

FOURTEENTH ANNUAL CONFERENCE

ONLINE PROGRAM

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Tim Hendrix Meredith College Raleigh, NC <u>hendrixt@meredith.edu</u> 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.

AMTE is proud to acknowledge and welcome members of its 18 affiliated organizations to our Fourteenth Annual Conference.

Illinois Mathematics Teacher Educators (IMTE) Utah Association of Mathematics Teacher Educators (UAMTE) Florida Association of Mathematics Teacher Educators (FAMTE) California Association of Mathematics Teacher Educators (CAMTE) Association of Mathematics Teacher Educators in Connecticut (AMTEC) Appalachian Association of Mathematics Teacher Educators (AAMTE) Georgia Association of Mathematics Teacher Educators (GAMTE) Tennessee Association of Mathematics Teacher Educators (TAMTE) Pennsylvania Association of Mathematics Teacher Educators (PAMTE) Massachusetts Mathematics Association of Teacher Educators (MassMATE) South Carolina Association of Mathematics Teacher Educators (SCAMTE) New Jersey Association of Mathematics Teacher Educators (NJAMTE) Rocky Mountain Association of Mathematics Teacher Educators (RMAMTE) Missouri Mathematics Association for Advancement of Teacher Training (MAT)² Association of Mathematics Teacher Educators in Texas (AMTE-Tx) Teachers of Teachers of Mathematics, Oregon (TOTOM) Mississippi Association of Mathematics Teacher Educators (MAMTE) Association of Mathematics Teacher Educators in Alabama (AMTEA)

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Acknowledgements

The Fourteenth 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 pull this conference together;
- Lori Albers, Tony Nguyen, and Cathy Boyle, San Diego State University, and Helen Kirk, Auburn University, for their support with registration and conference materials;
- CAMTE for assisting with technology for the conference; and
- the organizations who participated in the AMTE Exhibits (please see the final program for a complete listing).

Thanks to our Sponsors!

The Fourteenth Annual AMTE Conference would not be possible without the contributions and support of many individuals. AMTE wishes to express its sincere appreciation to our sponsors and exhibitors. Please see the final program for a complete listing.

Conference Information

Conference Registration Desk

Please stop by the AMTE Registration Desk, located in the hotel's lobby near the elevators, to obtain your conference materials, including the conference program and your nametag.

AMTE Registration Desk Hours:

Thursday, January 28	8:00 a.m. – 5:30 p.m.
Friday, January 29	7:30 a.m. – 5:00 p.m.
Saturday, January 30	7:30 a.m. – 11:30 a.m.

Wireless Internet Access

Complimentary wireless internet access in the conference area of the hotel is available Thursday through Saturday. Instructions and the code to use to access this service are available at the AMTE registration desk near the guest elevators beginning Thursday morning.

For conference attendees staying at the Hyatt Regency Irvine Hotel, internet access is available in individual guestrooms for \$10.95 per 24 hours from the time you sign on. Directions on how to access wireless and wired internet service can be found in your guestroom. With your guestroom internet, you also have internet access in the hotel lobby.

Hotel Parking Information

Discounted self-parking is available for conference attendees for \$6.00 per car per day or \$10.00 per car per day for overnight parking. In order to obtain these special discounted rates, just mention that you are with the AMTE conference either as you exit the parking lot (for day guests) or when checking into the hotel (for overnight guests) and staff will charge the appropriate parking rate. Valet parking is also available at the hotel's prevailing rates for \$13.00 per car per day or \$20.00 per car per day for overnight valet parking.

Options for Thursday Dinner

Check at the AMTE Registration Desk for a map of the area and list of nearby restaurants.

Please note that other important information is available at the back of the program book, including the following:

- Speakers' contact information
- Listing of the Judith E. Jacobs Lecturers since the creation of this award
- AMTE Events at the NCTM and NCSM Conferences in San Diego, CA, in April, 2010
- AMTE Leadership
- Call for Proposals for the 2011 AMTE Conference (deadline: May 7, 2010)
- Call for Nominees for the AMTE Award for Excellence in Scholarship in Mathematics Teacher Education (deadline: September 30, 2010) and AMTE's Early Career Award (deadline: October 15, 2010)
- Call for Manuscripts for the Special Equity Issue of the *Journal of Mathematics Teacher Education* (deadline: June 1, 2010)
- Call for Papers for the Contemporary Issues in Technology and Teacher Education (CITE) Journal

For your convenience, a map of the hotel convention center is printed on the back of the program booklet.

For any other questions, please contact the volunteers at the AMTE Registration Desk or the hotel staff.



Fourteenth Annual Conference SCHEDULE

January 28 – 30, 2010 Irvine, California

Thursday, January 28, 2010

8:00 a.m. – 5:30 p.m.	AMTE Registration Desk Open
Morning (varies)	Preconference Sessions (separate registration required; see AMTE website)
12:00 – 5:15 p.m.	Exhibits Open
1:00 – 1:45 p.m.	Concurrent Sessions
1:45 – 2:00 p.m.	Break
2:00 – 2.30 p.m.	Concurrent Sessions
2:30 – 2:45 p.m.	Break
2:45 – 4:15 p.m.	Concurrent Sessions
5:00 – 6:30 p.m.	General Session - Salon A

Friday, January 29, 2010

7:00 – 8:00 a.m.	Continental Breakfast
7:30 a.m. – 5:00 p.m.	AMTE Registration Desk Open
8:00 a.m. – 5:00 p.m.	Exhibits Open
8:00 – 9:15 a.m.	Concurrent Sessions
9:15 – 9:30 a.m.	Break
9:30 – 10:30 a.m.	Concurrent Sessions
10:30 – 10:45 a.m.	Break
10:45 – 11:45 a.m.	Concurrent Sessions
11:45 a.m. – 1:00 p.m.	Lunch and Committee Meetings - Salon C/D and Conference Theater Terrace
1:00 – 1:30 p.m.	Concurrent Sessions
1:30 – 1:45 p.m.	Break
1:45 – 2:30 p.m.	Concurrent Sessions
2:30 – 2:45 p.m.	Break
2:45 – 3:15 p.m.	Concurrent Sessions
3:15 – 3:30 p.m.	Break
3:30 – 4:15 p.m.	Concurrent Sessions
4:45 – 6:15 p.m.	Judith E. Jacobs Lecture - Salon A/B
7:00 – 8:00 p.m.	Dinner - Salon C/D

Saturday, January 30, 2010

7:00 – 8:00 a.m.	Continental Breakfast
7:30 – 11:30 a.m.	AMTE Registration Desk Open
8:00 – 9:15 a.m.	Concurrent Sessions
9:15 – 9:30 a.m.	Break
9:30 – 10:15 a.m.	Concurrent Sessions
10:15 – 10:30 a.m.	Break
10:30 – 11:45 a.m.	Concurrent Sessions
11:45 – 1:15 p.m.	Lunch and Business Meeting - Salon C/D
1:30 – 2:30 p.m.	Closing Session - Salon A/B



Preconference Sessions

Thursday Morning, January 28, 2010

The following Preconference Sessions will be held on Thursday morning, January 28, 2010, at the 2010 AMTE Annual Conference at the Hyatt Regency Hotel in Irvine, California. Each session requires preregistration; information is below. **No onsite registration is available.** Please contact the organizers for more information.

PRECONFERENCE SESSIONS

Technology Workshop

Developing teachers' mathematics TPACK: Showcasing exemplary technology tools and their uses in mathematics education.

Standards for Elementary Mathematics Specialist (EMS) Teacher Preparation/Certification

Overview of the Standards for EMS teacher preparation/certification including how to use the recommendations to advocate for EMS.

Developing Pre-Service and Beginning Teachers' Use of Formative Assessment in
the Secondary ClassroomSponsored by Texas Instruments, AMTE's NTLI

Sponsor

Learn how to use networked technology to help pre-service and beginning teachers develop their use of ongoing, classroom-level assessment.

NCTM's NCATE Program Reviewer Training Workshop

Learn how to be an NCTM-prepared NCATE reviewer.

Preparing to Teach Mathematics with Technology [PTMT]: Engaging Practices and Materials for Technology-Using Mathematics Teacher Educators

Engage in using NSF-sponsored teacher education materials to prepare middle and secondary mathematics teachers to effectively use technology.

Using Video and Student Work Focused on Children's Thinking to Help Professional Developers Support Elementary School Teachers in Transforming Their Teaching

Draw upon video and written student artifacts to support professional developers working with elementary school teachers

The Mathematical Preparation of Teachers: Developing the Knowledge Base for Teacher Educators

Discuss how to develop a strong, cohesive, and scientifically reliable body of professional knowledge about what mathematical preparation is needed of teachers and of teacher educators.

TECHNOLOGY WORKSHOP: Developing Teachers' Mathematics TPACK: Showcasing Exemplary Technology Tools and Their Uses in Mathematics Education

Sponsored by AMTE's Technology Committee

Organizer: Christopher Johnston (cjohnst2@gmu.edu)

Presenters: Christine Browning (<u>christine.browning@wmich.edu</u>), Shannon Driskell (<u>Shannon.Driskell@notes.udayton.edu</u>), S. Asli Ozgun-Koca (<u>aokoca@wayne.edu</u>), Suzanne Harper (<u>harpersr@muohio.edu</u>), Susann Mathews (<u>susann.mathews@wright.edu</u>)

Time: 9:00 a.m. – 12:00 p.m. Session limit: 50 participants

Description: This session will afford mathematics teacher educators the opportunity to:

- Experience, minds-on, various technology tools appropriate for mathematics education
- Discuss with other educators issues surrounding the use of technology
- Discuss activities that take advantage of the technology and promote mathematics Technology, Pedagogy, and Content Knowledge (TPACK).

Various technology tools will be showcased by members of the AMTE Technology Committee and other experienced mathematics teacher educators.

To Register: Indicate your interest on the AMTE Conference Registration Form.

Standards for Elementary Mathematics Specialist (EMS) Teacher Preparation/Certification

Sponsored by AMTE, the Brookhill Foundation & CISCO Learning

Organizers: Terry Goodman (<u>Goodman@ucmo.edu</u>) & Maggie McGatha (<u>maggie.mcgatha@louisville.edu</u>) Presenters: Hyman Bass, University of Michigan; Robert Berry, University of Virginia; Nadine Bezuk, San

Presenters: Hyman Bass, University of Michigan; Robert Berry, University of Virginia; Nadine Bezuk, San Diego State University; Diana Erchick, Ohio State University; Terry Goodman, University of Central Missouri; Maggie McGatha, University of Louisville; Denise Mewborn, University of Georgia; Barbara Reys, University of Missouri; Nicole Rigelman, Portland State University; Joanne Rossi Becker, San Jose State University; Kathy Stumpf, Brookhill Foundation

Additional Speakers: Francis (Skip) Fennell, McDaniel College; Jon Wray – Howard County Public Schools, MD

Time: 8:00 a.m. – 12:00 p.m. Session limit: 50 participants.

<u>Description</u>: The AMTE Elementary Mathematics Specialists (EMS) project group will share an overview of the *Standards for EMS Teacher Preparation/Certification* including how to use the recommendations to advocate for EMS. An overview of two ongoing EMS projects will also be shared (Elementary Math Specialists & Teacher Leaders (EMS & TL) Project and the K-5 Mathematics Specialists Academy). Session participants will have an opportunity to provide feedback on the *Standards for EMS Teacher Preparation/Certification*.

<u>To Register</u>: Indicate your interest on the AMTE Conference Registration Form. There is no charge to attend, but pre-registration for the session is required.

Developing Pre-Service and Beginning Teachers' Use of Formative Assessment in the Secondary Classroom Sponsored by Texas Instruments, AMTE's NTLI Sponsor

Presenter: Allan Bellman, Ph.D., Mathematics Education, Supervisor of Teacher Education, University of California, Davis
Time: 8:30 a.m. – 11:30 p.m.
Session limit: 40 participants

<u>Description</u>: Participants will see how networked technology has been used to help pre-service and beginning teachers develop their use of ongoing, classroom-level assessment. Participants will review algebra lessons, modeled after classes from members of the UC Davis 2009-2010 pre-service cohort, and review assignments used to develop teacher's formative assessment skills. Discussion will center on how pre-service teachers are using assessment to meet individual student needs and provide some level of differentiated instruction. While TI-Nspire[™] technology and the TI-Nspire Navigator classroom learning system will be used, non-technology tools for assessment will also be discussed.

<u>To Register, or for Further Information</u>: There is no charge to attend this session. To register, e-mail <u>knicolosi@ti.com</u> and provide the following information: Name, affiliation, e-mail address, telephone, and in a sentence or two, please describe your interest in this session.

NCTM's NCATE Program Reviewer Training Workshop

Sponsored by the National Council of Teachers of Mathematics Organizer/Presenter: Monique Lynch (<u>mlynch@nctm.org</u>)

Time: 8:30 a.m. – 12:00 p.m. Session limit: 30 participants

<u>Description</u>: This session is designed to prepare potential mathematics education program report reviewers for the current NCATE system. This session would also be useful to existing reviewers who want to learn the latest information about the process. A completed reviewer application is required in order to participate in this session.

<u>To Register</u>: E-mail <u>nctmncate@nctm.org</u> and indicate that you are interested in attending reviewer training on January 28. There is no charge to attend, but the completion of an application and pre-registration for the workshop are required. For more information, see <u>http://www.nctm.org/ncate.aspx</u>.

Preparing to Teach Mathematics with Technology [PTMT]: Engaging Practices and Materials for Technology-Using Mathematics Teacher Educators

Sponsored by the National Science Foundation grant # DUE-0817253

Organizers/Presenters: Hollylynne Lee (<u>Hollylynne@ncsu.edu</u>) and Karen Hollebrands (Karen_hollebrands@ncsu.edu)

Time: 8:00 a.m. – 12:00 p.m. Session limit: 30 participants

<u>Description</u>: Participants will engage in using NSF-sponsored teacher education materials to prepare middle and secondary mathematics teachers to effectively use technology. The materials aim to develop teachers' TPACK in an approach that integrates content, pedagogy and technology. Materials to be discussed focus on Data Analysis and Probability topics using *TinkerPlots* and *Fathom*. Participants will be provided with access to the materials and have the opportunity to become involved with a national collaborative network. See <u>http://ptmt.fi.ncsu.edu</u>. <u>To Register</u>: Participants will need to bring a laptop with access to *TinkerPlots* and *Fathom* (evaluation versions available for download). There is no charge to attend. Interested attendees should register at http://ptmt.fi.ncsu.edu/amte10. Questions can be directed to http://ptmt.fi.ncsu.edu/amte10. Questions can be directed to http://ptmt.fi.ncsu.edu/amte10.

Using Video and Student Work Focused on Children's Thinking to Help Professional Developers Support Elementary School Teachers in Transforming Their Teaching

Sponsored by the National Science Foundation grant # ESI-0455785 Organizer/Presenter: Randy Philipp (RPhilipp@mail.sdsu.edu)

Presenters: Vicki Jacobs (<u>VJacobs@mail.sdsu.edu</u>), Lisa Lamb, SDSU (<u>Lisa.Lamb@sdsu.edu</u>), John (Zig) Siegfried, SDSU (ziggafoss@hotmail.com), Bonnie Schappelle, SDSU (BSchappe@sunstroke.sdsu.edu)

Time: 8:30 a.m. – 12:00 p.m. Session limit: 40 participants

<u>Description</u>: In this interactive session, based on results from a large-scale study in which we found that teachers change along a variety of dimensions after engaging in sustained professional development, we will draw upon video and written student artifacts to support professional developers working with elementary school teachers. We will discuss characteristics of video and written student work that effectively engage teachers in discussions of children's mathematical thinking as a basis for their teaching. Video and written student work used during the session will be available for future use by participants. The general session outcome is that participants will reconsider the what, how, and why of using artifacts with teachers.

<u>To Register</u>: There is no charge to attend this session. To register, e-mail <u>RPhilipp@mail.sdsu.edu</u> and provide the following information: Name, affiliation, e-mail address, telephone, and in a sentence or two, please describe your interest in this session.

The Mathematical Preparation of Teachers: Developing the Knowledge Base for Teacher Educators

Sponsored by the Coordination Working Group for the Network on the Mathematical Preparation of Teachers (MPT-Net)

Organizers: Virginia (Ginny) L. Keen, University of Dayton, Mary Louise Metz, Indiana University of Pennsylvania, Clyde Greeno, The MALEI Mathematics Institute.

Time: 8:00 a.m. – 12:00 p.m. (Reception at 8:00; Challenge at 8:30; task work 9:00-11:15; then Forum until noon.) Session limit: 50 participants

Description: This session furthers the MTE community's development of a strong, cohesive, and scientifically reliable body of professional (MPT) knowledge about what mathematical preparation is needed of teachers and of teacher-educators – and about how best to instill such knowledge. The session promotes and facilitates efforts of pre-existing MPT working groups – and activation of new MPT working groups. Participants will cluster into special-interest discussion groups to review progress and develop plans. For details, visit http://wg-mpet.wikidot.com/2010-amte-pre-session

<u>To Register</u>: E-mail <u>mpt-net@mathematicsinstitute.org</u> and state your wish to attend the MPT preconference session at the 2010 AMTE Conference. If you wish to join a NEW MPT working group or to create one, so indicate and specify the special-interest area – and visit <u>http://wg-mpet.wikidot.com/what-is-an-mpt-working-group</u>. Members of pre-existing MPT working groups also should send copies to the respective coordinators of those working groups.

	Overview of Thursday Afternoon, January 28, 2010			
	1:00 - 1:45 pm	2:00 - 2:30 pm	2:45 - 4:15 pm	
Saddleback	1. The Top Ten Ways to Support Teachers' Transition from Preservice to Inservice based on the NCSM PRIME Leadership Framework - Briars	14. Building Settings for Systemic Mathematics Education in High- Poverty Schools: The Ethics and Practice of Cross-Institutional Partnerships - Lewis	27. Mapping the Knowledge Teachers Need to Support Children's Development of Proportional Reasoning - Kastberg, D'Ambrosio & Lynch-Davis	
Trabuco	2. Developing Mathematical Content Knowledge for Teaching in an Online Professional Development Program - Silverman	15. A Comparison of Pre-Service and In-Service Teachers' Beliefs About TI-Nspire Following an Initial Experience - Edwards & Ozgun-Koca	28. Using Guided Public Rehearsals to Support Novice Teachers' Learning of Ambitious Teaching Practice - Ghousseini, Kazemi, Franke, Lampert, Beasley & Chan	
Salon A	3. Collaborating to Teach Mathematics to Students with Special Needs - Karp & Lingo	16. Video-Based Professional Development to Support Teachers' Implementation of Curricula - Lee & Hudson	29. Teachers' Conversations about Video: Implications for Professional Development - Lamb, Jacobs, Pierson, Philipp, Schappelle & Siegfried	
Salon B	4. "Multiplying a Fraction by 2/2 Doubles its Value": Teachers' Strategies for Addressing Myths about Fractions - Shaughnessy & McNamara	17. Supporting Teachers in Developing Curriculum Vision - Cirillo	30. K-12 Textbooks and Curriculum Materials as Tools in Mathematics Teacher Education - Lloyd, Pitts Bannister, Mariano, Herbel- Eisenmann, Drake, Land & Arbaugh	
Pelican Hill	5. Evaluating Countywide Adoption and Implementation of K-5 Singapore Math: A Two- Year Study in 21 Elementary Schools - Spence	18. Enhancing Mathematical Knowledge for Teaching Prerequisite Algebra Concepts - Welder & Simonsen	31. Mathematics Teacher Educators Sharing Experiences with Case- Based Materials - Breyfogle, Hillman, Moeller, Morris, Rigelman & Roth McDuffie	
Shady Canyon	6. Elementary Math Specialists: A Survey of Practice – Frohbieter	19. Preservice Elementary Teacher Learning Through Lesson Study: Support Structures and Learning Outcomes - Appova	32. Mathematical Thinking: A Natural or a Learned Behavior? - Harkness & Lane	
Conference Theater	7. Preservice Teachers' Views of Oppressive and Liberative Teaching Practices: Equity Leadership in Mathematics Education - Yow	20. Teacher Considerations of Cognitive, Language, and Social Aspects of Learning During Lesson Study - Amador	33. Learning to Learn From Teaching: Using Video to Facilitate Pre-Service Teachers' Productive Reflection on Practice - van Es, Santagata, Conroy, Hansen & Hiebert	
Salon D	8. Supporting Prospective Teachers in Understanding Issues of Equity, Diversity, and Social Justice in Mathematics Education - Koestler & Felton	21. What Should Pre-Service Teachers Read in Methods Courses and What Do They Learn From It? - Harrington & Campbell	34. Creating Materials for Use by Other Mathematics Teacher Educators – Ball, Bass, Cengiz, Jacobs, Kennedy, Kim, Rathouz, Sleep & Suzuka	
Salon E	9. Supporting Special Education Teachers' Pedagogical Content Knowledge of Teaching Algebraic Reasoning – Fraivillig & Bulgar	22. What Secondary Mathematics Teachers Learn from Working with Mathematics Graduate Students - Hodge	35. Quantifying Uncertainty and Analyzing Numerical Trends (QUANT): Professional Development in Data Analysis, Probability, and Statistics - Foley,	

			Strayer & Regan
Santiago	10. Improving Prospective Elementary Teachers' Abilities to Evaluate Evidence of Student Mathematical Achievement - Phelps & Spitzer	23. An Online Problem-Based Mathematics Course and Its Impact on Reasoning and Academic Achievement - Bos	36. The Role of Sociomathematical and Professional Norms in Mathematics Teacher Education - Van Zoest, Stockero, Taylor, Mumme & Romagnano
Quail Hill	 11. Integrating SMART Technology into Math Methods Courses for Elementary Teachers Smith & Bevis 	24. A Case Study of Teachers' Application of Mathematical Knowledge for Teaching Fundamental Algebraic Procedures - Li	37. Developing and Sustaining University/K-12 Partnerships - Wilkerson, Cady, Meier, Meyer, Strunk & Baker
Woodbridge	12. Common Errors that Pre- Service Elementary Teachers Make in Content Courses - Ding, Matthews & Rech	25. Critical Features of Mathematics Coaching/Specialist Programs - McGatha	38. Supporting and Preparing Talented Secondary Mathematics Teachers for High Needs Schools - Lee, Hollebrands, Washington, Mewborn & Thomas
Oak Creek	13. Bridging the Disconnect in High School Mathematics Using Dynamic Technology-Supported Instruction - Safi	26. Helping Low-Income Kindergartners Develop Number Sense as a Bridge to Conventional Mathematics Learning - Dyson	39. Formative Assessment in a Networked Classroom (FANC) - Professional Development from Multiple Perspectives Olson, Olson & Gilbert

Thursday, January 28, 2010

Session 1

Saddleback

The Top Ten Ways to Support Teachers' Transition from Preservice to Inservice based on the NCSM PRIME Leadership Framework.

