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**Soma Roy\*** (soroy@calpoly.edu), 1 Grand Avenue, Statistics Department, California Polytechnic State University, San Luis Obispo, CA 93407, and **Beth L Chance** and **Allan J Rossman**. *Using simulation to teach inference about correlation and regression in introductory statistics courses*. Preliminary report.

Advances in technology have given statistics instructors the opportunity to use simulation/randomization extensively in their introductory statistics courses. Often instructors only use simulation-based methods to introduce inference for simpler contexts such as one-proportion inference or two-proportions inference, and then go on to use traditional theory-based methods when teaching topics such as inference about correlation and regression. In this presentation, we will discuss how we use simulation-based methods to teach inference about correlation and regression in our introductory statistics courses, and share examples of student activities. We will demonstrate that this approach can be used not only as a teaching tool but also as an analysis tool. We will also discuss the difference that the choice of simulation strategy (random shuffling versus random sampling) makes to the standard error of the slope statistic, how that affects the p-value, and how we address this issue with our students. (Received September 17, 2014)