

1125-G5-1980 **Abe Edwards*** (aedwards@msu.edu). *Great Pedagogical Gains from Mentoring Undergraduate Research in Calculus I.*

“What are some limitations of common images and metaphors from freshman calculus?” This question is illustrative of the independent research questions that students have pursued in my Calculus I courses. This talk describes the start-to-finish experiences of students who elected to pursue undergraduate research as part of an honors option for Calculus I. In particular, the talk explains how students work through the research process—from choosing a question, to collecting and analyzing data, to drawing conclusions and reporting the research to a broader audience. The talk emphasizes how mentoring undergraduates in research has improved my own teaching of calculus, and how I learned that the Unit Circle may occasionally fail us. (Received September 19, 2016)