Diane J. Briars, President, National Council of Supervisors of Mathematics

The NCSM PRIME Leadership Framework describes 12 research-informed teacher actions that mathematics education leaders should promote, support and expect of every teacher to increase student achievement. This session explores the implications of this framework for pre-service education and teacher induction programs and identifies important, but often overlooked, knowledge and experiences that beginning teachers need to be prepared to engage in these researchinformed actions.

Session 2

Trabuco

Developing Mathematical Content Knowledge for Teaching in an Online Professional Development Program

Jason Silverman, Drexel University

We will discuss our efforts to support the development of mathematical knowledge for teaching through a wholly online professional development program, including the theoretical framework that guides our instruction, the instructional practices employed, and evidence of teacher learning.

Session 3

Salon A

Collaborating to Teach Mathematics to Students with Special Needs

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

This session will present the results of a co-taught mathematics methods course for teachers of students with special needs. Learning outcomes were assessed through a pre- and postsurvey evaluating the special education teachers' knowledge of mathematics concepts and teaching strategies.

Session 4

Salon B

"Multiplying a Fraction by 2/2 Doubles its Value": Teachers' Strategies for Addressing Myths about Fractions

Meghan M. Shaughnessy, *University of Michigan* Julie McNamara, *UC Berkeley*

We report findings from a study of preservice and practicing teachers' strategies for addressing elementary school students' misconceptions about fractions. Implications for teacher education and professional development are addressed.

Session 5

Evaluating Countywide Adoption and Implementation of K-5 Singapore Math: A Two-Year Study in 21 Elementary Schools

Dianna Spence, North Georgia College & State University

Researchers studied one school system's adoption of the K-5 Singapore Math curriculum. Researchers examined classroom implementation for fidelity with established Singapore Math techniques and evaluated impact of the curriculum on teaching practices, teacher attitudes, student attitudes, and student achievement.

Session 6

Shady Canyon

Elementary Math Specialists: A Survey of Practice

Greta Frohbieter, University of Colorado at Boulder

Research on prevalent models of elementary math specialists used by schools and districts will be discussed. Broad data at the national level and a more detailed account from one urban region will be presented.

Session 7

Conference Theater

Preservice Teacher Views of Oppressive and Liberative Teaching Practices: Equity Leadership in Mathematics Education

Jan A. Yow, University of South Carolina - Columbia

During the course of a secondary methods course, preservice teachers were asked to observe oppressive and liberative teaching practices of their cooperating teacher and reflect on their own developing practice.

Session 8

Salon D

Supporting Prospective Teachers in Understanding Issues of Equity, Diversity, and Social Justice in Mathematics Education

Courtney Koestler, University of Wisconsin - Madison Mathew D. Felton, University of Wisconsin - Madison

This session is to bring together teacher educators interested in supporting prospective teachers in thinking about issues of equity, diversity, and social justice in mathematics methods and content courses. Participants may also bring resources to share.

1:00 - 1:45 pm

Pelican Hill

Session 9

Supporting Special Education Teachers' Pedagogical Content Knowledge of Teaching Algebraic Reasoning

Judith Fraivillig, *Rider University* Sylvia Bulgar, *Rider University*

Special education teachers instruct students in mathematics, yet many describe themselves as "not good in math". We will share our design and implementation of a workshop supporting these teachers' own algebraic reasoning and their pedagogical content knowledge in algebra.

Session 10

Santiago

Salon E

Improving Prospective Elementary Teachers' Abilities to Evaluate Evidence of Student Mathematical Achievement

Christine M. Phelps, *Central Michigan University* Sandy Margaret Spitzer, *Towson University*

This session will present an intervention to improve prospective teachers' ability to systematically study teaching. Together, we will examine participants' responses to discover how the intervention improved participants' abilities to evaluate evidence and how the intervention could be improved.

Session 11

Quail Hill

Integrating SMART Technology into Math Methods Courses for Elementary Teachers

Nancy L. Smith, *Emporia State University* Sheri Bevis, *Emporia State University*

Presenters will share how they implemented SMART

technology in a math methods course for elementary teachers, share student feedback, will demonstrate sample activities and share a list of resources.

Session 12

Woodbridge

Common Errors that Pre-Service Elementary Teachers Make in Content Courses

Meixia Ding, University of Nebraska - Lincoln Michael Edward Matthews, University of Nebraska at Omaha Janice Rech, University of Nebraska at Omaha

In this study, homework was analyzed from content courses from different universities. Using qualitative analysis techniques, the error descriptions were critiqued and refined. The final errors presented are those that have been persistent across various teachers, institutions, and textbooks.

Session 13

Oak Creek

Bridging the Disconnect in High School Mathematics Using Dynamic Technology-Supported Instruction

Farshid Safi, The College of New Jersey

This interactive session will explore ways that teachers and teacher educators can utilize dynamic software to promote classroom discourse while connecting functional, graphical and analytical notions. Strategies discussed aim to improve conceptual learning of topics while investigating common misconceptions.

Thursday, January 28, 2010

Session 14

Saddleback

Building Settings for Systemic Mathematics Education in High-Poverty Schools: The Ethics and Practice of Cross-Institutional Partnerships

Jennifer M. Lewis, University of Michigan

This session describes an effort to build a systemic and coherent effort of mathematics education for children in highpoverty schools by bringing together in-service teachers, preservice teachers, cooperating teachers, and university-based teacher educators around jointly-determined ideas and highleverage practices.

Session 15

Trabuco

A Comparison of Pre-Service and In-Service Teachers' Beliefs About TI-Nspire Following an Initial Experience

Thomas G. Edwards, *Wayne State University* S. Asli Ozgun-Koca, *Wayne State University*

We report findings from a study investigating the views of preservice and in-service mathematics teachers following their initial experience with TI-Nspire. The differences between the pre-service and in-service teachers' views will be discussed, and classroom activities for pre-service teachers shared.

Session 16

Salon A

Video-Based Professional Development to Support Teachers' Implementation of Curricula

Jean Lee, Indiana University Rick Hudson, University of Southern Indiana

We will introduce a video-based, professional development model designed to allow teachers to reflect on their implementation of a standards-based mathematics curriculum. Findings indicate how teacher participation impacts their understanding of curricula and have implications for teacher education.

Session 17

Salon B

Supporting Teachers in Developing Curriculum Vision

Michelle Cirillo, University of Delaware

Mathematics teachers and schools face difficult decisions and conflicting messages related to what to teach and how to teach. In this session, we discuss ways in which various stakeholders have addressed this issue through the development of curriculum vision.

Session 18

Pelican Hill

2:00 - 2:30 pm

Enhancing Mathematical Knowledge for Teaching Prerequisite Algebra Concepts

Rachael Welder, *Hunter College, City University of New York* Linda Simonsen, *University of Arizona*

This study investigated the effects of a mathematics content course on preservice elementary teachers' common and specialized content knowledge of prerequisite algebra concepts. Results provide evidence that this course is capable of enhancing preservice teachers' understanding beyond common content knowledge.

Session 19

Shady Canyon

Preservice Elementary Teacher Learning Through Lesson Study: Support Structures and Learning Outcomes

Aina Appova, Wright State University

The goal of this session is twofold: a) to share the research findings related to effective support structures for preservice teacher learning through lesson study, and b) encourage further discussions about productive and problematic teacher learning from conducting lesson study.

Session 20

Conference Theater

Teacher Considerations of Cognitive, Language, and Social Aspects of Learning During Lesson Study

Julie Amador, University of Nevada, Reno

The session will describe research conducted through a lesson study session with a focus on professional development. Teacher decision making regarding cognitive, language, and social aspects of learning, as they were discussed through the joint planning session will be highlighted.

Session 21

Salon D

What Should Pre-Service Teachers Read in Methods Courses and What Do They Learn From It?

Rachel A. Harrington, Western Oregon University Sunshine Campbell, University of Washington

We will share the results of a study of what pre-service teachers gain from reading research during their methods courses. Adding to our bibliography, we will solicit audience input on a list of recommended readings for mathematics preservice teachers.

Session 22

Salon E

What Secondary Mathematics Teachers Learn from Working with Mathematics Graduate Students

Angie Hodge, North Dakota State University

This presentation will discuss what secondary mathematics teachers learned from working with mathematics graduate students. An interactive example of a mathematics project collaboratively designed by teachers and graduate students will be used to illustrate such learning.

Session 23

Santiago

An Online Problem-Based Mathematics Course and Its Impact on Reasoning and Academic Achievement

Beth Bos, Texas State University, San Marcos

With innovative thinking and problem solving skills becoming the main stay for success in today's society, this presentation looks at how thinking, reasoning, and academic achievement are affected by the use of a hybrid online problem-based mathematics course.

Session 24

Quail Hill

A Case Study of Teachers' Application of Mathematical Knowledge for Teaching Fundamental Algebraic Procedures

Xuhui Li, California State University - Long Beach

The presenter reports findings from a case study on what kinds of mathematical knowledge for teaching a mathematics teacher utilizes when attempting to teach fundamental algebra formulas in conceptual ways, and what factors have shaped the use of such knowledge.

Session 25

Woodbridge

Critical Features of Mathematics Coaching/Specialist Programs

Maggie McGatha, University of Louisville

In this session you will learn about important features of mathematics coaching/specialist programs. Participants will share their thoughts about the topic and then we will explore what the research and other successful coaching/specialist programs around the country suggest.

Session 26

Oak Creek

Helping Low-Income Kindergartners Develop Number Sense As a Bridge to Conventional Mathematics Learning

Nancy Dyson, University of Delaware

Research shows that children from low income families bring less foundational knowledge for learning school mathematics than their more advantaged peers. Can an intervention which specifically targets number sense give kindergarten children the foundation they need to learn first grade mathematics?

Thursday, January 28, 2010

Session 27

Saddleback

2:45 - 4:15 pm

Salon B

Mapping the Knowledge Teachers Need to Support Children's Development of Proportional Reasoning

Signe E. Kastberg, Indiana University Purdue University Indianapolis Beatriz S D'Ambrosio, Miami University Kathleen Lynch-Davis, Appalachian State University

Participants will build a preliminary map of reasoning (pedagogical and mathematical) needed by future teachers to support student development of proportional reasoning. These maps will emerge from the collaborative analysis of selected tasks, tools, and student work.

Session 28

Trabuco

Using Guided Public Rehearsals to Support Novice Teachers' Learning of Ambitious Teaching Practice

Hala Ghousseini, University of Michigan Elham Kazemi, University of Washington Megan Franke, UCLA Graduate School of Education Magdalene Lampert, University of Michigan Heather Beasley, University of Michigan Angela Chan, UCLA Graduate School of Education

Participants will analyze new pedagogies that prepare novice teachers for the practice of ambitious teaching through the discussion of video episodes of efforts to guide novices' learning about mathematics, students, and teaching during public rehearsals in Elementary Math Methods Courses.

Session 29

Salon A

Teachers' Conversations about Video: Implications for Professional Development

Lisa Clement Lamb, San Diego State University Victoria Jacobs, San Diego State University Jessica Pierson, San Diego State University Randolph A. Philipp, San Diego State University Bonnie Schappelle, San Diego State University John Siegfried, San Diego State University

We explore findings and professional development implications from 30 focus group conversations (4 - 6 participants each) centered around a video clip. Participants were prospective and practicing teachers at different points of a sustained professional development effort focused on children's mathematical thinking.

K-12 Textbooks and Curriculum Materials as Tools in Mathematics Teacher Education

Gwendolyn Lloyd, Penn State Vanessa Pitts Bannister, Virginia Tech Gina Mariano, University of Oregon Beth Herbel-Eisenmann, Michigan State University Corey Drake, Iowa State University Tonia Jo Land, Iowa State University Fran Arbaugh, The Pennsylvania State University

In this session, we share strategies for using K-12 textbooks and curriculum materials in mathematics and methods courses for preservice teachers. We focus on the role of curriculum materials in developing preservice teachers' understandings of NCTM's principles for school mathematics.

Session 31

Session 30

Pelican Hill

Mathematics Teacher Educators Sharing Experiences With Case-Based Materials

M. Lynn Breyfogle, *Bucknell University* Susan L. Hillman, *Saginaw Valley State University* Babette Moeller, *EDC* Katherine A. Morris, *Sonoma State University* Nicole Rigelman, *Portland State University* Amy Margaret Roth McDuffie, *Washington State University Tri-Cities*

This working group session will provide a forum for establishing collaborative networks of MTEs using case-based materials to continue work at future meetings and in-between. The recent Teaching Resources Task Force Report will frame the topics for small group discussion.

Session 32

Shady Canyon

Mathematical Thinking: A Natural or a Learned Behavior?

Shelly Harkness, University of Cincinnati Catherine Lane, University of Cincinnati - Clermont College

During the academic years of 2007 - 2009 preservice and college students participated in a research study on mathematical thinking. Presenters will share results and allow session attendees to try the activities that were used in the study.

Session 33

Conference Theater

Learning to Learn From Teaching: Using Video to Facilitate Pre-Service Teachers' Productive Reflection on Practice

Elizabeth van Es, University of California, Irvine Rossella Santagata, University of California, Irvine Judi Conroy, University of California, Irvine Laurie Hansen, University of California, Irvine James Hiebert, University of Delaware

This session focuses on pre-service teachers' learning from practice. We discuss pre-service teachers' beginning noticing skills and then report on the impact of two interventions designed to help them learn to observe, analyze, and improve teaching.

Session 34

Salon D

Creating Materials for Use by Other Mathematics Teacher Educators

Judith E. Jacobs, University of Michigan Deborah Ball, University of Michigan Hyman Bass, University of Michigan Nesrin Cengiz, University of Michigan Dearborn Dave Kennedy, Shippensburg University Yeon Kim, University of Michigan Margaret Rathouz, University of Michigan - Dearborn Laurie Sleep, University of Michigan Kara Suzuka, University of Michigan

Mathematics teacher educators create or adapt materials that are used once or twice. Using structures and processes from the mod4 project as a reference, strategies will be developed for piloting and revising teacher educators' work to be used by others.

Session 35

Salon E

Quantifying Uncertainty and Analyzing Numerical Trends (QUANT): Professional Development in Data Analysis, Probability, and Statistics

Gregory D. Foley, *Ohio University* Jeremy Strayer, *Mount Vernon Nazarene University* Blake Regan, *Ohio University*

Many high school graduates are ill-equipped to deal with the quantitative information in their lives. This session will report on teacher growth resulting from a year-long program focusing on student statistical literacy using technology and the Mathematical Task Framework.

Session 36

Santiago

The Role of Sociomathematical and Professional Norms in Mathematics Teacher Education

Laura R. Van Zoest, Western Michigan University Shari L. Stockero, Michigan Technological University Cynthia E. Taylor, University of Missouri Judy Mumme, WestEd Lew Romagnano, The Metropolitan State College of Denver

A study investigating the durability of norms developed in a methods course and the extent to which graduates developed professional dispositions based on these norms is used to frame a discussion on the role of norms in mathematics teacher education.

Session 37

Quail Hill

Developing and Sustaining University/K-12 Partnerships

Trena Wilkerson, Baylor University Jo Ann Cady, University of Tennessee - Knoxville Sherry L. Meier, Illinois State University Rachelle Meyer, Baylor University Kathy Strunk, Anderson County Schools Betty Ruth Baker, Baylor University

In this interactive session, we identify several important aspects to developing, sustaining, and evaluating university/K-12 partnerships to support mathematics education. Small group discussions will allow participants to react to the presenters' ideas.

Session 38

Woodbridge

Supporting and Preparing Talented Secondary Mathematics Teachers for High Needs Schools

Hollylynne Stohl Lee, North Carolina State University Karen Hollebrands, North Carolina State University Harry Tyrone Washington, North Carolina State University Denise S. Mewborn, University of Georgia Christine D. Thomas, Georgia State University

We will share recruitment, retention, and programmatic efforts for preparing secondary mathematics teachers at three universities. Each university is a recipient of a Noyce grant from NSF that provides financial support for teachers. Session 39

Oak Creek

Formative Assessment in a Networked Classroom (FANC) -Professional Development from Multiple Perspectives.

Judith Olson, *CRDG*, *University of Hawaii* Melfried Olson, *CRDG*, *University of Hawaii* Michael Gilbert, University of Hawaii

This session examines a professional development research project with seventh-grade teachers and focuses on the interactions among mathematical content, formative assessment, technology, and general pedagogical techniques.

