Syllabus for STA410/STA2102
"Statistical Computation"

Instructor   Prof. Radu Craiu

TAs   Luhui Gan, Peiliang Guo and Peng Liu.

When and Where   Tuesday 1pm-2pm in LM 162 and Thursdays 1-3pm in NL 6 (David Naylor Building, formerly the Tanz Building at 6 Queen's Park Cres West).

Textbook   Computational Statistics by Geof Givens and Jennifer Hoeting.

Topics
1. Optimization (Newton Method, Fisher Scoring).
2. Combinatorial Optimization (Genetic Algorithms).
3. EM algorithm and Its variants.
4. Markov chain Monte Carlo.
5. Kernel Density Estimation and other techniques.

Software   We will use R to illustrate the concepts and implement the algorithms. All the data files are available online at:
http://www.stat.colostate.edu/computationalstatistics/

Marking   The mark is based on 2 homework assignments (30%), one in-class midterm examination (30%) and one final examination (40%). The midterm will take place on October 27, 2016.

Policy   The homework cannot be turned in late. You will receive marks only for the work turned in at deadline. Those who miss the midterm will have to take a make-up oral examination. The prerequisite requirements will be strictly enforced.