaniel College*
 Marilyn E. Strutchens, *Auburn University*
 Sybilla Beckmann, *University of Georgia*
 W. Gary Martin, *Auburn University*
 Michael Mays, *West Virginia University*

What does it mean to be referred to as a mathematics educator? This discussion session, organized by the AMTE Emerging Issues Committee, will explore WHO the collective "we" are, what we do, why we do it, and why it's important.

Session 51 **Salon B**
Mathematical Content Knowledge
Individual Session

An Analysis of Mathematical Content Knowledge for Teaching

John (Zig) Michael Siegfried, *James Madison University*
 Randolph Philipp, *San Diego State University*
 Victoria Jacobs, *The University of North Carolina at Greensboro*
 Lisa Lamb, *San Diego State University*
 Jessica Bishop, *University of Georgia*
 Robert Joseph Nanna, *University of Massachusetts Dartmouth*
 Casey Hawthorne, *San Diego State University*

We will discuss Common, Specialized, and Pedagogical Content Knowledge. Place-value and integer items used in two large NSF-funded research projects enable us to consider boundaries among types of knowledge while illuminating distinctions. Implications for teaching and research will be considered.

Session 52 **Santiago**
Teacher Professional Development
Symposium

Online Professional Development Resources for the CCSS-M Standards for Mathematical Practice

Joanne Rossi Becker, *San José State University*
 Kyndall Allen Brown, *California Mathematics Project*
 Susie W. Hakansson, *CAMTE & California Mathematics Project*

A professional development organization developed free online modules for Standards for Mathematical Practice to help teachers transition to the CCSS-M. This session will provide an overview of the modules, sample problems, and videos for each of the SMP.

Session 53 **Shady Canyon**
Preservice Teacher Field Experiences
Discussion Session

The Nature of University Supervisor Feedback: What is Being Acknowledged in the Mathematics Classroom

Catherine Schwartz, *East Carolina University*
Lisa Poling, *Appalachian State University*
Temple Walkowiak, *North Carolina State University*

The goal of the proposed session is to reflect on the nature of feedback given to elementary student teachers by university supervisors during observations of mathematics lessons and on the types of comments that become educative and influence teacher change.

Session 54 **Trabuco**
Equity and Mathematics Education
Individual Session

Disrupting Deficit Thinking: Infusing Innovative Approaches to Special Education into Mathematics Teacher Education

Rachel Lambert, *Chapman University*

This session will explore Disability Studies in Education as an alternative to medical models of disability. Mathematics educators will be exposed to innovative approaches to understanding disability into their teacher preparation classes (readings, simulations, facilitation strategies, Universal Design for Learning).

Session 55 **Turtle Rock A**
Pedagogical Content Knowledge
Individual Session

Examining the Effects of Mathematics Teacher Preparation on Teachers' Classroom Practice

Amanda Jansen, *University of Delaware*
Dawn Berk, *University of Delaware*
Erin Meikle, *University of Delaware*

We present findings from a study investigating the effects of mathematics teacher preparation on teachers' classroom practice. Analyses of teachers' practice in terms of its potential to support students' conceptual understanding indicate interesting teacher

preparation effects and changes over time.

Session 56 **Turtle Rock B**
Teacher Professional Development
Individual Session

Massive Open Online Courses for Mathematics Educators: Results from a Learning Trajectory-Based MOOC

Tamar Avineri, *North Carolina State University*
Dicky Ng, *North Carolina State University*
Alan Maloney, *North Carolina State University*

Urgency for teachers to implement the CCSS-M demands innovative ways for rapid yet in-depth professional development experiences. By combining a learning trajectory approach with a MOOC platform, we share study results from our first course on the equipartitioning learning trajectory.

Session 57 **Woodbridge**
Mathematical Content Knowledge
Individual Session

Interpreting the CCSSM: A Comparative Study of Elementary and Secondary Mathematics Teachers' Perceptions

Angeline King Gaddy, *Middle Tennessee State University*
Wesley Adam Baxter, *Middle Tennessee State University*
Natasha Erika Gerstenschlager, *Middle Tennessee State University*
Angela Barlow, *Middle Tennessee State University*
James Christopher Willingham, *Middle Tennessee State University*

Success of the Common Core hinges on teachers' interpretations of the content standards. We will share our results examining elementary and secondary teachers' interpretations of selected standards and teachers' perceptions of how their instructional practices will change.

Session 58 **Conference Theater**
Teaching and Learning with Technology
Brief Reports Session

Supplementing Ongoing Inservice Mathematics Teacher Professional Development Using Collaborative Online Tools

Christopher Ian Lundholm, *Washington State University*

Implementing meaningful professional development for districts spread hours apart is a challenge. In addition to regular face-to-face meetings, an online collaboration system using Google+ and Google Drive has been developed to provide ongoing support for teachers at a distance.

The Algebra Ready Project: Developing Online Professional Development to Address the Rational Numbers Problem

Amy Michelle Olson, *The University of Arizona*
 Christine Calderon Vriesema, *The University of Arizona*
 Ganna Sobolevs'ka, *The University of Arizona*

This session presents information from a project in which professional development content created by a team of experts and local teachers was further developed on an online platform to take advantage of opportunities (including learning blocks, video, interactions, and communities).

Session 59 **Crystal Cove**
Pedagogical Content Knowledge
Individual Session

Supporting Preservice Teachers' Planning of Discourse-Rich Instruction Using the Lesson Decision Plan

Tutita M. Casa, *University of Connecticut*

Participants will be introduced to the Lesson Decision Plan intended to support preservice teachers' decisions as they plan for discourse. They will learn of the multiple components, realize how they relate to one another, and analyze preservice teacher work.

Session 60 **Oak Creek**
Teacher Professional Development
Individual Session

Professional Development Shifts in Mathematics Education Technology

Shannon Driskell, *University of Dayton*
 Sarah B. Bush, *Bellarmine University*
 Christopher R. Rakes, *University of Maryland, Baltimore County*
 Margaret Niess, *Oregon State University*
 David Pugalee, *The University of North Carolina-Charlotte*

This session will facilitate discussion about how mathematics teacher educators can use research to enhance the professional development for using technology. We will share findings from a systematic review of literature and connect findings to audience discussions.

Session 61 **Pelican Hill**
Pedagogical Content Knowledge
Individual Session

Integrating Knowledge: A Model of Secondary Mathematics

Teacher Preparation

David Barker, *Illinois State University*
 Matthew Winsor, *Illinois State University*
 Wendy O'Hanlon, *Illinois Central College*
 J. Vince Kirwan, *Illinois State University*

In this session we present a model and curricular materials for integrating secondary mathematics teachers' knowledge of mathematics and pedagogy. The model, curricular materials, strategies for implementation, and research findings will be shared and discussed.

Session 62 **Quail Hill**
Pedagogical Content Knowledge
Individual Session

A Guided-Inquiry Approach Supporting Preservice Elementary Teachers' Development of a Mathematics Teacher Knowledge Framework

Sarah Quebec Fuentes, *Texas Christian University*
 John Matthew Switzer, *Texas Christian University*

Teachers implicitly explore Mathematical Knowledge for Teaching (MKT) through coursework and professional development. This presentation shares findings of a study that explicitly exposed preservice elementary teachers in a mathematics methods course to MKT through deliberately designed class activities and assignments.

Session 63 **Saddleback**
Mathematical Content Knowledge
Individual Session

Conjecturing a Linear Equation, Inequalities, and Functions Learning Trajectory for Teacher Education

Nicole L. Fonger, *North Carolina State University*

Based on recent research, we unpack the Linear Equations, Inequalities, and Functions contents in the Common Core Standards into a learning trajectory that describes and structures students' conceptual development. This session explores the role of learning trajectories in teacher preparation.

Session 64 **Salon A**
Teacher Professional Development
Symposium

Understanding the Role of Local Video in the Context of Professional Development

Stacy Ann Brown, *California State Polytechnic University, Pomona*
 Rebecca Ambrose, *University of California-Davis*
 Julie Carol Orosco, *University of California-Davis*
 Lorelei R. Coddington, *Claremont Graduate University*

Recognizing that the inclusion of video in professional development is an increasingly emergent practice, presenters will draw from three professional development projects to explore practices and perspectives that guide and structure use of local video records of students and classrooms.

Session 65 **Salon B**
Teaching and Learning with Technology

Individual Session

Supporting Preservice Teachers' Ability to Notice: An Online Platform for Understanding Children's Mathematical Thinking

Alison Castro Superfine, *University of Illinois at Chicago*
Amanda Michelle Fisher, *University of Illinois at Chicago*
John Bragelman, *University of Illinois at Chicago*

To help preservice teachers move from descriptive comments to highlighting noteworthy events that attend to children's mathematical thinking, we have designed an online platform utilizing a series of scaffolds and incorporating a set of videocases.

Session 66 **Santiago** **Preservice Teacher Field Experiences** **Individual Session**

Using Book Study to Promote Prospective Elementary Teachers' Knowledge of Children's Mathematical Thinking

Gemma Mojica, *The University of North Carolina at Chapel Hill*
Stephanie Anne Wright, *The University of North Carolina at Chapel Hill*

Student/cooperating teacher teams participated in professional development linking theory about children's thinking to practice (Empson & Levi, 2011). The Five Practices (Smith & Stein, 2011) were presented as a model to facilitate mathematically rich discussions. Our model will be shared.

Session 67 **Shady Canyon** **Equity and Mathematics Education** **Individual Session**

Reflection and Action: Debriefing on the Equity Strand

AMTE Equity Task Force Members

Participants who attended the Equity Learn and Reflect sub-strand will come together to debrief the questions posed in the first session. These questions focus on self-reflection, reflection on one's own practice, and plans for action.

Session 68 **Trabuco** **Mathematical Content Knowledge** **Individual Session**

The Impact of Teachers' Knowledge of Group Theory on Teaching Practices

Nicholas H. Wasserman, *Teachers College Columbia University*
Julianna Connelly Stockton, *Sacred Heart University*

What impact does knowledge of advanced mathematics, specifically group theory, have on algebra teaching? Researchers report on a qualitative study with four K-8 teachers, characterizing changes between their pre- and post-teaching practices for specific early algebra content.

Session 69 **Turtle Rock A** **Mathematical Content Knowledge**

Individual Session

An Emerging Framework to Characterize Interactions Between Teachers' Pedagogical Goals and Mathematical Knowledge for Teaching

Frank Stephen Marfai, *Phoenix College*

I share my findings regarding how some teachers' goals for student learning shifted in the context of using a research-based conceptual curriculum, and how these goal structures related to their mathematical knowledge for teaching and stated instructional goals.

Session 70 **Turtle Rock B** **Teacher Professional Development** **Individual Session**

Toward Robust Understanding of Algebra: Using an Algebra-Specific Observational Protocol to Prompt Reflection on Instruction

Jerilynn Lepak, *Michigan State University*
Jamie Wernet, *Michigan State University*
Sihua Hu, *Michigan State University*
Rachel Ayieko, *Michigan State University*

In this session, we present an observational protocol useful for framing reflection questions in professional development with algebra teachers. The protocol focuses on instruction supporting specific algebraic competencies for solving complex problems, such as generating and interpreting representations.

Session 71 **Turtle Rock C** **Preservice Teacher Field Experiences** **Individual Session**

Preservice Field Experience: An Effective Site for Learning the Meta-Process of Applying Research to Practice

Sarah A. van Ingen, *University of South Florida*

This session reports findings from a design-based research study on preparing preservice teachers to apply research to mathematics teaching. Analyses of performance assessment data provide insight into the extent to which field experiences support preservice teacher learning.

Session 72 **Woodbridge** **Preservice Teacher Field Experiences** **Individual Session**

Collaboratively Planning and Teaching a 5E-Lesson Aligned with CCSS in an Elementary Mathematics Methods Course

Chepina Rumsey, *Kansas State University*

The purpose of this session is to present a practical activity for integrating the 5E-Lesson Planning approach to an elementary mathematics methods course and the data supporting the benefits of this endeavor.

**General Session****Living Contradictions: Negotiating Practices
as Mathematics Teacher Educators****Beatriz D'Ambrosio, *Miami University***

In this talk I will reflect on and share living contradictions shaping our practice as mathematics teacher educators. These reflections have resulted from ongoing collaboration with colleagues as we engage in self-studies of our practices. Living contradictions stem from the discrepancies we identify between our socio-cultural realities and the societal demands of schooling, our beliefs and our practices, our identities as learners and our positioning as experts, and holding visions for teaching and becoming aware of the vision of others. Negotiations occur as we understand how our identities as teachers, scholars, and moral and social human beings are reflected in our practices.



Association of Mathematics
Teacher Educators

Salon C/D, Salon E

Conference participants have two choices for breakfast:

Breakfast

Salon C/D

Breakfast will be served in Salon C/D.

AMTE Advocacy Breakfast

Salon E

Ken Krehbiel, National Council of Teachers of Mathematics
Patricia Johnson, United States Department of Education
Karen King, National Science Foundation

The annual AMTE Advocacy Breakfast will present up-to-date initiatives related to policy in mathematics education. The speaker panel includes Ken Krehbiel, National Council of Teachers of Mathematics; Patricia Johnson, United States Department of Education; and Karen King, National Science Foundation. The presenters will outline major issues we should consider related to research and practice in our field. There will be an opportunity for questions and discussion following brief presentations by the speaker panel.

LEARN & REFLECT SESSIONS: PSTs FIELD EXPERIENCES

A *Learn and Reflect* sub-strand on Preservice Teacher Field Experiences is part of this year's conference. Sessions in the sub-strand are related to the experiences and impact of preservice teachers working in K-12 school settings and include early field experiences, student teaching and internships. Conference attendees will have an opportunity to attend and **learn** from the set of sub-strand sessions and **reflect** on their learning during a final wrap-up session. The Preservice Teacher Field Experiences sub-strand will be held on **Friday, February 7, 2014**.

Reflection Questions (posed by the Professional Development Committee)

1. What strategies or tools might be used in field experience settings to strengthen candidates' ability to notice? To support a range of learners? To facilitate discussions?
2. In what ways might field experiences support shifts in PSTs' identities as teachers and beliefs about students as learners or mathematics?
3. As you move through the sessions, what ideas have you gained about how connections between coursework and fieldwork can be strengthened to deepen teacher candidate learning?
4. Given your context, what are some dilemmas/tensions that you are grappling with after learning from the work of others in these sessions?
5. In what ways might we study the impact of particular field experiences?

Preservice Teacher Field Experiences Learn and Reflect Sessions

Session Number, Time, & Location	Title	Presenter(s)
Session 75: (Kick off) 8:00-9:00am Oak Creek	Developing Professional Noticing: An Examination of Preservice Teachers and Lesson Study	Amador & Hudson
Session 91 9:15 – 10:00 Pelican Hill	A Residency Model: Shifting From Traditional To On-Site Education	Nivens
Session 93 9:15 – 10:00 Saddleback	Theorizing from Practice: Designing Field-Based Mathematics Methods Courses	Hodges & Roy
Session 103 10:15 – 11:15 Oak Creek	Approximations of Co-Constructed Instructional Explanations as Tools of Ambitious Teaching for Novice Secondary Mathematics Teachers	Campbell & Elliott
Session 106 10:15 – 11:15 Saddleback	Expanding Field Experiences from the US to Australia: Engaging PSTs in Research on Student Learning	Wilkerson & Baker
Lunch 11:15 – 12:45		
Session 116 12:45 – 1:45 Brief Reports Conference Theater	What Do They See? An Inside Look Into Preservice Teacher Noticing in a Mathematics Classroom Preservice Elementary Teachers' Understandings of Mathematical Discourse Using the iPad to Develop Preservice Teachers' Understandings of the CCSSM	Estapa Lynch & Lynch Brookby & Grasseti
Session 7 12:45 – 1:45	Preparing and Supporting Mentor Teachers of Field Experiences for Secondary Mathematics Teachers	Franz, Kersaint, & Strutchens
Session 8: Wrap Up 2:00 – 2:45	Reflection and Action: <i>Debriefing on the Field Experiences Strand</i>	AMTE Professional Development Committee



Association of Mathematics
Teacher Educators

Salon E

EIC – Advocacy Toolkit Work Session

This interactive session (following the Advocacy Breakfast) will begin the process of creating and assembling AMTE's Advocacy Toolkit. This toolkit will provide mathematics educators with key contacts, resources, and position statements to use as they engage in policy-related discussions involving mathematics education (e.g. CCSS and teacher education, professional development related to consortial assessments, NCTQ ratings, CAEP Standards, etc.). Ken Krehbiel, National Council of Teachers of Mathematics, Pat Johnson, United States Department of Education, Karen King, National Science Foundation, and the AMTE Emerging Issues Committee will help to guide the session and tool kit assembly. Come. Get involved. Help determine what's in OUR toolkit.