Thursday, January 28, 2010

5:00 - 6:30 pm

Salon A/B

General Session: Common Core Standards

Glenda Lappan, Michigan State University William G. McCallum, University of Arizona Henry S. Kepner, University of Wisconsin – Milwaukee

An update on the driving forces behind and status of the Common Core Standards along with discussion of implications for our children and mathematics education

	Overview of I	Friday Morning, January	29, 2010	
8:00 - 9:15 am		9:30 - 10:30 am	10:45 - 11:45 am	
Saddl eback	40. Equity in Mathematics Education: Experiences and Reflections from a Teacher Preparation Program and Professional Development Initiatives - Menéndez, Aguirre, Wood, Civil, Celedón-Pattichis & Oslund	52. Professional Development that Promotes Mathematical Thinking and Increases Student Achievement - Brendefur	64. Building Professional Learning Communities with "Enhanced" Journal Articles - Lynch	
Trab uco41. The Role of Teacher Education in Promoting Reasoning and Sense Making in High School Mathematics - Martin, Quander, Brahier & Kersaint55 F F Comparison		53. Extending Teachers' Thinking of Proportional Reasoning Using NAEP Items - Goodson-Espy, Morge, Cifarelli & Pugalee	65. Making Student Thinking Public - Stockero, Van Zoest & Kratky	
Salon42. Expanding Horizons: Renewing Yourself and Others through International Experiences in Mathematics Education - Moskowitz, Hillman & Langbort42. Expanding Horizons: Renewing Yourself Hillman & Horizons: Renewing Yourself Hillman & Langbort		54. EXCELLENCE AWARD WINNER'S SESSION: So, What Does it Mean to Serve Mathematics Education? Issues and Challenges for All of Us - Past, Present, and Future - Fennell	66. Missouri's Statewide Pre-Service Math Teacher Conference: A Win- Win for All - Campbell, Goodman, Barnett, Combs, McCoy & Haistings	
Salon B	43. Redefining the Focus of High School Mathematics Instruction:Developing Teachers' Capacity to Reason and Prove - Smith & Stylianides	55. The Challenges for Mathematics Education - Collaborations with and Recommendations for the NCTM - Kepner	67. Using Video Clubs to Help Teachers Make the Link between Instruction and Student Learning – King & Burrill	
Pelica n Hill	44. Connecting Mathematical Concepts to Student Interpretations of Mathematical Representations - Adu-Gyamfi & Bosse	56. Engaging Mathematicians in the Work of Teacher Education - Kersaint	68. Advancing Pre-Service Teachers' Competences in Algebra and Algebraic Thinking - Magiera, van den Kieboom & Moyer	
Shady Cany on45. The Nature of Justification and Its Role as a Learning Practice in Middle School Algebra – Staples, Thanheiser, Bartlo, & Newton		57. Time Invested Does Not Equal the Grade: Communication and Online Learning of Mathematics Teachers Gillow-Wiles	69. Preparing Instructors to Teach Mathematics Content Courses for Preservice Elementary Teachers: Perspectives from Diverse Settings - Magner, Moss, Masingila, Olanoff & Kimani	
Confe rence Theat er	46. Enhancing Preservice Teachers' Preparation to Teach Statistics - Jacobbe	58. New Directions in the Research of Technology-Enhanced Education - Ronau, Rakes & Wagener	70. Helping Teachers Develop Their Technological, Pedagogical, Statistical Knowledge (TPSK) - Lee, Ives, Gonzalez & Shaughnessy	
Salon E	47. Designing and Using Mathematical Tasks to Develop Specialized Content Knowledge for Teaching - Kazemi, Carroll, Kelley- Petersen, Lesseig, Mumme, Sleep, Suzuka, Bass, Lewis, Ball & Elliott	59. Supporting Teachers' Efforts to Establish Productive Social Norms for Learning Mathematics - Dixon, Tobias & Roy	71. A Practice-Based Approach to Develop Mathematics Teacher Leaders' Understanding of General Misconceptions Related to Proportionality - Flowers	
Santi ago	48. Next-Generation Technologies and Their Impact on Mathematics Teacher Education Programs -	60. Mathematics Content Courses for Elementary and Middle Grades Teachers: Identifying the Necessary	72. Mathematics Professional Development 101 for Future and New Mathematics Teacher Educators	

	Meagher, Lapp, Zbiek & Edwards	and the Sufficient - Olson, Marchionda, Moody, Tassell & Weidemann	- Adams
Quail Hill	49. Developing Pre-Service Teachers' Ability to Foster Mathematical Communication in Early Childhood Classrooms - Tyminski, Kastberg, Richardson & Winarski	61. Integrated Mathematics: Conceptions and Implications - Wilson, de Araujo, Jacobson, Lowe & Singletary	73. Looking toward Careers in Mathematics Education in Colleges/Universities—Some Lessons Learned by Recent Graduates Reys, Dingman, Newton & Cox
Wood bridg e	50. Developing a Handbook for Mentoring in Mathematics Education - Enderson, Goodson-Espy, Breyfogle & Mohr-Schroeder	62. Keeping Up the Excitement for Learning Mathematics in the Middle School – LaFramenta & Adams	74. Teacher Education Student Development of Specialized Mathematical Content Knowledge - Meier & Rich
Oak Creek	51. Using Number Theory as a Site for Preservice Teachers' Reasoning and Justification - Cengiz, Flowers, Rathouz & Rubenstein	63. A Mathematics Coaching Research Design - Burroughs, Luebeck & Yopp	75. EARLY CAREER AWARD WINNER'S SESSION: Developing and Supporting Beginning Mathematics Teacher Educators - Lannin

Friday, January 29, 2010

Session 40

Saddleback

Equity in Mathematics Education: Experiences and Reflections from a Teacher Preparation Program and Professional Development Initiatives

José María Menéndez, *Radford University* Julia Aguirre, *University of Washington, Tacoma* Marcy B. Wood, *University of Arizona* Marta Civil, *University of Arizona* Sylvia Celedón-Pattichis, *University of New Mexico* Joy A. Oslund, *Alma College*

Panelists will share findings from studies with prospective and in-service teachers around teaching mathematics for social justice, teaching Latina/o students in a bilingual classroom, and analyzing teachers' discourse about practices and students to understand and promote equity in mathematics classrooms.

Session 41

Trabuco

The Role of Teacher Education in Promoting Reasoning and Sense Making in High School Mathematics

W. Gary Martin, Auburn University Judith Quander, National Council of Teachers of Mathematics Daniel Joseph Brahier, Bowling Green State University Gladis Kersaint, University of South Florida

This session will include a discussion of the implications of NCTM's "Focus on High School Mathematics: Reasoning and Sense Making" for mathematics teacher educators, both in preparing new teachers and in providing professional development.

Session 42

Salon A

Expanding Horizons: Renewing Yourself and Others through International Experiences in Mathematics Education

Stuart Moskowitz, *Humboldt State University* Susan L. Hillman, *Saginaw Valley State University* Carol Langbort, *San Francisco State University*

Working with mathematics teachers in schools around the world offers much for professional development in MTE. Issues related to benefits and challenges developing such experiences, along with their impact on our own teaching, will be discussed. Co-sponsored by USNCMI

Session 43

Salon B

Redefining the Focus of High School Mathematics Instruction: Developing Teachers' Capacity to Reason and Prove

Margaret Smith, University of Pittsburgh Gabriel Stylianides, University of Pittsburgh

In this session, participants will engage in a discussion and analysis of an instructional case, one component of a practicebased curriculum designed to develop teachers' mathematical and pedagogical knowledge related to reasoning and proving in the secondary mathematics curriculum.

Session 44

Pelican Hill

Connecting Mathematical Concepts to Student Interpretations of Mathematical Representations

Kwaku Adu-Gyamfi, *East Carolina University* Michael J. Bosse, *East Carolina University*

We will investigate how students' interpretations of mathematical representations affect their ability to connect multiple mathematical representations and to integrate mathematical information across representations. In doing so, we will apply a novel framework to learning, instruction, and assessment.

Session 45

Shady Canyon

The Nature of Justification and its Role as a Learning Practice in Middle School Algebra

Megan Staples, University of Connecticut Eva Thanheiser, Portland State University Joanna Bartlo, Portland State University Jill Newton, Purdue University

Mathematics educators will work with the audience to define and discuss the role of justification tasks in middle schools, and share results from the first phase of a research project focusing on justification as a learning practice in middle schools.

Session 46

Conference Theater

Enhancing Preservice Teachers' Preparation to Teach Statistics

Tim Jacobbe, University of Florida

This session will present research-based activities stemming from a joint ASA/NCTM project that will be published and released at the 2010 NCTM Annual Conference. Research has

8:00 - 9:15 am

preparation programs.

shown there is a need to include these types of activities during

Session 47

Salon E

Designing and Using Mathematical Tasks to Develop Specialized Content Knowledge for Teaching

Elham Kazemi, University of Washington Cathy Carroll, West Ed Megan Kelley-Petersen, University of Washington Kristin Lesseig, Oregon State University Judy Mumme, WestEd Laurie Sleep, University of Michigan Kara Suzuka, University of Michigan Hyman Bass, University of Michigan Jennifer M Lewis, University of Michigan Deborah Ball, University of Michigan Rebekah Elliott, Oregon State University

This session compares the design and use of tasks for developing teachers' specialized knowledge of mathematics across two projects. We examine how professional educators facilitate PD with these tasks and connect them to teachers' use of mathematics in practice.

Session 48

Santiago

Next-Generation Technologies and Their Impact on Mathematics Teacher Education Programs

Michael Meagher, Brooklyn College - CUNY Douglas Lapp, Central Michigan University Rose Mary Zbiek, Pennsylvania State University Michael Todd Edwards, Miami University

Teacher educators in various third-level settings will provide elaborated exemplars, all allied to research projects, of a wide range of technology deployment in pre-service programs and how that technology is integrated across programs and connected to field experiences and first-year teaching.

Session 49

Quail Hill

Developing Pre-Service Teachers' Ability to Foster Mathematical Communication in Early Childhood Classrooms

Andrew M Tyminski, *Purdue University* Signe E. Kastberg, *Indiana University Purdue University Indianapolis*

Sue Ellen Richardson, *IUPUI* Elizabeth Winarski, *The Project School - Bloomington*

This session addresses the development of meaningful communication skills in early childhood students and examines pre-service teachers' ability to foster this development. Attendees will engage in discussion regarding approaches to each of these facets. Classroom examples will be presented.

Session 50

Woodbridge

Developing a Handbook for Mentoring in Mathematics Education

Mary C. Enderson, *Middle Tennessee State University* Tracy J. Goodson-Espy, *Appalachian State University* M. Lynn Breyfogle, *Bucknell University* Margaret J. Mohr-Schroeder, *University of Kentucky*

This working-type session is soliciting help in developing a guide centered on issues related to mentoring in mathematics education. This session focuses on identifying factors of the mentoring process for potential and new faculty, raised both by new faculty (mentee) as well as experienced faculty (mentor).

Session 51

Oak Creek

Using Number Theory as a Site for Preservice Teachers' Reasoning and Justification

Nesrin Cengiz, University of Michigan Dearborn Judith M. Flowers, University of Michigan - Dearborn Margaret Rathouz, University of Michigan - Dearborn Rheta N. Rubenstein, University of Michigan - Dearborn

Number theory provides rich resources for the development of reasoning and justification. What tasks provide opportunities for generation of mathematically important conjectures? What constitutes a convincing and satisfactory justification? What are reasonable expectations for preservice teachers in expressing their justifications?

Boardroom

Committee Chairs Meeting

Barbara J. Reys, University of Missouri Nadine Bezuk, San Diego State University

Friday, January 29, 2010

Session 52

Saddleback

Professional Development that Promotes Mathematical Thinking and Increases Student Achievement

Jonathan Brendefur, Boise State University

This session describes a framework for mathematics professional development that has been successfully used to enhance the knowledge, skills and classroom practices of elementary in-service teachers in five schools.

Session 53

Trabuco

Extending Teachers' Thinking of Proportional Reasoning Using NAEP Items

Tracy J. Goodson-Espy, *Appalachian State University* Shelby Morge, *UNC Wilmington* Vic Cifarelli, *University of North Carolina at Charlotte* David Pugalee, *UNC Charlotte*

The session describes the activities of a current NSF project that developed and implemented a set of National Assessment of Educational Progress (NAEP) learning modules for preservice Middle Grades mathematics teachers.

Session 54

Salon A

AWARD WINNER'S SESSION:

So, What Does it Mean to Serve Mathematics Education? Issues and Challenges for All of Us - Past, Present, and Future

Francis (Skip) Fennell, McDaniel College

I'm a teacher educator; what does it mean to serve the field of mathematics education? How do you do that and why is it important?

Session 55

Salon B

The Challenges for Mathematics Education - Collaborations with and Recommendations for the NCTM

Henry S. Kepner, President, NCTM

Participate in a session that will identify key directions and challenges for NCTM in supporting and advocating for students and their teachers. The NCTM President will seek contributions and perspectives from AMTE members in this collaborative effort.

AMTE 2010 Annual Conference

Session 56

Engaging Mathematicians in the Work of Teacher Education

Gladis Kersaint, University of South Florida

In this session we will discuss collaboration among mathematics specialists (mathematicians, teacher educators, and teachers) to design and deliver statewide content-focused professional development based on new standards modeling NCTM's Curriculum Focal Points. Issues, challenges and successes will be discussed.

Session 57

Shady Canyon

Time Invested Does Not Equal the Grade: Communication and Online Learning of Mathematics Teachers

Henry Gillow-Wiles, Oregon State University

This presentation will report results from a phenomenological study of teachers participating in a 3 year blended model distance-learning program resulting in a M.Sc. in Mathematics, Science and Technology Integration that investigated issues of student role adjustment and technology self-efficacy.

Session 58

Conference Theater

New Directions in the Research of Technology-Enhanced Education

Robert N. Ronau, *University of Louisville* Christopher R. Rakes, *University of Louisville* Lauren L. Wagener, *University of Tennessee*

In this study, researchers conducted a systematic review of literature on the use of technology in education using three lenses: teacher knowledge, TPACK, and research design. Each lens provided unique insight into mathematics technology research.

9:30 - 10:30 am

Pelican Hill

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Session 59

Salon E

Quail Hill

Supporting Teachers' Efforts to Establish Productive Social Norms for Learning Mathematics

Juli K. Dixon, University of Central Florida Jennifer M. Tobias, Illinois State University George J. Roy, University of South Florida - St. Petersburg

The importance of establishing normative ways of interacting within classroom communities, which foster mathematical understandings, has been well documented. This session will describe ways in which experiences in a graduate program foster the establishment of supportive norms in teachers' classrooms.

Session 60

Santiago

Mathematics Content Courses for Elementary and Middle Grades Teachers: Identifying the Necessary and the Sufficient

Travis Austin Olson, University of Nevada, Las Vegas Hope Marchionda, Western Kentucky University Vivian Moody, Western Kentucky University Janet Lynne Tassell, Western Kentucky University Wanda Weidemann, Western Kentucky University

Working together towards optimally effective transitions in course and content sequencing and development with regard to content courses for elementary and middle school mathematics pre-service teachers.

Session 61

Integrated Mathematics: Conceptions and Implications

Patricia S. Wilson, University of Georgia Zandra de Araujo, University of Georgia Erik Jacobson, University of Georgia Laura Lowe, University of Georgia Laura Singletary, University of Georgia

Based on mathematics education literature and our research with secondary mathematics teachers, we will discuss a variety of conceptions of integrated mathematics, the issues involved in implementation, and implications for preparing teachers.

Session 62

Keeping Up the Excitement for Learning Mathematics in the Middle School

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

Results of the second year of an NSF study of how African American girls position themselves (or are positioned) as learners of mathematics and science as they move from elementary school to middle school.

Session 63

Oak Creek

Woodbridge

A Mathematics Coaching Research Design

Elizabeth Burroughs, *Montana State University* Jennifer Luebeck, *Montana State University* David Yopp, *Montana State University*

Coaching as a form of teacher professional development is popular among school districts nationwide. This session will describe a research design, including instruments, for answering questions about the knowledge and professional development needed for effective mathematics coaching.

Friday, January 29, 2010

Session 64

Building Professional Learning Communities with "Enhanced" Journal Articles

Monique C. Lynch, NCTM

Participants will actively engage in exploring enhanced articles from NCTM journals as a professional development tool. Facilitators will model the process of using the journal articles to build school-based, professional learning communities.

Session 65

Trabuco

Saddleback

Making Student Thinking Public Shari L. Stockero, Michigan Technological University

Laura R. Van Zoest, Western Michigan University James Kratky, Western Michigan University

This presentation focuses on beginning secondary mathematics teachers' ideas about having students make their thinking public and uses video clips to illustrate the ways in which they enacted these ideas in their classrooms.

Session 66

Salon A

Missouri's Statewide Pre-Service Math Teacher Conference: A Win-Win for All

Larry N. Campbell, *Missouri State University* Terry Goodman, *University of Central Missouri* Joann Barnett, *Ozark Middle School* Emily Combs, *Clinton Middle School* Ann McCoy, *University of Central Missouri* Jeanine Haistings, *William Jewell College*

Presenters will share details of a highly successful statewide Pre-Service Math Teacher conference for K-12 future teachers. Presentation will focus on benefits to ALL parties concerned, as well as highlights, details, logistics, and more.

Session 67

Salon B

Using Video Clubs to Help Teachers Make the Link between Instruction and Student Learning James King, University of Washington Gail Burrill, Michigan State University

Discussion of carefully chosen clips of classroom practice helps teachers make their teaching public, talk about mathematics and student learning, leading to a pedagogy more focused on students. The work of developing a video club over five years will be shared.

Session 68

Pelican Hill

10:45 - 11:45 am

Advancing Pre-Service Teachers' Competences in Algebra and Algebraic Thinking

Marta T. Magiera, *Marquette University* Leigh van den Kieboom, *Marquette University* John Moyer, *Marquette University*

We will discuss the use of activities that strengthened preservice teachers' algebra content knowledge. We will share the relationship between pre-service teachers' self-awareness and self-evaluation of their algebraic thinking and their ability to analyze the algebraic thinking of middle school students.

Session 69

Shady Canyon

Preparing Instructors to Teach Mathematics Content Courses for Preservice Elementary Teachers: Perspectives from Diverse Settings

Jodelle S. W. Magner, *Buffalo State College* Meg Moss, *Pellissippi State Community College* Joanna O. Masingila, *Syracuse University* Dana Olanoff, *Syracuse University* Patrick Kimani, *California State University*, *Fullerton*

Groups representing three types of institutions will present how they prepare instructors to teach mathematics courses for preservice elementary teachers. Group discussion will focus on issues of developing and supporting instructors' MKTT.

Session 70

Conference Theater

Helping Teachers Develop Their Technological, Pedagogical, Statistical Knowledge (TPSK)

Hollylynne Stohl Lee, North Carolina State University Sarah E. Ives, Texas A&M University - Corpus Christi Marggie D. Gonzalez, North Carolina State University J. Michael Shaughnessy, Portland State University

This session includes results from an NSF-funded project for implementing teacher education materials related to teaching statistics with technology. We will share and discuss issues for teacher educators to consider for how to develop TPSK for their preservice teachers.

Session 71

Salon E

A Practice-Based Approach to Develop Mathematics Teacher Leaders' Understanding of General Misconceptions Related to Proportionality

Judith M. Flowers, University of Michigan - Dearborn

Participants will engage in activities that develop an awareness of challenges students face in learning about proportionality and consider how teachers can support student learning. The session also involves reflecting on facilitating sessions with teacher leaders' colleagues around these topics.

Session 72

Santiago

Mathematics Professional Development 101 for Future and New Mathematics Teacher Educators

Thomasenia Lott Adams, University of Florida

This interactive session is particularly designed to inform and empower future and new mathematics teacher educators who plan to facilitate mathematics professional development with classroom teachers. Participants will view video examples, learn about skills, resources, challenges and pitfalls to avoid.

Session 73

Quail Hill

Looking toward Careers in Mathematics Education in Colleges/Universities—Some Lessons Learned by Recent Graduates.

Robert Reys, University of Missouri Shannon Dingman, University of Arkansas Jill Newton, Purdue University Dana Christine Cox, Miami University

This session will share information collected from recent

mathematics education doctorates currently working in colleges/universities. The participants will summarize survey results and share their first-hand experiences on issues ranging from job searching to transitioning to a faculty position.

Session 74

Woodbridge

Teacher Education Student Development of Specialized Mathematical Content Knowledge

Sherry L. Meier, *Illinois State University* Beverly S. Rich, *Illinois State University*

A theoretical framework describing the development of teacher education students' deep and connected specialized content knowledge for teaching will be presented. Participants will analyze sample student work using the framework, provide feedback, and discuss implications for teacher education programs.

Session 75

Oak Creek

EARLY CAREER AWARD WINNER'S SESSION: Developing and Supporting Beginning Mathematics Teacher Educators

John K. Lannin, University of Missouri

In this session, we will discuss the knowledge, challenges, and implications of assisting the development of mathematics teacher educators.

