

1116-M1-2629 **Beth Chance*** (bchance@calpoly.edu), San Luis Obispo, CA 93401. *Simulation-based inference beyond the introductory course.*

Simulation-based inference provides an alternative introduction to statistical inference that focuses on visualization and building on student intuition of what could happen “just by chance.” In this talk, we will address how this logic can be extended to introduce more advanced inferential procedures such as regression, chi-square, and anova. In particular, with regression, we will discuss how the design of the simulation impacts the analysis. Students see how the standard error of the slope is affected by different factors, and why modern statistical learning methods include consideration of the variability in the potential predictor variables. (Received September 22, 2015)