FRIDAY MORNING, FEBRUARY 7, 2014

	8:00 - 9:00 am	9:15 - 10:00 am	10:15 - 11:15 am
Conference Theater	73. <i>Teacher Professional Development Brief Reports Session</i>	89. <i>Teacher Professional Development Brief Reports Session</i>	101. <i>Mathematics Education Policy and Program Issues Brief Reports Session</i>
Crystal Cove	74. <i>Supporting Teachers in Developing Technology-Based Mathematics Tasks</i> - Lee, McCulloch, Berry, Bos, Ozgun-Koca, Nickell & Chandler		102. <i>Design and Development of Collaborative Mathematics Education Websites</i> - Champion
Oak Creek	75. <i>Developing Professional Noticing: An Examination of Preservice Teachers and Lesson Study</i> - Amador & Hudson	90. <i>Which Experiences Are Most Helpful For Preparing Elementary Mathematics Specialists? A Research Study</i> - Bitto & Mason	103. <i>Approximations of Co-Constructed Instructional Explanations as Tools of Ambitious Teaching for Novice Secondary Mathematics Teachers</i> - Campbell & Elliott
Pelican Hill	76. <i>AMTE Publications Session</i> - Smith, Spangler, Lapp, St. John, Wilkerson & Browning	91. <i>A Residency Model: Shifting from Traditional to On-Site Education</i> - Nivens	104. <i>Development of Revised Middle Grades Mathematics Diagnostic Teacher Assessments in Mathematics and Science (DTAMS)</i> - Bush, Ronau & Peters
Quail Hill	77. <i>Alignment of New Middle Grades Mathematics Textbooks: What Should Teachers (Preservice and Inservice) Understand?</i> - Kasmer, Teuscher, Dingman, Olson & Gadd	92. <i>Practitioner Inquiry in Preservice Mathematics Teacher Education</i> - Swidler, Smith & Heaton	105. <i>Using Bridges in Mathematics K-5 in Math Methods Courses</i> - Harris
Saddleback	78. <i>Exploring the Impact of Prime Online—an Online PD Program</i> - Pape	93. <i>Theorizing from Practice: Designing Field-Based Mathematics Methods Courses</i> - Hodges & Roy	106. <i>Expanding Field Experiences from the US to Australia: Engaging PSTs in Research on Student Learning</i> - Wilkerson & Baker
Salon A	79. <i>Preparing Beginners to DO Equitable Mathematics Instruction, Not Just Believe in It</i> - Ball, Shaughnessy, Boerst, Mann & Farmer	94. <i>Reengaging Students in Mathematics: A Look Inside One Formative Assessment Strategy</i> - Mills	107. <i>Co-Teaching in Practice: Preparing Teachers of Mathematics to Collaborate with Special Educators</i> - Karp & Lingo
Salon B	80. <i>What Does it Mean to Build on Student Mathematical Thinking?</i> - Peterson, Leatham & Van Zoest	95. <i>Classifying Discourse Responsibility In Mathematical Professional Development</i> - Starling, Trocki & Sztajn	108. <i>Elementary Mathematics Specialists: The Need for Innovation and Research</i> - de Araujo & Reys
Salon E	81. <i>Advocacy Toolkit Work Session</i> - Krehbiel, Johnson, King & AMTE Emerging Issues Committee Members		

Santiago	82. <i>Integrating Mathematics, Pedagogy and Cognitive Coaching in a Professional Development Program</i> - Lioutikova & Henriques	96. <i>Redefining Success for Teacher and Student: One Mathematics Student Teacher's Journey</i> - Cross, Tosmur-Bayazit & Hale	109. <i>Project SMILE: STEM Professional Development for Middle School Teachers</i> - Goodson-Espy
Shady Canyon	83. <i>The Structure of Mathematics Misconceptions in Algebra, Geometry Rational Numbers, and Probability</i> - Rakes & Ronau	97. <i>Differing Uses of Venn Diagrams: Implications for Teacher Educators</i> - Kimmins & Winters	110. <i>Common Core Standards Progressions: A Format and Tools for Professional Development</i> - McLeod, Schock & Kepner, Jr.
Trabuco	84. <i>Manipulatives in Methods: Partnering with ETA hand2mind</i> - Moore	98. <i>Analysis of Student Work as Preparation for Secondary Teaching</i> - McCrone, Chaar & Gleason	111. <i>Mathematics as Objectified Action</i> - Norton
Rock ATurtle	85. <i>Teachers' Discursive Positioning Moves Mediating the Formation of Students' Identities</i> - Zavala	99. <i>Preservice Secondary Teachers' Development of Knowledge about Representations</i> - Moon	112. <i>Math Labs: Designing High Quality School-Embedded Math Professional Learning</i> - Gibbons & Hintz
Rock BTurtle	86. <i>Experiencing "Mathematical Modeling" from Multiple Perspectives</i> - Zbiek & Long		113. <i>Eliciting Student Thinking: Exploring Common Patterns and Designing Instructional Responses</i> - Farmer & McNamara
Rock CTurtle	87. <i>Developing Mathematics Teachers' Pedagogical Language Knowledge for Challenging and Supporting English Language Learners</i> - Chu		114. <i>Preservice Teachers' Understanding of Constructing and Critiquing Viable Arguments</i> - Sjoström & Bennett
Woodbridge	88. <i>Supporting Elementary Preservice Teachers in Justifying Equivalence of Ratios</i> - Cengiz-Phillips, Rathouz & Rubenstein	100. <i>Mathematical Apps: Babysitters, Manipulatives or Generators of Mathematics?</i> - Harrington & Rhine	115. <i>A Comparison of Commonly Used Mathematics Classroom Observation Protocols</i> - Lesseig, Bostic, Sherman & Boston

Session 73
Teacher Professional Development
Brief Reports Session

Conference Theater

Mathematics Teaching for a Growth Mindset

Kathy Sun, *Stanford University*

This presentation will further our understanding of how math teachers help students develop a growth mindset towards mathematics. We examine features of a professional development on teaching mathematics for a growth mindset and teachers' reported implementation of growth mindset practices.

Supporting Teachers' Attention to Student Conjectures, Generalizations and Justifications: Opportunities and Challenges in Professional Development

Kristin Lesseig, *Washington State University Vancouver*

The purpose of this study was to investigate how school-based professional development supports teachers' ability to engage students in conjecturing, generalizing, and justifying. The analysis framework and results presented will ground discussion of challenges and opportunities afforded within lesson study.

Understanding the Factors that Mediate the Effects of Professional Development

Priya Vinata Prasad, *The University of Arizona*

This session aims to further the discussion about professional development by shifting the focus from the elements of effective PD to the teachers who receive PD. The emphasis will be on how teachers make connections between PD and the classroom.

Session 74
Teaching and Learning with Technology
Extended Session (8:00 – 10:00am)

Crystal Cove

Supporting Teachers in Developing Technology-Based Mathematics Tasks

Hollylynn Stohl Lee, *North Carolina State University*
 Allison McCulloch, *North Carolina State University*
 Robert Q. Berry, *University of Virginia*
 Beth Bos, *Texas State University-San Marcos*
 S. Asli Ozgun-Koca, *Wayne State University*
 Jennifer Nickell, *North Carolina State University*
 Kayla Chandler, *North Carolina State University*

We will discuss different tools and strategies for engaging teachers in developing technology-enabled mathematics tasks or resources. Tools we will use include online applets, video makers, dynamic geometry programs, dynamic statistics programs, TI-Nspire, and iBooks Author. Bring your laptop or iPad!

Session 75
Preservice Teacher Field Experiences
Individual Session

Oak Creek

Developing Professional Noticing: An Examination of Preservice Teachers and Lesson Study

Julie Amador, *University of Idaho*
 Rick A. Hudson, *University of Southern Indiana*

This presentation focuses on the development of preservice teachers' professional noticing during lesson study in a field experience course. Participants will become familiar with professional noticing frameworks, apply frameworks to videos, and learn about implementing lesson study with preservice teachers.

Session 76
AMTE Publications
Symposium

Pelican Hill

AMTE Publications: Opportunities to Publish Your Scholarly Work

Christine Browning, *Western Michigan University*
 Margaret Smith, *University of Pittsburgh*
 Denise Spangler, *University of Georgia*
 Doug Lapp, *Central Michigan University*
 Denny St. John, *Central Michigan University*
 Trena Wilkerson, *Baylor University*

This panel session includes editors from each of AMTE's publications: Mathematics Teacher Educator (MTE), Contemporary Issues in Technology and Teacher Education (CITE), and Connections Newsletter. Information will be shared regarding the submission and publication of scholarly work for each venue.

Session 77
Mathematics Education Policy and Program Issues
Individual Session

Quail Hill

Alignment of New Middle Grades Mathematics Textbooks: What Should Teachers (Preservice and Inservice) Understand?

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

In this session we will share initial results from our analysis of the presentation of transformational geometry and ratio and proportion in middle grades textbooks published since the release of CCSSM in 2010.

Session 78
Teacher Professional Development
Individual Session

Saddleback

Exploring the Impact of Prime Online—an Online PD Program

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

This presentation will explore the impact of Prime Online, an online teacher professional development (oTPD) program. This oTPD was developed to support grade 3-5 general education and special education teachers' developing Mathematics Content Knowledge for Teaching and pedagogical content knowledge.

Session 79
Equity and Mathematics Education
Individual Session

Salon A

Preparing Beginners to DO Equitable Mathematics Instruction, Not

Just Believe in It

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

Beginning teachers must learn to carry out practices that promote equity. This session identifies five practices, and focuses in detail on two of them, including delving into ways of developing beginning teachers' proficiency with and commitment to using them.

Session 80 **Salon B** **Pedagogical Content Knowledge** **Discussion Session**

What Does it Mean to Build on Student Mathematical Thinking?

Blake Peterson, *Brigham Young University*
Keith Leatham, *Brigham Young University*
Laura R. Van Zoest, *Western Michigan University*

"Attend to," "respond to," "pursue," and "use" are terms often used synonymously with "build on" student mathematical thinking. This imprecision contributes to teachers' difficulty in implementing the practice. Our discussion will work toward developing common definitions among mathematics teacher educators.

Session 81 **Salon E** **Mathematics Education Policy and Program Issues** **Discussion Session**

Advocacy Toolkit Work Session

AMTE Emerging Issues Committee Members
Ken Krehbiel, *National Council of Teachers of Mathematics*
Patricia Johnson, *United States Department of Education*
Karen King, *National Science Foundation*

This interactive session (which will follow the Advocacy Breakfast) will begin the process of creating and assembling AMTE's Advocacy Toolkit. The AMTE toolkit will provide mathematics educators with key contacts, resources, and position statements useful for mathematics educators as they engage in policy-related discussions involving mathematics education (e.g., CCSS and teacher education, professional development related to consortial assessments, NCTQ ratings, CAEP Standards). Panel speakers and the AMTE Emerging Issues Committee will help to guide the session and tool kit assembly. Come. Get involved. Help determine what's in OUR toolkit.

Session 82 **Santiago** **School and University Partnerships and Projects** **Individual Session**

Integrating Mathematics, Pedagogy and Cognitive Coaching in a Professional Development Program

Ekaterina Lioutikova, *University of Saint Joseph*
Barbara D. Henriques, *University of Saint Joseph*

In this session, we share highlights and findings from a three-year grant-supported professional development program focused on enhancing elementary and middle school teachers' mathematical knowledge for teaching, their classroom practices, and their confidence in leadership.

Session 83 **Shady Canyon** **Mathematical Content Knowledge** **Individual Session**

The Structure of Mathematics Misconceptions in Algebra, Geometry, Rational Numbers, and Probability

Christopher R. Rakes, *University of Maryland, Baltimore County*
Robert N. Ronau, *University of Louisville*

This study compared possible relationships between content area misconceptions in algebra, geometry, rational number, and probability to develop a conceptual framework of mathematics misconceptions. Data analyses consisted of qualitative analysis of student responses and structural equation modeling.

Session 84 **Trabuco** **AMTE Gold Sponsor Session** **Individual Session**

Manipulatives in Methods: Partnering with ETA hand2mind

Sara Moore, *ETA hand2mind*

What's new at ETA hand2mind? This session will share new manipulative resources and provide opportunities to discuss strategies for incorporating manipulatives into methods and field experiences. How can we help you do your work more effectively?

Session 85 **Turtle Rock A** **Equity and Mathematics Education** **Individual Session**

Teachers' Discursive Positioning Moves Mediating the Formation of Students' Identities

Maria del Rosario Zavala, *San Francisco State University*

We examine empirical evidence of two teachers' discursive positioning moves in high school mathematics. We investigate how teachers' discourse mediates the formation of students' mathematical identities. Implications for discursive positioning in teacher education will be explored.

Session 86 **Turtle Rock B** **Mathematical Content Knowledge** **Extended Session (8:00 – 10:00am)**

Experiencing "Mathematical Modeling" from Multiple Perspectives

Rose Mary Zbiek, *Penn State University*
Mike Long, *COMPLETE Center, George Mason University*

Mathematics education policy and curriculum documents, particularly CCSSM, and conversations with mathematics educators yield different perspectives on "mathematical modeling." Participants will examine these perspectives across grade levels and content through three modeling activities, examination of documents, and research evidence.

Session 87 **Turtle Rock C** **Pedagogical Content Knowledge** **Extended Session (8:00 – 10:00am)**

Developing Mathematics Teachers' Pedagogical Language Knowledge for Challenging and Supporting English Language Learners

Haiwen Haiwen Chu, *WestEd*

This workshop engages participants in experiencing and reflecting upon teacher professional development activities that highlight and develop the pedagogical language knowledge necessary to challenge and support English language learners in the Standards for Mathematical Practices within the Common Core.

Session 88
Mathematical Content Knowledge
Individual Session

Woodbridge

***Supporting Elementary Preservice Teachers in Justifying
Equivalence of Ratios***

Nesrin Cengiz-Phillips, *University of Michigan-Dearborn*
Margaret Rathouz, *University of Michigan-Dearborn*
Rheta Rubenstein, *University of Michigan-Dearborn*

Preservice teachers are usually comfortable with renaming ratios, but they struggle with justifying why those ratios are equivalent. What are helpful ways to develop understanding of ratio equivalence? How do appropriate language and representations support PSTs in justifying ratio equivalence?

Session 89 **Conference Theater**
Teacher Professional Development
Brief Reports Session

Learning about Implementing CCSS-Mathematics through Lesson Study

Kyle Prince, *Middle Tennessee State University*
 Teresa A. Schmidt, *Middle Tennessee State University*
 Angela Barlow, *Middle Tennessee State University*

This study examines how a lesson study group developed a CCSS-oriented lesson through three cycles of collaborative lesson planning, teaching, and reflection. Lesson videos, teachers' interview, and reflection indicate significant shifts of teaching and developments of participant teachers' professional competence.

Managing the Open Discussion of Contrasting Ideas in Video Clubs

Tracy Dobie, *Northwestern University*

In this work, we explore how teachers engage in discussions of contrasting ideas. Using conversation analysis, we identify three features that define the practice and briefly consider resources in teacher communities that may support the enactment of such discussions.

Session 90 **Oak Creek**
Mathematics Education Policy and Program Issues
Individual Session

Which Experiences Are Most Helpful For Preparing Elementary Mathematics Specialists? A Research Study

Laura Bitto, *The College of William and Mary*
 Marguerite Mary Mason, *The College of William and Mary*

Let's investigate the roles, responsibilities, and background experiences of elementary mathematics specialists. Participants will be engaged in discussions about pertinent experiences for elementary mathematics specialists in preparation programs and reflect upon obstacles and successes while comparing to research results.

Session 91 **Pelican Hill**
Preservice Teacher Field Experiences
Individual Session

A Residency Model: Shifting from Traditional to On-Site Education

Ryan Andrew Nivens, *East Tennessee State University*

I report how methods course assignments shifted from simulation to actual participation in remediation, assessment, and co-teaching in a K-6 methods course in a state where policies dictate a residency model in place of traditional courses followed by student teaching.

Session 92 **Quail Hill**
Equity and Mathematics Education
Individual Session

Practitioner Inquiry in Preservice Mathematics Teacher Education

Stephen Swidler, *University of Nebraska-Lincoln*
 Wendy Smith, *University of Nebraska-Lincoln*
 Ruth M. Heaton, *University of Nebraska-Lincoln*

We present an analysis of graduate preservice teachers' case studies of "struggling math learners", part of a graduate certification program supported by Robert Noyce Fellowships. Cases are authentic practitioner inquiries offering evidence of preservice teachers' emergent student-centeredness enabling them to serve individual learners.