Friday, January 29, 2010

11:45 am - 1:00 pm

LUNCH

Salon C/D and Conference Theater Terrace

AMTE Committee Meetings

Salon C/D

	Overview of Friday Afternoon, January 29, 2010				
	1:00 - 1:30 pm	1:45 - 2:30 pm	2:45 - 3:15 pm	3:30 - 4:15 pm	
Saddl eback	76. Using Student- Generated Representations to Enhance Prospective Teachers' Understandings of Data Analysis – Garza- Kling	88. Beliefs and Practices of Mathematics Teacher Educators: Revelations and Outcomes from Research and Practice - Lovin & Sanchez	100. Getting Off to a Good Start: Providing Support for Novice Secondary Mathematics Teachers - Caldwell	112. Examining the Role of the Facilitator in Motivating Teachers During Elementary Mathematics Professional Development - Linder	
Trab uco	77. Building Community and Trust: Lessons from a Partnership to Foster Algebraic Thinking in Grades K-6 - Yoder & Galindo	89. Technology and Teaching and Learning Secondary Mathematics: Implications for Teacher Preparation and Professional Development – Burrill & Ellis	101. Pre-Service Elementary Teachers' Use of Technology in Lesson Plans Assigned in Methods Coursework - Johnston	 113. Reducing Pre-Service Teacher Anxieties for Teaching Elementary Mathematics - Westenskow, Bingham Brown & Moyer- Packenham 	
Salon A	78. Supporting Graduate Teaching Assistants Through Self-Reflection and Mentoring - Bostic & Jacobbe	90. Coordinating Interns' Experiences in the Field and University: The Mediated Field Experience - Campbell	102. Using Student Thinking While Teaching: How to Get What You Don't Have - Wieman	114. Practicing What We Teach: The Development and Implementation of a Standards-Based Elementary Content Course - Steimle & James	
Salon B	79. Teacher Candidates' Perceptions of Children's Mathematical Learning in Urban Field Experience - Ford	91. AMTE Elementary Mathematics Specialist (EMS) Initiative - Reys	103. Enhancing Spatial Ability of Pre-Service Elementary Teachers - Hanlon & Lucas	115. Pre-Service Teachers' Understanding of Continuity - Coskun & Akyuz	
Pelica n Hill	80. Confronting Practice: Critical Colleagueship in a Mathematics Teacher Study Group - Males	92. A Mathematics Teachers' Circle - Fernandes & Harold	104. Investigating the Needs of Early Career Mathematics and Science Teachers - Utley	116. Pre-Service and In- Service Teachers' Development of Algebraic Thinking and Reasoning - Che	
Shady Cany on	81. A Teacher's Journey with a New Generation Handheld: Decisions, Struggles, and Accomplishments - Ozgun- Koca, Meagher & Edwards	93. The Nature of Students' Collaboration in the Creation of a Wiki - McCulloch & Smith	105. Examining the Intersections Between Math for Social Justice, Equity and Teacher Development – Gonzalez	117. MIME: Developing and Implementing a Masters Program that Meets the Needs of Practicing Middle Grades Teachers – Mikusa & Melillo	
Confe rence	82. Using Portfolio Assessment in Mathematics	94. Including English Learners in Secondary	106. Prospective Teachers' Development of Whole	118. Known Mix: Exploring Teachers' Understanding	

	Theat er	<i>Content Courses for Pre- Service Elementary Teachers -</i> Berry	<i>Mathematics Methods</i> <i>Courses</i> - Lager	Number Concepts and Operations - Roy, Tobias, Safi & Dixon	of Variation - Gilbert
	Salon E	83. Discourse and Academic Rigor in Single- Sex Mathematics Classrooms – Wiegert & Che	95. Helping to Create Mathematically Successful Schools - Jacobs	107. Supporting Local Contexts in an Online Professional Development World - Hodges	
	Santi ago	84. Supporting Systemic Change: Establishing Collaborative Learning Communities – Tarlow	96. Calculator Use on NAEP: A Look at Fourth- and Eighth-Grade Mathematics Achievement - Walcott	108. Online Professional Development for Mathematics Teachers - McKenna, Gilmore, Brunsvold, Loats & Evans	119. Preparing Mathematics Teachers to Learn to Teach from Their Teaching - Powers & Judd
	Quail Hill	85. Advanced Concepts of Middle School Mathematics: What Students Learned and How Pedagogy was "Caught" – Gonske	97. A Self-Evaluation of the Impact of a Teacher Education Program – Gainsburg	109. Promoting Mathematical Discourse Through Shared Story Book Reading – Columba	120. Research-Based Curriculum Guides and Benchmark Exams Increase Effectiveness of Professional Development and District-Wide Mathematics Achievement. - Hyde & Canzone
	Wood bridg e	86. What KeyRecorder, a 'Spy' Program, Reveals About Calculator Usage of Pre-Service Elementary Teachers? – Matthews	98. Engaging Preservice Teachers in the Analysis of Children's Thinking – Meyer, Cooper & Wilkerson	110. Using Digital Literacies to Enhance Communication and Reflection During Student Teaching - Miriti & Mohr- Schroeder	121. Supporting the Preparation of Teachers through the NCTM and its Affiliates - Garneau, Noblitt & Long
Oak Creek		87. Becoming a Better Teacher: Lessons Learned from Conducting a Critical Classroom Analysis - Wilburne	99. A Holistic Approach to Mathematics Teacher Development - Buckley, Hodge, Moss & Bowzer	111. Preparing Teachers to Use District Documents and Policies as Resources Rather than Constraints - Land	122. The Role of Two-Year Colleges in the Mathematics Preparation of Future Teachers - Farinelli

Friday, January 29, 2010

Session 76

Saddleback

Using Student-Generated Representations to Enhance Prospective Teachers' Understandings of Data Analysis

Gina Marie Garza-Kling, Western Michigan University

Participants will examine and discuss representations of data that were generated by prospective teachers, with a focus on the potential of such a task for helping prospective teachers develop a deeper and more meaningful understanding of data analysis.

Session 77

Trabuco

Building Community and Trust: Lessons from a Partnership to Foster Algebraic Thinking in Grades K-6

Gina Borgioli Yoder, Indiana University at Indianapolis Enrique Galindo, Indiana University

We share lessons learned from a partnership project supporting K-6 teachers in fostering students' algebraic thinking. Success has been based on a concerted effort to build trust by joining with teachers to construct an emergent curriculum responsive to their needs.

Session 78

Salon A

Supporting Graduate Teaching Assistants Through Self-Reflection and Mentoring

Jonathan David Bostic, University of Florida Tim Jacobbe, University of Florida

A doctoral student will share reflections from the experience of teaching an elementary methods course for the first time. The lessons learned led to several changes and will provide insight for graduate students and faculty.

Session 79

Salon B

Teacher Candidates' Perceptions of Children's Mathematical Learning in Urban Field Experience

Margaret Irene Ford, Duquesne University

This is a qualitative study of teacher candidates' perceptions about learning mathematics through urban field experience. Teacher candidates participated in an intensive study of mathematics teaching and learning. The focus and nature of their learning will be discussed.

Session 80

Pelican Hill

Confronting Practice: Critical Colleagueship in a Mathematics Teacher Study Group

Lorraine Marie Males, Michigan State University

This presentation will discuss how eight mathematics teachers participating in a teacher study group as part of a project focused on action research to improve classroom discourse developed as "critical colleagues" (Lord, 1994) and the contexts that promoted this development.

Session 81

Shady Canyon

A Teacher's Journey with a New Generation Handheld: Decisions, Struggles, and Accomplishments

S. Asli Ozgun-Koca, *Wayne State University* Michael Meagher, *Brooklyn College - CUNY* Michael Todd Edwards, *Miami University*

We present a case study of a teacher's first attempts to integrate an advanced digital technology into her instruction. Through the struggles and accomplishments that she experienced, we will discuss how she developed her Technological, Pedagogical, and Content Knowledge (TPACK).

Session 82

Conference Theater

Using Portfolio Assessment in Mathematics Content Courses for Pre-Service Elementary Teachers

Sandra Berry, Indiana University Purdue University Fort Wayne

This session describes the presenter's experiences in using a portfolio assessment plan in foundational mathematics courses for future elementary teachers. The presentation outlines the goals, challenges and progress of the project over a 4 year period.

Session 83

Salon E

Discourse and Academic Rigor in Single-Sex Mathematics Classrooms

Elaine M. Wiegert, *Clemson University* Megan Che, *Clemson University*

This session reviews the findings from a case study which examines the academic rigor and classroom discourse in single-sex, middle grade mathematics classrooms.

1:00 - 1:30 pm

Session 84

Santiago

Woodbridge

Supporting Systemic Change: Establishing Collaborative Learning Communities

Lynn D. Tarlow, City College of the City University of NY

In this session we will examine how learning communities have been created within and among urban schools, designed to support systemic change in a successful professional development program. This model highlights critical tools that impact teachers' ideas and classroom practice.

Session 85

Quail Hill

Advanced Concepts of Middle School Mathematics: What Students Learned and How Pedagogy was "Caught"

Teresa Gonske, Northwestern College

Participants will examine evidence from reflective learning logs regarding outcomes of a math course designed to build conceptual understanding of middle grades content, and will review course activities, learning environment, affective transformations, and observed effects on subsequent math and methods courses. Future collaboration is invited.

What KeyRecorder, a 'Spy' Program, Reveals About Calculator Usage of Pre-Service Elementary Teachers?

Michael Edward Matthews, University of Nebraska at Omaha

This session will discuss a study that investigated the calculator usage (hindering and aiding techniques) of preservice elementary teachers. The methodology involved using KeyRecorder, a calculator app that records keystrokes, and the report will discuss the pros/cons of this.

Session 87

Session 86

Oak Creek

Becoming a Better Teacher: Lessons Learned from Conducting a Critical Classroom Analysis

Jane Wilburne, Penn State Harrisburg

Twenty-six K-12 mathematics teachers conducted a critical analysis of their teaching after reading The Teaching Gap (Stigler & Hiebert, 1999). The session will share the top five focused improvement areas and the resulting impact on student learning.

Friday, January 29, 2010

Session 88

Saddleback

Beliefs and Practices of Mathematics Teacher Educators: Revelations and Outcomes from Research and Practice

LouAnn Lovin, James Madison University Wendy Sanchez, Kennesaw State University

Research suggests that teachers' beliefs influence classroom practice. In this session we will share how findings of our research project about beliefs of mathematics teacher educators have impacted our work with prospective elementary and secondary mathematics teachers in methods courses.

Session 89

Trabuco

Technology and Teaching and Learning Secondary Mathematics: Implications for Teacher Preparation and Professional Development

Gail Burrill, Michigan State University Wade Ellis, *West Valley Community College*

Dynamic interactive technologies along with the research on learning difficult mathematics concepts provide a new lens for engaging students in learning mathematics not just carrying out mathematical processes.

Session 90

Salon A

Coordinating Interns' Experiences in the Field and University: The Mediated Field Experience

Sunshine Campbell, University of Washington

This session describes a secondary math methods course which incorporated a field experience, mediated by the instructor, in an attempt to support interns in drawing stronger connections between practices they learn in the university and the reality of implementation in classrooms.

Session 91

Salon B

AMTE Elementary Mathematics Specialist (EMS) Initiative

Barbara J. Reys, University of Missouri

The work of the AMTE EMS Project Team will be reported. The team is generating a model EMS state endorsement plan specifying benchmarks/criteria for EMS endorsement. It is also developing advocacy strategies to encourage adoption of statelevel EMS endorsement options.

Session 92

A Mathematics Teachers' Circle

Anthony Fernandes, *UNC Charlotte* Reiter Harold, *UNC Charlotte*

A Mathematics Teachers' Circle engages middle school mathematics teachers in challenging problem solving on a regular basis. This session will describe the beginnings of one circle and engage the audience in a typical problem-solving activity.

Session 93

Shady Canyon

The Nature of Students' Collaboration in the Creation of a Wiki

Allison W. McCulloch, North Carolina State University Ryan C. Smith, North Carolina State University

We will describe a wiki-based group project implemented in a graduate mathematics education course. Students' perspectives on the benefits and drawbacks of creating a wiki, the nature of their collaboration, and examples of their work will be shared.

Session 94

Conference Theater

Including English Learners in Secondary Mathematics Methods Courses

Carl Lager, University of California, Santa Barbara

In this hands-on, interactive session, participants will experience and deconstruct a pre-service mathematics lesson that foregrounds secondary mathematics teaching and learning for English learners. Follow-up resources for secondary mathematics methods courses will be shared.

Session 95

Salon E

Helping to Create Mathematically Successful Schools

Judith E. Jacobs, University of Michigan

Mathematics teacher educators can help schools improve their mathematics programs. Ways of translating the research on mathematically successful schools into actions that schools can take will be presented and developed.

1:45 - 2:30 pm

Pelican Hill

Session 96	Santiago	Session 98	Woodbridge
Calculator Use on NAEP: A look at Fourth- and Grade Mathematics Achievement	l Eighth-	Engaging Preservice Teachers in the A Thinking	nalysis of Children's
Crystal Walcott, <i>Indiana University Purdue Univ</i> <i>Columbus</i> Presenters will share results of a research study of fourth- and eighth-grade calculator items from the mathematics assessment based on an item classifi framework that considers the appropriateness of a	ersity f released e NAEP cation a calculator as	Rachelle Meyer, <i>Baylor University</i> Sandi Cooper, <i>Baylor University</i> Trena Wilkerson, <i>Baylor University</i> A team of mathematics educators develor mathematics methods course that allowe to explore children's thinking about fract	oped a lesson for a ed preservice teachers tions. The authors will
a tool for solving the problems.		share the lesson design, organization of to of the data analysis.	the study, and results
Session 97	Quail Hill		
A Self-Evaluation of the Impact of a Teacher Ed	lucation	Session 99	Oak Creek
Program		A Holistic Approach to Mathematics Teacher Development	
Julie Gainsburg, California State University, Nor	thridge	Lecretia Buckley, Jackson State Univers	sity
Learn about one mathematics-credential program evaluation via observations of recent graduates te their secondary mathematics classrooms. Using '	's self- aching in 'homegrown''	Angie Hodge, North Dakota State Unive Erin Moss, Millersville University Angela D. Bowzer, Westminster College This papel presentation focuses on house	rsity
observation and merview protocols, we investiga		This parter presentation rocuses on now	manematics educators

This panel presentation focuses on how mathematics educators can develop curricula and experiences within mathematics education that promote holistic development for teacher education candidates.

graduates' implementation of program-emphasized teaching

practices and the factors that influence this implementation.

Friday, January 29, 2010

Session 100

Saddleback

Getting Off to a Good Start: Providing Support for Novice Secondary Mathematics Teachers

Janet Caldwell, Rowan University

By participating in a week-long summer institute, novice teachers develop specific plans for the beginning of the year. The program described here, in operation over the last seven years, focuses on teaching mathematics through problem solving.

Session 101

Trabuco

Pre-Service Elementary Teachers' Use of Technology in Lesson Plans Assigned in Methods Coursework

Christopher Johnston, George Mason University

This session presents results of a study which explored preservice elementary teachers' use of technology in lesson plans written for their methods course. Four primary types of lesson designs were implemented by the participants. Implications for teacher educators are discussed.

Session 102

Salon A

Using Student Thinking While Teaching: How to Get What You Don't Have

Rob Wieman, University of Delaware

The presenter will share the findings of research on high school mathematics teachers who are attempting to use student thinking in their teaching and their efforts to create classrooms where students make their thinking public.

Session 103

Salon B

Enhancing Spatial Ability of Pre-Service Elementary Teachers

Adele Hanlon, University of Central Oklahoma Carol A. Lucas, University of Central Oklahoma

This session will present research that explored the influential nature of an activity called Quick Draw with respect to preservice elementary, early childhood, and special education teachers' beliefs regarding spatial thinking, their spatial ability, and their geometric thinking.

Session 104

Investigating the Needs of Early Career Mathematics and Science Teachers

Juliana Utley, Oklahoma State University

Results of a study that examined the perceived needs of early career mathematics and science teachers will be shared. Session participants will be encouraged to share and discuss potential ways teacher educators can provide support.

Session 105

Shady Canyon

Examining the Intersections Between Math for Social Justice, Equity and Teacher Development

Lidia Gonzales, York College of the City University of NY

This session reports upon a study that aimed to explore the developing identities of 7 high school mathematics teachers as they partook in a community of practice exploring the teaching of mathematics for social justice.

Session 106

Conference Theater

Prospective Teachers' Development of Whole Number Concepts and Operations

George J. Roy, University of South Florida - St. Petersburg Jennifer M. Tobias, Illinois State University Farshid Safi, The College of New Jersey Juli K. Dixon, University of Central Florida

Whole number concepts and operations were examined during a classroom teaching experiment (CTE) conducted in an undergraduate elementary education mathematics content course. Prospective teachers' mathematical development during the CTE will be presented through the video clips and class work samples.

Session 107

Salon E

Supporting Local Contexts in an Online Professional Development World

Thomas E. Hodges, Western Carolina University

This session shares findings on the ways in which participating middle grades mathematics teachers situated their experiences in an online professional development within their local teaching practices. Participants are encouraged to share their own design/outcome experiences with online professional development.

2:45 - 3:15 pm

Pelican Hill

Santiago

Online Professional Development for Mathematics Teachers

Patricia McKenna, *Metropolitan State College of Denver* Don Gilmore, *Metropolitan State College of Denver* Dale Brunsvold, *Metropolitan State College of Denver* James Loats, *Metropolitan State College of Denver* Brooke Evans, *Metropolitan State College of Denver*

This session will address using collaborative problem-solving in an online setting to strengthen content knowledge and develop a "learning community" among mathematics teachers as an approach to professional development.

Session 109

Session 108

Ouail Hill

Promoting Mathematical Discourse Through Shared Story Book Reading

Lynn Columba, Lehigh University

This session presents initial results from a study on the effect of instructing early education teachers to embed mathematical discourse in shared storybook reading as a means of increasing "math talk" in the classroom.

Session 110

Using Digital Literacies to Enhance Communication and Reflection During Student Teaching

Landrea Miriti, *Bluegrass Community and Technical College* Margaret J. Mohr-Schroeder, *University of Kentucky*

In this presentation, we will share how our experiences engaging secondary mathematics student teachers and their university supervisors in online social networking provided opportunities for university supervisors to actively monitor and guide the development of beliefs and practices.

Session 111

Preparing Teachers to Use District Documents and Policies as Resources rather than Constraints

Tonia Jo Land, Iowa State University

Districts and district leaders try to influence and support instruction through boundary objects. This case study describes the efforts of a teacher to construct a coherent mathematics curriculum, but her interpretation of district boundary objects constrained this process.

Woodbridge

Oak Creek

Friday, January 29, 2010

Session 112

Saddleback

Examining the Role of the Facilitator in Motivating Teachers During Elementary Mathematics Professional Development

Sandra Mammano Linder, Clemson University

This session presents the results from a study examining the role of the facilitator in motivating teachers during elementary mathematics professional development. Participants connect findings from this study to practice and receive a framework for assessing future facilitators.

Session 113

Trabuco

Reducing Pre-Service Teacher Anxieties for Teaching Elementary Mathematics

Arla Westenskow, *Utah State University* Amy Bingham Brown, *Utah State University* Patricia Moyer-Packenham, *Utah State University*

Pre-service teachers often express anxiety about teaching mathematics in elementary schools. These anxieties limit their teaching in a variety of significant ways that impact children. This session focuses on strategies for reducing pre-service teachers' anxieties through positive university learning communities.

Session 114

Salon A

Practicing What We Teach: The Development and Implementation of a Standards-Based Elementary Content Course

Alice Steimle, University of Mississippi Julie James, University of Mississippi

This session will describe how NCTM's Process Standards were utilized to redesign an elementary mathematics content course. Presenters will discuss the impact of this new course format on pre-service teachers' content knowledge and beliefs regarding mathematics teaching and learning.

Session 115

Salon B

Pre-Service Teachers' Understanding of Continuity

Sirin Coskun, University of Central Florida Didem Akyuz, University of Central Florida

This session will delineate results of a research study which examined pre-service teachers' understanding of the concept of continuity especially focusing on their definitions and graphs. The working group format will allow attendees to discuss preservice teachers' work samples.

Session 116

Pre-Service and In-Service Teachers' Development of Algebraic Thinking and Reasoning

Megan Che, Clemson University

This session focuses on two algebra content courses for inservice and pre-service teachers. Goals, readings, activities, and products for the two courses are compared. Ways inservice teachers engaged students in class activities, along with student and teacher work samples, are discussed.

Session 117

Shady Canyon

MIME: Developing and Implementing a Masters Program that Meets the Needs of Practicing Middle Grades Teachers

Michael G. Mikusa, *Kent State University* Judith A. Melillo, *Kent State University*

Presenters will share about the implementation of a masters program owned by both the college of education and arts and sciences and taught collaboratively by mathematicians and mathematics educators. We will engage participants in our successes and failures.

Session 118

Conference Theater

Known Mix: Exploring Teachers' Understanding of Variation

Michael Gilbert, University of Hawaii

We report on research considering how middle school teachers reason about distributions in a sampling context. We work on a sampling task, see video clips, and review findings into strengths and barriers that middle school teachers have concerning distributional reasoning.

3:30 - 4:15 pm

Pelican Hill

Pro-Sor

Session 119

Santiago

Woodbridge

Preparing Mathematics Teachers to Learn to Teach from Their Teaching

Robert Powers, University of Northern Colorado April Judd, Northern Arizona University

This session reports our effort to use the lesson experiment process in the preparation of secondary pre-service teachers. We will share information on lesson experiment methods, discuss actual work from teacher candidates, and summarize a report of interviews from candidates.

Session 120

Quail Hill

Research-Based Curriculum Guides and Benchmark Exams Increase Effectiveness of Professional Development and District-Wide Mathematics Achievement.

