

1014-97-1427      **Joan Ferrini-Mundy\*** (jferrini@msu.edu), Science and Mathematics Education, 211 N. Kedzie Hall, East Lansing, MI 48824. *Reaching Common Ground: Issues in Teachers' Mathematical Education and Professional Development.*

Current challenges in K-12 mathematics education lead to pleas for improving the mathematical education of prospective teachers and the ongoing professional development of in-service teachers. I will summarize key elements of three major research and development activities underway at Michigan State University: reform of preservice teacher education (the Carnegie-supported Teachers for a New Era initiative), where an MSU team of mathematicians and mathematics educators began by designing "Teacher Knowledge Standards" in mathematics; development of assessment tools for measuring secondary school teachers' mathematical knowledge for teaching (the NSF-supported Knowledge of Algebra for Teaching project, REC 0337595), and the ongoing professional development of teachers in our Mathematics and Science Partnership (NSF-supported PROM/SE, Promoting Rigorous Outcomes in Mathematics and Science Education, EHR-0314866). Using cases and examples from our collaborative efforts in these projects, I will discuss the challenges and benefits of committing to "reaching common ground" among mathematics education researchers, psychometricians, teacher educators, mathematicians, and K-12 teachers in shaping mathematics learning experiences for teachers. (Received September 28, 2005)