

Seminar & Events Bulletin: Teaching Mathematics

07-01-2011 to 12-31-2021

Monday, September 26, 2011

5:15pm-6:30pm **Teaching Mathematics** -- Deborah Ball (Univ. Michigan, School of Education) *Learning and Teaching the Common Core Mathematical Processes* -- 3096 East Hall

Monday, October 24, 2011

5:15pm-6:30pm **Teaching Mathematics** -- Yvonne Lai (Univ. Michigan, School of Education) *Practices of Teaching Mathematical Practices* -- 3096 East Hall

Monday, November 21, 2011

5:15pm-6:30pm **Teaching Mathematics** -- Hyman Bass (Univ Michigan, School of Ed & Math Dept.) *Features of Mathematical Tasks That Can Support the Learning and Teaching of Mathematical Practices* -- 3096 East Hall

Monday, December 05, 2011

5:15pm-6:30pm **Teaching Mathematics** -- Vilma Mesa (Univ. Michigan, School of Education) *Mathematical Practices in the Classroom* -- 3096 East Hall

Monday, February 06, 2012

5:15pm-6:30pm **Teaching Mathematics** -- Hanna Bennett (Univ Michigan, Math Dept.) *Mathematical Practices: Implementation and Outcomes* -- 3096 East Hall

Tuesday, March 13, 2012

5:15pm-6:30pm **Teaching Mathematics** -- Doug Ensley (Shippensburg University) *Interactive Technology for Teaching Mathematical Proof* -- 3096 East Hall

Monday, March 26, 2012

5:15pm-6:30pm **Teaching Mathematics** -- Hyman Bass (Univ. Michigan, Math Dept. & School of Education) *Mathematical Structure in the Curriculum* -- 3096 East Hall

Monday, April 02, 2012

5:15pm-6:30pm **Teaching Mathematics** -- Judith Jacobs (Univ Michigan, School of Education) *The Mathematical Practices: The Key to Improving Teachers' Content Knowledge* -- 3096 East Hall

Tuesday, October 02, 2012

5:15pm-6:30pm **Teaching Mathematics** -- Daniel Zaharopol (Learning Unlimited, Chicago) *New Pathways for Mathematical Talent* -- 3096 East Hall

Thursday, October 25, 2012

5:15pm-6:30pm **Teaching Mathematics** -- Catherine Beneteau (University of Southern Florida) *A Mathematician and Mathematics Educator Team Teaching Experience* -- 4088 East Hall

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Tuesday, December 04, 2012

5:15pm-6:30pm **Teaching Mathematics** -- Angela Kubena (Univ Michigan, Math Dept.) *Math Practices in Introductory Program Math Lesson Plans* -- 3096 East Hall

Tuesday, January 22, 2013

5:15pm-6:30pm **Teaching Mathematics** -- Nina White (Univ Michigan, Math Dept and School of Education) *The math content sequence for pre-service elementary teachers: students, goals, and methods* -- 3096 East Hall

Monday, January 28, 2013

5:15pm-6:30pm **Teaching Mathematics** -- Grace Kennedy (UCSB) *Teaching Math for Elementary School Teachers Through Observation and Inquiry* -- 3096 East Hall

Monday, February 25, 2013

5:15pm-6:30pm **Teaching Mathematics** -- Michael Von Korff (Reasoning Mind) *Mathematical Knowledge for Online Instruction* -- 3096 East Hall

Monday, March 11, 2013

5:15pm-6:30pm **Teaching Mathematics** -- Michael Weiss (Michigan State Univ) *More than Problem-Solving: Mathematical Practices Beyond the Common Core* -- 3096 East Hall

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Abstracts

Teaching Mathematics

Monday, September 26, 2011, 5:15pm-6:30pm

3096 East Hall

Deborah Ball (Univ. Michigan, School of Education)

Learning and Teaching the Common Core Mathematical Processes

In this session we will be considering the theme for the seminar this semester, mathematical practices, looking at what the common core proposes as mathematical practices in the context of a classroom video.

Teaching Mathematics

Monday, October 24, 2011, 5:15pm-6:30pm

3096 East Hall

Yvonne Lai (Univ. Michigan, School of Education)

Practices of Teaching Mathematical Practices

In this session we will use the examples from mathematical content for future teachers courses to explore how students encounter and grapple with mathematical practices in the classroom, and what instructors need to bring this to the fore in their classes.