Karajean Hyde, University of California, Irvine Janna Canzone, University of California, Irvine

The session will describe partnership work done with urban school districts to improve mathematics test scores for all students. This work includes the use of research-based curriculum guides, benchmark exams and of professional development, all co-aligned to standards. Supporting the Preparation of Teachers through the NCTM and its Affiliates

Marc Garneau, Affiliate Services Committee, NCTM Bethany Noblitt, Affiliate Services Committee, NCTM Vena Long, Affiliate Services Committee, NCTM

In this session, members of the NCTM Affiliate Services Committee will explore many of the facets of teacher preparation, with a particular focus on pedagogical content knowledge and the support and resources available through the NCTM and its affiliates.

Session 122

Session 121

Oak Creek

The Role of Two-Year Colleges in the Mathematics Preparation of Future Teachers

Rob Farinelli, Community College of Allegheny County

As more students are beginning their post-secondary education at two-year colleges, many of these institutions are putting more resources into teacher preparation programs. Many students are now receiving all of their mathematics content courses at the two-year college. This session will focus on best practices as well as innovative partnerships.

Friday, January 29, 2010

Salon A/B

Judith E. Jacobs Lecture

Building Knowledge for Helping Teachers Learn to Teach: An Alternative Path for Teacher Education

James Hiebert, University of Delaware

Two problems threaten teacher education's credibility: it has minimal impact on the teaching practices of its graduates, and no one knows how to fix it. Maybe it's time to reconceptualize the goals for teacher education and design an alternative process for achieving them.

Overview of Saturday, January 30, 2010			
	8:00 - 9:15 am	9:30 - 10:15 am	10:30 - 11:45 am
Saddl eback	123. How Children's Mathematical Thinking Informs Mathematical Knowledge for Teaching – Browning, Thanheiser, Watanabe, Moss, Heim & Fasteen	135. NCATE, TEAC, and More: Accreditation Updates and Challenges - Fennell & Lynch	147. Increasing Teachers' Knowledge of and Attention to Equity Issues in Multiple Settings - Strutchens, Martin & Scarborough
Trab uco	124. Preparing K-12 Teachers of Statistics - Rossman & Chance	136. Assessing the Impact of Supports on Teachers and Students' Experiences with Mathematics-Based PBL – Cross, Hudson & Lee	148. Mathematics Content Courses for Preservice Elementary Teachers: What's it Like for Faculty and Students? - Hart, Swars & Oesterle
Salon A	125. Teacher Beliefs: The Influence of Mathematical Experiences - Barker, Hill, Witkowski, Zhang, Langrall & O'Hanlon	137. Targeted Field Experiences in Lesson Study and Inquiry for Pre- Service Mathematics Teachers - Burroughs & Luebeck	149. The Comprehensive Mathematics Instruction (CMI) Framework: A New Lens for Examining Teaching and Learning - Hilton, Hendrickson & Bahr
Salon B	126. Studying and Developing Productive Disposition of Elementary School Teachers and Their Students - Philipp, Siegfried, Schappelle, Jacobs, Lamb & Pierson	138. Thai High School Mathematics Teachers' Probability Conceptions and Misconceptions - Talawat	150. Methods and Purposes for Assessing High School Teachers' Knowledge of Geometry - Hollebrands, Smith, Herbst, Bush, Jakubowski, Ronau & Lee
Pelica n Hill	127. The Development, Activity and Impact of Elementary Mathematics Specialists - Campbell & Whitenack	139. Video Cases: The Impact of a Five-Day Video Sequence on Elementary Teacher Candidates - Barlow, Harmon & Riales	151. Geometry for Prospective Elementary School Teachers: What? How? Why? - Watanabe, Driskell, Grant & Millsaps
Shady Cany on	128. Reflecting on Practice and Learning to Pay Attention to Students' Thinking - Galindo, McCloskey & Tsegai	140. <u>Mathematics Teacher Educator</u> : An AMTE Journal to Develop a Professional Knowledge Base from Practice - Flores	152. Pursuing Mathematical Justification in Professional Development: Supporting Teachers' Specialized Content Knowledge - Elliott, Lesseig, Kelley-Petersen, Carroll & Lannin
Confe rence Theat er	129. Using Student Work to Support Secondary Teachers in Understanding Student Thinking - Beckmann, Rubenstein & Thompson	141. Moving Beyond Word Problems: What is True Problem Solving? - Tassell, Marchionda & Olson	153. Framings for Secondary Mathematics Teacher Education Programs - Masingila, Chazan, Romagnano, Dollard & Arbaugh
Salon E	130. Preparing K-8 Preservice Teachers to Teach ALL Students: Focusing on Language, Culture, and Community Diversity - Roth McDuffie, Drake & Aguirre	142. The Van Hiele Levels of Prospective Secondary Mathematics Teachers - Grundmeier & Simard	154. Mathematics Teacher Development through Virtual Fieldwork - Mead, Silverman, Malm, Kruczek, Sullivan, Goodson-Espy, Lahann, Starkey & Boschmans
Santi ago	131. Perspectives on Facilitation of Professional Development: Core Tasks of Facilitation and Fidelity of Implementation - Goldsmith, Moeller & Seago	143. Nudging High School and College Math Faculty Toward Reform Through "Little Changes" - Frost	155. Using <u>Singapore Math</u> to Teach TeachersMeasurement and Geometry - Baldridge
Quail Hill	132. The Evolution and Paradigm Shift of a Rural Collaborative Teacher Group - Slavit & Kennedy	144. Two Degree Programs for K-8 Mathematics Specialists (Coaches) - DeBellis	156. Making the Most of Content Courses: Developing Teachers' Mathematical and Pedagogical

			Content Knowledge - Hillen & Metz
Wood bridg e	133. Successful Approaches to Address a Statewide Mathematics Teacher Shortage: California State University's System-wide Initiative - Bohlin, Bissell, Benken, Ellis, Hsu, Reed, Santa Cruz & Sundar	145. Training Teachers to Use Authentic Discovery Learning Projects in Statistics - Sinn & Spence	157. Elementary Teachers' Uses of a Learning Trajectory – Mojica
Oak Creek	134. Using Math Tasks to Help Preservice Teachers Learn about Mathematics Teaching - Chval & Lannin	146. What Should be Made Explicit When Modeling Effective Pedagogy? – Nickerson & Brown	158. Connecting with the AMTE Affiliates - Cooper, Cady, Liebars & Wilburne

Saturday, January 30, 2010

Session 123

Saddleback

How Children's Mathematical Thinking Informs Mathematical Knowledge for Teaching

Christine Browning, Western Michigan University Eva Thanheiser, Portland State University Tad Watanabe, Kennesaw State University Meg Moss, Pellissippi State Community College Krista Heim, Portland State University Jodi Fasteen, Portland State University

This session focuses on: (a) interpretations of how to deepen mathematical knowledge for teaching through incorporating children's thinking into content courses for pre-service teachers and (b) interpretations of children's thinking within a theoretical construct of the mathematical knowledge for teaching.

Session 124

Trabuco

Preparing K-12 Teachers of Statistics

Allan Rossman, *Cal Poly - San Luis Obispo* Beth Chance, *Cal Poly - San Luis Obispo*

We summarize guidelines from the American Statistical Association for teaching data analysis in the K-12 mathematics curriculum. We describe a course for preparing pre-service teachers to implement these guidelines. We provide hands-on activities that can used in such a course.

Session 125

Salon A

Teacher Beliefs: The Influence of Mathematical Experiences

David Barker, Illinois State University John Hill, Illinois State University Chepina Witkowski, Illinois State University Ziaofen Zhang, Illinois State University Cynthia Langrall, Illinois State University Wendy O'Hanlon, Illinois State University

This session describes the impact of a summer program designed to provide authentic mathematical experiences to teachers. A description of the program and analysis of belief data will be presented and discussed.

Session 126

Salon B

Studying and Developing Productive Disposition of Elementary School Teachers and Their Students

Randolph A. Philipp, San Diego State University John Siegfried, San Diego State University Bonnie Schappelle, San Diego State University Victoria Jacobs, San Diego State University Lisa Clement Lamb, San Diego State University Jessica Pierson, San Diego State University

Drawing upon our study of professional development, our practice, and the practice of two elementary school teachers, we will use tasks to ground a discussion among participants about the development of productive disposition in adult and child learners of mathematics.

Session 127

Pelican Hill

The Development, Activity and Impact of Elementary Mathematics Specialists

Patricia F. Campbell, *University of Maryland* Joy W. Whitenack, *Virginia Commonwealth University*

This session will describe an elementary mathematics specialist endorsement program and research examining the knowledge, activity and impact of cohorts of specialists over a three-year period, including research addressing the relationship between student achievement and coaching activities.

Session 128

Shady Canyon

Reflecting on Practice and Learning to Pay Attention to Students' Thinking

Enrique Galindo, *Indiana University* Andrea McCloskey, *Penn State University* Samuel Kifle Tsegai, *Indiana University*

We share initial results from an NSF-funded project that supports future elementary teachers to learn to build models of students' math and science concepts using teaching experiments. Lesson Study is then used to reflect on the effectiveness of their lessons.

Session 129

Conference Theater

Using Student Work to Support Secondary Teachers in Understanding Student Thinking

Charlene E. Beckmann, *Grand Valley State University* Rheta N. Rubenstein, *University of Michigan - Dearborn* Denisse R. Thompson, *University of South Florida*

Preservice secondary teachers (PSTs) benefit from opportunities to examine adolescents' mathematical thinking. Come explore several strategies to address this need. Join us in studying how PSTs perceive student work, what they observe, what they misunderstand and what they miss.

AMTE 2010 Annual Conference

8:00 - 9:15 am

Session 130

Salon E

AMTE 2010 Annual Conference

Preparing K-8 Preservice Teachers to Teach ALL Students: Focusing on Language, Culture, and Community Diversity

Amy Margaret Roth McDuffie, Washington State University Tri-Cities Corey Drake, Iowa State University Julia Aguirre, University of Washington, Tacoma

Teacher educators will share findings from a multi-university project focused on designing and researching K-8 mathematics methods activities that develop pre-service teachers' knowledge and practices for effective mathematics instruction in culturally, linguistically, and socio-economically diverse schools.

Session 131

Santiago

Perspectives on Facilitation of Professional Development: Core Tasks of Facilitation and Fidelity of Implementation

Lynn Goldsmith, *Education Development Center, Inc.* Babette Moeller, *EDC* Nanette Seago, *WestEd*

This symposium will present frameworks articulating the tasks of facilitation and issues related to fidelity of implementation and share results of two research studies. The session will also afford opportunities for session participants to share experiences and insights.

Session 132

The Evolution and Paradigm Shift of a Rural Collaborative Teacher Group

David Slavit, Washington State University Vancouver Anne Kennedy, Educational Service District 112

Five-year narrative of a rural group of middle school mathematics teachers engaged in collaborative inquiry. Teacher talk and stance toward data will be discussed. Particular attention is given to the learning goals and collaboration in the final year.

Session 133

Woodbridge

Oak Creek

Successful Approaches to Address a Statewide Mathematics Teacher Shortage: California State University's System-wide Initiative

Carol Fry Bohlin, California State University, Fresno Joan Bissell, California State University Chancellor's Office Babette M. Benken, California State University, Long Beach Mark Ellis, California State University, Fullerton Eric Hsu, San Francisco State University Catherine Reed, California State University, East Bay Rafaela Santa Cruz, San Diego State University Viji K. Sundar, California State University Stanislaus

The Mathematics and Science Teacher Initiative is a statewide effort of the California State University system to address the shortage of mathematics and science teachers. Effective mathematics teacher recruitment and preparation strategies from a variety of campuses will be shared.

Session 134

Using Math Tasks to Help Preservice Teachers Learn about Mathematics Teaching

Kathryn Chval, University of Missouri John K. Lannin, University of Missouri

During this working session, participants will engage in discussion around developing a coherent sequence of activities designed to support preservice mathematics teachers' curricular knowledge of the use and design of mathematical tasks.

Quail Hill

Saturday, January 30, 2010

Session 135

Saddleback

NCATE, TEAC, and More: Accreditation Updates and Challenges

Francis (Skip) Fennell, *McDaniel College* Monique C. Lynch, *NCTM*

This session will update NCATE, TEAC, and other certification and accreditation avenues and discuss the challenges mathematics teacher educators face as they address these simultaneously similar and different sets of institutional requirements. Bring your questions!

Session 136

Trabuco

Assessing the Impact of Supports on Teachers and Students' Experiences with Mathematics-Based PBL

Dionne Cross, Indiana University Rick Hudson, University of Southern Indiana Jean Lee, Indiana University

Our presentation will focus on describing the conceptual, pedagogical and physical supports that lead to positive outcomes of a year-long implementation of two project-based units.

Session 137

Salon A

Targeted Field Experiences in Lesson Study and Inquiry for Pre-Service Mathematics Teachers

Elizabeth Burroughs, *Montana State University* Jennifer Luebeck, *Montana State University*

This session examines how pre-service teachers benefit from structured classroom observations, problem-based clinical interviews with school students, and participation with practicing teachers in lesson study. Participants will examine video clips of undergraduate student interaction with in-service teachers.

Session 138

Salon B

Thai High School Mathematics Teachers' Probability Conceptions and Misconceptions

Puttoei Talawat, University of California Santa Barbara

Learn about Thai high school mathematics teachers' types of probability conceptions and misconceptions, how they perceive their conceptions and misconceptions play out in their teaching, and their general beliefs about teaching probability. Implications for U.S. teacher education will be shared.

Session 139

Pelican Hill

9:30 - 10:15 am

Video Cases: The Impact of a Five-Day Video Sequence on Elementary Teacher Candidates

Angela Till Barlow, University of Mississippi Shannon Harmon, University of Mississippi Julie Riales, University of Mississippi

Presenters will share results of research that examined the impact of video case studies on beliefs and understandings of standards-based instruction. Specifically, the use of a sequence of case studies versus a non-sequenced set of case studies will be shared.

Session 140

Shady Canyon

<u>Mathematics Teacher Educator</u>: An AMTE Journal to Develop a Professional Knowledge Base from Practice

Alfinio Flores, University of Delaware and the members of the AMTE Journal Task Force

The AMTE Journal Task Force will share progress regarding the new AMTE journal.

Session 141

Conference Theater

Moving Beyond Word Problems: What is True Problem Solving?

Janet Lynne Tassell, Western Kentucky University Hope Marchionda, Western Kentucky University Travis Austin Olson, University of Nevada, Las Vegas

Learn how to design a problem-solving plan that can enhance any existing curriculum with a focus on appropriate problems beyond simple word problems. Learn the importance of scaffolding, intentionally teaching strategies, and choosing problems that are of suitable rigor.

Session 142

Salon E

The Van Hiele Levels of Prospective Secondary Mathematics Teachers

Todd Grundmeier, Cal Poly, San Luis Obispo Carole Simard, Cal Poly, San Luis Obispo

This individual session will present the results of a research project that aimed to assess whether an inquiry-oriented, technology-based, proof-intensive geometry course had any influence on the van Hiele levels of prospective mathematics teachers.

Session 143

Nudging High School and College Math Faculty Toward Reform Through "Little Changes"

Janet Hart Frost, Washington State University Spokane

We discuss activities and outcomes of a joint high school and college mathematics professional development project. Despite participants' enthusiasm, they made few changes until they heard examples of "little changes" and were asked to commit to the same.

Session 144

Quail Hill

Santiago

Two Degree Programs for K-8 Mathematics Specialists (Coaches)

Valerie A. DeBellis, Discrete Teaching

Virginia has state approved certification requirements and an NSF project that prepared teachers. With this framework, degree programs were designed and offered. I will share the details of this three-year experience, including reflections for faculty on the power and pitfalls.

Session 145

Training Teachers to Use Authentic Discovery Learning Projects in Statistics

Robb Sinn, North Georgia College & State University Dianna Spence, North Georgia College & State University

Teacher training modules for statistics were developed and tested in a three-year project funded by the NSF. We report analysis of data collected, describe training workshops held for secondary teachers, and discuss learning outcomes for teacher educators.

Session 146

Oak Creek

What Should be Made Explicit When Modeling Effective Pedagogy?

Susan D. Nickerson, *San Diego State University* Cassondra Brown, *San Diego State University*

Mathematics instructors in a professional development program modeled inquiry-oriented instruction and explicitly discussed pedagogical decisions and actions. We characterize aspects of pedagogy that the instructors chose to explicitly discuss that emerged from a post-hoc analysis.

Woodbridge

Saturday, January 30, 2010

Session 147

Saddleback

Increasing Teachers' Knowledge of and Attention to Equity Issues in Multiple Settings

Marilyn Elaine Strutchens, Auburn University W. Gary Martin, Auburn University Becky Scarborough, TEAM-Math

Presenters will share definitions and related theories used to guide their work when addressing equity issues with mathematics teachers. Challenges and triumphs experienced when addressing equity in formal courses, professional development workshops, and school-embedded professional development will be discussed.

Session 148

Trabuco

Mathematics Content Courses for Preservice Elementary Teachers: What's it like for Faculty and Students?

Lynn C. Hart, *Georgia State University* Susan Swars, *Georgia State University* Susan Oesterle, *Simon Fraser University*

This symposium will present research on the perspectives of university faculty who teach mathematics content courses for preservice elementary teachers and preservice teachers in these mathematics content courses.

Session 149

Salon A

The Comprehensive Mathematics Instruction (CMI) Framework: A New Lens for Examining Teaching and Learning

Sterling Hilton, *Brigham Young University* Scott Hendrickson, *Brigham Young University* Damon Bahr, *Brigham Young University*

This presentation describes the Comprehensive Mathematics Instruction Framework, the professional development through which it was delivered, and preliminary results from its implementation. This work results from a university-public school partnership initiative to provide access to inquiry pedagogy for K-12 teachers.

Session 150

Salon B

Methods and Purposes for Assessing High School Teachers' Knowledge of Geometry

Karen Hollebrands, North Carolina State University Ryan C. Smith, North Carolina State University Patricio Herbst, University of Michigan William Bush, University of Louisville Elizabeth Jakubowski, Florida State University Robert N. Ronau, University of Louisville Carl Lee, University of Kentucky

An assessment of teachers' knowledge of geometry might be useful for several purposes (e.g., curriculum development, program evaluation, professional development). Different methods and purposes for assessing high school mathematics teachers' knowledge of geometry and pedagogy will be discussed.

Session 151

Pelican Hill

Geometry for Prospective Elementary School Teachers: What? How? Why?

Tad Watanabe, *Kennesaw State University* Shannon Driskell, *University of Dayton* Jean Marie Grant, *Bradley University* Gayle M. Millsaps, *Purdue University Calumet*

Participate in a discussion on what "big ideas" of geometry prospective elementary school teachers should understand, and exploring options for continuation of this discussion after AMTE. Also share existing resources for teaching these "big ideas".

Session 152

Shady Canyon

Pursuing Mathematical Justification in Professional Development: Supporting Teachers' Specialized Content Knowledge

John K. Lannin, University of Missouri Rebekah Elliott, Oregon State University Kristin Lesseig, Oregon State University Megan Kelley-Petersen, University of Washington Cathy Carroll, West Ed

Participants will investigate the kinds of justifications a facilitator might pursue in professional development to enhance teachers' specialized mathematical knowledge. By analyzing a variety of teachers' justifications on a task we will consider how to orchestrate productive teacher learning.

10:30 - 11:45 am

Session 153

Conference Theater

Framings for Secondary Mathematics Teacher Education Programs

Joanna O. Masingila, Syracuse University Daniel Chazan, University of Maryland Lew Romagnano, The Metropolitan State College of Denver Clark D. Dollard, The Metropolitan State College of Denver Fran Arbaugh, The Pennsylvania State University

Teacher educators from three institutions will present the theoretical and practical framings they use in their secondary mathematics teacher education programs and how they came to those framings. Group discussion will focus on the affordances and constraints of various framings.

Session 154

Salon E

Mathematics Teacher Development through Virtual Fieldwork

Claire Mead, *The Math Forum @ Drexel* Jason Silverman, *Drexel University* Cheryl Malm, *Northwest Missouri State University* Klay Thomas Kruczek, *Western Oregon University* Mary M. Sullivan, *Rhode Island College* Tracy J. Goodson-Espy, *Appalachian State University* Paula Elmer Lahann, *Indiana University* Michele Anne Starkey, *Mount St. Mary's College* Barbara Boschmans, *Plymouth State University*

We will discuss our efforts to support pre-service teachers' learning through virtual fieldwork in the Math Forum's Online Mentoring Project, where pre-service teachers interact virtually with K-12 students and provide feedback that is attuned to students' mathematical understandings.

