THE UNIVERSITY OF CHICAGO

Department of Statistics

STATISTICS COLLOQUIUM

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Importance Sampling: An Alternative View of Ensemble Learning

MONDAY, October 8, 2012, at 4:00 PM

133 Eckhart Hall, 5734 S. University Avenue

Refreshments following the seminar in Eckhart 110

ABSTRACT

Ensemble methods have emerged as being among the most powerful statistical learning techniques. It is shown that many of the popular ensemble methods can be viewed from the perspective of of high-dimensional numerical integration. In particular, bagging, boosting, and Bayesian model averaging are seen to correspond to Monte Carlo integration methods each based on different importance sampling strategies. This interpretation explains some of their properties and suggests modifications to them that can improve their accuracy and especially their computational performance.

* Joint work with Bogdan Popescu.

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