Co-presented by Yvonne Lai, UM School of Education, and Hanna Bennett and Mark Radosevich, UM Department of Mathematics.

Teaching Mathematics

Monday, November 21, 2011, 5:15pm-6:30pm

3096 East Hall

Hyman Bass (Univ Michigan, School of Ed & Math Dept.)

Features of Mathematical Tasks That Can Support the Learning and Teaching of Mathematical Practices

In this seminar we will continue our discussion of math practices, what they are, and how we might establish their existence given an observation of a student's work or a classroom. The session will be an informal working seminar in which we collectively work to establish a meaningful working definition for one or two of the mathematical practices in the common core, and things we would expect to see illustrating them in student work and in classrooms.

Co-facilitated by Hyman Bass, UM School of Education and Department of Mathematics, and Yvonne Lai, UM School of Education.

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Teaching Mathematics

Monday, December 05, 2011, 5:15pm-6:30pm

3096 East Hall

Vilma Mesa (Univ. Michigan, School of Education)

Mathematical Practices in the Classroom

In this seminar we will watch video of a mathematics classroom at the University of Michigan with the aim of exploring how the mathematical practices we have been discussing appear, are taught, and are cultivated. The session will be focused on the discussion of the practices, and will be facilitated by Hanna Bennett, UM Department of Mathematics, and Vilma Mesa, UM School of Education.

Teaching Mathematics

Monday, February 06, 2012, 5:15pm-6:30pm

3096 East Hall

Hanna Bennett (Univ Michigan, Math Dept.)

Mathematical Practices: Implementation and Outcomes

TBA

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Co-presented by Hanna Bennett and Mark Radosovich, Univ. Michigan Math Dept., and Vilma Mesa, Univ. Michigan School of Education.

Teaching Mathematics

Tuesday, March 13, 2012, 5:15pm-6:30pm

3096 East Hall

Doug Ensley (Shippensburg University)

Interactive Technology for Teaching Mathematical Proof

Students construct their own understanding of concepts (mathematical and otherwise) through life experiences. This philosophy is commonly applied through the use of physical manipulatives in the K-12 curriculum, and technology increasingly allows it to be extended to all levels of mathematics instruction. This presentation will focus on some technology-based tools designed to enhance the learning of mathematical proof among freshman discrete mathematics students through the application of this philosophy. The primary medium for these materials is Flash-based applets running in a web browser, but there is currently a shift toward mobile platforms that will also be discussed as well. Lots of links to tutorials for Flash programming and reusable Flash objects will also be shared.

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Teaching Mathematics

Monday, March 26, 2012, 5:15pm-6:30pm

3096 East Hall

Hyman Bass (Univ. Michigan, Math Dept. & School of Education)

Mathematical Structure in the Curriculum

Teaching Mathematics

Monday, April 02, 2012, 5:15pm-6:30pm

3096 East Hall

Judith Jacobs (Univ Michigan, School of Education)

The Mathematical Practices: The Key to Improving Teachers' Content Knowledge

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Teaching Mathematics
Tuesday, October 02, 2012, 5:15pm-6:30pm
3096 East Hall
Daniel Zaharopol (Learning Unlimited, Chicago)
New Pathways for Mathematical Talent

Students from underserved backgrounds face many challenges to excelling at math. In addition to often difficult school and home lives, they lack exposure to the traditional "pathways" that their peers might follow to mathematical success, such as math clubs, competitions, and summer programs. As a result, their exposure to mathematical abstraction and challenging tasks is often very limited. Moreover, there are few if any very good mathematical role models for them, and their conception of what comes after high school is often fraught with potentially harmful inaccuracies.

In this talk, I'll introduce the Summer Program in Mathematical Problem Solving, a three-week residential summer program that helps students without access to advanced mathematical study prepare themselves for further work. We'll discuss the mathematics and teaching styles within the program; the way we try to bring students into a "mathematical culture" and a sense of the opportunities before them; and how we try to show them what mathematics really is. Because the program is a three-week long residential program with very limited space, we also had to make decisions about whom to recruit; we will discuss how we identified students with insight into and motivation for learning mathematics.