Session 155

Using <u>Singapore Math</u> to Teach Teachers Measurement and Geometry

Scott Jeremy Baldridge, Louisiana State University

We discuss a course that uses Primary Mathematics Curriculum from Singapore to teach prospective and practicing teachers measurement and geometry. The course textbook was highly rated by the NCTQ. Session participants will spend time puzzling over interesting elementary geometry problems.

Session 156

Quail Hill

Making the Most of Content Courses: Developing Teachers' Mathematical and Pedagogical Content Knowledge

Amy F. Hillen, *Kennesaw State University* Mary Louise Metz, *Indiana University of Pennsylvania*

Participants will engage in three types of activities used in content courses that integrate mathematical and pedagogical content knowledge: analyzing children's work, discussing teachers' own misconceptions, and examining research on children's thinking; and will consider design principles for these activities.

Session 157

Woodbridge

Oak Creek

Elementary Teachers' Uses of a Learning Trajectory

Gemma Mojica, North Carolina State University

This session describes work on a learning trajectory for equipartitioning and reports findings from two studies of prospective and practicing teachers' uses of the trajectory to inform their instructional practices.

Session 158

Connecting with the AMTE Affiliates

Sandi Cooper, AMTE Affiliates Director, Baylor University Jo Ann Cady, University of Tennessee - Knoxville Cathy Liebars, The College of New Jersey Jane Wilburne, Penn State Harrisburg

This session will share ideas for establishing an AMTE affiliate group and for improving collaborations among existing AMTE affiliates. Come meet other affiliate members and officers and enjoy some informal discussions.

Santiago

Salon A/B

Closing Session: Thinking About Teacher Learning

Sharon Feiman-Nemser, Brandeis University

In this autobiographical presentation, Sharon Feiman-Nemser will discuss changing ideas about teacher learning, drawing on her own experiences as a teacher and teacher educator and her research on learning to teach.



AMTE Annual Meeting 2010

Speakers' Contact Information

Adams, Thomasenia Lott Adu-Gyamfi, Kwaku Aguirre, Julia Akyuz, Didem Amador, Julie Appova, Aina Arbaugh, Fran

Bahr, Damon

Baker, Betty Ruth

University of Florida East Carolina University University of Washington, Tacoma University of Central Florida University of Nevada, Reno Wright State University The Pennsylvania State University

A

<u>tla@coe.ufl.edu</u>	62,72
adugwamfik@ecu.edu	44
jaguirre@u.washington.edu	40, 130
dakyuz@mail.ucf.edu	115
juliemamador@gmail.com	20
aina.appova@wright.edu	19
arbaugh@psu.edu	30, 153

Β

Brigham Young University	damon_bahr@byu.edu	149
Baylor University	Betty_Ruth_Baker@baylor.edu	37
Louisiana State University	sbaldrid@math.lsu.edu	155
University of Michigan	dball@umich.edu	34, 47
Illinois State University	dbarker@ilstu.edu	125
University of Mississippi	abarlow@olemiss.edu	139
Ozark Middle School	JoannBarnett@mail.ozark.k12.mo.us	66
Portland State University	jbartlo@pdx.edu	45
University of Michigan	hybass@umich.edu	34, 47
University of Michigan	beasley@umich.edu	28
Grand Valley State University	beckmannc21@aol.com	129
California State University, Long Beach	bbenken@csulb.edu	133
Indiana University Purdue University Fort Wayne	<u>berrys@ipfw.edu</u>	82
Emporia State University	sbevis@emporia.edu	11
Utah State University	<u>amy.bingham@usu.edu</u>	113
California State University Chancellor's Office	jbissell@calstate.edu	133
California State University, Fresno	carolb@csufresno.edu	133
Texas State University, San Marcos	bb33@txstate.edu	23
Plymouth State University	bboschmans@plymouth.edu	154
East Carolina University	bossem@ecu.edu	44
University of Florida	jdbostic@ufl.edu	78
Westminster College	Angela.Bowzer@westminster-mo.edu	99
Bowling Green State University	brahier@bgsu.edu	41
Boise State University	jbrendef@boisestate.edu	52
Bucknell University	lynn.breyfogle@bucknell.edu	31, 50
NCSM	djbmath@comcast.net	1
San Diego State University	cas_brown97@yahoo.com	146
Western Michigan University	christine.browning@wmich.edu	123
Metropolitan State College of Denver	brunsvol@mscd.edu	108
Jackson State University	lecretia.a.buckley@jsums.edu	99
Rider University	<u>sbulgar@rider.edu</u>	9
Michigan State University	<u>burrill@msu.edu</u>	67, 89
Montana State University	burrough@math.montana.edu	63, 137
University of Louisville	bill.bush@louisville.edu	150

C

University of Tennessee - Knoxville	jcady@utk.edu	37, 158
Rowan University	caldwell@rowan.edu	100
Missouri State University	larrycampbell@missouristate.edu	66
University of Maryland	patc@umd.edu	127
University of Washington	campsun@u.washington.edu	21,90
University of California, Irvine	jcanzone@uci.edu	120
West Ed	ccarrol@wested.org	47, 152

Baldridge, Scott Jeremy Ball, Deborah Barker, David Barlow, Angela Till Barnett, Joann Bartlo, Joanna Bass, Hyman Beasley, Heather Beckmann, Charlene E. Benken, Babette M Berry, Sandra Bevis, Sheri Bingham Brown, Amy Bissell, Joan Bohlin, Carol Fry Bos, Beth Boschmans, Barbara Bosse, Michael J. Bostic, Jonathan David Bowzer, Angela D Brahier, Daniel Joseph Brendefur, Jonathan Breyfogle, M. Lynn Briars, Diane J Brown, Cassondra Browning, Christine Brunsvold, Dale Buckley, Lecretia Bulgar, Sylvia Burrill, Gail Burroughs, Elizabeth Bush, William

Cady, Jo Ann Caldwell, Janet Campbell, Larry N. Campbell, Patricia F. Campbell, Sunshine Canzone, Janna Carroll, Cathy

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Celedón-Pattichis, Sylvia Cengiz, Nesrin Chan, Angela Chance, Beth Chazan, Daniel Che, Megan Chval, Kathryn Cifarelli, Vic Cirillo, Michelle Civil, Marta Columba, Lynn Combs, Emily Conroy, Judi Cooper, Sandi Coskun, Sirin Cox, Dana Christine Cross, Dionne

D'Ambrosio, Beatriz S de Araujo, Zandra DeBellis, Valerie A. Ding, Meixia Dingman, Shannon Dixon, Juli K. Dollard, Clark D. Drake, Corey Driskell, Shannon Dyson, Nancy

Edwards, Michael Todd Edwards, Thomas G. Elliott, Rebekah Ellis, Mark Ellis, Wade Enderson, Mary C. Evans, Brooke

Farinelli, Rob Fasteen, Jodi Felton, Mathew D. Fennell, Francis (Skip) Fernandes, Anthony Flores, Alfinio Flowers, Judith M Foley, Gregory D. Ford, Margaret Irene Fraivillig, Judith Franke, Megan Frohbieter, Greta Frost, Janet Hart

Gainsburg, JulieCGalindo, EnriqueInGarneau, MarcAGarza-Kling, Gina MarieWGhousseini, HalaUGilbert, MichaelUAMTE 2010 Annual Conference

University of New Mexico University of Michigan Dearborn UCLA Graduate School of Education Cal Poly - San Luis Obispo University of Maryland Clemson University University of Missouri University of North Carolina at Charlotte University of Delaware University of Arizona Lehigh University Clinton Middle School University of California, Irvine **Baylor University** University of Central Florida Miami University Indiana University

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Miami University Wayne State University Oregon State University California State University, Fullerton West Valley Community College Middle Tennessee State University Metropolitan State College of Denver

F

Community College of Allegheny County
Portland State University
University of Wisconsin - Madison
McDaniel College
UNC Charlotte
University of Delaware
University of Michigan - Dearborn
Ohio University
Duquesne University
Rider University
UCLA Graduate School of Education
University of Colorado at Boulder
Washington State University Spokane

G

saaladan Qunm adu	40
sceledon@unin.edu	40
<u>nesrinc@umd.umich.edu</u>	34, 51
achan@gseis.ucla.edu	28
bchance@calpoly.edu	124
dchazan@umd.edu	153
sche@clemson.edu	83, 116
ChvalKb@missouri.edu	134
vvcifare@uncc.edu	53
mcirillo@udel.edu	17
<u>civil@math.arizona.edu</u>	40
hlc0@lehigh.edu	109
ecombs@clinton.k12.mo.us	66
jconroy@uci.edu	33
sandra_cooper@baylor.edu	98, 158
sirincoskun@gmail.com	115
dana.cox@muohio.edu	73
dicross@indiana.edu	136

`		
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dambrobs@muohio.edu	27
Dearaujo@uga.edu	61
debellis@discreteteaching.com	144
mding2@unl.edu	12
sdingman@uark.edu	73
jkdixon@mail.ucf.edu	59, 106
cdollard@mscd.edu	153
cdrake@iastate.edu	30, 130
Shannon.Driskell@notes.udayton.edu	151
ndvson@udel.edu	26

m.todd.edwards@gmail.com	48, 81
t.g.edwards@wayne.edu	15
rebekah.elliott@science.oregonstate.edu	47, 152
mellis@fullerton.edu	133
wade25@sbcglobal.net	89
mcenders@mtsu.edu	50
bevans21@mscd.edu	108

rfarinelli@ccac.edu	122
jfasteen@pdx.edu	123
mdfelton@wisc.edu	8
ffennell@mcdaniel.edu	54, 135
anthony.fernandes@uncc.edu	92
alfinio@math.udel.edu	140
jflowers@umich.edu	51,71
foleyg@ohio.edu	35
ford@duq.edu	79
fraivillig@rider.edu	9
mfranke@ucla.edu	28
Greta.Frohbieter@colorado.edu	6
frost@wsu.edu	143

julie.gainsburg@csun.edu	97
egalindo@indiana.edu	77, 128
piman@telus.net	121
gina.garza-kling@wmich.edu	76
hghousse@umich.edu	28
mjgilber@hawaii.edu	39, 118
	Page 49

Gillow-Wiles, Henry Gilmore, Don Goldsmith, Lynn Gonske, Teresa Gonzalez, Lidia Gonzalez, Marggie D Goodman, Terry Goodson-Espy, Tracy J. Grant, Jean Marie Grundmeier, Todd

Haistings, Jeanine

Hanlon, Adele

Hansen, Laurie

Harold, Reiter

Hart, Lynn C.

Heim, Krista

Harkness, Shelly

Harmon, Shannon

Harrington, Rachel A

Hendrickson, Scott

Herbst, Patricio Hiebert, James

Hillen, Amy F.

Hilton, Sterling

Hodge, Angie

Hudson, Rick

Hyde, Karajean

Hsu, Eric

Hillman, Susan L.

Hodges, Thomas E

Hollebrands, Karen

Hill, John

Herbel-Eisenmann, Beth

Oregon State University Metropolitan State College of Denver Education Development Center, Inc. Northwestern College York College of the City University of NY North Carolina State University University of Central Missouri Appalachian State University Bradley University Cal Poly, San Luis Obispo

Texas A&M University - Corpus Christi

57 gillowwh@onid.orst.edu gilmored@mscd.edu 108 lgoldsmith@edc.org 131 tlgonske@nwc.edu 85 euclid6675@aol.com 105 mdgonza2@ncsu.edu 70 goodman@ucmo.edu 66 goodsonespyt@appstate.edu 50, 53, 154 jeanmar@bradley.edu 151 tgrundme@calpoly.edu 142

Η

William Jewell College	haistingsj@william.jewell.edu	66
University of Central Oklahoma	<u>ahanlon@uco.edu</u>	103
University of California, Irvine	hansenl@uci.edu	33
University of Cincinnati	harkneml@ucmail.uc.edu	32
University of Mississippi	seharmon@olemiss.edu	139
UNC Charlotte	hbreiter@uncc.edu	92
Western Oregon University	harringr@wou.edu	21
Georgia State University	lhart@gsu.edu	148
Portland State University	kheim@pdx.edu	123
Brigham Young University	scott@mathed.byu.edu	149
Michigan State University	bhe@msu.edu	30
University of Michigan	pgherbst@umich.edu	150
University of Delaware	hiebert@udel.edu	33
Illinois State University	jhill@ilstu.edu	125
Kennesaw State University	ahillen@kennesaw.edu	156
Saginaw Valley State University	shillman@svsu.edu	31, 42
Brigham Young University	sterling_hilton@byu.edu	149
North Dakota State University	Angela.Hodge@ndsu.edu	22, 99
Western Carolina University	thodges3@gmail.com	107
North Carolina State University	karen hollebrands@ncsu.edu	38, 150
San Francisco State University	erichsu@math.sfsu.edu	133
University of Southern Indiana	rhudson@usi.edu	16, 136
University of California, Irvine	khyde@uci.edu	120

SarahIves@gmail.com

jacobbe@coe.ufl.edu

judithjacobs@mac.com

vjacobs@mail.sdsu.edu

emjakubowski@fsu.edu

jjames1@olemiss.edu

cjohnst2@gmu.edu

april.judd@nau.edu

erikdjacobson@gmail.com

Ι

J

Ives, Sarah E.

Jacobbe, Tim Jacobs, Judith E. Jacobs, Victoria Jacobson, Erik Jakubowski, Elizabeth James, Julie Johnston, Christopher Judd, April

University of Florida University of Michigan San Diego State University University of Georgia Florida State University University of Mississippi George Mason University Northern Arizona University

Κ

University of Louisville	karen@louisville.edu	3
Indiana University Purdue University Indianapolis	skastber@iupui.edu	27, 49
University of Washington	ekazemi@u.washington.edu	28,47
University of Washington	meg199@u.wasington.edu	47, 152
Educational Service District 112	anne.kennedy@esd112.org	132
Shippensburg University	dikenn@ship.edu	34
University of Wisconsin - Milwaukee	kepner@uwm.edu	55
University of South Florida	Kersaint@coedu.usf.edu	41, 56
University of Michigan	kimyeon@umich.edu	34
California State University, Fullerton	pkimani@fullerton.edu	69
University of Washington	king@math.washington.edu	67
	-	D

Karp, Karen Kastberg, Signe E. Kazemi, Elham Kelley-Petersen, Megan Kennedy, Anne Kennedy, Dave Kepner, Henry, S. Kersaint, Gladis Kim, Yeon Kimani, Patrick

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Koestler, Courtney Kratky, James Kruczek, Klay Thomas

LaFramenta, Joanne Jenson

Lahann, Paula Elmer

Lamb, Lisa Clement

Lampert, Magdalene

Land, Tonia Jo

Lane, Catherine

Langbort, Carol

Lannin, John K

Lapp, Douglas

Lesseig, Kristin

Lee, Carl

Lee, Jean

Langrall, Cynthia

Lee, Hollylynne Stohl

Lager, Carl

University of Wisconsin - Madison Western Michigan University Western Oregon University

ckoestler@wisc.edu	8
james.l.kratky@wmich.edu	65
kruczekk@wou.edu	154

L

University of Florida	jlafra@coe.ufl.edu	62
University of California, Santa Barbara	clager@education.ucsb.edu	94
Indiana University	plahann@indiana.edu	154
San Diego State University	Lisa.Lamb@sdsu.edu	29, 126
University of Michigan	mlampert@umich.edu	28
Iowa State University	tjland@iastate.edu	30, 111
University of Cincinnati - Clermont College	pullincl@ucmail.uc.edu	32
San Francisco State University	clangbo@sfsu.edu	42
Illinois State University	langrall@ilstu.edu	125
University of Missouri	Lannin@missouri.edu	75, 134, 152
Central Michigan University	lapp1da@mail.cmich.edu	48
University of Kentucky	lee@ms.uky.edu	150
North Carolina State University	hollylynne@ncsu.edu	38,70
Indiana University	jeanlee@indiana.edu	16, 136
Oregon State University	lesseigk@onid.orst.edu	47, 152
University of Michigan	jmlewis@umich.edu	14, 47
California State University - Long Beach	xli2@csulb.edu	24
The College of New Jersey	liebars@tcnj.edu	158
Clemson University	sandram@clemson.edu	112
University of Louisville	amy.lingo@louisville.edu	3
Penn State	lloyd@psu.edu	30
Metropolitan State College of Denver	loatsj@mscd.edu	108
Affiliate Services Committee, NCTM	vlong@utk.edu	121
James Madison University	lovinla@jmu.edu	88
University of Georgia	lmlowe@uga.edu	61
University of Central Oklahoma	clucas@uco.edu	103
Montana State University	luebeck@math.montana.edu	63, 137
NCTM	mlynch@nctm.org	64, 135
Appalachian State University	lynchrk@appstate.edu	27

Lewis, Jennifer M Li, Xuhui Liebars, Cathy Linder, Sandra Mammano Lingo, Amy Lloyd, Gwendolyn Loats, James Long, Vena Lovin, LouAnn Lowe, Laura Lucas, Carol A. Luebeck, Jennifer Lynch, Monique C Lynch-Davis, Kathleen

Μ

Magiera, Marta T.
Magner, Jodelle S.W.
Males, Lorraine Marie
Malm, Cheryl
Marchionda, Hope
Mariano, Gina
Martin, W. Gary
Masingila, Joanna O
Matthews, Michael Edward
McCloskey, Andrea
McCoy, Ann
McCulloch, Allison W.
McGatha, Maggie
McKenna, Patricia
McNamara, Julie
Mead, Claire
Meagher, Michael
Meier, Sherry L
Melillo, Judith A.
Menéndez, José María
Metz, Mary Louise
Mewborn, Denise S.
Meyer, Rachelle
Mikusa, Michael G.
Millsaps, Gayle M.
Miriti, Landrea
Moeller, Babette
Mohr-Schroeder, Margaret J.