Session 93 **Saddleback**
Preservice Teacher Field Experiences
Individual Session

Theorizing from Practice: Designing Field-Based Mathematics Methods Courses

Thomas E. Hodges, *University of South Carolina*
 George J. Roy, *University of South Carolina*

This session is focused on the design of field-based elementary mathematics methods coursework organized around embedded live demonstrations, engagements, and reflections on work with real students in real classroom settings, providing critical experiences on which theory-practice connections are constructed.

Session 94 **Salon A**
Presidential Exchange Series
Individual Session

Reengaging Students in Mathematics: A Look Inside One Formative Assessment Strategy

Valerie Mills, *President, National Council of Supervisors of Mathematics*

Reengagement is a formative assessment strategy grounded in the effective and intentional use of student thinking to forward learning. Session participants will explore this strategy through a case study taken from a statewide project with opportunities to examine the challenges and opportunities reengagement affords.

Session 95 **Salon B**
Teacher Professional Development
Individual Session

Classifying Discourse Responsibility in Mathematical Professional Development

Tina Starling, *North Carolina State University*
 Aaron Trocki, *North Carolina State University*
 Paola Sztajn, *North Carolina State University*

How do teachers take responsibility of discussions during professional development? We classified discourse responsibility as correcting, eliciting, probing, or responsive. Join us as we share our coding scheme and discuss implications of this work on discourse analysis and professional development.

Session 96
Preservice Teacher Field Experiences
Individual Session

Santiago

Redefining Success for Teacher and Student: One Mathematics Student Teacher's Journey

Stephanie Cross, *Georgia State University*
Nermin Tosmur-Bayazit, *Georgia State University*
Jessica James Hale, *Georgia State University*

Julie is a mathematics student teacher who struggled to redefine success for herself and her students. Participants will read part of Julie's story and participate in a structured "chalk talk" to reflect on what Julie's story means for teacher educators.

Session 97
Pedagogical Content Knowledge
Individual Session

Shady Canyon

Differing Uses of Venn Diagrams: Implications for Teacher Educators

Dovie Louise Kimmins, *Middle Tennessee State University*
Joseph Jeremy Winters, *Middle Tennessee State University*

Venn diagrams are used differently in mathematics and language arts. This session illustrates these differences using the elementary school curriculum, shows elementary school student's thinking about Venn diagrams, and provides implications for teacher educators.

Session 98
Mathematical Content Knowledge
Individual Session

Trabuco

Analysis of Student Work as Preparation for Secondary Teaching

Sharon McCrone, *University of New Hampshire*
May Chaar, *University of New Hampshire*
Brian W. Gleason, *Nevada State College*

We will share sample analysis tasks from a research project focused on preservice secondary teachers' mathematical knowledge for teaching. Participants will consider preservice teachers' responses to these tasks and discuss potential implications for this in secondary mathematics teacher preparation.

Session 99
Pedagogical Content Knowledge
Individual Session

Turtle Rock A

Preservice Secondary Teachers' Development of Knowledge about Representations

Kyunghee Moon, *University of West Georgia*

This presentation offers the results of research that investigated how preservice secondary teachers developed knowledge about representations through a series of mathematics and mathematics education courses. Attendees will share their research or experiences regarding teacher preparation.

Session 100
Teaching and Learning with Technology
Individual Session

Woodbridge

Mathematical Apps: Babysitters, Manipulatives or Generators of Mathematics?

Rachel Harrington, *Western Oregon University*
Steve Rhine, *Willamette University*

The number of algebra apps available to teachers is overwhelming and growing daily. Teachers can choose from reference tools, games, simulators, and more. What do teachers need to consider when implementing different kinds of tablet-based virtual manipulatives in the classroom?

Session 101 Conference Theater**Mathematics Education Policy and Program Issues
Brief Reports Session****Actions Elementary Mathematics Teacher Educators Use to
Develop Prospective Teachers' Awareness of the CCSSM**

Cynthia E. Taylor, *Millersville University of Pennsylvania*
Kelley Elizabeth Buchheister, *University of South Carolina*
Christa Jackson, *University of Kentucky*

Participants will engage in discussion around actions elementary mathematics teacher educators implement to provide an opportunity for prospective teachers to develop an awareness of the mathematical practices and content standards within the Common Core State Standards for Mathematics.

**Navigating an Education Transformation: How Novice Teachers
Respond to Implementation of the CCSSM**

Rebecca Darrough, *University of Missouri-Columbia*
Vickie Spain, *University of Missouri-Columbia*

Novice teachers are beginning to implement the Common Core State Standards of Mathematics (CCSSM). We will present the results of a study that investigated the challenges and benefits of the CCSSM as described by K-8 novice mathematics teachers.

Session 102 Crystal Cove
**Teaching and Learning with Technology
Individual Session****Design and Development of Collaborative Mathematics Education
Websites**

Joe Champion, *Boise State University*

How can mathematics educators develop professional-quality collaborative websites using limited technical resources? Grounded in literature, this research-based session will share a responsive web platform for local, state, and national mathematics education organizations by leveraging an open source content management system.

Session 103 Oak Creek
**Preservice Teacher Field Experiences
Individual Session****Approximations of Co-Constructed Instructional Explanations as
Tools of Ambitious Teaching for Novice Secondary Mathematics
Teachers**

Matthew P. Campbell, *Oregon State University*
Rebekah Elliott, *Oregon State University*

This session examines a design research study across secondary methods courses and student teaching placements to discuss and investigate the design of approximations of co-constructed instructional explanations to support novice teachers' enactment and development of ambitious teaching across instructional settings.

Session 104 Pelican Hill
**Mathematical Content Knowledge
Individual Session****Development of Revised Middle Grades Mathematics Diagnostic
Teacher Assessments in Mathematics and Science (DTAMS)**

William S. Bush, *University of Louisville*
Robert N. Ronau, *University of Louisville*
Susan A. Peters, *University of Louisville*

This session will describe progress in updating and revising the DTAMS originally developed in 2002. The revisions align the assessments with the mathematics content and Mathematical Practices of the Common Core State Standards in Mathematics items.

Session 105 Quail Hill
**AMTE Gold Sponsor Session
Individual Session****Using Bridges in Mathematics K-5 in Math Methods Courses**

Pam Harris, *University of Texas at 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, a nonprofit organization dedicated to serving the K-12 education community. 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. Join Bridges author and university instructor Pam Harris to learn how this program can enhance your math methods courses.

Session 106 Saddleback
**Preservice Teacher Field Experiences
Individual Session****Expanding Field Experiences from the U.S. to Australia: Engaging
PSTs in Research on Student Learning**

Trena Wilkerson, *Baylor University*
Betty Ruth Baker, *Baylor University*

Presenters will share a field-based model stemming from a partnership between a U.S. university and Australian school that engages PSTs as primary agents in research examining student learning of rational numbers. Program structure, methodology, outcomes, and challenges will be discussed.

Session 107 Salon A
**Equity and Mathematics Education
Individual Session****Co-Teaching in Practice: Preparing Teachers of Mathematics to
Collaborate with Special Educators**

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

This session addresses co-teaching between a mathematics educator and a special educator. Co-planning and co-teaching will be highlighted with examples of course components that address these practices which are rarely implemented in K-12 classrooms or in university coursework.

Session 108 Salon B
Mathematics Education Policy and Program Issues
Individual Session

Elementary Mathematics Specialists: The Need for Innovation and Research

Zandra de Araujo, *University of Missouri*
Barbara Jean Reys, *University of Missouri-Columbia*

In this session we discuss the development of a research agenda regarding elementary mathematics specialists and their impact on student and teacher learning, constraints to elementary mathematics specialist preparation, and a particular preparation model that attempts to overcome these constraints.

Session 109 Santiago
Teacher Professional Development
Individual Session

Project SMILE: STEM Professional Development for Middle School Teachers

Tracy Goodson-Espy, *Appalachian State University*

This session describes results from Project SMILE, a STEM professional development program for middle school teachers. The project investigated the use of InspireData in integrating scientific inquiry with mathematical problem solving and in enhancing teachers' ability to teach STEM literacy.

Session 110 Shady Canyon
Mathematical Content Knowledge
Individual Session

Common Core Standards Progressions: A Format and Tools for Professional Development

Kevin McLeod, *University of Wisconsin-Milwaukee*
Bridget Schock, *Milwaukee Public Schools*
Henry Kepner, Jr., *University of Wisconsin-Milwaukee*

Participants will explore the concept of division as a missing factor problem, which appears in CCSSM standards from Grades 3 through 6. A tool for helping teachers see the coherence in such a standards progression will be presented and discussed.

Session 111 Trabuco
AMTE 2013 Early Career Award Winner
Individual Session

Mathematics as Objectified Action

Anderson Norton, *Virginia Tech*

The purpose of this presentation is to investigate mathematical development as the objectification of action. Informed by research on how students construct new mathematical objects from their mental actions, we consider examples across the K-20 curriculum, including the psychological construction of cohomology and related objects of algebraic topology. This context will likely provide each of us with the opportunity to experience the kind of exhilaration students feel when they create new mathematical objects, as well as the frustration they feel when required to act on actions that are not yet objectified.

Session 112 Turtle Rock A
Teacher Professional Development
Individual Session

Math Labs: Designing High Quality School-Embedded Math Professional Learning

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

This presentation will describe a school-embedded professional development model, "math labs", centered on creating opportunities for teachers to make their practice public and form a shared vision for high quality mathematics instruction.

Session 113 Turtle Rock B
Teacher Professional Development
Individual Session

Eliciting Student Thinking: Exploring Common Patterns and Designing Instructional Responses

Julie McNamara, *University of Michigan*
Susanna Farmer, *University of Michigan*

This session explores preservice and inservice training for elementary mathematics teachers focusing on eliciting student thinking as a means to deepen understanding of common patterns of student thinking and to identify and implement an instructional response to such patterns.

Session 114 Turtle Rock C
Pedagogical Content Knowledge
Individual Session

Preservice Teachers' Understanding of Constructing and Critiquing Viable Arguments

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

This study investigates preservice teachers' understandings of one mathematical practice; constructing and critiquing mathematical arguments. Implications associated with major misunderstandings and the actions taken to help them develop the skills to support students in constructing mathematical arguments will be discussed.

Session 115 Woodbridge
Pedagogical Content Knowledge
Discussion Session

A Comparison of Commonly Used Mathematics Classroom Observation Protocols

Milan Sherman, *Drake University*
Kristin Lesseig, *Washington State University Vancouver*
Jonathan David Bostic, *Bowling Green State University*
Melissa D. Boston, *Duquesne University*

The RTOP, IQA, and MQI are three research-based, vetted tools for coding mathematics classroom instruction. This discussion session is designed to familiarize attendees with these instruments, and foster critical thinking about how to define and measure mathematics instructional quality.

FRIDAY AFTERNOON, FEBRUARY 7, 2014

	12:45 - 1:45 pm	2:00 - 2:45 pm	3:15 - 4:00 pm
Conference Theater	116. <i>Preservice Teachers Field Experiences Brief Reports Learn and Reflect Strand</i>	131. <i>Mathematics Education Policy and Program Issues Brief Reports Session</i>	143. <i>Equity and Mathematics Education Brief Reports Session</i>
Crystal Cove	117. <i>Facing Multiple Identities as Designers, Researchers, and Teacher Educators Focused on Classroom Discourse</i> - Cirillo, Steele, Johnson, Cavanna & McAney		144. <i>Documenting a Successful Partnership: Researchers Collaborate with Practitioners to Improve Student Achievement</i> - Wyberg, Miller & Ahrendt
Oak Creek	118. <i>Statistics Education for Teachers: A Professional Development Project</i> - Casey & Bargagliotti	132. <i>Supporting Rural and Remote Schools: The Development of a Regional Mathematics Network</i> - Amador & Bennett	145. <i>Using Number Strings to Support Preservice Teachers' Transitions to Higher Levels of Math Talk</i> - Bofferding & Kemmerle
Pelican Hill	119. <i>Teaching Teachers to Recognize and Use the Mathematical Practices</i> - Lai, Kennedy, Sherman & Jacobs	133. <i>Leveraging Learning Trajectories to Develop Teachers' Statistical Knowledge for Teaching Grades K-8</i> - Ng & Avineri	146. <i>Teaching with Technology: Two-Tiers of Professional Development</i> - Roy & Fueyo
Quail Hill	120. <i>Using a Critical Ethnomathematical Perspective to Relate Ethnomathematics Theory and Practice</i> - Naresh	134. <i>Student Teachers and Cooperating Teachers Talking about Students' Mathematics Rather than Students' Behavior</i> - Leatham, Peterson & Franc	147. <i>Four Themes, Six Lessons, and Sixteen Designers: Weaving a Tapestry of Common Core Professional Development</i> - Lindaman & Luebeck
Saddleback	121. <i>AMTE'S EXCELLENCE AWARD FOR SCHOLARSHIP: Sustainable Professional Development and the Preparation of Professional Development Leaders</i> - Borko	135. <i>Developing a Course in Mathematical Problem Solving with Technology for Preservice Secondary Teachers</i> - Cox & Harper	148. <i>Capturing the Complex Role of Mathematics Teacher-Leader Educators: Their Instructional Decisions and Rationales</i> - Nair
Salon A	122. <i>Assessment Literacy, Mathematics Teaching and PARCC and SMARTER Balanced – How Are These Connected?</i> - Fennell, Kobett & Wray	136. <i>Teachers Developing Culturally Responsive Teaching with the Wlodkowski & Ginsberg Motivational Framework</i> - Parker, Bartell, Novak & Powers	149. <i>The Development of Mathematical Practices: Using a Quadratics Task to Prompt Increased Levels of Proficiency</i> - Frost & Coomes
Salon B	123. <i>Preparing and Supporting Mentor Teachers of Field Experiences for Secondary Mathematics Teachers</i> - Strutchens, Kersaint & Franz	137. <i>Children's Mathematical Learning: Using Videos of How Children Learn Mathematics</i> - Feikes & Pratt	150. <i>Cognitive and Metacognitive Processes of Preservice Mathematics Teachers Solving Tasks Based in the Secondary Curriculum</i> - Truelove & Zelkowski

Santiago	124. <i>Scholarly Inquiry and Practice of Mathematics Methods Instruction</i> - Sanchez, Kastberg & Lischka	138. <i>Tools, Tasks, and Trajectories: Bringing the Common Core to Classrooms through Online Professional Learning</i> - Diemert & Cobbs	151. <i>(How) Does Mathematics Teacher Preparation Matter? Findings from a Longitudinal Study</i> - Berk, Gallivan & Miller
Shady Canyon	125. <i>Context with the Negative Integers: More than a Pedagogical Tool</i> - Wessman-Enzinger	139. <i>Reflection and Action: Debriefing on the Preservice Teachers Field Experiences Strand</i> - AMTE Professional Development Committee Members	152. <i>Defining, Developing, and Measuring "Proclivities for Teaching Mathematics"</i> - Fischman & Lewis
Trabuco	126. <i>Using Technology to Enhance Proportional Reasoning with Tables and Graphs in the Middle School</i> - Olson & Olson	140. <i>Does This Make Sense? Using the SCOMAS Framework to Examine Students' Conceptions of Mathematics</i> - Grady	153. <i>Cultivating Community: Building on Teachers' Beliefs and Experience to Broker Meaningful Professional Development</i> - Silverman
Rock ATurtle	127. <i>Enacting the Standards for Mathematical Practice in a Preservice Elementary Mathematics Content Course</i> - Koester & Loats	141. <i>Developing Preservice Secondary Teachers' Conceptual Understanding of Algebra</i> - Patterson	154. <i>The Effect of Authority and Worldview on Elementary Mathematics Teachers' Beliefs</i> - Sawyer
Rock BTurtle	128. <i>NCTM NCATE/CAEP Program Reviewer Training</i> - O'Neal		155. <i>Secondary Mathematics Teacher Education: Learning How to Teach Algebra</i> - Mintos
Rock CTurtle	129. <i>The Use of Pedagogies of Enactment in Practice-Based Mathematics Teacher Education and Professional Development</i> - Edwards, Buchbinder & Walkoe		156. <i>Impact of Academic Institutions and Doctoral Programs in the Development of Mathematics Teacher Educators</i> - Safi
Woodbridge	130. <i>Developing a Culture of Learning around the Elementary Teacher Performance Assessment (TPA): One University's Journey</i> - Markworth	142. <i>Supporting Teachers to Use Technology: Teaching Fractions with PhET Interactive Simulations</i> - Hensberry	157. <i>What does 'Appropriate Uses of Technology in Mathematics Education' Mean? What the Research Says (or Doesn't)!</i> - Johnston

Session 116
Preservice Teacher Field Experiences
Brief Reports Session

Conference Theater

What Do They See? An Inside Look into Preservice Teacher Noticing in a Mathematics Classroom

Anne Estapa, *Iowa State University*

This session allows attendees to experience the elementary classroom through the eyes of preservice teachers. Data and results from a study, focused on preservice teacher noticing, highlight the importance for connections between university methods coursework and classroom experiences.