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Teaching Mathematics**Thursday, October 25, 2012, 5:15pm-6:30pm****4088 East Hall****Catherine Beneteau (University of Southern Florida)***A Mathematician and Mathematics Educator Team Teaching Experience*

In the 2009-10 academic year, I team taught two courses with my colleague Dr. Denisse Thompson in the College of Education. The courses were geometry, housed in the Mathematics Department, and a high school methods for teaching mathematics course, housed in the Department of Secondary Education. Both courses are intended for preservice secondary education mathematics teachers. This collaboration was supported in part by a National Science Foundation grant with P.I. Dr. Rebecca McGraw at the University of Arizona. In this talk, I will discuss how the collaboration worked in practice, its successes and challenges, including a certain "dissonance" between the mathematics and mathematics education cultures, some insights from outside observers (another colleague and a graduate student in mathematics education), and some interesting data about student attitude towards the collaboration and mathematics teaching in general. I will conclude with some of the longer term impacts this collaboration has had on my own teaching. Much of the content of this talk has recently appeared in a joint article with Denisse Thompson, Gladis Kersaint, and Sarah Bleiler, in the 2012 NCTM Yearbook, dedicated to Professional Collaborations in Mathematics Teaching and Learning.

Teaching Mathematics**Tuesday, December 04, 2012, 5:15pm-6:30pm****3096 East Hall****Angela Kubena (Univ Michigan, Math Dept.)***Math Practices in Introductory Program Math Lesson Plans*

TBA

To be co-presented by Angela Kubena and Paul Kessenich (Univ Michigan, Math Dept.), and Karen Rhea (Univ Michigan, Math Dept., retired).

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Teaching Mathematics

Tuesday, January 22, 2013, 5:15pm-6:30pm

3096 East Hall

Nina White (Univ Michigan, Math Dept and School of Education)

The math content sequence for pre-service elementary teachers: students, goals, and methods

This is an overview of the math content sequence at UM for pre-service elementary teachers. I will talk about the students in the course, the goals for the course (both in content and practices), why those are the goals of the course, and how using inquiry-based learning (IBL) teaching methods supports achievement of those goals. There will be three parts: (I) a general introduction to some of the issues and topics when educating future teachers, (II) a description of the course over the last three years and, in particular, some aspects of the course as I've taught it, and (III) a short description of some research I conducted on the Fall 2012 semester of this course, including some encouraging results.

Teaching Mathematics

Monday, January 28, 2013, 5:15pm-6:30pm

3096 East Hall

Grace Kennedy (UCSB)

Teaching Math for Elementary School Teachers Through Observation and Inquiry

Enjoyment of mathematics cannot be taught, but it can be learned if it is not already a part of someone's world view. Encouraging it was an important learning outcome in my course on mathematics for elementary school teachers. We used "Math in the City" videos of children learning mathematics to introduce mathematical concepts that pre-service teachers go on to investigate in our course. I will discuss how to integrate the activities to support my learning outcomes of increased confidence and enjoyment of mathematics.

Teaching Mathematics

Monday, February 25, 2013, 5:15pm-6:30pm

3096 East Hall

Michael Von Korff (Reasoning Mind)

Mathematical Knowledge for Online Instruction

Reasoning Mind is a Houston-based nonprofit that develops K-12 math learning software. In this talk, I will discuss the means by which we simulate expert teaching in a virtual classroom. To develop our online curriculum, we work with a team of expert math teachers who have offered us access to their knowledge of curriculum and mathematical pedagogy. I will outline our methods for modeling these teachers and discuss what we've learned about their knowledge and practices. Finally, I will describe some of the expertise we have gained that we could not have learned from classroom teachers--pedagogical knowledge that is unique to e-learning.

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Teaching Mathematics

Monday, March 11, 2013, 5:15pm-6:30pm

3096 East Hall

Michael Weiss (Michigan State Univ)

More than Problem-Solving: Mathematical Practices Beyond the Common Core

The Common Core Standards, with its articulation of eight Mathematical Practices, has placed a welcome emphasis on the kind of thinking mathematicians engage in when problem-solving. But problem-solving is only one facet of mathematical work. More than anything, what distinguishes authentic mathematics from classroom math is problem-posing -- wondering about and seeking to discover what is (or might be) true. In this talk I will provide a taxonomy of problem-posing "moves", and discuss what makes some problems worth asking, and some results worth knowing. I also present examples of how these mathematical practices and values can be embedded in classroom work and in assessment.