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## Selective bi-coordinate variations for resource allocation type problems

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### Abstract

© 2016, Springer Science+Business Media New York. We suggest a modification of the coordinate descent methods for resource allocation problems, which keeps the basic convergence properties of the gradient ones, but enables one to reduce the total computational expenses and to provide all the computations in a distributed manner. We describe applications to economic (auction) equilibrium problems and give preliminary results of computational tests.

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### Keywords

Bi-coordinate descent, Decentralized exchange mechanism, Local variations, Optimization problems, Resource allocation