Paul Regier* (paulregier@gmail.com) and Milos Savic (savic@ou.edu). How Can Instructors Fostering Mathematical Creativity Build Student Self-efficacy for Proving?

Mathematical creativity has been emphasized as an essential part of mathematics, yet little research has been done to study the effects of fostering creativity in the undergraduate mathematics classroom. In this talk, we explore how fostering mathematical creativity impacts student self-efficacy for proving. For this, we examined classroom observations, online surveys, and student interviews for evidence of Sriraman’s (2005) five principles for fostering mathematical creativity and changes in students via Bandura’s (1997) four sources of self-efficacy. This revealed connections between four of the five principles and changes in student self-efficacy for proving, along with two instances where the combined use of principles may have provided students greater opportunities for building self-efficacy for proving. Several implications of these connections and suggestions for future research will be discussed. (Received September 25, 2018)