Marquette University	marta.magiera@marquette.edu
Buffalo State College	magnerjs@math.buffalostate.edu
Michigan State University	maleslor@msu.edu
Northwest Missouri State University	CGMALM@nwmissouri.edu
Western Kentucky University	hope.marchionda@wku.edu
University of Oregon	gmariano@uoregon.edu
Auburn University	martiwg@auburn.edu
Syracuse University	jomasing@syr.edu
University of Nebraska at Omaha	michaelmatthews@unomaha.edu
Penn State University	amccloskey@psu.edu
University of Central MO	mccoy@ucmo.edu
North Carolina State University	allison_mcculloch@ncsu.edu
University of Louisville	maggie.mcgatha@louisville.edu
Metropolitan State College of Denver	mckennap@mscd.edu
UC Berkeley	juliem@berkeley.edu
The Math Forum @ Drexel	claire@mathforum.org
Brooklyn College - CUNY	mmeagher@brooklyn.cuny.edu
Illinois State University	meier@ilstu.edu
Kent State University	jmelillo@kent.edu
Radford University	jmenendez2@radford.edu
Indiana University of Pennsylvania	mlmetz@iup.edu
University of Georgia	dmewborn@uga.edu
Baylor University	rachelle_meyer@baylor.edu
Kent State University	mmikusa@kent.edu
Purdue University Calumet	<u>millsaps@calumet.purdue.edu</u>
Bluegrass Community and Technical College	landrea.miriti@kctcs.edu
EDC	bmoeller@edc.org
University of Kentucky	m.mohr@uky.edu

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Mojica, Gemma	North Georgia College & State University	gmmojica@ncsu.edu	157
Moody, Vivian	Western Kentucky University	vrmoody2@gmail.com	60
Morge, Shelby	UNC Wilmington	morges@uncw.edu	53
Morris, Katherine A	Sonoma State University	morrisk@sonoma.edu	31
Moskowitz, Stuart	Humboldt State University	stuart@humboldt.edu	42
Moss, Erin	Millersville University	ermoss@purdue.edu	99
Moss, Meg	Pellissippi State Community College	mvmoss@pstcc.edu	69, 123
Moyer, John	Marquette University	johnm@mscs.mu.edu	68
Moyer-Packenham, Patricia	Utah State University	patricia.moyer-packenham@usu.edu	113
Mumme, Judy	WestEd	jmumme@wested.org	36, 47

Newton, Jill Nickerson, Susan Denise Noblitt, Bethany

O'Hanlon, Wendy Oesterle, Susan Olanoff, Dana Olson, Judith Olson, Melfried Olson, Travis Austin Oslund, Joy A. Ozgun-Koca, S. Asli

Phelps, Christine M. Philipp, Randolph A. Pierson, Jessica Pitts Bannister, Vanessa Powers, Robert Pugalee, David

Central Michigan University San Diego State University San Diego State University Virginia Tech University of Northern Colorado UNC Charlotte

Q

Quander, Judith

National Council of Teachers of Mathematics

R

Rakes, Christopher R	University of Louisville	crrake01@louisville.edu	58
Rathouz, Margaret	University of Michigan - Dearborn	rathouz@umd.umich.edu	34, 51
Rech, Janice	University of Nebraska at Omaha	jrech@unomaha.edu	12
Reed, Catherine	California State University, East Bay	catherine.reed@csueastbay.edu	133
Regan, Blake	Ohio University	regan@math.ohiou.edu	35
Reys, Barbara J	University of Missouri	reysb@missouri.edu	91
Reys, Robert	University of Missouri	reysr@missouri.edu	73
Riales, Julie	University of Mississippi	jriales@olemiss.edu	139
Rich, Beverly S	Illinois State University	bsrich@ilstu.edu	74
Richardson, Sue Ellen	IUPUI	ser2@iupui.edu	49
Rigelman, Nicole	Portland State University	rigelman@pdx.edu	31
Romagnano, Lew	The Metropolitan State College of Denver	romagnal@mscd.edu	36, 153
Ronau, Robert N	University of Louisville	bob@louisville.edu	58, 150
Rossman, Allan	Cal Poly - San Luis Obispo	arossman@calpoly.edu	124
Roth McDuffie, Amy Margaret	Washington State University Tri-Cities	mcduffie@tricity.wsu.edu	31, 130
Roy, George J	University of South Florida - St. Petersburg	royg@mail.usf.edu	59, 106
Rubenstein, Rheta N.	University of Michigan - Dearborn	rrubenst@umd.umich.edu	51, 129

Purdue University San Diego State University Affiliate Services Committee, NCTM

О

Ν

Illinois State University	Wohanlon@icc.edu	125
Simon Fraser University	oesterles@douglas.bc.ca	148
Syracuse University	deolanof@syr.edu	69
CRDG, University of Hawaii	jkolson@hawaii.edu	39
CRDG, University of Hawaii	melfried@hawaii.edu	39
University of Nevada, Las Vegas	travis.olson@unlv.edu	60, 141
Alma College	oslund@msu.edu	40
Wayne State University	aokoca@wayne.edu	15, 81

janewton@purdue.edu

noblittb@nku.edu

snickers@sunstroke.sdsu.edu

Ρ

phelps.christine@gmail.com	10
rphilipp@mail.sdsu.edu	29, 126
jpierson@mail.sdsu.edu	29, 126
vrpitts@vt.edu	30
robert.powers@unco.edu	119
David.Pugalee@uncc.edu	53

jquander@nctm.org

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Safi, Farshid Sanchez, Wendy Santa Cruz, Rafaela Santagata, Rossella Scarborough, Becky Schappelle, Bonnie Seago, Nanette Shaughnessy, J Michael Shaughnessy, Meghan M Siegfried, John Silverman, Jason Simard, Carole Simonsen, Linda Singletary, Laura Sinn, Robb Slavit, David Sleep, Laurie Smith, Margaret Smith, Nancy L. Smith, Ryan C. Spence, Dianna Spitzer, Sandy Margaret Staples, Megan Starkey, Michele Anne Steimle, Alice Stockero, Shari L Strayer, Jeremy Strunk, Kathy Strutchens, Marilyn Elaine Stylianides, Gabriel Sullivan, Mary M. Sundar, Viji K. Suzuka, Kara Swars, Susan

The College of New Jersey Kennesaw State University San Diego State University University of California, Irvine TEAM-Math San Diego State University WestEd Portland State University University of Michigan San Diego State University Drexel University Cal Poly, San Luis Obispo University of Arizona University of Georgia North Georgia College & State University Washington State University Vancouver University of Michigan University of Pittsburgh Emporia State University North Carolina State University North Georgia College & State University Towson University University of Connecticut Mount St. Mary's College University of Mississippi Michigan Technological University Mount Vernon Nazarene University Anderson County Schools Auburn University University of Pittsburgh Rhode Island College California State University Stanislaus University of Michigan Georgia State University

13, 106 safi@tcnj.edu wsanchez@kennesaw.edu 88 rsantacruz@mail.sdsu.edu 133 r.santagata@uci.edu 33 bdscarborough@bellsouth.net 147 BSchappe@sunstroke.sdsu.edu 29.126 nseago@wested.org 131 mikesh@pdx.edu 70 mshaugh@umich.edu 4 ziggafoss@hotmail.com 29, 126 silverman@drexel.edu 2,154 csimard@calpoly.edu 142 simonsen@math.arizona.edu 18 lms1217@uga.edu 61 rsinn@ngcsu.edu 145 dslavit@wsu.edu 132 sleepl@umich.edu 34, 47 pegs@pitt.edu 43 nsmith@emporia.edu 11 smithryanc@yahoo.com 93, 150 djspence@ngcsu.edu 5,145 sspitzer@towson.edu 10 megan.staples@uconn.edu 45 154 mstarkey@msmc.la.edu asteimle@olemiss.edu 114 stockero@mtu.edu 36,65 jeremy.strayer@gmail.com 35 kstrunk@acs.ac 37 strutme@auburn.edu 147 gstylian@pitt.edu 43 mmsullivan@ric.edu 154 vsundar@csustan.edu 133 ksuzuka@umich.edu 34.47 sswars@gsu.edu 148

Т

University of California Santa Barbara
City College of the City University of NY
Western Kentucky University
University of Missouri
Portland State University
Georgia State University
University of South Florida
Illinois State University
Indiana University
Purdue University

U

V

Utley, Juliana

Talawat, Puttoei N/A

Tassell, Janet Lynne

Thomas, Christine D

Tobias, Jennifer M.

Tsegai, Samuel Kifle

Tyminski, Andrew M

Thompson, Denisse R.

Taylor, Cynthia E.

Thanheiser, Eva

Tarlow, Lynn D.

Oklahoma State University

van den Kieboom, Leigh van Es, Elizabeth Van Zoest, Laura R Marquette University University of California, Irvine Western Michigan University

W

Wagener, Lauren L

University of Tennessee

wagener@math.utk.edu

evanes@uci.edu

ptalawat@education.ucsb.edu

thompson@tempest.coedu.usf.edu

ltarlow@ccny.cuny.edu

janet.tassell@wku.edu

cthomas212@aol.com

cetq35@mizzou.edu

evat@pdx.edu

jtobias@ilstu.edu

stsegai@indiana.edu

atyminsk@purdue.edu

juliana.utley@okstate.edu

leigh.vandenkieboom@mu.edu

laura.vanzoest@wmich.edu

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Walcott, Crystal	Indiana University Purdue University Columbus	walcottc@iupuc.edu	96
Washington, Harry Tyrone	North Carolina State University	htwashin@ncsu.edu	38
Watanabe, Tad	Kennesaw State University	twatanab@kennesaw.edu	123, 151
Weidemann, Wanda	Western Kentucky University	wanda.weidemann@wku.edu	60
Welder, Rachael	Hunter College, City University of New York	rwelder@hunter.cuny.edu	18
Westenskow, Arla	Utah State University	arlawestenskow@gmail.com	113
Whitenack, Joy W.	Virginia Commonwealth University	jwwhitenack@vcu.edu	127
Wiegert, Elaine M.	Clemson University	ewieger@clemson.edu	83
Wieman, Rob	University of Delaware	gomathman@yahoo.com	102
Wilburne, Jane	Penn State Harrisburg	jmw41@psu.edu	87, 158
Wilkerson, Trena	Baylor University	trena_wilkerson@baylor.edu	37, 98
Wilson, Patricia S.	University of Georgia	pswilson@uga.edu	61
Winarski, Elizabeth	The Project School-Bloomington	ewinarski@theprojectschool.org	49
Witkowski, Chepina	Illinois State University	jgwitko@ilstu.edu	125
Wood, Marcy B.	University of Arizona	mbwood@email.arizona.edu	40

Y

Ζ

Yoder, Gina Borgioli Yopp, David Yow, Jan A.

Zbiek, Rose Mary

Zhang, Ziaofen

Indiana University at Indianapolis Montana State University University of South Carolina - Columbia

Pennsylvania State University

Illinois State University

rmz101@psu.edu 48 xzhang3@ilstu.edu 125

gbyoder@iupui.edu

jyow@sc.edu

yopp@math.montana.edu

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AMTE Events at the 2010 NCTM and NCSM Annual Conferences in San Diego, CA

AMTE Special Interest Session at the NCSM Conference

Wednesday afternoon, April 21, 2010 2:45 – 4:00 pm Location TBA

AMTE Reception at the NCTM Conference

Thursday, April 22, 2010 6:00 - 7:30 pm Torrey Room, San Diego Marriott Hotel and Marina

All members and interested persons are invited to attend.

For information on membership and other AMTE activities, please see <u>www.amte.net</u>.

AMTE's Fifteenth Annual Conference, 2011

We invite you to plan to attend and speak at next year's Fifteenth Annual AMTE Conference. The *Call for Proposals* will be available on the AMTE website (<u>www.amte.net</u>) by March 1, 2010 and in the next issue of *AMTE Connections*. Michelle Chamberlin of the University of Wyoming (mchanbe5@uwyo.edu) will be the Program Chair. **The deadline for submitting proposals is May 7, 2010**.

The 2012 Conference will be held in Fort Worth, Texas on February 9 - 12, 2012. Stay tuned for more information!



History of the Judith Jacobs Lecture

The Judith 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 research. 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.

	Judith Jacobs Lecturer	University	Title of Talk
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 Henry Poincare
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

Judith Jacobs Lecturers:



STANDING COMMITTEES

Affiliate Connections

Tasks: Promotes the development of, provides support to, and facilitates communication among AMTE affiliate groups.

2008 - 2010 (Complete term Jan. 30, 2010) CHAIR (2009): Jane Wilburne, Penn State – Harrisburg; jmw41@psu.edu Chrystal Dean; Appalachian State University, NC: deanco@appstate.edu Maria Fung, Western Oregon University, OR; fungm@wou.edu Cathy Liebars, The College of New Jersey, NJ; liebars@tcnj.edu

2009 - 2011

CHAIR (2010): Angela Barlow, University of Mississippi, MS; <u>abarlow@olemiss.edu</u> Jo Ann Cady, University of Tennessee, TN; <u>jcady@utk.edu</u> Sandi Cooper, Baylor University, TX; <u>Sandra_cooper@baylor.edu</u>, Affiliate Director (AMTE BOARD)

2009 - 2012

Brian Townsend, University of Northern Iowa, IA; <u>brian.townsend@uni.edu</u> Tammy Hanebrink, Southeast Missouri State University, MO; <u>thanebrink@semo.edu</u>

2010 - 13 (Begin term Jan. 31, 2010)

Carol Fry Bohlin, California State University, Fresno, CA; <u>carolb@csufresno.edu</u> Stephanie Smith, Georgia State University, GA; szsmith@gsu.edu

Awards

Tasks: Solicits nominations and selects AMTE members for awards recognizing outstanding teaching, research, and service in mathematics teacher education.

2008 - 2010 (Complete term Jan. 30, 2010)

CHAIR (2009): Kate Riley, California Polytechnic State University, CA; <u>kriley@calpoly.edu</u> Stacy Reeder, University of Oklahoma, Norman, OK; <u>reeder@ou.edu</u>

2008 - 2011

Thomasenia Lott Adams, University of Florida, FL; <u>tla@coe.ufl.edu</u> Joanna Masingila, Syracuse University, NY; <u>jomasing@syr.edu</u>

2009 - 2012

CHAIR (2010): Trena Wilkerson, Baylor University, Waco, TX; <u>Trena_Wilkerson@baylor.edu</u> Richard Millman, Georgia Institute of Technology, GA; <u>Richard.millman@ceismc.gatech.edu</u> Randy Philipp, San Diego State University, CA; <u>rphilipp@mail.sdsu.edu</u> (AMTE Board)

2010 - 13 (Begin term Jan. 31, 2010)

Doug Corey, Brigham Young University, UT; <u>dougcorey1@yahoo.com</u> Diana Lambdin, Indiana University, IN; <u>lambdin@indiana.edu</u>

Constitution and By-laws

Tasks: Revisits the constitution and by-laws making suggestions and changes as needed.

2008 - 2010 (Complete term Jan. 30, 2010) CHAIR: E. Todd Brown, University of Louisville, Louisville, KY; etbrow01@louisville.edu Sue McMillan, Buffalo State College, NY; <u>mcmillse@buffalostate.edu</u> Bonnie Oppenheimer, Mississippi University for Women, MS; <u>boppen@muw.edu</u> Nadine Bezuk, San Diego State University, <u>nbezuk@mail.sdsu.edu</u> (AMTE Board)

2010 - 12 (Begin term Jan. 31, 2010)

CHAIR: Bill Speer; University of Nevada – Las Vegas, NV; <u>william.speer@unlv.edu</u> Maggie McGatha, University of Louisville, KY; <u>maggie.mcgatha@louisville.edu</u> Cheryl Malm, Northwest Missouri State University, MO; <u>cgmalm@nwmissouri.edu</u>

Membership

Tasks: Works on issues associated with AMTE membership, including benefits of membership and increasing the number of members (e.g., attract members from our affiliate organizations).

2008 - 2010 (Complete term Jan. 30, 2010)

Jill Drake, University of West Georgia, Carrollton, GA; <u>jdrake@westga.edu</u> Michael <u>Matthews, University of Nebraska - Omaha, NE; michaelmatthews@mail.unomaha.edu</u> Ron Preston, East Carolina University, NC; <u>prestonr@ecu.edu</u> (2009 - 10)

2009 - 2011

CHAIR (2009): Barbara Dougherty, Iowa State University, IA; <u>barbarad@iastate.edu</u> CHAIR (2010): Larry Campbell, Missouri State University, MO; <u>larrycampbell@missouristate.edu</u>

2009 - 2012

Gail Burrill, Michigan State University, MI; burrill@msu.edu (begin 10-26-09) Jill Newton, Purdue University, West Lafayette, IN; <u>janewton@purdue.edu</u> Randy Philipp, San Diego State University, CA; <u>rphilipp@mail.sdsu.edu</u> (AMTE BOARD)

2010 - 2013 (Begin term Jan. 31, 2010)

Eric Milou, Rowan University, NJ; <u>milou@rowan.edu</u> Olga Kosheleva, Univ. of Texas at El Paso, TX; olgak@utep.edu

Mentoring

Tasks: seeks ways to mentor new faculty and doctoral students in teaching, scholarship, and professional responsibilities while networking with other mathematics teacher educators.

2008-2010 (Complete term Jan. 30, 2010)

Margaret Mohr, University of Kentucky, Lexington, KY; <u>m.mohr@uky.edu</u> Doug Jones, Appalachian State University, Boone, NC; <u>jonesd@appstate.edu</u>

2009 - 2011

CHAIR: Mary Enderson, Middle Tennessee State University, TN; mcenders@mtsu.edu Robert Berry, University of Virginia, VA; rqb3e@virginia.edu

2009 - 2012

Tracey Goodsen-Espy, Appalachian State University, NC; <u>goodsonespyt@appstate.edu</u> Teresa Gonske, Northwestern College, MN; <u>TLGonske@nwc.edu</u> M. Lynn Breyfogle, Bucknell University, PA; <u>mbreyfog@bucknell.edu</u> (AMTE BOARD)

2010 - 2013 (Begin term Jan. 31, 2010)

Patricia Campbell, University of Maryland, MD; patc@umd.edu Susan Friel, University of North Carolina – Chapel Hill, NC; sfriel@email.unc.edu

Nominations and Elections

Tasks: Solicits nominations and compiles a slate of nominees; prepares the content for the ballot

2008-2010 (Complete term Jan. 30, 2010)

Cynthia Langrall, Illinois State University, Normal, IL; <u>langrall@ilstu.edu</u> Amy Roth McDuffie, Washington State University – Tri Cities, WA; <u>mcduffie@tricity.wsu.edu</u> Christine Browning, Western Michigan University, MI; <u>Christine.browning@wmich.edu</u> Jenny Bay-Williams, University of Louisville; j.baywilliams@louisville.edu **(AMTE BOARD)**

2009 - 2011

Monique Lynch, NCTM, Reston, VA; mlynch@nctm.org Bill Bush, University of Louisville, KY; <u>bill.bush@louisville.edu</u>

2009 - 12

CHAIR (2009): Skip Fennell, McDaniel College, MD; <u>ffennell@mcdaniel.edu</u> Christine Thomas, Georgia State University, GA; cthomas212@aol.com

2010 - 13 (Begin term Jan. 31, 2010) CHAIR (2010): Rheta Rubenstein, University of Michigan - Dearborn, MI; <u>rrubenst@umd.umich.edu</u>

Judy Mumme, WestEd, MT; jmumme@wested.org

Research on Mathematics Teacher Education Advisory Committee (RMTEAC)

2009 - 2010 (Complete term Jan. 30, 2010)

CHAIR (2009): Ed Silver, University of Michigan, MI; <u>easilver@umich.edu</u> Karen King, New York University, New York, NY; <u>Karen.d.king@nyu.edu</u> Gwen Lloyd, Virginia Tech, Blacksburg, VA; <u>Lloyd@vt.edu</u> Fran Arbaugh, The Pennsylvania State University, PA; <u>arbaugh@psu.edu</u> (AMTE Board)

2009 - 2011

CHAIR (2010): Peg Smith, University of Pittsburgh, Pittsburgh, PA; pegs+@pitt.edu

Paola Szatjn, North Carolina State University, NC; paola_sztajn@ncsu.edu

2009 - 2012

Elizabeth Hughes, University of Northern Iowa, IA; <u>elizabeth.hughes@uni.edu</u> Megan Franke, UCLA, CA; <u>mfranke@ucla.edu</u> (2 yr.)

2010 - 2013 (Begin term Jan. 31, 2010)

Corey Drake, Iowa State University, IA; cdrake@iastate.edu Rick Kitchen, University of New Mexico, NM; kitchen@unm.edu

Technology and Mathematics Teacher Education

Tasks: Recommends policy related to the AMTE website, NTLI, and technology issues.

