



THE UNIVERSITY OF
CHICAGO

Departments of Computer Science, Mathematics, Statistics, and the Computation Institute
SCIENTIFIC AND STATISTICAL COMPUTING SEMINAR

RICHARD HAHN

Econometrics and Statistics

The University of Chicago Booth School of Business

**Decoupled Shrinkage and Selection: A New Tool for
Posterior Summaries in Linear Regression**

THURSDAY, April 11, 2013, at 4:30 PM

Eckhart 133, 5734 S. University Avenue

ABSTRACT

In this talk I consider the old chestnut of subset selection in linear models. The approach will be purely Bayesian and the key tool will be a novel loss function which imposes an explicit parsimony penalty subject to a probabilistic prediction constraint: we seek a linear prediction rule which is as small as possible subject to predicting well on future data with high probability. The resulting summary is computationally efficient and straight-forward to describe to non-methodologists. The method can be applied to any GLM and is able to cleverly utilize existing optimization routines.

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