ABSTRACT: Deterministic computer models are ubiquitous, appearing everywhere from industrial engineering to atmospheric science. These simulators are quite often complex, and as such can be difficult and/or time-intensive to run. The number of runs to get a satisfactory understanding of these codes is often unrealistic, and so a "computer experiment" is necessary.

In this talk I will give an introduction to the statistical design and analysis of these computer experiments. More specifically, I will first discuss how stochastic (Gaussian) processes can be used to build surrogates for the original complex deterministic codes. I then describe how this framework allows for quantifying uncertainty and understanding the relationship between inputs and output. I will conclude with a brief discussion of other aspects of computer experiments including the calibration of models to field data and my research on the use of partial derivative information.

Peter is a candidate for a faculty position in our department.

Monday, March 4, 2013
4:00 pm
Refreshments will be provided at 3:45.
Solon Campus Center 130

EVERYONE IS WELCOME

The University of Minnesota Duluth is an equal opportunity educator and employer.