

1:30 – 3:00 Breakout sessions

**Session A:** *Lesson Study: Advice From K-12 and University-based Lesson Study Practitioners.*

Catherine Lewis, Elizabeth Baker and Ruth Cossey, Mills College; Brigitte Lahme, Sonoma State University; David Foster, Silicon Valley Mathematics Initiative; Jackie Hurd, Palo Alto Unified School District; Stan Pesick and Marlene Wilson, Oakland Unified School District; Tracy Sola, Belmont-Redwood Shores School District; Jane Decker, Petaluma High School; Erik Moll, Oakland Unified School District. Experienced lesson study participants, from departments of mathematics and mathematics education, and from elementary and secondary schools, will share thoughts about what is needed to build toward Sybilla Beckmann's vision of one community of mathematics teachers, and how lesson study can contribute.

During the first half of the session, panelists will discuss the following questions.

- How is lesson study similar to and different from other forms of professional learning you have experienced?
- What have you learned about mathematics and its teaching-learning through lesson study? How did your learning of mathematics occur—what were the supports and catalysts for it?
- What advice do you have for mathematicians and mathematics educators who may be interested in initiating or participating in lesson study work?
- What tools and resources are useful for mathematics lesson study—both generic tools for lesson study and specific types of mathematical resources. What kinds of mathematical resources tend *not* to be useful?
- How should teachers' mistakes be handled?

The second half of the session will be devoted to Q & A with the audience.

**Session B:** Randolph Philipp, San Diego State University, *How A Focus on Children's Mathematical Thinking Supports the Professional Development of Elementary School Teachers.*

Teachers in the United States do not have built-in means by which to continue to grow professionally. One promising means for supporting teacher professional development is for teachers to learn from their own practice in general, and from their students' mathematical thinking in particular. This presentation will share results of how focusing on children's mathematical thinking supported the professional development of elementary school teachers. In addition to considering mathematical content knowledge and beliefs, we will also look at what teachers notice from instructional settings. Video examples of students' mathematical thinking will be used to ground the conversation about mathematics, teaching, and learning.

**Session C:** Teacher education and professional development

Richard Bisk, Worcester State University, *New Requirements for the Mathematical Preparation of Elementary Teachers in Massachusetts*. In 2007, the Massachusetts Board of Elementary and Secondary Education voted unanimously to upgrade the mathematical requirements for new elementary school teachers. Elementary teacher candidates now have to pass a separately scored mathematics test to earn certification. A detailed document ([www.doemass.org/mtel/mathguidance.pdf](http://www.doemass.org/mtel/mathguidance.pdf)) describes “the breadth and depth of mathematics that teachers at the elementary level must not only be able to do, but understand and explain in many ways to students.” This talk will discuss the new requirements and the rationale behind them.

Katherine Socha, Math for America, *Is one of these things not like the others? Comparing Math for America with other national teacher preparation and professional development programs*.

Math for America is a 6-year old secondary school mathematics teacher professional development program that started in New York City. Despite the similarity of names, MfA differs greatly from the Teach For America model. This session will explore similarities and differences between the MfA, TFA, Knowles Teaching Fellowships, NYC Math Immersion, and one or two more programs. The aim is to seek out a central collection of practices and set these practices in context of the experiences of practicing teachers.

**Session D:** Paul Goldenberg, EDC. Discussion session: *Interpreting the Mathematical Practices of the Common Core State Standards for the elementary and middle grades*.

**Session E:** Zalman Usiskin, University of Chicago. Discussion session: *Recruiting More Students into Mathematics Teaching*.