

STANFORD UNIVERSITY
DEPARTMENT OF STATISTICS
DEPARTMENTAL SEMINAR

4:15pm, Tuesday, April 24, 2007
Sequoia Hall Room 200
(Cookies at 3:45 in 1st Floor Lounge)

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Group Variable Selection via Hierarchical Lasso and Its Oracle Property

In many engineering and scientific applications, predictor variables are grouped, for example, in biological applications where assayed genes or proteins can be grouped by biological role. Common statistical analysis methods such as ANOVA, factor analysis, and functional modeling with partially ordered basis sets also exhibit natural variable groupings. We develop a new variable selection method that respects the group constraint. Our new method enjoys benefits that existing successful methods do not have, while offering the potential for achieving theoretical “oracle” properties.