



Mathematics Colloquium



Math-Ed Seminar: Teaching Calculus with Active Learning, Rigor, and Depth - The Mean Value Theorem as an Example

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Tuesday, April 17th, 2018

4:10 p.m.

SPARK Room 323

In this talk, I will present data from five instructors teaching the Mean Value Theorem in a first-semester calculus course. Different teaching styles were used by the instructors; student centered learning was prevalent in one class, while the others were more traditional lectures. However, all instructors provided some opportunity for students to engage in doing mathematics to some degree. 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. Four themes related to emergence and use of examples were found to be themes in the data: who generated the example, who evaluated the example, for what purpose the example was used, and the richness of the example. This talk will emphasize that instruction that leverages student generated examples can provide a great deal of richness and depth in a mathematics lesson and create 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.

Refreshments served at 3:30 p.m.

SPARK 323

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