

1125-H5-173

**Christine A. Herrera\*** (caherrera@csuchico.edu) and **Alexander White** (aw22@txstate.edu). *Exploring Sequences through Technology to Expand Students' Example Space.*

Instructors who teach calculus often struggle to find a meaningful way to build students' conceptual understanding of limits of sequences. One way to deepen students' understanding is to enrich their example space. However, a student's example space may be dominated by either the number line model or the Cartesian plane and there is the potential for cognitive conflict when an example of a sequence is presented in a visual model that varies from the model that dominates their example space. The talk will address the difficult transition between the two different visual models and show how to reduce this potential cognitive conflict using the Wolfram Demonstration, Examples of Limits of Real Sequences. We will share tasks that help students visualize and understand the formal mathematical language of limits. By using the dynamic graphs which incorporate both models, explore different general examples, and demonstrate how their properties relate to the formal definition, students are able to build a robust example space. (Received August 08, 2016)