

Statistics 221 – Term Project

Due: May 5, 7 or 12

The term project involves discussing a recent paper that deals with a statistical computing issue. The following are a set of papers which could be discussed in class. If there is a paper not on this list that you would prefer to discuss instead, please discuss it with me. The presentations are expected to be 20 minutes plus 5 for questions. Note for the longer papers, it will not be possible to deal with the whole paper, so the important issues should be focused on.

The presentations will be done in class on May 5, 7, and 12 (reading period). The order of presentations will be chosen somewhat at random, though if there are a couple of papers that make sense to be presented on the same day, they probably will be.

Please e-mail me at irwin@stat.harvard.edu with your preference for which paper you would prefer to discuss. Please send a couple of choices in case some of you choose the same paper.

1. Tanner MA and Wong WH (1987). The Calculation of Posterior Distributions by Data Augmentation (with Discussion). *JASA* **87**: 528-550.
2. Gilks WR and Roberts GO (1996). Strategies for Improving MCMC. In *Markov Chain Monte Carlo in Practice*, WR Gilks et al. editors, 89-114.
3. Raftery AE and Lewis SM (1996). Implementing MCMC. In *Markov Chain Monte Carlo in Practice*, WR Gilks et al. editors, 115-130.
4. Gelman A and Rubin DB (1992). Inference from Iterative Simulation using Multiple Sequences. *Statistical Science* **7**: 457-472.
5. Geyer CJ (1992). Practical Markov Chain Monte Carlo. *Statistical Science* **7**: 473-483.
6. Geyer CJ and Thompson EA (1995). Annealing Markov Chain Monte Carlo with Applications to Ancestral Inference. *JASA* **90**: 909-920.
7. Casella G, Lavine M, Robert C (2001). Explaining the Perfect Sampler. *The American Statistician* **55**:299-305.
8. Niu T, Qiu ZS, Xu X, Liu JS (2002). Bayesian Haplotype for Multiple Linked Single-Nucleotide Polymorphisms. *American Journal of Human Genetics* **70**:157-169. ???
9. Richardson S and Green PJ (1997). On Bayesian Analysis of Mixtures with an Unknown Number of Components. *Journal of the Royal Statistical Society Series B (Methodology)* **59**:731-792.
10. Wei GCG and Tanner MA. (1990). A Monte Carlo Implementation of the EM Algorithm and the Poor Man's Data Augmentation Algorithms. *JASA* **85**: 699-704.