



Students requiring accommodations as a result of disability, must contact the Centre for Students

Textbook: There is no required textbook. I think the course notes should be sufficient. What follows is a list of textbooks that may be useful supplements:

- T. Santner, B. J. Williams and W. I. Notz (2003) *The Design and Analysis of Computer Experiments*, Springer.
- Walter R. Gilks, Sylvia Richardson, D. J. Spiegelhalter (1996) *Markov Chain Monte Carlo in Practice*, CRC Press.
- Cressie, N. (1992) *Statistics for Spatial Data*, Wiley.
- ~~W. I. Notz (2003) *The Design and Analysis of Computer Experiments*, Springer.~~

We'll meet Tuesdays 1:30-4:20, For the first six weeks of the term.

Outline: The course will focus on methods for utilizing simulation models in statistical inference, largely from a Bayesian perspective. The course will cover Markov chain Monte Carlo, Bayesian inference, spatial models(Markov random field models, Gaussian process models, spline models) and their application to systems for which simulation models exist. Although the application to simulation models is rather specific, the course should also give a useful introduction to Markov chain Monte Carlo, spatial modeling and Bayesian inference.

Grading Scheme: Course grades will be determined by homework and a class project which will be presented to the class in the final classes of the term.

Students should be aware that they have certain rights to confidentiality concerning the return of course papers and the posting of marks. Please pay careful attention to the options discussed in class at the beginning of the semester. Students are reminded that Academic Honesty is a cornerstone of the acquisition of knowledge. Scholarly integrity is required of all members of the University. Please consult the General Guidelines of the calendar for more details.

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