Preservice Elementary Teachers' Understandings of Mathematical Discourse

Sararose Lynch, *Westminster College*

This session reports findings from a qualitative study of preservice teachers' (PSTs) understandings of mathematical discourse. I present varied PSTs' perspectives based on coursework and field experiences. I examine the findings to identify implications for preservice mathematics education courses.

Using the iPad to Develop Preservice Teachers' Understandings of the CCSSM

Silvy Brookby, *Framingham State University*
 Mary Theresa Grassetti, *Framingham State University*

This presentation will highlight the findings of the researchers who have implemented the use of the iPad for developing preservice teachers' understanding and implementation of the CCSSM Standard 3: Construct viable arguments and critique the reasoning of others.

Session 117
Teacher Professional Development
Extended Session (12:45 – 2:45pm)

Crystal Cove

Facing Multiple Identities as Designers, Researchers, and Teacher Educators Focused on Classroom Discourse

Michelle Cirillo, *University of Delaware*
 Mike Steele, *University of Wisconsin-Milwaukee*
 Kate Johnson, *Brigham Young University*
 Jillian Cavanna, *Michigan State University*
 Kathleen (Taffy) McAneny, *University of Delaware*

We describe some of the dilemmas we grappled with when designing, enacting, and researching professional development materials focused on classroom discourse. Specifically, we explore balancing these (sometimes) conflicting roles and learning to write materials that support facilitators and participants.

Session 118
Teacher Professional Development
Individual Session

Oak Creek

Statistics Education for Teachers: Project-SET Professional Development Project

Stephanie Casey, *Eastern Michigan University*
 Anna Bargagliotti, *Loyola Marymount University*

This session will present professional development materials for secondary mathematics teachers that use learning trajectories as their focus for preparing teachers to teach sampling variability and regression, two fundamental topics in statistics.

Session 119
Mathematical Content Knowledge
Individual Session

Pelican Hill

Teaching Teachers to Recognize and Use the Mathematical Practices

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

Mathematics teacher educators must help teachers recognize and use the Mathematical Practices before teachers can do this with their students. Participants will analyze tasks to highlight the Practices. A free, web-based resource will be shared for continuing this work.

Session 120
Equity and Mathematics Education
Individual Session

Quail Hill

Using a Critical Ethnomathematical Perspective to Relate Ethnomathematics Theory and Practice

Nirmala Naresh, *Miami University*

The goal of this session is to better understand and discuss plausible ways to address the challenges posed by a critical ethnomathematics curriculum. We will explore the implications of ethnomathematics theory for its practice in the mathematics teacher education context.

Session 121
AMTE Award Winner Excellence Award for Scholarship—
Individual Session

Saddleback

Sustainable Professional Development and the Preparation of Professional Development Leaders

Hilda Borko, *Stanford University*

As school districts respond to the widespread adoption of the Common Core State Standards, teachers around the country are being asked to implement new curricula and assessments, interact with their students in different ways, and have a much deeper knowledge of content than ever before. Professional learning opportunities are key to achieving these changes. The educational community must develop and test large-scale, system-level professional development aligned with the CCSS that is scalable and sustainable. In this session, I will discuss the emerging consensus on the central features of professional development models that can meet teachers' learning needs and help them to improve their practice. I will then share the models for mathematics teacher professional development and the preparation of professional development leaders that my colleagues and I developed and studied over a period of more than 10 years. After describing the models, I will share key findings from our research program regarding participating teachers' knowledge and instructional practices, and PD leaders' ability to facilitate professional development workshops and orchestrate mathematically and pedagogically rich conversations. The session will conclude with questions and suggestions for next steps.

that our community of mathematics teacher education scholars and practitioners can take, to ensure high quality learning opportunities for all teachers and students.

Session 122 Salon A
Mathematics Education Policy and Program Issues
Individual Session

Assessment Literacy, Mathematics Teaching and PARCC and SMARTER Balanced – How Are These Connected?

Skip Fennell, *McDaniel College*
Beth McCord Kobett, *Stevenson University*
Jon Wray, *Howard County Public Schools*

Assessment literacy is the extent to which teachers are proficient and adept in employing a variety of assessment techniques to monitor instruction and gauge student progress. Consider how the PARCC and SMARTER Balanced assessments can influence teacher assessment literacy.

Session 123 Salon B
Preservice Teacher Field Experiences
Individual Session

Preparing and Supporting Mentor Teachers of Field Experiences for Secondary Mathematics Teachers

Marilyn E. Strutchens, *Auburn University*
Gladis Kersaint, *University of South Florida*
Dana Franz, *Mississippi State University*

The Working Group on Mentoring will present findings from its work and engage the audience in discussions about field experiences and the preparation need by mentor teachers in the era of the high stakes standards, such as the Common Core.

Session 124 Santiago
Pedagogical Content Knowledge
Discussion Session

Scholarly Inquiry and Practice of Mathematics Methods Instruction

Wendy B. Sanchez, *Kennesaw State University*
Signe Kastberg, *Purdue University*
Alyson Lischka, *Middle Tennessee State University*

Presenters will share research syntheses related to activities in methods courses and a research agenda for scholarly inquiry and practices in methods. Participants will discuss the idea of common methods activities and ways of sharing a knowledge base for methods.

Session 125 Shady Canyon
Pedagogical Content Knowledge
Individual Session

Context with the Negative Integers: More than a Pedagogical Tool

Nicole M. Wessman-Enzinger, *Illinois State University*

Using context is often a pedagogical tool intended to facilitate the learning of the negative integers. Research will be shared that illustrates different ways of using and thinking about the negative integers supplemented and promoted by various contexts.

Session 126 Trabuco
Teaching and Learning with Technology
Individual Session

Using Technology to Enhance Proportional Reasoning with Tables and Graphs in the Middle School

Judith Olson, *University of Hawaii*
Melfried Olson, *University of Hawaii*

This session will describe research related to student reasoning and proportional relationships and examine classroom actions demonstrating a classroom community employing valid arguments to justify mathematical claims for finding the 'next or n-th term' in a table of values.

Session 127 Turtle Rock A
Mathematical Content Knowledge
Individual Session

Enacting the Standards for Mathematical Practice in a Preservice Elementary Mathematics Content Course

Mark Koester, *Metropolitan State University of Denver*
Jim Loats, *Metropolitan State University of Denver*

We will share our teaching model that is built around the Standards for Mathematical Practice in our Mathematics of the Elementary Curriculum course. We will focus on number and operation. Video of the class and student work will ground participant interaction.

Session 128 Turtle Rock B
Mathematics Education Policy and Program Issues
Extended Session (12:45 – 2:45pm)

NCTM NCATE/CAEP Program Reviewer Training

Judy O'Neal, *University of North Georgia*

This session is designed to prepare mathematics and mathematics education faculty to serve as reviewers of mathematics program reports from teacher education programs seeking NCATE/CAEP accreditation and to provide existing reviewers with the latest updates on the process.

Session 129 Turtle Rock C
Pedagogical Content Knowledge
Extended Session (12:45 – 2:45pm)

The Use of Pedagogies of Enactment in Practice-Based Mathematics Teacher Education and Professional Development

Ann Edwards, *University of Maryland*
Orly Buchbinder, *University of Maryland*
Janet Dawn Kim Walkoe, *University of Maryland*

In this workshop, participants will engage in activities implementing pedagogies of enactment—practice-based pedagogies involving representations, approximations, decompositions, and anticipations of practice—from four teacher education contexts using Lesson Sketch, a media-rich online interactive platform. Please bring a laptop.

Session 130
Mathematics Education Policy and Program Issues
Individual Session

Woodbridge

***Developing a Culture of Learning around the Elementary Teacher
Performance Assessment (TPA): One University's Journey***

Kim Markworth, *Western Washington University*

Information will be presented on how an interdisciplinary faculty team created programmatic supports for the Teacher Performance Assessment (TPA) in elementary mathematics as we contended with the challenge of a high-stakes assessment and maintaining a focus on powerful pedagogies and ambitious teaching.

Session 131 **Conference Theater**
Mathematics Education Policy and Program Issues
Brief Reports Session

Oklahoma Elementary Mathematics Specialist (EMS) Statewide Certification

Saeed Sarani, *Oklahoma State Regents for Higher Education*

Three state agencies, Oklahoma State Regents for Higher Education, Oklahoma State Department of Education, and Oklahoma Commission for Teacher Preparation, collaboratively created EMS. This process allows elementary and/or early childhood teachers to earn a certification in grades PK-5.

Collaborating and Advocating for a Strong and Vibrant Mathematics Teaching Profession

Sybilla Beckmann, *University of Georgia*

Research on motivation indicates that evaluating teachers by their students' performance on high stakes tests will weaken mathematics teaching. This session discusses efforts to work and advocate for a stronger profession, including "The Mathematics Teaching Community", <https://mathematicsteachingcommunity.math.uga.edu>.

Session 132 **Oak Creek**
Teacher Professional Development
Individual Session

Supporting Rural and Remote Schools: The Development of a Regional Mathematics Network

Cory A. Bennett, *Idaho State University*
 Julie Amador, *University of Idaho*

This study investigated teachers' perceptions on the teaching implications associated with the Standards for Mathematical Practice at one state-developed regional mathematics network, for grades K-12, as the teachers work to implement the Common Core State Standards for Mathematics.

Session 133 **Pelican Hill**
Mathematical Content Knowledge
Individual Session

Leveraging Learning Trajectories to Develop Teachers' Statistical Knowledge for Teaching Grades K-8

Dicky Ng, *North Carolina State University*
 Tamar Avineri, *North Carolina State University*

We present learning trajectories to unpack K-8 grades' statistical data and analysis topics in the CCSS-M to support teachers' interpretation and implementation of the CCSS-M in a coherent structure by examining how statistical ideas develop over time across grade levels.

Session 134 **Quail Hill**
Preservice Teachers Field Experience
Individual Session

Student Teachers and Cooperating Teachers Talking about

Students' Mathematics Rather than Students' Behavior

Keith Leatham, *Brigham Young University*
 Blake Peterson, *Brigham Young University*
 Niccole Franc, *Brigham Young University*

We contrast conversations between student teachers and cooperating teachers in a traditional student teaching structure with those in an altered structure that focused on student mathematical thinking. Interestingly, conversations about students' behavior decreased as conversations about students' mathematics increased.

Session 135 **Saddleback**
Teaching and Learning with Technology
Individual Session

Developing a Course in Mathematical Problem Solving with Technology for Preservice Secondary Teachers

Dana Christine Cox, *Miami University*
 Suzanne R. Harper, *Miami University*

We will give an overview of our course including activities, assignments, and assessments. We will also share three recommendations, grounded in our research, for planning similar or more advanced courses that build upon these ideas in a program of study.

Session 136 **Salon A**
Equity and Mathematics Education
Individual Session

Teachers Developing Culturally Responsive Teaching with the Wlodkowski & Ginsberg Motivational Framework

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

We describe the Motivational Framework for culturally responsive teaching and our work with secondary teachers to implement the framework in their classrooms. Teacher feedback indicates the framework is a useful tool in their supporting the needs and interests of students.

Session 137 **Salon B**
Pedagogical Content Knowledge
Individual Session

Children's Mathematical Learning: Using Videos of How Children Learn Mathematics

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

This session will share new, unpublished videos and report the results of an online survey in which both undergraduates in a mathematical content course for elementary teachers and teachers in a graduate course viewed a video illustrating children's mathematical thinking.

Session 138
Teacher Professional Development
Individual Session

Santiago

Tools, Tasks, and Trajectories: Bringing the Common Core to Classrooms through Online Professional Learning

Kacey Diemert, *Montana State University*
Georgia Ann Cobbs, *University of Montana*

This session showcases a series of asynchronous online modules used to help middle grades teachers investigate the Common Core. Each thematic module encourages teachers to explore existing Web resources, engage in collaborative learning, and apply new knowledge in real time.

Session 139
Preservice Teacher Field Experiences
Individual Session

Shady Canyon

Reflection and Action: Debriefing on the Preservice Teachers Field Experiences Strand

AMTE Professional Development Committee Members

Participants who attended the Preservice Teacher Field Experiences Learn and Reflect sub-strand will come together to debrief the questions posed in the first session. These questions focus on self-reflection, reflection on one's own practice, and plans for action.

Session 140
Pedagogical Content Knowledge
Individual Session

Trabuco

Does This Make Sense? Using the SCOMAS Framework to Examine Students' Conceptions of Mathematics

Maureen M. Grady, *Penn State University*

Students need to conceive of mathematics as sensible. This session will introduce the newly developed SCOMAS Framework. Participants will use the framework to examine classroom video for indicators that students conceive of mathematics as sensible.

Session 141
Mathematical Content Knowledge
Individual Session

Turtle Rock A

Developing Preservice Secondary Teachers' Conceptual Understanding of Algebra

Cody Patterson, *The University of Arizona*

I will present examples of tasks designed to "jam" preservice teachers' procedural knowledge and encourage the development of conceptual thinking about algebra. I will present preliminary evidence of preservice teachers' conceptual gains after working on these tasks.

Session 142
Teaching and Learning with Technology
Individual Session

Woodbridge

Supporting Teachers to Use Technology: Teaching Fractions with PhET Interactive Simulations

Karina K. R. Hensberry, *University of Colorado Boulder*

The PhET Project (<http://phet.colorado.edu>) develops and studies the use of free interactive simulations (sims) for teaching and learning. I describe the results of a study in which elementary school teachers taught fraction concepts using PhET sims.

Session 143 Conference Theater
Equity and Mathematics Education
Brief Reports Session

Conceptualizing Culturally Responsive Teaching: Issues and Challenges for the Preservice Teacher

Mary Theresa Grasseti, *Framingham State University*
 Silvy Brookby, *Framingham State University*

We examine how preservice teachers in a racially and linguistically homogenous teacher preparation program conceptualize diversity and implement culturally responsive teaching. With an increasingly diverse U.S. student population, this line of inquiry is particularly relevant (Villegas & Lucas, 2002).

Preservice Teachers' Conceptions in Context: Teaching Mathematics for Social Justice

Cindy Jong, *University of Kentucky*
 Thomas E. Hodges, *University of South Carolina*

This presentation uses the Teaching Mathematics for Social Justice-Beliefs scale to explore changes in preservice teachers' beliefs about teaching mathematics for social justice and related factors. Implications for measuring beliefs about teaching mathematics for social justice and coursework are discussed.

Session 144 Crystal Cove
School and University Partnerships and Projects
Individual Session

Documenting a Successful Partnership: Researchers Collaborate with Practitioners to Improve Student Achievement

Sue F. Ahrendt, *University of Wisconsin-River Falls*
 Terry Wyberg, *University of Minnesota*
 Christina Miller, *University of Minnesota*

This session will share the results of a university and school partnership taking place with researchers, a third grade team, and a school mathematics coach. This session highlights possibilities of partnerships that both raise student achievement and support curriculum implementation.

Session 145 Oak Creek
Pedagogical Content Knowledge
Individual Session

Using Number Strings to Support Preservice Teachers' Transitions to Higher Levels of Math Talk

Melissa Kemmerle, *Stanford University*
 Laura Bofferding, *Purdue University*

Our study illuminates how number strings help beginning teachers move to higher levels of a math-talk community. The basics of the practice are easy to learn, but number strings are complex enough to provide room for long-term growth for teachers.

Session 146 Pelican Hill
Teacher Professional Development
Individual Session

Teaching with Technology: Two-Tiers of Professional Development

George J. Roy, *University of South Carolina*
 Vivian Fueyo, *University of South Florida St. Petersburg*

This session focuses on two-tiers of professional development that served as an impetus for educational change. Findings document a significant increase in the participating middle school teachers' mathematical understanding when using curriculum units that integrate dynamic technology.

Session 147 Quail Hill
Teacher Professional Development
Individual Session

Four Themes, Six Lessons, and Sixteen Designers: Weaving a Tapestry of Common Core Professional Development

Brian J. Lindaman, *Montana State University*
 Jennifer Luebeck, *Montana State University*

We share the successes and challenges of bringing together university faculty and K-12 teachers to design teacher learning materials. Community-building protocols and technology-facilitated collaboration contributed to creating professional development materials for Fraction-Ratio-Proportion; Number and Operation; Mathematical Practices; and Teacher Leadership.

Session 148 Saddleback
Development of Mathematics Teacher Educators
Individual Session

Capturing the Complex Role of Mathematics Teacher-Leader Educators: Their Instructional Decisions and Rationales

Reshmi Nair, *University of Northern Colorado*

I will address the role of mathematics teacher-leader educators, those who facilitate teacher leadership courses and programs. Specifically, the viewpoints, beliefs, and factors that inform the teacher-leader educators' instructional decisions in a Mathematics Teacher Leadership Program will be examined.

