1116-Q5-1332 **Michael A Tallman*** (michael.tallman@okstate.edu), 3523 Bristol Road Ave, Stillwater, OK 74074. *Instructional Coherence and Quantitative Reasoning.*

In this talk I report findings from a study that explored the effect of a secondary mathematics teacher's level of attention to quantitative reasoning on the quality and coherence of the ways of understanding his instruction supported. I analyzed 37 videos of an experienced secondary mathematics teacher's instruction of trigonometric functions. Specifically, I characterized the extent to which the teacher's instruction attended to supporting students in reasoning quantitatively and examined the consequences of this attention (or lack thereof) on the quality and coherence of the mathematical meanings the teacher afforded his students the opportunity to construct. My analysis revealed that the incoherencies in the teacher's instruction were occasioned by his inattention to supporting students in reasoning quantitatively. My results suggest that pre-service teacher preparation programs and in-service professional development initiatives should engage teachers in experiences that advance their ability to reason quantitatively, as well as support them in leveraging quantitative reasoning in their teaching of specific mathematics concepts. (Received September 18, 2015)