



THE UNIVERSITY OF
CHICAGO

Department of Statistics
STATISTICS COLLOQUIUM

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Lebesgue Type Inequalities for Greedy Approximation

MONDAY, November 5, 2012, at 4:00 PM

133 Eckhart Hall, 5734 S. University Avenue

Refreshments following the seminar in Eckhart 110

ABSTRACT

While the ℓ_1 minimization technique plays an important role in designing computationally tractable recovery methods in compressed sensing, its complexity is still impractical for many applications. An attractive alternative to the ℓ_1 minimization is a family of greedy algorithms. We will discuss some greedy algorithms from the point of view of their theoretical performance. We will discuss Lebesgue type inequalities for greedy algorithms in both Hilbert and Banach spaces. By the Lebesgue type inequality we mean an inequality that provides an upper estimate for the error of a particular method of approximation of f by elements of a special form, say, form \mathcal{A} , by the best-possible approximation of f by elements of the form \mathcal{A} .

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