2008 - 2010 (Complete term Jan. 30, 2010)

Christopher Johnston, George Mason University, Fairfax, VA; <u>cjohnst2@gmu.edu</u> Michael Mikusa, Kent State University, Kent, OH; <u>mmikusa@kent.edu</u>

2009 - 2011

CHAIR (2009): Bob Ronau, University of Louisville, KY; <u>bob@louisville.edu</u> Susann Mathews, Wright State University, OH; <u>susann.mathews@wright.edu</u> Gladis Kersaint, University of South Florida; kersaint@coedu.usf.edu (AMTE BOARD) AMTE 2010 Annual Conference

2009 - 12 CHAIR (2010): Enrique Galindo, Indiana University, IN; <u>egalindo@indiana.edu</u>

Jeff Shih, University of Nevada - Las Vegas, LV; jshih@unlv.nevada.edu

2010 - 13 (Begin term Jan. 31, 2010)

Tom Dick, Oregon State University, OR; tpdick@math.oregonstate.edu Karen Flanagan Hollebrands, North Carolina State University, NC; karen_hollebrands@ncsu.edu

TASK FORCES

Equity Task Force

(Established December 2007, target completion date January 2010)

Co-CHAIR: Rochelle Gutierez, University of Illinois at Urbana - Champaign, rgutirrz@uiuc.edu

Co-CHAIR: Edd Taylor, Northwestern University, IL; <u>edd-taylor@northwestern.edu</u> Comfort Akwaji-Anderson, Iowa State University, <u>comfortakwaji@aol.com</u> Robert Berry III, University of Virginia, VA; <u>robertberry@virginia.edu</u> Tutita Casa, University of Connecticut, CT; <u>tutita.casa@uconn.edu</u> Marta Civil, University of Arizona, AZ; <u>civil@math.arizona.edu</u> Susie Hakansson, University of California – Las Angeles, CA; <u>shakans@ucla.edu</u> Jenny Bay-Williams, University of Louisville; <u>j.baywilliams@louisville.edu</u> (AMTE BOARD)

Journal Task Force

(Established 2009, target completion date: January 2010)

CHAIR: Alfinio Flores, University of Delaware, DE; aflores@udel.edu

Fran Arbaugh, The Pennsylvania State University, <u>arbaugh@psu.edu</u> (AMTE BOARD) John Lannin, University of Missouri, LanninJ@missouri.edu Rheta Rubenstein, University of Michigan - Dearborn, rrubenst@umd.umich.edu Lynn Stallings, Kennesaw State University, Istallin@kennesaw.edu Pat Wilson, University of Georgia, pswilson@uga.edu

Special Project Teams

TE-MAT Review

CHAIR: David Pugalee, University of North Carolina - Charlotte, NC; <u>David.Pugalee@uncc.edu</u> M. Lynn Breyfogle, Bucknell University, PA; <u>mbreyfog@bucknell.edu</u> (AMTE BOARD) Field Testers (Charged with testing the feasibility of the design)

AMTE Website Revision

(Established February 13, 2009, target completion date: January 15, 2010 for Phase I)

CHAIR: Gary Martin, Auburn University, AL;<u>martiwg@auburn.edu</u> (AMTE BOARD)

Jenny Bay-Williams, Louisville University, KY; <u>j.baywilliams@louisville.edu</u> Nadine Bezuk, San Diego State University, CA;<u>nbezuk@mail.sdsu.edu</u> Tim Hendrix, Meredith College, NC; <u>hendrixt@meredith.edu</u> Chris Johnston, Christopher Johnston, George Mason University, Fairfax, VA; cjohnst2@gmu.edu

Chris Johnston, Christopher Johnston, George Mason University, Fairfax, VA; cjohnst2@gmu.edu Jane Wilburne, Penn State – Harrisburg; jmw41@psu.edu

AMTE Elementary Mathematics Specialist Project Team

(Established February 23, 2009, target completion date: January 31, 2010)

CHAIR: Barbara Reys, University of Missouri, MO; reysb@missouri.edu

AMTE 2010 Annual Conference

Hyman Bass, University of Michigan, MI; <u>hybass@umich.edu</u> Joanne Rossi Becker, San Jose State University, CA; becker@math.sjsu.edu Robert Berry, University of Virginia, VA; rqb3e@virginia.edu Nadine Bezuk, San Diego State University, CA; nbezuk@mail.sdsu.edu **(AMTE BOARD)** Diana Erchick, Ohio State University at Newark, OH; erchick.1@osu.edu Terry Goodman, University of Central Missouri, MO; goodman@ucmo.edu Maggie McGatha, University of Louisville, KY; maggie.mcgatha@louisville.edu Denise Mewborn, University of Georgia, GA; dmewborn@uga.edu

ANNUAL CONFERENCE COMMITTEES

Conference Director: Susan Gay, University of Kansas, KS; <u>sgay@ku.edu</u> **Assistant Conference Director:** Carol Lucas, University of Central Oklahoma, OK; <u>clucas@uco.edu</u>

2010 Local Arrangements

CHAIR: Mark W. Ellis, California State University – Fullerton, CA; mellis@fullerton.edu

2010 Annual Conference – Program Committee

Chair: Jennifer Chauvot, University of Houston, TX; jchauvot@uh.edu Assistant to the Chair: Michelle Chamberlin, University of Wyoming, WY; <u>mchambe5@uwyo.edu</u> Ann Bledsoe, Columbia College, MO; <u>ambledsoe@ccis.edu</u> Jeff Choppin, University of Rochester, NY; jchoppin@warner.rocherster.edu Maria Fernandez, Florida International University, FL; <u>mfernan@fiu.edu</u> Michael Gilbert, University of Hawaii, HI; <u>mjgilber@hawaii.edu</u> Tim Jaccobe, University of Florida, FL; jacobbe@coe.ufl.edu Keith Leatham, Brigham Young University, UT; kleatham@mathed.byu.edu LouAnn Lovin, James Madison University, VA; lovinla@jmu.edu Maggie Niess, Oregan State University, OR; <u>niessm@onid.orst.edu</u> Stephen Pape, University of Florida, FL; <u>spape@ulf.edu</u> Jeff Wanko, Miami University of Ohio, OH; <u>wankojj@muohio.edu</u> Susan Gay, University of Kansas; <u>sgay@ku.edu</u> (AMTE BOARD)

PUBLICATIONS

AMTE Monograph Series

Series Editor (2008 - 2011): Marilyn Strutchens, Auburn University, AL; strutme@auburn.edu

Sixth Monograph

Co-editor: Denise Mewborn, University of Georgia, GA; <u>dmewborn@coe.uga.edu</u> **Co-editor:** Hollylynne Stohl Lee, North Carolina State University, NC; <u>Hollylynne@ncsu.edu</u> Fran Arbaugh, The Pennsylvania State University, PA; <u>arbaugh@psu.edu</u> Laurie Cavey, James Madison University, VA; <u>caveylo@jmu.edu</u> Suzanne Harper, Miami University of Ohio, OH; <u>harpersr@muohio.edu</u> Linda Kallam, Southeastern Oklahoma State University, OK; <u>lkallam@se.edu</u> Kate Kline, Western Michigan University, MI; <u>kate.kline@wmich.edu</u> Johnny Lott, University of Mississippi, University, MS; <u>jlott@olemiss.edu</u> Jennifer Luebeck, University of Montana, Bozeman, MT; <u>luebeck@math.montana.edu</u> Lew Romagnano, The Metropolitan State College of Denver, CO; <u>romagnaL@mscd.edu</u> Gideon L. Weinstein, Western Governors University, Rensselaer, NY; <u>gweinstein@wgu.edu</u>

Seventh Monograph

Co-editor: Johnny Lott, University of Mississippi, University, MS; <u>jlott@olemiss.edu</u> **Co-editor:** Jennifer Luebeck, University of Montana, MT; <u>luebeck@math.montana.edu</u> Jane Keiser, Miami University of Ohio, OH; <u>keiserjm@muohio.edu</u> Carol Malloy, University of North Carolina, NC; <u>cmalloy@email.unc.edu</u> Eric Milou, Rowan University, NJ; <u>milou@rowan.edu</u> Melfried Olson, University of Hawaii, HI; <u>melfried@hawaii.edu</u> Laura Spielman, Radford University, VA; <u>lspielman@radford.edu</u> Shari Stockero, Michigan Technological University, MI; <u>stockero@mtu.edu</u> Amy Hillen, Kennesaw State University, GA; <u>ahillen@kennesaw.edu</u> Dorothy White, University of Georgia, GA; <u>dywhite@uga.edu</u> Trena Wilkerson, Baylor University, TX; <u>Trena_Wilkerson@baylor.edu</u>

AMTE Special Issue of JMTE

Editor: Marilyn Strutchens, Auburn University, AL; STRUTME@auburn.edu

Editorial Board:

Jenny Bay-Williams, University of Louisville, KY; <u>j.baywilliams@louisville.edu</u> Robert Q. Berry III, University of Virginia, VA; <u>robertqberry@gmail.com</u> Kathryn Chval, University of Missouri, MO; <u>chvalkb@missouri.edu</u> Marta Civil, University of Arizona and CEMELA, AZ; <u>civil@math.arizona.edu</u> Beatriz D'Ambrosio, Miami University, OH; <u>dambrobs@muohio.edu</u> Carol E. Malloy, University of North Carolina, Chapel Hill, NC; <u>cmalloy@email.unc.edu</u> Dorothy White, University of Georgia, GA; dywhite@uga.edu

Newsletter

Editor: Libby Knott, University of Montana, MT; Knott@mso.umt.edu (2009 - 2011)

Newsletter Editorial Panel

2007 - 2010

Teresa Gonske, Northwestern College, MN; <u>tlgonske@nwc.edu</u> Traci Salinas, Appalachia State University, NC; <u>salinastm@appstate.edu</u>

2009 - 2011

Sarah Kasten, University of Northern Kentucky, KY; <u>kastens1@msu.edu</u> Bob Reys, University of Missouri, MO; <u>reysr@missouri.edu</u>

2009 - 2012

Karen Karp, University of Louisville, KY; <u>karen@louisville.edu</u> Bob Mayes, University of Wyoming, WY; <u>rmayes2@uwyo.edu</u>

2010 - 13 (begin term Jan. 31, 2010)

David Barnes, NCTM, VA; <u>dbarnes@nctm.org</u> Beth Burroughs, Montana State University, MT; <u>burrough@math.montana.edu</u>

CITE Journal (2008 - 2011)

Co-editor: Christine Browning, Western Michigan University, MI; <u>christine.browning@wmich.edu</u> **Co-editor:** Denny St. John, Central Michigan University, MI; <u>stjoh1d@cmich.edu</u> Fran Arbaugh, The Pennsylvania State University, PA; <u>arbaugh@psu.edu</u> (AMTE Board)

CITE Reviewers:

Berlin, Donna Chamblee, Greg Channell, Dwayne Cory, Beth Frykholm, Jeff Garofalo, Joe Goodson-Espy, Tracy Harper, Suzanne Hjalmarson, Margret Horton, Robert M. Hovermill, Jeffrey Johnson, Gwendolyn Johnson, Iris Johnston, Chris Jones, Dustin Keen, Ginny Kersaint, Gladis Kosheleva, Olga Lapp, Doug Martin Rend, Jill McDuffie,Amy Meltzer, Sarah Moyer-Packenham, Patricia Niess, Margaret Nillas, Leah O'Neal, Judy Ozgun-Koca, Asli Pateman, Neil Polly, Drew Pugalee, David Rakes, Christopher Ronau, Robert Shafer, Kathy Shamatha, Jeff Sorto, Angela St. John, Dennis Walmsley, Angela Wu, Zhonghe Zbiek, Rose



Call for Manuscripts: Special Equity Issue of <u>The Journal of</u> <u>Mathematics Teacher Education</u> (JMTE)

Background

The Association of Mathematics Teacher Educators (AMTE) is an organization designed to bring together individuals interested in mathematics teacher education in order to promote and improve the education of preservice and inservice teachers of mathematics. Two of its goals are to facilitate communication and to promote collaboration among mathematics teacher educators, including those in Colleges of Education, in Departments of Mathematics, and outside higher education settings. In an effort to support these goals, AMTE has published five monographs and is in the process of publishing the sixth and seventh monographs. In addition to these venues AMTE is partnering with the editors of The Journal of Mathematics Teacher Education (JMTE) to publish a special issue of the journal focusing on addressing equity issues in the mathematics education of teachers. Equity in mathematics education should be one of the most important concerns of teachers, administrators, policy makers, and mathematics educators. In fact, AMTE, the National Council of Supervisors of Mathematics (NCSM), and the National Council of Teachers of Mathematics (NCTM) have made equity a priority for their organizations (Gutiérrez, Bay-Williams, & Kanold, 2008). Some of these organizations have task forces and position statements related to equity issues compelling all involved in the mathematics education of students to become aware of equity issues and to take steps toward eliminating the inequities that plague K-16 education. Equity has been defined in a number of ways:

- "Excellence in mathematics education rests on equity—high expectations, respect, understanding, and strong support for all students. Policies, practices, attitudes, and beliefs related to mathematics teaching and learning must be assessed continually to ensure that all students have equal access to the resources with the greatest potential to promote learning. A culture of equity maximizes the learning potential of all students. ... Different solutions, interpretations, and approaches that are mathematically sound must be celebrated and integrated into class deliberations about problems. All members of the classroom group must accept the responsibility to engage with and support one another throughout the learning experience." (NCTM Position Statement, 2008).
- Equity is "being unable to predict students' mathematics achievement and participation based solely upon characteristics such as race, class, ethnicity, sex, beliefs, and proficiency in the dominant language" (Gutierrez, 2007, p. 41).
- Lipman's (2004) concept of equity includes "the equitable distribution of material and human resources, intellectually challenging curricula, educational experiences that build on students' cultures, languages, home experiences, and identities; and pedagogies that prepare students to engage in critical thought and democratic participation in society" (p. 3).

Mathematics teacher educators must lead the field in helping teachers and other stakeholders to understand equity issues and to develop and implement strategies to combat inequity in our schools and universities. This special issue of JMTE will feature articles that report on research outcomes that will inform the field on how to best address equity issues in the mathematics classroom and other factors that impact equity in teacher education across the continuum from preparation to early career to experienced teacher. This includes a focus on equity in K-12 mathematics classrooms, such as curricula decisions, standardized test taking policies, and teaching practices and policies related to the English language learners (ELLs) and students with exceptionalities. Moreover, this Special Equity Issue is especially important given the growing numbers of diverse learners in mathematics classrooms, and the need to understand how to best prepare mathematics teachers

that can effectively eradicate the achievement gap and diminish other related disparities in mathematics education.

Anticipated Audience

The anticipated audience for this special issue of JMTE includes individuals responsible for the preparation and professional development of mathematics teachers, such as community college, college, or university faculty, researchers, or professional development facilitators.

Possible Topics

The Special Equity Issue of JMTE aims to include research papers devoted to research into the education of mathematics teachers and development of teaching that promotes students' successful learning of mathematics. JMTE focuses on all stages of professional development of mathematics teachers and teacher educators and serves as a forum for considering institutional, societal and cultural influences that impact teachers' learning, and ultimately that of their students. Critical analyses of particular programs, development initiatives, technology, assessment, teaching diverse populations and policy matters, as these topics relate to equity are welcome. All papers are rigorously refereed. Topics may include but are not limited to the following broad categories:

- Theoretical frameworks and definitions related to pursuing equity in teacher learning.
- Research and/or review of research related to effective ways to enable prospective and practicing teachers to be aware of the factors that influence students' mathematics achievement and to be models and/or advocates for equitable classroom practices. This may include research on any of the following:
 - Impact of expectations and beliefs on student achievement (and therefore inequities in the mathematics classrooms);
 - o The many roles that culture plays in the teaching and learning of mathematics;
 - The complex influences that affect mathematics learning, such as school factors [e.g., "tracking" policies, assessment or instructional practices, language policy (e.g., states that limit bilingual education → effect on math teaching for ELLs), and availability of appropriate resources];
 - Students' attitudes/beliefs which include their self perceptions and expectations regarding their mathematics ability, and their beliefs about mathematics;
 - Teacher influences on students' mathematics identities and the related impact on students' positive or negative dispositions toward mathematics; and
 - Family influences, which include parental involvement and expectations, socioeconomic status, and cultural customs.
- Professional development models or practices that have effectively enabled teachers to better serve the range of learners in their classrooms.
- Research on pedagogical strategies that allow English language learners to develop critical problem-solving skills and other higher-level skills related to mathematics.
- Impact of instructional strategies such as differentiated instruction and collaborative teaching models on students with learning disabilities and other exceptionalities.
- Teachers' knowledge and understanding of policy issues that can create disparities among and across groups of students based on race/ethnicity, gender, language, ability and socio-economic status.

Preparation of Manuscripts

Any questions about possible topics for inclusion may be directed to the editor of the Special Issue. Editorial decisions will be made by the editor of JMTE, the Special Issue editor, and members of the Editorial Panel:

Special Issue Editor	Marilyn Strutchens, Auburn University, strutme@auburn.edu
JMTE Editor	Peter Sullivan
Panel members	Jennifer Bay-Williams, University of Louisville Robert Q. Berry III, University of Virginia Kathryn Chval, University of Missouri Marta Civil, University of Arizona Beatriz D'Ambrosio, (Miami University Carol E. Malloy, University of North Carolina, Chapel Hill Dorothy White, University of Georgia

Manuscripts should be completed in APA style, double-spaced in 12-point font using 1 inch margins, and should not exceed 6000 words, including references, tables, and figures. Six manuscripts will be included in the journal.

Submission of manuscripts will be accepted electronically, as instructed below. Authors submit two electronic versions of their manuscript; one copy should include a cover page with all appropriate author information (name, address, phone, fax, and email); the other copy should allow for blind review. Please name your WORD document files as follows:

Identifiable copy: LASTNAME.doc Blind copy: LASTNAMEblind.doc

Send both electronic files to:	Marilyn E. Strutchens
	Email: <u>strutme@auburn.edu</u>

Submission Due Date: June 1, 2010

Anticipated Publication Date: 2011



AMTE'S AWARDS: The Excellence in Mathematics Teacher Education Award

and the *Early Career Award*

Description of Awards

The Board of Directors of the Association of Mathematics Teacher Educators has established two awards to be given annually to two mathematics teacher educators of national recognition at the Annual Meeting of the AMTE. The purpose of these awards is to recognize excellence in each area of mathematics teacher education (teaching, service, research). The purpose of the first award, the **Excellence Award**, rotates every three years, focusing on a different area: **Excellence in Teaching**; **Excellence in Service**; and **Excellence in Scholarship.** The second award, the **Early Career Award**, recognizes a mathematics teacher educator who, while early in his/her career, has made distinguished contributions and shows exceptional potential for leadership in these areas.

Recipients of AMTE Awards are:

Excellence in Teaching in Mathematics Teacher Education (next award in 2012)

- Margaret (Peg) Smith (2009)
- Randy Philipp (2006)

Excellence in Service in Mathematics Teacher Education (next award in 2013)

- Francis (Skip) Fennell (2010)
- Bill Bush (2007)

Excellence in Scholarship in Mathematics Teacher Education (next award in 2011)

• Frank Lester (2008)

Early Career Award (awarded annually)

- Beth Herbel-Eisenmann (2010)
- John Lannin (2009)

Complete information on these awards is available on the AMTE website at <u>www.amte.net</u>.

2011 Award for Excellence in Scholarship in Mathematics Teacher Education

The 2011 Excellence in Scholarship Award is intended to recognize a colleague for a unique contribution in scholarship that has made a significant and lasting contribution to mathematics teacher education, directly and indirectly. The nominee shall have demonstrated commitment to mathematics teacher education through one or more of the following areas:

- a. The dissemination of research findings offering unique perspectives on the professional development of mathematics teachers.
- b. The publication of materials useful in the preparation or continuing professional development of mathematics teachers.
- c. Design of innovative pre-service or in-service programs.
- d. The contribution of theoretical perspectives that have pushed the field forward.

Criteria for Excellence in Scholarship Award

The nominee of the Excellence in Service Award should be an active member of the mathematics teacher education community and have at least five years of commitment to mathematics teacher education. He or she 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 service to 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 <u>four</u>) for the nomination from individuals knowledgeable of the nominee's contributions relative to one or more of the criteria stated above.

2011 Early Career Award

The Early Career Award is intended to recognize a colleague's contributions in their 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.

Criteria for Early Career Award

The nominee for the Early Career Award should be a mathematics teacher educator practicing in the field no later than 10 years after receipt of a doctoral degree.

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. Current vita of the nominee.

- b. Letter of nomination documenting the nominee's eligibility for the award.
- c. Three letters of support for the nomination from individuals knowledgeable of the nominee's contributions relative to one or more of the criteria stated above.
- d. Evidence of at least three contributions of the nominee's teaching, service, and/or scholarship in mathematics education in one or more areas as outlined above.

Nomination Process for Excellence Award and Early Career Award

AMTE members may nominate a mathematics teacher educator who meets the criteria of the award. 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. Therefore, applicants are encouraged to submit all application materials electronically.

Electronic submissions should be sent to Tony Nguyen at tonguyen@projects.sdsu.edu.

If applicants wish to include large documents in hard-copy form, we will be able to scan documents of up to 50 pages in length. Applicants may submit DVDs, CDs, or videotapes, but each clip submitted should be no more than 20 minutes long. Hard copy submissions should be sent to:

Nadine Bezuk Attn: AMTE Award Nomination 6475 Alvarado Rd., Suite 206 San Diego, CA 92120

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

Deadline for Nominations

Nominations for the **Excellence in Scholarship Award** must be received by **September 30, 2010**. For the **Early Career Award**, nominations must be received by **October 15, 2010**.

Procedure for Review of Materials

The AMTE Awards Committee, a seven-member committee, will review the materials and select the award winner yearly. Nominations will be reviewed by the committee, and the award recipient will be notified by late November, so that the person can have time to make arrangements to attend the AMTE conference.

The award recipients will receive a plaque and be recognized at the AMTE meeting in the year in which he or she receives the award. The winner of the Excellence Award will give a featured presentation at the AMTE Annual Conference in the year they receive the award. The winner of the Early Career Award will be recognized at the annual AMTE meeting and asked to contribute an article for the Summer AMTE Connections Newsletter and to lead a mentoring session for other early career mathematics education faculty at the annual AMTE meeting.



CONTEMPORARY ISSUES IN TECHNOLOGY AND TEACHER EDUCATION

http://www.citejournal.org

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Share research to push our thinking forward regarding issues of technology use in mathematics teacher education.

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, 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 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 color graphics, photographs, video, and other media. Manuscripts may be submitted online through the journal website. Inquiries about potential manuscript topics are welcomed.

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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.

FOR MORE INFORMATION

For further information, please feel free to contact one of the co-editors of CITE-Math:

- Christine Browning (<u>christine.browning@wmich.edu</u>), or
- Denny St. John (<u>stjoh1d@cmich.edu</u>)

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- 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