Session 149 Salon A
Mathematical Content Knowledge
Individual Session

The Development of Mathematical Practices: Using a Quadratics Task to Prompt Increased Levels of Proficiency

Janet Hart Frost, *Washington State University*
 Jacqueline Rene Coomes, *Eastern Washington University*

We describe mathematics teachers' levels of investigation and use of the Common Core Standards for Mathematical Practice (SMP) on a quadratics function task, and use of the results to design lessons that supported preservice teachers' improved proficiency with the SMP.

Session 150 Salon B
Mathematical Content Knowledge

Individual Session

Cognitive and Metacognitive Processes of Preservice Mathematics Teachers Solving Tasks Based in the Secondary Curriculum

Hazel Truelove, *The University of Alabama*
Jeremy Zelkowski, *The University of Alabama*

The findings of a qualitative study into the cognitive and metacognitive behaviors of six preservice secondary mathematics teachers will be presented. Of particular interest is their mathematical practices across tasks involving function, geometry, and data analysis.

Session 151 **Santiago**
Mathematical Content Knowledge
Individual Session

(How) Does Mathematics Teacher Preparation Matter? Findings from a Longitudinal Study

Dawn Berk, *University of Delaware*
Heather Gallivan, *University of Delaware*
Emily Miller, *University of Delaware*

We describe a five-year longitudinal study following two cohorts of K-8 teachers as they transition from teacher preparation into their first years of teaching. Analyses of tasks measuring teachers' mathematical- and pedagogical-content knowledge suggest that, and how, teacher preparation matters.

Session 152 **Shady Canyon**
Teacher Professional Development
Individual Session

Defining, Developing, and Measuring "Proclivities for Teaching Mathematics"

Davida Fischman, *California State University San Bernardino*
Jennifer M. Lewis, *Wayne State University*

This session will share findings from a newly developed measure for specialized habits of mind for teaching mathematics, what we call "proclivities for teaching mathematics," and how this correlates with other measures of teacher professional growth.

Session 153 **Trabuco**
Teacher Professional Development
Individual Session

Cultivating Community: Building on Teachers' Beliefs and Experience to Broker Meaningful Professional Development

Jason Silverman, *Drexel University*

I will discuss efforts to use and study student thinking and problem solving to construct and modify shared formative assessment tools as the locus of activity that defines a sustainable online mathematics education community.

Session 154 **Turtle Rock A**
Pedagogical Content Knowledge
Individual Session

The Effect of Authority and Worldview on Elementary Mathematics Teachers' Beliefs

Amanda Gantt Sawyer, *The University of Georgia*

I report on how two elementary mathematics teachers' beliefs were affected by their worldviews and their view on authority, and I identify different activities teacher educators can implement to make prospective teachers aware of their worldviews and sources of authority.

Session 155 **Turtle Rock B**
Pedagogical Content Knowledge
Individual Session

Secondary Mathematics Teacher Education: Learning How to Teach Algebra

Alexia Shernetta Mintos, *Purdue University*

In this presentation I will discuss findings from the Preparing to Teach Algebra (PTA) project at five institutions. I will focus on preservice teachers' opportunities to learn to teach modeling in algebra and learn to teach with equity in mind.

Session 156 **Turtle Rock C**
Development of Mathematics Teacher Educators
Individual Session

Impact of Academic Institutions and Doctoral Programs in the Development of Mathematics Teacher Educators

Farshid Safi, *The 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 157 **Woodbridge**
Teaching and Learning with Technology
Individual Session

What does 'Appropriate Uses of Technology in Mathematics Education' Mean? What the Research Says (or Doesn't)!

Christopher Johnston, *American Institutes for Research*

This session reviews research on appropriate uses of technology in mathematics education, and the varying definitions thereof. The author discusses examples of appropriate uses and calls upon educators and researchers to better and unambiguously define this construct.



Association of Mathematics
Teacher Educators

Salon A

Judith Jacobs Lecture

***Curriculum Matters! For Teachers, for Students,
and for Mathematics Teacher Educators***

Barbara J. Reys, *University of Missouri-Columbia*

“Curriculum” is a broad term describing statements of what is to be learned in school (standards) as well as the instructional tools (textbooks, lesson plans, and materials) that teachers use to teach. It is also a means to change and improve learning opportunities for students. This session will highlight issues and events that are impacting the school mathematics curriculum. It will also suggest a path for increasing emphasis on curriculum within mathematics teacher preparation.

SATURDAY, FEBRUARY 8, 2014

	8:00 - 8:45 am	9:00 - 10:15 am	10:30 - 11:30 am
Conference Theater	158. <i>Teaching and Learning with Technology Brief Reports Session 2</i>	174. <i>Mathematical Content Knowledge Brief Reports Session 2</i>	190. <i>Pedagogical Content Knowledge Brief Reports Session 1</i>
Crystal Cove	159. <i>Curricular Reasoning in the CCSSM Era: How Teachers Evaluate Electronically Available Curriculum Resources</i> - Webel, Krupa & McManus	175. <i>Using a Multidimensional Observation Instrument to Support Pre-Service In-Service Teachers' Development of Standards-Based Instructional Practices</i> - Berry, Swartz & Pinter	191. <i>Learning to Facilitate: Using Generative Prompts in Mathematics Teacher Study Groups</i> - Carlson & Heaton
Oak Creek	160. <i>Mathematical Modeling: Secondary Teacher Preparation in the Era of Common Core</i> - Anhalt & Cortez	176. <i>How Does Undergraduate Research Bridge Theory and Practice?</i> - Abney, Santarone, Shiver & Waldron	192. <i>Learning Trajectories as a Framework for Inservice Teacher Professional Development Courses</i> - Maloney & Panorkou
Pelican Hill	161. <i>How Does a Focus on Mathematical Practices Influence Preservice Teachers Thinking and Reasoning about Computations?</i> - Cady & Lubinski	177. <i>The Evolution of a Methods Task: Improving Preservice Teachers' Reflections on their Practice</i> - Lischka & Sanchez	193. <i>Unpacking Privilege in Mathematics Education Research: Implications for Mathematics Teacher Educators</i> - Bartell & Johnson
Quail Hill	162. <i>3-Column Proof in Algebra Courses for Preservice Teachers</i> - Yee	178. <i>Fraction Schemes and Operations: An Extension to PreK-8 Prospective Teachers</i> - Stevens, Siegfried, Lovin & Norton	194. <i>Changing Beliefs: A Professional Development Task that Reshapes Teachers' Mathematical Perceptions</i> - Hughes, Brendefur & Carney
Saddleback	163. <i>Fostering Mathematics Teacher Asynchronous Noticing through Mobile Video</i> - Chao & Murray	179. <i>The CCSS and Fractions: Implications for Mathematics Educators</i> - Burrill, Dick, Watanabe & Olson	195. <i>New Research in Mathematics Classroom Coaching: The Coaching Knowledge Effective Coaches Hold</i> - Burroughs
Salon A	164. <i>Knowledge for Teaching Mathematics to ELLs: How is it Measured, and How Does it Grow?</i> - Wilson & Sorto	180. <i>MTE-Partnership: A National Networked Improvement Community for Secondary Mathematics Teacher Preparation</i> - Martin, Mays & Strutchens	196. <i>Noticing for Equitable Mathematics Teaching</i> - van Es, Mercado, C' de Baca, Quiroz & Ormseth
Salon B	165. <i>Graduate TAs Teaching Prospective Elementary Teachers about Reasoning-and-Proving: A Case Study</i> - Rogers & Steele	181. <i>Using Secondary Mathematics Video: Strategies and Visions</i> - Wieman, Philipp, Chazan, Ellis, Sherin, Silver & Stockero	197. <i>The Simultaneous Renewal of Inservice and Preservice Teachers</i> - Monroe & Bahr
Salon E	166. <i>Preparing Elementary Mathematics Specialists: An Examination of Participant Change, Challenges, and Implications</i> - Walkowiak & Faulkner	182. <i>Supporting and Retaining Beginning Mathematics Teachers</i> - Perry, Thrasher, Lee & Hollebrands	198. <i>Moving to Common Practice with the Common Core: Essential Role of District Teacher Leadership Teams</i> - Huinker, Hedges & Richards

Santiago	<i>167. Teachers' Perceptions of Students' Prior Knowledge for Teaching New Concepts</i> - Lee & Coomes	<i>183. Supporting School-Wide Efforts to Enact Project-Based Learning in Mathematics</i> - Slavit	<i>199. Double-Dose Math Courses Built Upon Engaging, Conceptual Learning Improves Achievement and Attitudes for Struggling Students</i> - Hyde & Canzone
Shady Canyon	<i>168. Methods Courses or Seminar Courses? Which are Easier to Deliver Online?</i> - Chauvot	<i>184. Exploring Social Justice Issues, Reading and Interpreting the World Through Data</i> - Poling & Naresh	<i>200. Promoting the Standards for Mathematical Practice in Preservice Education Programs</i> - Walker, Werner & Wilburne
Trabuco	<i>169. Action Research for Equity in Urban Mathematics Classrooms</i> - Bonner	<i>185. Developing Mathematics for Teaching: Frameworks that Inform our Practice</i> - Kastberg & Lynch-Davis	<i>201. The Myth of Planning: Patterns of Participation in Supporting Teachers' Development of Rich Discourse Practices</i> - Steele & Cavanna
Rock ATurtle	<i>170. Incorporating Lesson Study into Preservice Teachers' Field Experiences</i> - Buchheister	<i>186. Digital Resources and Early Math Learning in Prekindergarten Classrooms</i> - Hupert, Vidiksis & Kamdar	<i>202. Fraction Detectives: Investigating Fraction Equivalence in Two Bilingual Latino Classrooms</i> - Dominguez
Rock BTurtle	<i>171. Developing Teachers' Thinking of Quantitative Reasoning: Connecting the CCSSM to Practice</i> - Glassmeyer	<i>187. Engaging in Critical Reflection to Unpack, Analyze, and Question the Common Core Standards</i> - Koestler	<i>203. Activities to Facilitate Middle and Secondary Mathematics Teachers' Transformative Learning of Statistics within Professional Development</i> - Peters & Watkins
Rock CTurtle	<i>172. PST's Theoretical and Experiment Prediction Tendencies with Elongated Dice</i> - Daiga	<i>188. Impact of Hands-On, Conceptual Math Intervention Curriculum in a Low Performing Middle School</i> - Canzone & Hyde	<i>204. Teachers' Uses of Learning Trajectories: Frameworks for Student-Centered and Equitable Instruction</i> - Myers & Edgington
Woodbridge	<i>173. Preservice Student Teacher Noticing Through Analysis of their Students' Work</i> - Dick	<i>189. Development of Teacher Reasoning that Supports Teaching Mathematics with Social Justice</i> - Baldinger & Jilk	<i>205. Investigating the Challenge of Developing Preservice Teachers' Mathematical Knowledge for Teaching</i> - Paolucci

Session 158 **Conference Theater**
Teaching and Learning with Technology
Brief Reports Session

Geometric Habits of Mind, Dynamic Geometry Software, and the Concept of Angles

Melike Yigit, *Purdue University*
 Sue Ellen Richardson, *Purdue University*

Geometric Habits of Mind (GHOM) can play an essential role in the teaching and learning of the concepts of angles. We provide suggestions that support students' development of GHOM by using dynamic geometry software as they explore angle concepts.

iPad Apps Utilized in Middle School Mathematics Classrooms with a 1:1 Setting

Travis A. Olson, *University of Nevada, Las Vegas*
 Jeffrey Shih, *University of Nevada, Las Vegas*
 Amanda Thomas, *Penn State Harrisburg*
 Lina DeVaul, *University of Nevada, Las Vegas*
 Amy Beth Adkins, *University of Nevada, Las Vegas*

Based on research conducted in the first year of a project investigating teacher's use of iPads, we highlight iPad apps utilized by teachers. We share the degree of success the teachers report with regard to the use of the apps.

Session 159 **Crystal Cove**
Pedagogical Content Knowledge
Individual Session

Curricular Reasoning in the CCSSM Era: How Teachers Evaluate Electronically Available Curriculum Resources

Corey M. Webel, *University of Missouri*
 Erin Elizabeth Krupa, *Montclair State University*
 Jason McManus, *Montclair State University*

We explore the curricular reasoning employed by fifth and sixth grade teachers in a professional development activity where they were asked to discuss and evaluate a variety of resources obtained through an Internet search for a specific CCSSM standard.

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

Mathematical Modeling: Secondary Teacher Preparation in the Era of Common Core

Cynthia Oropesa Anhalt, *The University of Arizona*
 Ricardo Cortez, *Tulane University*

This session focuses on the advancement in mathematical modeling understanding by a group of secondary preservice teachers. The choice of rich modeling problems and the analysis of mathematical modeling elements aligned with the Common Core State Standards will be presented.

Session 161 **Pelican Hill**
Mathematical Content Knowledge

Individual Session

How Does a Focus on Mathematical Practices Influence Preservice Teachers Thinking and Reasoning about Computations?

Cheryl A. Lubinski, *Illinois State University*
 Jo A. Cady, *University of Tennessee*

In this session, we share the results of pre- and post-assessments of computational fluency from preservice teachers enrolled in a mathematics course focusing on problem solving and explanations. Implications for teacher educators will be discussed.

Session 162 **Quail Hill**
Pedagogical Content Knowledge
Individual Session

3-Column Proof in Algebra Courses for Preservice Teachers

Sean Yee, *California State University, Fullerton*

3-column proofs resolve the CCSSM requirement for students to explain how to solve algebraic equations and include proof in algebra courses. Participants learn how to implement 3-column proofs within secondary school and preservice teacher content courses in algebraic reasoning.

Session 163 **Saddleback**
Teaching and Learning with Technology
Individual Session

Fostering Mathematics Teacher Asynchronous Noticing through Mobile Video

Theodore Chao, *Harvard University*
 Eileen Murray, *Harvard University*

Emphasizing how a teacher notices student mathematical thinking is a core tenant of modern mathematics education reform. This study explores the use of teacher asynchronous noticing of students' mathematical thinking through a mobile app for smart phones and tablets.

Session 164 **Salon A**
Equity and Mathematics Education
Individual Session

Knowledge for Teaching Mathematics to ELLs: How is it Measured, and How Does it Grow?

Aaron T. Wilson, *The University of Texas-Pan American*
 M. Alejandra Sorto, *Texas State University*

This session presents results of research in developing an instrument for measuring teachers' knowledge for teaching mathematics to Latino English Language Learners. The instrument's theoretical framework, items and their properties, as well as usage for mathematics teacher educators are considered.

Session 165 **Salon B**
Development of Mathematics Teacher Educators
Individual Session

Graduate TAs Teaching Prospective Elementary Teachers about Reasoning-and-Proving: A Case Study

Kimberly Cervello Rogers, *Bowling Green State University*
Mike Steele, *University of Wisconsin-Milwaukee*

Two TAs' classroom instruction and beliefs about teaching reasoning and proving highlight challenges associated with teaching mathematics content to future teachers. Implications for helping mathematics educators of these courses make explicit connections to prospective teachers' work as future teachers are discussed.

Session 166 **Salon E**
Mathematics Education Policy and Program Issues
Individual Session

Preparing Elementary Mathematics Specialists: An Examination of Participant Change, Challenges, and Implications

Temple Walkowiak, *North Carolina State University*
Valerie N. Faulkner, *North Carolina State University*

We will share information about our elementary mathematics specialist preparation program and how our participants changed. Then, we will engage the audience in discussion about challenges, policy implications, and potential research opportunities regarding the preparation of elementary mathematics specialists.

Session 167 **Santiago**
Pedagogical Content Knowledge
Individual Session

Teachers' Perceptions of Students' Prior Knowledge for Teaching New Concepts

Hyung Sook Lee, *Eastern Washington University*
Jacqueline Rene Coomes, *Eastern Washington University*

We highlight our research on teachers' development of coherent understandings of the content they teach, how teachers distinguish between new and prior knowledge of students when using a task, and their ability to design lessons that use students' prior knowledge.

Session 168 **Shady Canyon**
Teacher Professional Development
Individual Session

Methods Courses or Seminar Courses? Which are Easier to Deliver Online?

Jennifer Chauvot, *University of Houston*

The online instructional activities of a 4-8 mathematics methods course are compared to the online activities of a mathematics education seminar course, suggesting that deliberate decisions make online instruction both feasible and desirable for educating teachers in a digital world.

