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BAYESIAN ANALYSIS OF HIGH DIMENSIONAL DATA

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In parallel to fast evolving technology that give rise to high dimensional data in many set-ups, there is a lot of interest in searching for sparse structure in such high dimensional data sets. In the first part of the talk, I shall discuss models and algorithms based on parallel tempering and Evolutionary Monte Carlo for Bayesian variable selection in the large p , small n paradigm. In the second part, I shall focus attention on dimension reduction through sparse latent factor models. Models and methods will be illustrated by examples from the field of genomics.