

**STANFORD UNIVERSITY**  
**DEPARTMENT OF STATISTICS**  
**DEPARTMENTAL SEMINAR**

4:15 p.m., Tuesday, December 5, 2006  
Sequoia Hall Room 200  
(Cookies at 3:45 in 1st Floor Lounge)

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**Transcription Regulation Networks**

Transcription is the first step of the process with which the static information coded in a genome determines the dynamic behavior of a living cell. The regulation of transcription is largely carried out by proteins that bind up-stream of the controlled genes. Statistical analysis of the genome sequence can help determine the location of binding site for such proteins, thereby identify which genes they regulate and their possible interactions. Gene expression array experiments provide measurements of transcription levels and hence also contain information on the transcription network. I will present a series of statistical analysis of genome sequence and array data that shed some light on the transcription network of E. Coli.