Session 169 **Trabuco**
Equity and Mathematics Education
Individual Session

Action Research for Equity in Urban Mathematics Classrooms

Emily Bonner, *University of Texas at San Antonio*

In this session I will present findings from a professional development project through which Algebra I teachers in high-need schools were engaged in a year-long action research project. Findings show that action research can facilitate culturally responsive mathematics teaching.

Session 170 **Turtle Rock A**
Preservice Teacher Field Experiences
Individual Session

Incorporating Lesson Study into Preservice Teachers' Field Experiences

Kelley Elizabeth Buchheister, *University of South Carolina*

The presenter will describe data that: (a) demonstrates how lesson study enhanced preservice teachers' lesson reflections, (b) describes how the collaborative process contributed to preservice teachers' mathematical disposition, and (c) identifies areas in which improvement and attention are needed.

Session 171 **Turtle Rock B**
Teacher Professional Development
Individual Session

Developing Teachers' Thinking of Quantitative Reasoning: Connecting the CCSSM to Practice

David Glassmeyer, *Kennesaw State University*

In a graduate course focusing on quantitative reasoning, I detail an approach to teacher education that was documented to develop teachers' thinking about quantitative reasoning in ways connected to their classroom practice.

Session 172 **Turtle Rock C**
Mathematical Content Knowledge
Individual Session

PST's Theoretical and Experiment Prediction Tendencies with Elongated Dice

Michael Daiga, *Indiana University*

Participants will leave this program understanding how preservice teachers and high school students used theoretical and experimental probabilities to predict elongated dice outcomes. Participants will roll dice, discuss possible arguments, and be presented research results from the two-phase study.

Session 173 **Woodbridge**
Preservice Teacher Field Experiences
Individual Session

Preservice Student Teacher Noticing Through Analysis of their Students' Work

Lara Dick, *North Carolina State University*

A study resulting in an extension of the professional noticing framework to preservice teacher education is presented. Join the discussion focused on the coding scheme and implications for design research and the noticing framework for research with preservice student teachers.

Session 174 **Conference Theater**
Mathematical Content Knowledge
Brief Reports Session

Developing Understanding: Preservice Elementary Teachers' Landscape of (Re)Learning Fractions as Operators

Wendy Stienstra, *The King's University College*

This presentation explores how a conceptual understanding of fractions as operators developed in 14 preservice elementary teachers over the course of a school year. The resulting landscape of (re)learning will be unpacked with the use of video clips.

Preservice Teachers' Understanding and Representations Involving Multiplication of Fractions

Ji-Won Son, *University of Tennessee*

This session presents findings of a study investigating how preservice elementary teachers understand multiplication of fractions with word problems and how they explain and justify the meaning behind their computation steps with multiple representations.

Increasing Preservice Teachers' Anticipation of Students' Thinking in Algebra

Steve Rhine, *Willamette University*

The Algebraic Thinking Project aims to capitalize upon three decades of research on student thinking and misconceptions in algebra to better prepare preservice teachers to anticipate students' thought processes and struggles through project resources.

Preservice Teachers' Knowledge of Functions

Arnulfo Perez, *Indiana University*

This presentation reports on preservice teachers' understanding of functions by analyzing their performance on two types of function items: those that engage analytic processing of information and those that engage visual processing of information.

Session 175 **Crystal Cove**
Teacher Professional Development
Symposium

Using a Multidimensional Observation Instrument to Support Preservice and Inservice Teachers' Development of Standards-Based Instructional Practices

Robert Q. Berry, *University of Virginia*
 Barbara Ann Swartz, *McDaniel College*
 Holly Henderson Pinter, *Western Carolina University*

We will introduce the Mathematics Scan (M-Scan), a multidimensional observational measure of standards-based mathematics instructional quality (20 minutes), with results of two studies using M-Scan (30 minutes), and explore with participants ways they can use M-Scan in their work (25 minutes).

Session 176 **Oak Creek**
Pedagogical Content Knowledge
Symposium

How Does Undergraduate Research Bridge Theory and Practice?

Angel Rowe Abney, *Georgia College*
 Doris Santarone, *Georgia College and State University*
 Janet M. Shiver, *Central Washington University*
 Rachel Bevin Waldron, *Georgia College State University*

Through a variety of projects teacher educators seek to involve prospective teachers in research. We will describe the projects and programs in which these are embedded, and discuss whether the experiences help undergraduates connect theory and practice in meaningful ways.

Session 177 **Pelican Hill**
Pedagogical Content Knowledge
Discussion Session

The Evolution of a Methods Task: Improving Preservice Teachers' Reflections on their Practice

Alyson Lischka, *Middle Tennessee State University*
 Wendy B. Sanchez, *Kennesaw State University*

Presenters will share experiences revising a methods course video critique assignment that yielded improved quality of PSTs' reflections. Data will be shared highlighting this improvement. Discussion will be facilitated around ways to move methods course assignments toward more scholarly practice.

Session 178 **Quail Hill**
Mathematical Content Knowledge
Discussion Session

Fraction Schemes and Operations: An Extension to PreK-8 Prospective Teachers

Alexis Stevens, *James Madison University*
 John (Zig) Michael Siegfried, *James Madison University*
 LouAnn Lovin, *James Madison University*
 Anderson Norton, *Virginia Tech*

This session will discuss the fractional mathematical content knowledge of both middle school students and PreK-8 prospective teachers. Topics include fraction schemes and operations, along with ways to assess. Implications for researchers and teacher educators will be presented.

Session 179 **Saddleback**
Teaching and Learning with Technology
Symposium

The CCSS and Fractions: Implications for 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 fraction concepts using unit fractions and the number line, bringing coherency and consistency to learning fractions. The challenge is helping teachers make the necessary connections

from research to practice.

Session 180 Salon A
School and University Partnerships and Projects Symposium

MTE-Partnership: A National Networked Improvement Community for Secondary Mathematics Teacher Preparation

W. Gary Martin, *Auburn University*
Michael Mays, *West Virginia University*
Marilyn E. Strutchens, *Auburn University*

Secondary mathematics teacher preparation programs face significant challenges in preparing enough new teachers who can meet the challenges of the Common Core. A networked improvement community of 38 school-university partnerships from around the country is addressing this challenge.

Session 181 Salon B
Teacher Professional Development Symposium

Using Secondary Mathematics Video: Strategies and Visions

Robert Morgan Wieman, *Rowan University*
Randolph Philipp, *San Diego State University*
Daniel Chazan, *University of Maryland*
Mark W. Ellis, *California State University Fullerton*
Miriam Gamoran Sherin, *Northwestern University*
Edward Silver, *University of Michigan*
Shari L. Stockero, *Michigan Technological University*

After presenters engage participants in a discussion of a video of secondary mathematics students, respondents will share their theoretical perspectives and experiences. Then presenters will lead a general discussion about broader issues related to making video more widely available.

Session 182 Salon E
Mathematics Education Policy and Program Issues Discussion Session

Supporting and Retaining Beginning Mathematics Teachers

Emily Plunkett Thrasher, *North Carolina State University*
Ayanna Perry, *North Carolina State University*
Hollylyne Stohl Lee, *North Carolina State University*
Karen Hollebrands, *North Carolina State University*

This session aims to foster cross-institutional dialogue on how universities can participate in induction programs for teachers. The strategies and outcomes of one university-based program will be shared. Break-out discussions will focus on university supports to induction programs and research.

Session 183 Santiago
School and University Partnerships and Projects Discussion Session

Supporting School-Wide Efforts to Enact Project-Based Learning in Mathematics

David Slavit, *Washington State University Vancouver*

This research study examines the role of teacher collaboration and support in the development of project-based opportunities to learn in a first-year, STEM-focused school. A mathematics teacher educator and

school principal will share results, experiences, and project examples.

Session 184 Shady Canyon
Equity and Mathematics Education Discussion Session

Exploring Social Justice Issues, Reading and Interpreting the World Through Data

Lisa Poling, *Appalachian State University*
Nirmala Naresh, *Miami University*

The goal of the session is to generate dialogue on using statistics to read and understand the world, finding meaningful ways in which statistics can be used in preservice teacher education programs to bring awareness to social justice issues.

Session 185 Trabuco
Mathematical Content Knowledge Discussion Session

Developing Mathematics for Teaching: Frameworks that Inform our Practice

Signe Kastberg, *Purdue University*
Kathleen Lynch-Davis, *Appalachian State University*

As frameworks for mathematical knowledge for teaching emerge, mathematics teacher educators (MTEs) have more tools than ever to inform their practice. Participants will discuss frameworks for mathematics for teaching and the affordances they provide for the development of MTEs' practices.

Session 186 Turtle Rock A
Teaching and Learning with Technology Individual Session

Digital Resources and Early Math Learning in Prekindergarten Classrooms

Naomi Hupert, *Education Development Center, Inc.*
Regan Vidiksis, *Education Development Center, Inc.*
Danae Kamdar, *SRI International*

In this session, we guide participants through a professional development experience to introduce early childhood educators to transmedia (digital videos and interactive games) as a way to engage young children in math learning.

Session 187 Turtle Rock B
Equity and Mathematics Education Discussion Session

Engaging in Critical Reflection to Unpack, Analyze, and Question the Common Core Standards

Courtney Koestler, *The University of Arizona*

This discussion session will provide a space for participants to discuss ways in which they have (or want to) engage teachers in critically unpacking, analyzing, and questioning the Common Core in order to work towards more equitable mathematics education.

Session 188
School and University Partnerships and Projects
Individual Session

Turtle Rock C

Impact of Hands-On, Conceptual Math Intervention Curriculum in a Low Performing Middle School

Janna Canzone, *University of California, Irvine*
Karajeon Hyde, *University of California, Irvine*

Secondary mathematics intervention programs often lack engaging, concept-based curriculum. This session reports on the success of an alternative approach using a hands-on curriculum with embedded language supports and continuous professional development for teachers at a low performing middle school.

Session 189
Teacher Professional Development
Symposium

Woodbridge

Development of Teacher Reasoning that Supports Teaching Mathematics with Social Justice

Evra Baldinger, *University of California, Berkeley*
Lisa M. Jilk, *University of Washington*

We describe a model for professional development focused on implementing the equity-focused pedagogy Complex Instruction, and report findings about productive shifts in teacher reasoning that supports teaching with social justice. Participants will view and discuss data, analysis, and findings.

Session 190
Pedagogical Content Knowledge
Brief Reports Session

Conference Theater

Instructional Activities in Secondary Mathematics Teacher Education: Learning through Practice in Only Twenty Minutes

Frances K. Harper, *Michigan State University*

In an abbreviated secondary mathematics methods course, preservice teachers engaged with planning, rehearsal, and reflection of instructional activities, which emphasized high-level teaching practices. The focus on practice and real-time coaching allowed for meaningful, powerful learning experiences within a short timeframe.

Reasoning with and about Definitions: Learning Opportunities Afforded by Rehearsal in a Secondary Methods Course

Erin Baldinger, *Stanford University*
 Sarah Kate Selling, *Stanford University*

This paper focuses on an instructional activity that elicits reasoning with and about definitions and provides opportunities for novice teachers to rehearse discussion facilitation. Presenters will share the activity and video to highlight the learning opportunities afforded by this rehearsal.

Teachers' Use of Student Thinking in Collaborative Lesson Planning

Sue Ellen Richardson, *Purdue University*
 Laura Bofferding, *Purdue University*

Mathematics teachers use their understanding of students' algebraic thinking to design collaborative units, informing teacher educators that opportunities for individual and collaborative research, reflection, analysis, and planning are useful activities for teachers, especially when organized around teachers' interactions with students.

Session 191
Development of Mathematics Teacher Educators
Individual Session

Crystal Cove

Learning to Facilitate: Using Generative Prompts in Mathematics Teacher Study Groups

Mary Alice Carlson, *University of Nebraska-Lincoln*
 Ruth M. Heaton, *University of Nebraska-Lincoln*

Study group facilitators need to learn to generate productive conversations. In this session, we examine prompts a facilitator used to support teachers' investigation of students' mathematical thinking and try the prompts in a simulated study group planning session.

Session 192
Teacher Professional Development
Individual Session

Oak Creek

Learning Trajectories as a Framework for Inservice Teacher Professional Development Courses

Alan Maloney, *North Carolina State University*
 Nicole Panorkou, *Montclair State University*

We describe the design of a professional development course focused on Rational Number learning trajectories that embed the CCSS-M. We consider how learning trajectories, depicting student conceptual growth towards mathematical understandings, provide a framework for organizing such professional development.

Session 193
Equity and Mathematics Education
Individual Session

Pelican Hill

Unpacking Privilege in Mathematics Education Research: Implications for Mathematics Teacher Educators

Tonya Gau Bartell, *Michigan State University*
 Kate Johnson, *Brigham Young University*

Participants will examine mathematics education research privilege, explore data generated from teachers around their engagement with a list of privileges, and discuss issues that arise when using lists like these in one's practice as a mathematics teacher educator.

Session 194
Pedagogical Content Knowledge
Individual Session

Quail Hill

Changing Beliefs: A Professional Development Task that Reshapes Teachers' Mathematical Perceptions

Gwyneth Retta Hughes, *Developing Mathematical Thinking*
 Jonathan Brendefur, *Boise State University*
 Michele Carney, *Boise State University*

Participants will engage in a rich mathematical task from a successful statewide professional development course. Presenters share quantitative and qualitative data on how and why this type of task changes teachers' beliefs about the study and teaching of mathematics.

Session 195
Teacher Professional Development
Individual Session

Saddleback

New Research in Mathematics Classroom Coaching: The Coaching Knowledge Effective Coaches Hold

Elizabeth A. Burroughs, *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 coaches' mathematics knowledge are all found to impact teachers' practices and beliefs.

Session 196
Equity and Mathematics Education
Individual Session

Salon A

Noticing for Equitable Mathematics Teaching

Elizabeth van Es, *University of California, Irvine*
 Janet Mercado, *University of California, Irvine*
 Cooper C' de Baca, *Santa Ana Unified School District*

Richard Quiroz, *Loara High School*
Tor Henning Ormseth, *El Rancho Unified School District*

This session examines noticing for equitable mathematics teaching. We share a framework to characterize noticing for equity. Teacher participants share approaches to noticing for equity, and we discuss how teachers' dispositions to equitable teaching arises in their noticing during instruction.

Session 197 Salon B
School and University Partnerships and Projects Individual Session

The Simultaneous Renewal of Inservice and Preservice Teachers

Eula Ewing Monroe, *Brigham Young University*
Damon L. Bahr, *Brigham Young University*

Inservice teachers were invited to study and implement reform-based pedagogy alongside preservice teachers. A study of the inservice teachers' experience will be described.

Session 198 Salon E
School and University Partnerships and Projects Individual Session

Moving to Common Practice with the Common Core: Essential Role of District Teacher Leadership Teams

DeAnn Huinker, *University of Wisconsin-Milwaukee*
Melissa Hedges, *Mequon-Thiensville School District*
Paige Richards, *School District of South Milwaukee*

Teacher leadership teams are proving essential for moving mathematics instruction toward the Common Core. This university collaborative with six school districts deepens teachers' knowledge of standards progressions, develops teacher leadership skills, and identifies district challenges and leverage points.

Session 199 Santiago
School and University Partnerships and Projects Individual Session

Double-Dose Math Courses Built Upon Engaging, Conceptual Learning Improves Achievement and Attitudes for Struggling Students

Karajeane Hyde, *University of California, Irvine*
Janna Canzone, *University of California, Irvine*

This study investigates the impact of a 2-period, conceptual-based, engaging curriculum designed for struggling Pre-Algebra/Algebra students in two low performing urban districts. Results demonstrate increased achievement and attitudes for all students, particularly for English Learners and socioeconomically-disadvantaged students.

Session 200 Shady Canyon
Pedagogical Content Knowledge Individual Session

Promoting the Standards for Mathematical Practice in Preservice Education Programs

Janet Walker, *Indiana University of Pennsylvania*
Judy Werner, *Slippery Rock University*
Jane M. Wilburne, *Penn State Harrisburg*

Three university teacher educators will share strategies, activities,

and supporting research to enhance K-12 preservice teachers' understanding and ability to promote the use of the CCSS Standards for Mathematical Practice.

Session 201 Trabuco
Teacher Professional Development Discussion Session

The Myth of Planning: Patterns of Participation in Supporting Teachers' Development of Rich Discourse Practices

Mike Steele, *University of Wisconsin-Milwaukee*
Jillian Cavanna, *Michigan State University*

Teacher education often positions planning as a precursor to implementing new classroom practices. In this session, we describe the ways in which teachers engaged in discourse-focused professional development participated in planning activities as they learned new practices.

Session 202 Turtle Rock A
Equity and Mathematics Education Individual Session

Fraction Detectives: Investigating Fraction Equivalence in Two Bilingual Latino Classrooms

Higinio Dominguez, *Michigan State University*

Results from an open-ended assessment that compared students' understandings of fraction equivalence in two bilingual Latino classrooms suggest that an effective way to fully understand the complexity of fraction equivalence is to ground the concept in students' multiple realities.

