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**Stacy M. Musgrave\*** ([smmusgrave@cpp.edu](mailto:smmusgrave@cpp.edu)). *Understanding and Improving Instructors' Mathematical Meanings for Teaching.*

At many universities, courses leading up to and including calculus are taught by graduate teaching assistants (GTAs). These typically novice instructors face the challenge of teaching ideas foundational to calculus, yet data suggests GTAs often hold impoverished meanings for those ideas themselves. In this presentation, I share data revealing the varied meanings held by GTAs regarding average rate of change, angle measure and the sine function, before and after being involved in an intervention designed to support them in developing richer meanings for these and other ideas found in algebra and pre-calculus courses. I then describe how a targeted intervention supported these instructors in developing richer and more connected meanings for the content, as well as increased their fluency in discussing foundational ideas for precalculus and calculus. (Received September 09, 2017)