



THE UNIVERSITY OF CHICAGO

Departments of Computer Science, Mathematics, Statistics, and the Computation Institute

SCIENTIFIC AND STATISTICAL COMPUTING SEMINAR

SPECIAL SEMINAR

(Live broadcast via Adobe Connect)

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MOPEC: Multiple Optimization Problems with Equilibrium Constraints

TUESDAY, March 26, 2013, at 3:00 PM
SEARLE 240A, 5735 S. Ellis Avenue

ABSTRACT

We present a mechanism for describing and solving collections of optimization problems that are linked by equilibrium conditions. Included in this class are classical models such as the PIES model and agent based formulations arising from Nash Games. We demonstrate this mechanism in the context of energy planning problems, specifically for capacity expansion, hydro operation, and transmission line switching. We show how to incorporate stochastic information into these systems and give examples of their use and their possible extensions to hierarchical modeling.

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