Session 203 Turtle Rock B
Mathematical Content Knowledge Individual Session

Activities to Facilitate Middle and Secondary Mathematics Teachers' Transformative Learning of Statistics within Professional Development

Susan A. Peters, *University of Louisville*
Jonathan D. Watkins, *University of Louisville*

Participants engage with innovative activities designed to support inservice middle and high school teachers in advancing their statistical proficiencies. Discussion focuses on how engagement with the activities facilitates development of deep statistical understandings and on activity extensions and adaptations.

Session 204 Turtle Rock C
Teacher Professional Development Individual Session

Teachers' Uses of Learning Trajectories: Frameworks for Student-Centered and Equitable Instruction

Marrielle Myers, *North Carolina State University*
Cyndi Edgington, *North Carolina State University*

In this session, we share work from professional development focused on students' mathematical thinking. In particular, we explore two frameworks of teachers' uses of students' learning trajectories in instruction and in addressing issues of equity in the elementary mathematics classroom.

Session 205
Pedagogical Content Knowledge
Individual Session

Woodbridge

Investigating the Challenge of Developing Preservice Teachers' Mathematical Knowledge for Teaching

Catherine Paolucci, *National University of Ireland, Galway*

This session will focus on the mathematical and pedagogical knowledge required for effective teaching. Participants will analyze a sample lesson, consider the results of a related study, and discuss examples of different types of teacher knowledge.

Index of Speakers

A

Abney, Angel Rowe	Georgia College	angel.abney@gcsu.edu	19, 176
Adams, Thomasenia L.	University of Florida	tla@coe.ufl.edu	22
Adkins, Amy Beth	University of Nevada, Las Vegas	adkinsa5@unlv.nevada.edu	158
Aguirre, Julia	University of Washington Tacoma	jaguirre@u.washington.edu	30, 32
Ahrendt, Sue F.	University of Wisconsin-River Falls	sue.ahrendt@uwrf.edu	144
Alibegovic, Emina	University of Utah	emina@math.utah.edu	17
Amador, Julie	University of Idaho	jamador@uidaho.edu	75, 132
Ambrose, Rebecca	University of California-Davis	rcambrose@ucdavis.edu	64
AMTE Emerging Issues Committee Members			81
AMTE Equity Task Force Members			67
AMTE Professional Development Committee Members			139
Anhalt, Cynthia Oropesa	The University of Arizona	canhalt@math.arizona.edu	160
Avineri, Tamar	North Carolina State University	taaviner@ncsu.edu	56, 133
Ayieko, Rachel	Michigan State University	ayiekora@msu.edu	70

B

Bagley, Spencer	San Diego State University	sbagley@rohan.sdsu.edu	23
Bahr, Damon L.	Brigham Young University	damon_bahr@byu.edu	197
Baker, Betty Ruth	Baylor University	Betty_Ruth_Baker@baylor.edu	106
Baldinger, Erin	Stanford University	erin.baldinger@stanford.edu	190
Baldinger, Evra	University of California, Berkeley	evra@berkeley.edu	189
Ball, Deborah Loewenberg	University of Michigan	dball@umich.edu	8, 79
Bamberger, Honi Joyce	Towson University	hbamberger@towson.edu	4
Barber, Krystal	Syracuse University	kapagan@syr.edu	31
Bargagliotti, Anna	Loyola Marymount University	abargag@gmail.com	118
Barker, David	Illinois State University	dbarker@ilstu.edu	25, 61
Barlow, Angela	Middle Tennessee State University	angela.barlow@mtsu.edu	57, 89
Bartell, Tonya Gau	Michigan State University	tbartell@msu.edu	136, 193
Baxter, Wesley Adam	Middle Tennessee State University	wab2n@mtmail.mtsu.edu	57
Bay-Williams, Jennifer	University of Louisville	j.baywilliams@louisville.edu	6
Becker, Joanne Rossi	San José State University	joanne.rossibecker@sjsu.edu	52
Beckmann, Sybilla	University of Georgia	sybilla@math.uga.edu	50, 131
Beisiegel, Mary	Oregon State University	mary.beisiegel@oregonstate.edu	12
Benken, Babette M.	California State University, Long Beach	babette.benken@csulb.edu	45
Bennett, Cory A.	Idaho State University	benncor3@isu.edu	114, 132
Berk, Dawn	University of Delaware	berk@udel.edu	55, 151
Berry, Robert Q.	University of Virginia	rqb3e@virginia.edu	74, 175
Bieda, Kristen	Michigan State University	kbieda@msu.edu	17, 32
Bishop, Jessica	University of Georgia	jpbishop@uga.edu	23, 51
Bismarck, Stephen	University of South Carolina Upstate	sbismarck@uscupstate.edu	19
Bitto, Laura	The College of William and Mary	laurabitto@gmail.com	90
Boerst, Tim	University of Michigan	tboerst@umich.edu	8, 79
Bofferding, Laura	Purdue University	LBofferding@Purdue.edu	145, 190
Bohlin, Carol Fry	California State University, Fresno	carolb@csufresno.edu	33
Bonner, Emily	University of Texas at San Antonio	emily.bonner@utsa.edu	169
Borko, Hilda	Stanford University	hildab@stanford.edu	121
Bos, Beth	Texas State University-San Marcos	bb33@txstate.edu	74
Bostic, Jonathan David	Bowling Green State University	bosticj@bgsu.edu	15, 115
Boston, Melissa D.	Duquesne University	bostonm@duq.edu	115
Bragelman, John	University of Illinois at Chicago	jbrage2@uic.edu	65
Brass, Amber	Arizona State University	amberbrass@yahoo.com	24
Brendefur, Jonathan	Boise State University	jbrendef@boisestate.edu	194
Breyfogle, M. Lynn	Bucknell University	mbreyfog@bucknell.edu	32
Brookby, Silvy	Framingham State University	sbrookby@framingham.edu	116, 143
Brown, Kyndall Allen	California State Polytechnic University, Pomona	kyndallb@math.ucla.edu	52
Brown, Stacy Ann	California State Polytechnic University, Pomona	brown@csupomona.edu	64
Browning, Christine	Western Michigan University	christine.browning@wmich.edu	48, 76
Buchbinder, Orly	University of Maryland	obuchbin@umd.edu	129
Buchheiser, Kelley Elizabeth	University of South Carolina	buchheis@mailbox.sc.edu	101, 170
Burrill, Gail	Michigan State University	burrill@msu.edu	179
Burroughs, Elizabeth A.	Montana State University	burroughs@math.montana.edu	195
Burton, Megan	Auburn University	meb0042@auburn.edu	33
Bush, Sarah B.	Bellarmine University	sbush@bellarmine.edu	60
Bush, William S.	University of Louisville	bill.bush@louisville.edu	104

C

C' de Baca, Cooper	Santa Ana Unified School District	coopcdeBaca@gmail.com	196
Cady, Jo A.	University of Tennessee	jcady@utk.edu	161

Calderon Vriesema, Christine	The University of Arizona	cnc02005@email.arizona.edu	58
Campbell, Matthew P.	Oregon State University	campbmat@onid.orst.edu	103
Canzone, Janna	University of California, Irvine	jcanzone@uci.edu	188, 199
Carlson, Mary Alice	University of Nebraska-Lincoln	mary.carlson@huskers.unl.edu	191
Carney, Michele	Boise State University	michelecarney@boisestate.edu	28, 194
Casa, Tutita M.	University of Connecticut	tutita.casa@uconn.edu	59
Casey, Stephanie	Eastern Michigan University	scasey1@emich.edu	25, 118
Castro Superfine, Alison	University of Illinois at Chicago	amcastro@uic.edu	65
Cavanna, Jillian	Michigan State University	cavannaj@msu.edu	117, 201
Cengiz-Phillips, Nesrin	University of Michigan-Dearborn	nesrinc@umich.edu	88
Chaar, May	University of New Hampshire	mej29@wildcats.unh.edu	98
Champion, Joe	Boise State University	joechampion@gmail.com	102
Chandler, Kayla	North Carolina State University	kcchand2@ncsu.edu	74
Chang, Jen-Mei	California State University, Long Beach	jen-mei.chang@csulb.edu	27
Chao, Theodore	Harvard University	theodore_chao@gse.harvard.edu	163
Chauvot, Jennifer	University of Houston	jchauvot@uh.edu	168
Chazan, Daniel	University of Maryland	dchazan@umd.edu	17, 181
Chesler, Joshua	California State University, Long Beach	josh.chesler@csulb.edu	27
Chu, Haiwen Haiwen	WestEd	achu@wested.org	87
Chval, Kathryn B.	University of Missouri-Columbia	chvalkb@missouri.edu	47
Cirillo, Michelle	University of Delaware	mcirillo@udel.edu	41, 117
Civil, Marta	The University of North Carolina at Chapel Hill	civil@email.unc.edu	32
Clark, Lawrence M.	University of Maryland	lmclark@umd.edu	17
Cobbs, Georgia Ann	University of Montana	georgia.cobbs@mso.umt.edu	138
Coddington, Lorelei R.	Claremont Graduate University	loirelei.coddington@cgu.edu	64
Conforti Prezler, Noelle	University of Washington	noellecp@uw.edu	16
Confrey, Jere	Amplify Learning & North Carolina State University	jconfrey@amplify.com	22
Coomes, Jacqueline Rene	Eastern Washington University	jcoomes@ewu.edu	149, 167
Copur-Gencturk, Yasemin	University of Houston	ycopur-gencturk@uh.edu	14
Cortez, Ricardo	Tulane University	rcortez@tulane.edu	160
Cox, Dana Christine	Miami University	dana.cox@miamioh.edu	135
Crespo, Sandra	Michigan State University	crespo@msu.edu	17, 32
Cross, Dionne Indera	Indiana University	dicross@indiana.edu	34
Cross, Stephanie	Georgia State University	scross@gsu.edu	1, 96

D

Daiga, Michael	Indiana University	mdaiga@indiana.edu	172
Darrough, Rebecca	University of Missouri-Columbia	rldpp9@mail.missouri.edu	101
de Araujo, Zandra	University of Missouri	dearaujoz@missouri.edu	108
DeVaul, Lina	University of Nevada, Las Vegas	zangl@unlv.nevada.edu	158
Dick, Lara	North Carolina State University	lkdick@ncsu.edu	173
Dick, Thomas	Oregon State University	tpdick@math.oregonstate.edu	179
Diemert, Kacey	Montana State University	diemert@math.montana.edu	138
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Wright, Stephanie Anne	The University of North Carolina at Chapel Hill	sawright@live.unc.edu	10, 66
Wyberg, Terry	University of Minnesota	wyber001@umn.edu	144
Y			
Yee, Sean	California State University, Fullerton	syee@fullerton.edu	162
Yeh, Cathery	University of California, Irvine	catheryy@uci.edu	11
Yigit, Melike	Purdue University	yigit@purdue.edu	158
Yoder, Gina Borgioli	Indiana University at Indianapolis	gbyoder@iupui.edu	9
Z			
Zahner, William	Boston University	wzahner@bu.edu	36
Zavala, Maria del Rosario	San Francisco State University	mza@sfsu.edu	85
Zbiek, Rose Mary	Penn State University	rmz101@psu.edu	86
Zelkowski, Jeremy	The University of Alabama	jzelkowski@bamaed.ua.edu	150
Zollinger, Scott	The Ohio State University	zollinger.4@buckeyemail.osu.edu	46

AMTE EVENTS AT THE 2014 NCTM AND NCSM ANNUAL CONFERENCES

APRIL 9-12, 2014 IN NEW ORLEANS, LOUISIANA

AMTE Special Interest Session at the NCSM Conference

Wednesday afternoon, April 9, 2014
Time and Location TBA

AMTE Reception at the NCTM Conference

Thursday, April 10, 2014
6:00 - 7:30 pm
Salon 19/22
Hilton New Orleans Riverside Hotel

All members and interested persons are invited to attend.

For more detailed information,
please see www.amte.net

Volunteer at the AMTE Exhibit Booth

NCTM Annual Meeting, April 9 - 12, 2014

Are you going to be at the NCTM Annual Meeting in New Orleans? If so, make plans to help staff the AMTE Booth in the Exhibit Hall at NCTM. You would only need to spend 1-2 hours at the booth promoting AMTE and the AMTE Affiliates. It's a great opportunity to meet new people, recruit new members, and visit with colleagues as they come through the exhibit hall. To volunteer, please contact Sandi Cooper (sandra_cooper@baylor.edu) or fill out a volunteer card and return to the registration desk.

AMTE'S 2015 ANNUAL CONFERENCE

We invite you to attend and speak at next year's Nineteenth Annual AMTE Conference, which will be held on February 12 - 14, 2015, in Orlando, Florida. The *Call for Proposals* will be available on the AMTE website (www.amte.net) by March 1, 2014 and in the next issue of *AMTE Connections*. Dusty Jones of the Sam Houston University (dljones@shsu.edu) is the Program Chair. **The deadline for submitting proposals is May 15, 2014.**

Stay tuned for more information about the 2015 Conference.



Association of Mathematics
Teacher Educators

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
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

TASK FORCES

Equity Task Force

Rochelle Gutierrez (Co-chair), University of Illinois at Urbana-Champaign, rg1@illinois.edu
Beth Herbel-Eisenmann (Co-chair), Michigan State University, bhe@msu.edu
Tom Dick, Oregon State University, mtpdick@math.oregonstate.edu
Corey Drake, Michigan State University, cdrake@msu.edu
Eric Milou, Rowan University, milou@rowan.edu
Amy Roth McDuffie, Washington State University Tri-Cities, mcduffie@tricity.wsu.edu
Marta Civil, University of North Carolina at Chapel Hill, civil@email.unc.edu
Imani Goffney, University of Houston, igoffney@central.uh.edu
Karen Karp, University of Louisville, karen.karp@louisville.edu
Rick Kitchens, University of New Mexico, kitchen@unm.edu
Anita Wager, University of Wisconsin-Madison, awager@wisc.edu

CAEP Standards Review Task Force

Marilyn Strutchens (Chair), Auburn University, strutme@auburn.edu
Kathryn Chval, University of Missouri, chvalkb@missouri.edu
Gary Martin, Auburn University, martiwg@auburn.edu
Sybilla Beckmann, University of Georgia, sybilla@math.uga.edu
Corey Drake, Michigan State University, cdrake@msu.edu
Tim Hendrix, Meredith College, hendrix@meredith.edu

PUBLICATIONS

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

Newsletter

Editor (2010 - 2014)

Trena Wilkerson, Baylor University, Trena_Wilkerson@baylor.edu (Sept. 2010-Jan. 2014)

Editor (2014 – 2017)

Babette Benkin, California State University – Long Beach, babette.benkin@csulb.edu

Editorial Panel:

2011 - 2014

Lorraine Gregory, Lake Superior State University, lgregory@lssu.edu

2012 - 2015

Johnny Lott, University of Montana, jlott@mso.umt.edu

2013 - 2016

Nancy Dyson, University of Delaware, ndyson@udel.edu
L. Diane Miller, Middle Tennessee State University, diane.miller@mtsu.edu
Sarah Roberts, Iowa State University, sroberts@iastate.edu

2014 - 2017

Daniel Ilaria, West Chester University, dilaria@wcupa.edu
Maggie Niess, Oregon State University, niessm@onid.orst.edu

CITE Journal Editors (2008-2011)

Term: (through 2014)

Co-Editor: Denny St. John, Central Michigan University, MI; stjoh1d@cmich.edu

Term: (through 2016)

Co-Editor: Doug Lapp, Central Michigan University, MI; lapp1da@cmich.edu

Term: (through 2017)

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

CITE Reviewers, 2013

Dennis Beck, University of Arkansas
Donna Berlin, The Ohio State University
Jered Borup, Brigham Young University
Beth Bos, Texas State University-San Marcos
Christine Browning, Western Michigan University
Gail Burrill, Michigan State University
Jo Ann Cady, The University of Tennessee
Catherine Cavanaugh, University of Florida
Gregory Chamblee, Georgia Southern University
Kyle Cheney, University of Memphis
Lynn Columba, Lehigh University
Beth Cory, Sam Houston State University
Thomas Dick, Oregon State University
Nicole Fonger, Western Michigan University
Jeff Frykholm, University of Colorado-Boulder
Tracy Goodson-Espy, Appalachian State University
Mary Grasseti, Framingham State University
Suzanne Harper, Miami University
Margret Hjalmarson, Purdue University
Robert M. Horton, Clemson University
Gwendolyn Johnson, University of South Florida
Iris Johnson, Miami University
Christopher Johnston, George Mason University
Dustin Jones, Sam Houston State University
Virginia Keen, University of Dayton
Gladys Kersaint, University of South Florida
Cathy Kinzer, New Mexico State University
Olga Kosheleva, University of Texas at El Paso
Tibor Marcinek, Central Michigan University

