

1035-I1-585

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In this session, we demonstrate two interactive probability modules designed for a calculus-based courses in probability and mathematical statistics. Each module focuses on a probability distribution function or statistical concept and contains interactive graphics, data sets and suggested activities. Similar to the JAVA applets and simulation routines used in the introductory statistics course, these modules enhance learning by enabling students to visualize distribution functions, interactively vary the function's parameters, and master fundamental probabilistic and statistical concepts. The inclusion of empirical data enables the students to fit the appropriate probability model to the empirical distribution and estimate parameters. Suggested activities prompt the student to delve deeper into the underlying concepts. Linking theoretical models to real applications allows students to better grasp the relationship of probability and statistical inference. The software requires no knowledge of programming. A complete set of interactive Probability modules is currently under development by a team including a mathematician, statistician and two computer scientists. Members of the audience are invited to test the beta versions of the product as it is further developed. (Received September 11, 2007)