2016 KMED Conference Program

8:30-9:00 TEB 122 **Registration and Breakfast** **Taylor Education Building (TEB) 122**			
9:00-9:15 **TEB Auditorium**	**Opening Remarks** Dan McGee, Executive Director, Kentucky Center for Mathematics Sarah Kasten, Conference Organizer, Northern Kentucky University Bethany Noblitt, Conference Organizer, Northern Kentucky University		
9:15-10:15 **TEB Auditorium**	**Keynote Address** Carl Lee, University of Kentucky Reflections on Transforming Mathematics Dr. Lee will present tasks and problems that provide opportunities to reflect on the important role of transformations in mathematics, including geometry, algebra, science, technology, and art.		
10:30-11:30 **Session 1**	**Dickey Hall 323**	**Dickey Hall 325**	**Dickey Hall 331**
Presenter	Jonathan Thomas, University of Kentucky	Maggie McGatha, University of Louisville	Lynn Patterson, Murray State University
Co-Presenter(s)	Edna Schack, Morehead State University Molly Fisher, University of Kentucky Cindy Jong, University of Kentucky Lenore Kinne, Northern Kentucky University		
Session Title	Mathematics Teaching and Learning in Online and Technology-Mediated Contexts: A Forum for Guided Discussion	What Does the Research Say about Mathematics Coaching? An Update	Transforming Mathematical Practices in the K-3 Classroom
Abstract	Online and technology-mediated contexts are becoming increasingly ubiquitous in mathematics educator development both at the level of pre-service teacher preparation and in-service teacher professional development. This session will consist of a brief project overview of one multi-institutional technology-mediated effort	In this session you will be engaged in exploring an overview of the research on mathematics coaching and the implications for mathematics coaching programs. We will look at what the research says about (a) changing instructional practice, (b) improving student achievement, and (c) identifying the roles and responsibilities of coaches.	An overview of the grant project "Supporting Strategies for Building Numeracy in Grades K-3" will be shared. The main purpose of this project is to train teachers to fluently use the Teacher Learning Community (TLC) approach to building numeracy. Through the TLC approach and other supports the teachers and

	followed by guided group discussions. These discussions will be organized around the affordances and constraints of online and technology-mediated contexts with the aim of identifying central features which allow for productive learning experiences.	We will explore what this research might mean for your work as a mathematics educator.	administrators will: 1. Develop an understanding of the TLC approach to building numeracy. 2. Design and connect standards-based lessons. 3. Encourage students and themselves to analyze their own mathematical thinking by thinking like a mathematician rather than merely using procedural instruction. 4. Guide students to use and seek an understanding of mathematics and building numeracy concepts for future classroom mathematical explorations. 5. Guide students in incorporating the Standards for Mathematical Practice (CCSS) into their daily mathematical routines. 6. Guide students in developing a mindset of learning and thinking like a problem solver.
11:45-1:00 **Lunch** Dickey Hall 129	AMTE Affiliation Discussion Facilitated by Sarah Kasten and Bethany Noblitt	KMED's stated purpose includes disseminating research and effective mathematics teacher education practices, establishing collaborative working groups of mathematics teacher education professionals, informing mathematics education policy, and advocating for high quality mathematics education for all. These goals align closely with the goals of the Association of Mathematics Teacher Education. During lunch, we will examine these goals and discuss what an affiliation with AMTE could mean for the future of KMED.	

1:15-2:15 Session 2	**Dickey Hall 323**	**Dickey Hall 325**	**Dickey Hall 331**
Presenter	Cheryll Crowe, Asbury University	Molly Fisher, University of Kentucky	Susan A. Peters, University of Louisville
Co-Presenter(s)		Cindy Jong, University of Kentucky Jonathan Thomas, University of Kentucky Meredith Davis, University of Kentucky (REU Fellow) Mallory Bickett, University of Kentucky (REU Fellow)	
Session Title	TPACK & Training Teachers: Preparing Pre-Service Elementary Math Specialists	Undergraduate Involvement in Mathematics Education Research: Insights from Students' Perspective	Activities to Facilitate Middle and Secondary Mathematics Teachers' Transformative Learning of Statistics within Professional Development
Abstract	This presentation will outline the mathematics preparation for an elementary math specialist at Asbury University. Using the TPACK framework, this program emphasizes the teaching and learning of mathematics content through the integration of pedagogy and technology. Participants will gain insight into the program components (a sequence of six mathematics courses) which include embedded clinical experiences and an action research project in the capstone course.	Undergraduate involvement in mathematics education research can be a highly rewarding and productive experience for both students and faculty alike. However, the process may also prove challenging on a number of fronts. In this session members of a research team, including the undergraduate members, will share their perceptions of certain aspects of project participation. The session will conclude with guided small group and whole group discussions regarding the affordances and challenges of undergraduate research involvement.	Participants engage with innovative activities designed to support inservice middle and high school teachers in advancing their statistical proficiencies. Discussion focuses on how engagement with the activities facilitates development of deep statistical understandings and on activity extensions and adaptations.

Session 3: 2:30-3:30	**Dickey Hall 323**	**Dickey Hall 325**	**Dickey Hall 331**
Presenter	Sarah Kasten, Northern Kentucky University	Marla Lemmon, Northern Kentucky University	Margaret Yoder, Eastern Kentucky University
Co-Presenter(s)			Robin Hill, Kentucky Department of Education
Session Title	EMS Roundtable Discussion	Transdisciplinary Preparation of Preservice Secondary Math and Science Teachers	A Vision for Mathematics: The Status Quo is Unacceptable
Abstract for Program	Participants will engage in discussion about potential future collaborations among universities and the Kentucky Center for Mathematics with the goal of supporting Kentucky teachers in their pursuit of becoming and Elementary Mathematics Specialist.	There is currently minimal research about transdisciplinary preparation of preservice secondary math and science teachers. This was investigated during the summer of 2015 at a week-long professional development funded by the Kentucky Center for Mathematics. The findings from the professional development will be presented. Participants' beliefs and attitudes towards STEM (science, technology, engineering, and mathematics) integration were examined. The experience culminated with lessons developed by the preservice teachers.	During this session, participants will be introduced to the recently released document from the MAA: A Common Vision for Undergraduate Mathematical Sciences Programs in 2025.
3:30-4:00 **Conference Wrap-Up** **TEB Auditorium**			