

You are cordially invited to attend the
MSU Mathematics Education Colloquium



Presented by:
Dr. Chris Rasmussen
San Diego State University

Wednesday,
February 18, 2015

3:30 – 5:00 p.m.
252 Erickson Hall
MSU

Recent Developments in Post-Calculus Mathematics Education Research

In this presentation I offer a survey of recent developments in post-calculus mathematics education research. In the past 10 years the field has witnessed considerable growth, with more and more research moving away from identifying student difficulties to studies of learning and teaching processes and productive ways that instruction moves forward student thinking. I argue that much of this work can be seen as falling in what Stokes refers to as “Pasteur’s quadrant,” which refers to basic research that seeks to extend the frontiers of understanding but is also inspired by considerations of use. I also highlight the emerging body of work that is examining lecture-oriented instruction, inquiry-oriented instruction, and professional development for undergraduate instructors. I conclude with a look ahead at the intersection of undergraduate mathematics education research and other discipline based educational research (e.g., Chemistry, Physics, Biology, Engineering), with an eye toward what we can learn from other disciplines and ways in which we need to better coordinate with them.

Chris Rasmussen received his B.Sc. in mechanical engineering from the University of Maryland in 1985 and later taught secondary school mathematics in the Peace Corps from 1987-1989. He received an M.A in mathematics from the University of Maryland in 1993 and a Ph.D. in mathematics education in 1997, also from the University of Maryland. He is currently Professor of mathematics education in the Department of Mathematics and Statistics at San Diego State University. His research centers on investigating inquiry-oriented approaches to the learning and teaching of undergraduate mathematics, focusing on how mathematical ideas are developed through student exploration and teacher-student classroom discourse. His work in differential equations and linear algebra has led to advances in instructional approaches that begin with students’ informal or intuitive ideas to progressively build more formal mathematics and the role of the instructor in this process. His current research is examining characteristics of successful programs in the Pre-calculus to Calculus II sequence, with an eye toward implications for institutions that want to improve the first two years of their undergraduate program.

The Program in Mathematics Education sponsors this event.