STA 412H - 2105H - Nonparametric methods of inference

Contact Details
Professor Jamie Stafford
Office: Sidney Smith Hall 6019
telephone: (416)978-5709
email: stafford@utstat.toronto.edu
Class meets W 1-4, Sidney Smith Hall 2105
Office hours: M 2-4 W 4-5

Text:
Efron, B. and Tibshirani, R. (1993) *An Introduction to the Bootstrap.* Chapman and Hall.

Suggested References:
Davison, A. C. and Hinkley, D. V. (1997) *Bootstrap Methods and their Application.* Cambridge University Press.
Chambers, J. M. (2008) *Software for Data Analysis: Programming with R.* Springer.

Evaluation:
Two assignments: 20 % each
Term test: 10 %
Final: 50 %

Overview:
The course gives an introduction to some modern methods of nonparametric inference with special emphasis on bootstrap methods. Through a series of data analysis problems involving the bootstrap students are exposed to methods for density estimation, robust and flexible regression. Many fundamental concepts in mathematical statistics are revisited and viewed from the lens of bootstrap simulation providing an important experimental perspective.