1145-O5-237 **Thomas LoFaro*** (tlofaro@gustavus.edu), Gustavus Adolphus College, 800 W. College Avenue, Saint Peter, MN 56082. *Using Computer Simulations to Promote Conjecture in an IBL Dynamical Systems Course.*

There is a long history of using computer simulations in dynamical systems to engage students in self-discovery of mathematical ideas. I will discuss an ongoing project that combines these activities with Inquiry Based Learning that aims to provide students a more complete mathematical experience. In particular, the goal of this method (called ECAP) is to engage students in a mathematical **E**xperiment, encourage them the make a formal **C**onjecture based on the experiment, provide them an opportunity to **A**pply the resulting theorem, and finally to utilize IBL methods to help them **P**rove the result. In this talk I will outline the motivation and structure for such a course and demonstrate material for at least one topic. (Received August 23, 2018)