You are cordially invited to attend the

*MSU Mathematics Education Colloquium*

Wednesday, October 10, 2012

3:30 – 5 p.m., 252 Erickson Hall, MSU

Jill Newton

Purdue University



***Preparing to Teach Algebra (PTA): A Study of Teacher Education***

For more than a century high school algebra courses have served as the foundation for higher mathematics and as gatekeepers for entrance to college mathematics. Desires for equity and for higher achievement have resulted in an algebra requirement for most students; however, failure rates in algebra are high. Little is known about programs of study in secondary mathematics education; in particular, teachers’ preparation to teach algebra. In Preparing to Teach Algebra (PTA), a three-year NSF-funded research project, we utilize a mixed-methods approach, including a national survey and case studies of algebra-related learning in four purposefully chosen secondary mathematics teacher preparation programs to study the following question: What opportunities do secondary mathematics teacher preparation programs provide to learn about (1) algebra, (2) algebra teaching, (3) issues in achieving equity in algebra, and (4) the algebra, functions, and modeling standards and mathematical practices described in the Common Core State Standards for Mathematics (CCSSM)? In this talk, I will share a status report of the project, including the process of developing frameworks and the survey, and preliminary results from the pilot study*.*

Jill Newton is an Assistant Professor in Mathematics Education at Purdue University. She earned a B.S. in Mathematics and a Ph.D. in Curriculum and Instruction at Michigan State University and an M.A. in International Education at George Washington University. She taught secondary mathematics and science for 12 years, including as a Peace Corps volunteer in Papua New Guinea and at international schools in the Democratic Republic of Congo, Bulgaria, Tanzania, and Venezuela. She teaches secondary mathematics methods courses, graduate courses focused on teaching, and learning mathematics, and leads a study abroad program for education students to Tanzania each May. She currently serves as a principal investigator on two NSF-funded projects, a study that examines teacher moves that promote justification in middle school mathematics classrooms and a study that investigates the preparation of algebra teachers.

*The Program in Mathematics Education sponsors this event.*