Final Term Paper, ORFE 569

Due by 11:59pm on May 14, 2007

Objective: Putting together Lab Assignments 1, 2, 3 and 4 (optional), you are required to write a final term paper. Your term paper will serve as a base to **produce a publishable paper** with the after-semester refinement and more empirical results.

Structure: Below, a structure is for your reference. Feel free to modify the structure, but the contents should be included.

Title

Abstract (Usually, written in the end)

1. Introduction
2. The Model (with two Representations)
   (a) Filtering with Counting Process Observations
   (b) Construction of Price from Value
3. Bayesian Inference (or Estimation, if no model selection) via Filtering
   (a) Review Likelihoods, Posterior, (and Bayes factors), and related Filtering equations. Review the convergence theorem for the consistency of recursive algorithms.
   (b) Construct your algorithm for computing trade-by-trade Bayes estimates (and Bayes factors). At least, present those keys equations. (HW3, #3 and HW4, # 4 (optional))
4. Simulation and Empirical Studies
   (a) Simulation Examples
      i. A Simulated Data Set (Lab 2, with suitable figures and tables)
      ii. Bayes Estimation - (Lab 3, with suitable figures and tables)
      iii. (optional) Bayesian Model Selection - (Lab 4, with suitable figures and tables)
   (b) A Real Data Example
      i. The Data (Lab 1, with suitable figures and tables)
      ii. Bayes Estimation - (Lab 3, with suitable figures and tables)
      iii. (optional) Bayesian Model Selection - (Lab 4, with suitable figures and tables)
5. Conclusions
6. Appendix (if needed)
7. References

Remarks: Do not flood your paper with unnecessary figures. Present only the figures and tables that show your points.

Even though you may not get the right results timely for Lab 4, you are encouraged to write your term paper as if you have the results of Lab 4. You may fill in the results later.