



## Colloquium Series

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### Reshaping Mathematical Identity by Valuing Creativity in Calculus

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**Abstract:** This talk will describe the research design of an NSF grant awarded to my research team to study the effects of fostering creativity in calculus. Based on results from a pilot study in proof-based mathematics classes, which indicated that giving students opportunities to explore and create mathematical ideas impacts their mathematical identities and behaviors, we are furthering our previous studies by examining instructional practices and student outcomes when mathematical creativity is explicitly valued in non-proof-based courses, specifically in Calculus I. A discussion of how we are adjusting the typical Calculus I tasks from routine to non-routine and using these tasks in conjunction with a Creativity-in-Progress Rubric on Problem Solving will be given as well as an examination the theoretical underpinnings of the study, recent results, and work that will be done in the near future.

**Keywords:** creativity, calculus, self-efficacy, mathematical identity

Thursday December 6th, 12:05 - 12:50pm in 8-249