

The University of Chicago Department of Statistics

BAHADUR MEMORIAL LECTURES

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Assigning Statistical Significance in High-Dimensional Problems

MONDAY, April 16, 2012 at 4:00PM

133 Eckhart Hall, 5734 S. University Avenue Refreshments will be served after the seminar in Eckhart 110.

ABSTRACT

High-dimensional data, where the number of variables is much larger than sample size, occur in many applications nowadays. During the last decade, remarkable progress has been achieved in terms of point estimation and computation. However, one of the core statistical tasks, namely to quantify uncertainty or to assign statistical significance, is still in its infancy for many problems and models. After a brief review of some main concepts for high-dimensional statistical inference, we present procedures and corresponding theory for quantifying significance in single and multiple testing problems. Illustration on various examples highlights the methods' user-friendly nature for high-dimensional data analysis.

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