COMPUTATIONAL RESEARCH in BOSTON and BEYOND SEMINAR

Mixed-integer convex optimization

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ABSTRACT:

Mixed-integer convex optimization problems are convex problems with the additional (non-convex) constraints that some variables may take only integer values. Despite the past decades' advances in algorithms and technology for both mixed-integer *linear* and *continuous, convex* optimization, mixed-integer convex optimization problems have remained relatively more challenging and less widely used in practice. In this talk, we describe our recent algorithmic work on mixed-integer convex optimization which has yielded advances over the state of the art, including the globally optimal solution of open benchmark problems. Based on our developments, we have released Pajarito, an open-source solver written in Julia and accessible from popular optimization modeling frameworks. Pajarito is immediately useful for solving challenging mixed combinatorial-continuous problems arising from engineering and statistical applications, including sparse regression with the L_0 norm.

FRIDAY, APRIL 1, 2016
12:00 PM – 1:00 PM
Building 32, Room 124
(STATA)

Pizza and beverages will be provided.

http://math.mit.edu/crib/

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