

Special Topics - Markov Chains  
STA 7934 (16E4)  
Spring 2016

**Instructor:**

J. P. Hobert  
204 Griffin Floyd Hall  
392-1941 x229

**Class:** T 9:10-10:25am, R 9:35-10:50am, Griffin-Floyd 230

**Office Hours:** By appointment

**Plan:**

I will start with a rigorous treatment of countable state space Markov chain theory. The first lectures will be based on Section 8 of Billingsley (1995), and the classical paper on computable bounds by Diaconis and Stroock (1991).

**Grading:**

The grade will be based on four in-class exams.

**Starting references:**

Billingsley, P. (1995). *Probability and Measure*, 3rd ed. John Wiley & Sons, New York.

Pitman, J. W. (1974). Uniform rates of convergence for Markov chain transition probabilities, *Zeitschrift für Wahrscheinlichkeitstheorie und Verwandte Gebiete* **29**: 193-227.

Diaconis, P. and Stroock, D. (1991). Geometric bounds for eigenvalues of Markov chains, *Annals of Applied Probability* **1**: 36-61.