

1096-00-767

Monica Farmer Cox* (mfc@purdue.edu), 701 W. Stadium Ave., ARMS 1329, West Lafayette, IN 47907. *Mathematics: A Foundation for Advancing Research in Graduate Engineering Education.*

This session offers a perspective about how mathematics served a foundation for the speaker's pursuit of graduate degrees in engineering and education. Included will be a presentation of findings across multiple federally-funded projects focused upon the preparation of graduate science, technology, engineering, and mathematics (STEM) students for a variety of careers. The primary focus will be upon a newly-developed assessment tool, the Global Real-time Assessment Tool for Teaching Enhancement (G-RATE), which provides instructors with pedagogical feedback that is collected from direct classroom observations, students' survey responses, and instructors' self-reflections of teaching. The speaker will discuss the evolution of the G-RATE and G-RATE research findings along with efforts to commercialize the G-RATE. Connections to the speaker's mathematics training will be referenced along with lessons learned regarding the crossing of disciplinary boundaries within academia. (Received September 10, 2013)