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Vicki L Sealey* (sealey@math.wvu.edu), **Nicole M Infante**, **Matthew P Campbell** and **Johnna Bolyard**. *The Generation and Use of Examples to Promote Authentic Engagement in Calculus Classrooms*.

In this talk, we present analysis of video data of five instructors teaching the Mean Value Theorem in a first-semester calculus course. Throughout the lessons, graphical examples were provided by the instructors and/or the students of functions that satisfied or did not satisfy the conclusion of the Mean Value Theorem. Through the use of thematic analysis, we identified four themes related to emergence and use of examples: who generated the example, who evaluated the example, the precision of the example, and how and when the example was used. We show that instruction that leverages student generated examples provided a great deal of richness and depth in a mathematics lesson and created opportunities to engage students in authentic mathematical activity. This work contributes to an evolving notion of what is entailed in students' active learning of mathematics and the role of the instructor. (Received September 24, 2018)