APPLIED MATHEMATICS COLLOQUIUM

THE LIPSCHITZ EXTENSION PROBLEM

ASSAF NAOR
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ABSTRACT:

The Lipschitz extension problem asks for conditions on a pair of metric spaces X,Y such that every Y-valued Lipschitz map on a subset of X can be extended to all of X with only a bounded multiplicative loss in the Lipschitz constant. This problem dates back to the work of Kirszbraun and Whitney in the 1930s, and has been extensively investigated in the past two decades. The methods used in this direction are based on geometric, analytic and probabilistic arguments. In particular, the methods involve stable processes, random projections, random partitions of unity and the analysis of Markov chains in metric spaces. In this talk, we will present the main known results on the Lipschitz extension problem, as well as several recent breakthroughs.

MONDAY, APRIL 25, 2005
4:15 PM
Building 4, Room 231

Refreshments at 3:30 PM in Building 2, Room 349.

Applied Math Colloquium: http://www-math.mit.edu/amc/spring05
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