Dr. Tibshirani will discuss some procedures for modelling high-dimensional data based on L1 (lasso) style penalties. He will describe pathwise coordinate descent algorithms for the lasso, which are remarkably fast and facilitate application of the methods to very large datasets for the first time. He will then give examples of new applications of L1 penalties to microarray classification, the fused lasso for signal detection and the matrix completion problem.

About Rob Tibshirani

Before joining the Stanford faculty, Robert Tibshirani was a professor at the University of Toronto from 1985 to 1998. In his work, he develops statistical tools for the analysis of complex datasets, most recently in genomics and proteomics. His most well-known contributions are the lasso, which uses L1 penalization in regression and related problems, and significance analysis of microarrays (SAM). He also co-authored three widely used books “Generalized Additive Models,” “An Introduction to the Bootstrap” and “The Elements of Statistical Learning.”

In recognition of The Department of Statistics' 25th year celebration, there will be a reception following this talk in Martel Hall.