

1023-J5-452

Sheldon P. Gordon (gordonsp@farmingdale.edu) and **Florence S. Gordon*** (fgordon@nyit.edu). *Sampling + Simulation = Statistical Understanding: Graphical Simulations in Excel for Introductory Statistics.*

This presentation will illustrate the use of interactive graphical simulations in Excel for investigating a wide variety of random processes and sampling distributions that arise in introductory statistics courses including simulations of: * various probabilistic processes such as coin flipping and dice rolling; * the normal, binomial and other distributions; * the Central Limit Theorem; * confidence intervals and hypothesis testing; * regression and correlation analysis. The talk will emphasize a variety of ways that such graphical simulations in Excel can be used effectively. The speakers will describe their use, particularly as classroom demonstrations to motivate statistical ideas, to increase student understanding of otherwise difficult concepts and methods, to provide tools by which the students can personally discover the underlying statistical concepts, and to "justify" or validate the statistical theory. (Received September 13, 2006)