Jill Martin Rend, Indiana University of Pennsylvania
Amy McDuffie, Washington State University Tri-cities
Sarah Meltzer, Western Carolina University
Maria Mitchell, Central Connecticut State University
Amanda Mohn, University of South Florida
Patricia Moyer Packenham, Utah State University
Leah Nillas, Illinois Wesleyan University
Asli Ozgun-Koca, Wayne State University
Neil Pateman, University of Hawaii
David Pugalee, University of North Carolina Charlotte
Christopher Rakes, University of Louisville
Jayson Richardson, University of Kentucky
Mark Rodriguez, Sacramento State University
Robert Ronau, University of Louisville
Kathryn Shafer, Ball State University
Jason Silverman, Drexel University
Mary Smeal, Alabama State University
Wendy Smith, University of Nebraska-Lincoln
Alejandra Sorto, Texas State University-San Marcos
Dorian Stoilescu, University of Western Sydney
Daniel Tillman, University of Texas at El Paso
Elizabeth van Es, University of California-Irvine
Angela Walmsley, St. Louis University
Tharanga Wijetunge, Lyon College, Arkansas
Zhonghe Wu, National University
Jamaal Young, University of North Texas
Rose Zbiek, The Pennsylvania State University
Jeremy Zelkowsky, The University of Alabama

Mathematics Teacher Educator Journal

2011 - 2014

Editor: Margaret (Peg) Smith, University of Pittsburgh, pegs@pitt.edu

Associate Editor: Melissa Boston, Duquesne University, bostonm@duq.edu

Editorial Panel:

2011 - 2014

Rheta Rubenstein, University of Michigan-Dearborn, rrubenst@umd.umich.edu
Diana Lambdin, Indiana University, lambdin@indiana.edu

2011 - 2015

Denise Spangler (Chair, 2012, 2013), University of Georgia, dspangle@uga.edu
Tad Watanabe, Kennesaw State University, twatanab@kennesaw.edu

2013 - 2016

Anthony Fernandes, University of North Carolina–Charlotte, anthony.fernandes@uncc.edu
Laura Van Zoest, Western Michigan University, laura.vanzoest@wmich.edu

AMTE Board Member, 2013

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



Association of Mathematics
Teacher Educators

AMTE 2014 BUSINESS MEETING AGENDA

Saturday, February 8, 2014
Hyatt Regency Irvine, Irvine, CA

A. Welcome, Review of 2013 Strategic Priorities

Fran Arbaugh

B. Approval of the Minutes

Maggie McGatha

C. Treasurer & Membership Report

Suzanne Harper, Nadine Bezuk

D. Committee and Task Force Reports

Committees:

Affiliates Connections
Awards
Communications
Constitution and Bylaws
Membership
Mentoring
Nominations and Elections
Program
Research
Technology (and NTLE Award)

Christine Walker, Chair
Courtney Koestler, Chair
Travis Olson, Chair
Jane Cushman, Chair
Travis Miller, Chair
Angela Barlow, Chair
Maggie Neiss, Chair
Shannon Driskell, Chair
Mary Foote, Chair
Margaret Mohr-Schroeder, Chair

Task Forces/Special Initiatives:

STaR Program

Barbara Reys and Jon Star, Co-chairs

E. Publications

Mathematics Teacher Educator Journal
Connections Newsletter
CITE Journal

Peg Smith, Editor
Trena Wilkerson, Editor
Denny St. John and Doug Lapp, Co-editors
Susan Gay
Nadine Bezuk & Fran Arbaugh

F. Conferences

G. Recognitions

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

H. Other Business

I. Installation of new Board Members

Fran Arbaugh

J. 2014 Strategic Priorities & Announcements

Fran Arbaugh

K. Adjournment



Association of Mathematics
Teacher Educators

MINUTES

AMTE 2013 Business Meeting

Saturday, January 26, 2013
Orlando, FL

Marilyn Strutchens, President, called the meeting to order at 11:30 am.

Welcome, Review of 2012 Strategic Priorities

Marilyn Strutchens welcomed the members and reviewed the 2012 Board Priorities of (1) Recruiting, serving, and supporting Members, (2) Supporting equitable practices in mathematics teacher education, and (3) Engaging AMTE members in the review and enactment of the Mathematics Education of Teachers (MET2)

Approval of the Minutes

Maggie McGatha, Secretary, called for any changes to the minutes and there were none. Judith Jacobs moved to accept the minutes, Karen Karp seconded. Unanimously approved.

Treasurer Report

Lynn Stallings, Treasurer, presented the expenditures and income from the past year. She pointed out that most of our income comes from membership dues. Our goal is to have at least \$80,000 in reserve and we now have \$103,058.29.

Membership Report

Nadine Bezuk, Executive Director, presented the Membership report. Our current membership is 964. 640 memberships expire this year so Nadine reminded the members to renew. We have 126 graduate student members and 12 emeritus members.

Committee and Task Force Reports

Committees:

Affiliates Connections

Megan Burton, Chair, thanked the committee for their work. The committee is trying to identify affiliate members who may not be AMTE members.

Awards

Courtney Koestler, incoming chair, reminded the membership that next year's awards are the Early Career and Excellence in Scholarship Awards. Information about the awards are on the website. The committee encourages the membership to nominate people for the awards.

Communications

Trena Wilkerson, Chair, thanked the committee for their work in 2012. She welcomed new members and thanked outgoing members. She shared details of the conference app.

Constitution and Bylaws

Jane Cushman, Chair, reported that there were no changes in the Constitution and By-Laws. She thanked the outgoing member, Bill Speer, and welcomed new members, Mellissa Boston and Karen Keene.

Membership

Marilyn Strutchens shared the report of the Membership Committee, prepared by Eric Milou (committee chair). She thanked the committee for their work and welcomed new members, Whitney Wesley and Susan Swars. The committee will share an email that members can send to non-members to encourage them to join AMTE.

Mentoring

Pat Campbell, Chair, thanked the committee for their work and welcomed new members, Matthew Winsor and Calli Holaway. Highlights of the committee's work include: STaR committee ; discussion tables, dinner group reservations for graduate students or new members,

Nominations and Elections

Christine Thomas, Chair, thanked the committee members for the hard work this year. Thanked outgoing members, Judy Mumme and Rheta Rubenstein. Welcomed new members Andrea McCloskey and Karen Karp. Successfully completed the election of a Treasurer, Suzanne Harper, and Board Member-At-Large, Edward A. Silver.

Conference Program

Suzanne Harper, Chair, thanked committee members for the hard work on the conference. The Committee increased the length of the conference. She thanked the outgoing members and welcomed new members, Ann McCoy, Robert Powers, Wendy Smith & P. Holt Wilson. The 2014 conference will be in Irvine, CA. The proposal deadline for the 2014 conference is May 15, 2013

Research

Corey Drake, Chair, thanked the members of committee. He reminded the membership to keep checking the "My Favorite Articles" section under the "Research" tab on the AMTE home page. He encourage the membership to share ideas with the committee.

Technology (and NTLA Award)

Tom Dick, Chair, thanked the members welcomed new members Michael Mikusa, Beth Bos, S. Asli Ozgun-Koca. The National Technology Leadership Initiative (NTLI) Best Paper Award now requires submission of a paper for publication in *Contemporary Issues in Technology and Teacher Education (CITE)*. Unfortunately, no one submitted a paper this year, so we are not presenting the award this year. A travel award for the winner to present at the SITE conference is now sponsored by Texas Instruments.

New Committees

Emerging Issues

Marilyn welcomed the members of this new committee: Francis (Skip) Fennell (chair), W. Gary Martin, Karen King, Mike Mays, Sybilla Beckman, and Jennifer Luebeck.

Professional Development Committee

Marilyn welcomed the members of this new committee: Dorothy White, (chair), Michael Steele, Eugenia Vomvoridi-Ivanovic, Hyman Bass, and Jennifer Bay-Williams.

Task Forces/Special Initiatives:

Common Core State Standards Task Force

Lynn Breyfogle, Chair, thanked Kathy Stumpf at The Brookhill Foundation for their support of the face-to-face meetings for the task force. The task force worked for 18 months and is now disbanded. The new Emerging

Issues Committee will be handling issues related to the CCSS.

MET II Review Task Force

Randy Philipp, Chair, thanked the members of the task force. The work of the Task Force was to respond to a late draft of the MET II document. We were told our feedback was the most useful feedback they received.

Equity Task Force

Marilyn Strutchens shared the report of the Equity Task Force, prepared by Rochelle Gutierrez (committee co-chair). Marilyn thanked members of the Task Force for their work. They were responsible for the Learn and Reflect strand in this year's conference. The Task Force will be focusing on a position statement about equity and expanding a post-doc internship idea.

STaR-Like Task Force

Barbara Reys, Co-Chair, reported that 115 fellows have completed the STaR program. AMTE will host the program at the end of the NSF funding. She asked the membership for help in identifying groups, foundations, and individuals to support the program by sponsoring one or more Fellows in future cohorts (cost is \$2500/Fellow)

NCATE Review Task Force

Marilyn Strutchens, President,

Publications

Mathematics Teacher Education Journal

Denise Spangler, Chair, thanked the members of the editorial board and welcomed new members, Laura VanZoest, Anthony Fernandes. She asked the membership to volunteer to review submissions.

Connections Newsletter

Trena Wilkerson, Editor, thanked the editorial panel, thanked outgoing members and recognized new members, Nancy Dyson, L. Diane Miller, and Sarah Roberts. She reminded the membership that they can submit a peer-reviewed article for the newsletter and that all committees and task forces submit articles to the newsletter

CITE Journal

Marilyn Strutchens shared the report of the CITE Journal, prepared by Denny St. John and Doug Lapp (committee co-chairs). She thanked the reviewers.

Conferences

Susan Gay, Conference Director, thanked the membership for attending the conference and invited the membership to next year's conference in Irvine, CA. She reported that 584 people registered for the conference and more than 550 attended. She asked the membership to submit feedback for the conference.

Recognitions

Outgoing Board & Committee Members

Marilyn Strutchens thanked outgoing Board members Lynn Stallings (Treasurer) and Amy Roth-McDuffie (Member At-large) for their service. She thanked outgoing Sponsorship Director, Jeff Wanko for his service.

Program & Local Arrangements Committee

Marilyn thanked the program committee and the local committee for their hard work in making the conference a success. She thanked local arrangement co-chairs, Julie Dixon & Enrique Ortiz and program chair, Suzanne Harper, for their leadership.

Other Business

Installation of new Board Members

Marilyn Strutchens welcomed incoming Board members Megan Burton (Affiliates Director), Ed Silver (Member-At-Large), Christine Browning (Publications Director) and Suzanne Harper (Treasurer).

Marilyn introduced the new President of AMTE, Fran Arbaugh, who concluded the meeting. Fran thanked Marilyn for her work as President and reminded the membership that we would honor Marilyn at next year's business meeting as she completes her final year as Past-President.

2013 Strategic Priorities & Announcements

Fran outlined the following Action Priorities for 2013:

1. Positioning AMTE as a vocal and influential participant in national policy initiatives regarding mathematics teacher education.
2. Focusing explicit attention on the connections among mathematics teacher education research, practice, and policy.

Other Announcements

- AMTE Special Interest Session at the NCSM Conference, April 17, 2:30 p.m.
- AMTE Reception at the NCTM Conference, April 18, 6:00 p.m., Hyatt Regency
- If you are willing to volunteer at the AMTE booth at the NCTM conference, complete the flyer in your conference folder.

Adjournment

Fran adjourned the meeting at 1:00 pm.

Respectfully submitted by Maggie McGatha



AMTE'S AWARDS: THE EXCELLENCE IN MATHEMATICS TEACHER EDUCATION AWARD AND THE EARLY CAREER AWARD

2015 Award for Excellence in Teaching 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 2015 Excellence in Teaching in Mathematics Teacher Education Award is intended to recognize a colleague for a unique contribution in teaching that has made a significant and lasting contribution to the pedagogy of mathematics teacher education. The nominee shall have demonstrated innovative practices in teaching and commitment to mathematics preservice or inservice teacher education through 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.

Criteria for Excellence in Scholarship Award

The nominee of the Excellence in Teaching Award should be an active member of AMTE and have at least five years of commitment to mathematics teacher education. They should have made unique contributions to the field of mathematics teacher education. Unique contributions should be considered in the broadest sense possible.

Documentation required for Excellence in Scholarship Award:

- a. A current vita of the nominee, focused on excellence in teaching in mathematics teacher education (5 page limit).
- b. A letter of nomination documenting the nominee's eligibility for the award, related to the criteria listed above.
- c. Additional letters of support (no more than four) for the nomination from individuals knowledgeable of the nominee's contributions relative to one or more of the criteria stated above.

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 to Tony Nguyen at tonguyen@projects.sdsu.edu.

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

2015 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 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 **two**) from individuals (e.g., colleagues within and outside of the individual's institution, recent doctoral graduates mentored by the nominee) knowledgeable of the nominee's contributions relative to the focus area. Multiple authored letters are accepted.

Nomination Process

AMTE members can nominate a mathematics teacher educator who meets the criteria for eligibility. Self-nominations

will not be considered. The three areas of teaching, service, and scholarship shall be weighted equally in the evaluation of the nomination materials. Nominees do not need to demonstrate exceptional work in every area, and may be considered for exemplary work in only one area.

The committee will review applications in an electronic format; all application materials should be submitted as a single PDF file to Tony Nguyen at tonguyen@projects.sdsu.edu.

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



SUSAN GAY AMTE CONFERENCE SCHOLARSHIP FOR GRADUATE STUDENTS

Description of Awards

The Susan Gay AMTE Conference Scholarship, named after Susan Gay in honor of her extraordinary service to AMTE over many years as conference director, president, secretary, and board member-at-large, was established to provide graduate students financial support to attend the AMTE annual conference. Each year up to 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 graduate student making steady progress toward completion.

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.

Susan Gay Scholarship Winners

- 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**

CITE: CALL FOR MANUSCRIPTS

Share research regarding issues of technology use in mathematics teacher education. If you have an expository paper focusing on innovative approaches to integrating technology into teacher education, submit those to the “Current Practice” section of CITE.

The *CITE-Math Journal* provides a forum for a dialog about best practices of utilizing technology in the preparation of mathematics teachers. Papers may address any area of research in technology and mathematics teacher education, dealing with either preservice and inservice issues. Papers will be reviewed on the following criteria: relevance to technology and mathematics teacher education research, originality, clarity of expression, and literature support.

A wide range of formats and approaches to scholarship are accepted, including qualitative research, quantitative research, and theoretical pieces. Articles will be published in an electronic format as well as in corresponding versions (pdf) suitable for print. An electronic format allows articles to be published in a timely fashion and allows for the inclusion of various media including applets, color graphics, photographs, video, etc. Manuscripts may be submitted online through the journal website (<http://site.aace.org/newpubs/index.cfm?fuseaction=Info.CITEEntrance>). Inquiries about potential manuscript topics are welcomed.

Listed below are two of the papers published during 2012 in CITE-Math’s 4 issues.

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

Reviewers serve an important function in evaluating the research submitted to *CITE-Math* as we consider papers regarding issues and innovative uses of technology use in mathematics teacher education. Members of the review board are given no more than three manuscripts per year, with usually four weeks to complete each review.

Interested?

Please go to <http://site.aace.org/newpubs/index.cfm?fuseaction=Info.CITEEntrance> and provide information online. You also 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, Denny St. John (stjoh1d@cmich.edu) or Doug Lapp (lapp1da@cmich.edu) 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 Denny St. John (stjoh1d@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, 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).

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 to providing evidence of their effectiveness. Note that *effectiveness* implies that something is *better* and not just *different* as a result of the innovation. In addition, authors should make explicit the specific contribution to our knowledge. Findings should be reported with enough warrants to allow the construction or justification of recommendations for policy and practice.

We 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), and a discussion of how this intervention might be used by others.
- 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/in-service) and are not idiosyncratic to the instructor. Again, such manuscripts would include a careful description of the tool, 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. 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*: Such manuscripts might be empirical or philosophical/theoretical in nature. In either case, manuscripts should clearly situate the issue within the field and the existing literature, fully articulate the means of addressing the issue, and offer readers some analysis of the effectiveness of the means of addressing 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. Articles should provide a connection to the existing knowledge base in mathematics teacher education and should be grounded in theory or previously published articles. Similarly, to enable others to build on work that is published in *MTE*, authors should provide sufficient detail to allow for verification, replication in other contexts, or modification by subsequent authors. 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>.

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**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**