

Regulatory Networks in E.Coli

Chiara Sabatti, Ph.D.
University of California at Los Angeles

Abstract:

Understanding the regulation of gene _expression is perhaps a first step in the direction of a quantitative description of the cell system. Bacteria, as E. Coli, offer a convenient model to start tackling this problem: a relative small number of regulatory proteins (few hundreds) are responsible for regulating the transcription of the ~4000 genes. Information on this regulatory network is contained in genome sequences, which can be used to identify binding sites of regulatory proteins, and in gene expression data, which monitor the effects of such regulation. I will describe models for the analysis of both these datasets that I have been developing in collaboration with Kenneth Lange and the laboratory of James Liao, in UCLA Chemical Engineering.