MCMC for Inverse Problems and Parameter Estimation  
SYLLABUS: MATH 514, Topics in Applied Math

Professor: John Bardsley  
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Email: bardsleyj@mso.umt.edu  
Time and Place: MWF 12:10-1pm, DHC 023.  
Course Web Page: http://web.math.umt.edu/bardsley/courses/514/514.html  
Office Hours: MWF 3pm, subject to change.

LEARNING GOALS: By the end of the course you should:

1. understand what characterizes a typical inverse problem;
2. understand what characterizes a typical parameter estimation problem;
3. be able to implement an MCMC method in both cases;
4. be well-versed in the use of MATLAB for such MCMC calculations;

ASSESSMENT: Your course grade will be determined by your performance on the homework and on your final project.

STUDENT CONDUCT: All students need to be familiar with the Student Conduct Code. You can find it in the “A to Z Index” on the UM home page. All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University.

FOR ANY STUDENT WITH A DISABILITY: If you have a disability that has, or might have, an effect on your performance in this class, please let me know. I will do my best to accommodate you.

Important Dates:

9.19  
Last day to change grade option to audit;  
Last day to submit override form;  
Last day to use CyberBear for course changes;  
Last day to withdraw with a partial refund.

10.31  
Last day to add or drop courses or change grading options, except audit.

12.16, Friday, 8-10am  
Final project presentations. This can change.