APPLIED MATHEMATICS COLLOQUIUM

SYMMETRY AND SYMMETRY BREAKING IN OPTIMIZATION PROBLEMS

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ABSTRACT:

How much symmetry and structure should we expect the solutions of an optimization problem to have? Some cases have unexpected symmetry (think of crystals), while others have unexpectedly little. This talk will focus on a class of problems on the boundary between order and disorder: most cases involve little symmetry, but they nevertheless have considerable structure. We'll examine several cases in detail, with connections to combinatorics, quantum physics, and discrete geometry.

MONDAY, OCTOBER 27, 2008
4:30 PM
Building 4, Room 231

Reception at 4:00 PM in Building 2, Room 349
(Applied Math Common Room)

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