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Random Multidimensional Assignment Problem

Tuesday, April 25, 2006
4:00 pm
Peirce 220

Abstract:
The Multidimensional Assignment Problem (MAP) is a higher-dimensional version of the Linear Assignment Problem that arises in the areas of data association, target tracking, resource allocation, etc. In this talk we discuss the behavior of random large-scale instances of MAP whose assignment costs are iid random variables with a prescribed probability distribution. Convergence of the optimal value of random MAP is investigated for a broad class of continuous distributions, and tight bounds for the expected optimal cost of the MAP are constructed. In addition, we discuss the properties of solution landscape of the MAP, including the expected number of local minima, distribution of hamming distance to the global minimum, etc.

Refreshments will be provided.
For more information contact Darinka Dentcheva, Michael Zabarankin, Ionut Florescu, or call 201-216-5449.