Title:
Recent Advances on Computer Experiments.

Abstract:
This talk attempts to address the fundamental question of "what is a (proper) computer simulation?" Various simulation issues will be discussed, including, bootstrapping (re-sampling), Markov Chain Monte Carlo (MCMC), Statistical Distribution, random number generation, and computer models. Their basic concepts and usefulness will be discussed, no specific algorithm will be given, however.

Second portion of the talk will be focused on design of running computer simulation models. Computer models can describe complicated physical phenomena. However, to use these models for scientific investigation, their generally running times and mostly deterministic nature require a special designed experiments. Recent advances on Latin Hypercube Design and Uniform Design will be discussed. Slides of his talk can be downloaded at the website http://www.personal.psu.edu/users/j/x/jxz203/lin/Lin_pub/.