1035-K1-1895   **Randal E. Hickman*** (`ar2000@usma.edu`), 3112-B Paterson Loop, West Point, NY 10996.
Motivating Statistics-based Problem Solving through Monte-Carlo Simulation.

One of the best methods of capturing student interest in statistics is to demonstrate the importance of statistics in solving "real-world" problems. However, the analytical solutions for many of the most interesting statistical phenomena quickly become prohibitively complex when presented to introductory statistics students. This talk will demonstrate how introductory statistics instruction can employ the tools of Monte Carlo simulation to handle complex, real-world modeling problems. In addition to teaching students a simulation-based approach for solving interesting and complex statistical models, the Monte Carlo technique has the added benefit of providing an application for more basic principles such as problem decomposition, properties of the CDF, and understanding randomness. This presentation will demonstrate how Monte Carlo simulation is used to teach introductory statistics at the United States Military Academy. (Received September 20, 2007)