1125-E1-867 **Robin L Angotti*** (riderr@uw.edu), School of STEM, Campus Box 358538, 18115 Bothell Way NE, Bothell, WA 98011. *Using Big Data in the Sciences: Integrating Mathematics and Plant Ecology.*

In a collaborative partnership, faculty from mathematics and biology co-taught a course for undeclared freshmen students using a big data set of 35 years of plant succession data on Mt. St. Helens in which data was analyzed and visualized within the scientific discipline of plant ecology. Mathematical and scientific literacy were developed in conjunction with each other as they arose in context of analyzing large-scale biological patterns in the data.

By working with the data set, freshmen students learned key mathematical, statistical, and biological concepts which were integrated into hands-on tasks assigned in the course while utilizing cutting edge software tools, specifically Tableau software. Instruction started from the application of trying to visualize the data and worked at a level appropriate for student analysis. First year students were exposed to authentic research data and were asked to investigate and explain the data in terms that anyone could understand. Students and faculty created online interactive visualizations to allow access to the information found in the data. This session will also describe insights on cross-disciplinary collaborative teaching to provide students access to rich, data applications of scientific research. (Received September 12, 2016)