

BRANCH AND BOUND WITH SIMPLICIAL PARTITIONS AND COMBINATION OF LIPSCHITZ BOUNDS FOR GLOBAL OPTIMIZATION

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The proposed branch and bound algorithm with simplicial partitions for global optimization uses combination of two types of Lipschitz bounds. One is improved Lipschitz bound with first norm. Another is combination of simple bounds with different norms. The efficiency of the proposed global optimization algorithm is evaluated experimentally. It is shown that the proposed bound improves results considerably.

LPRANKBOOST AND COLUMN GENERATION

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We investigate the use of LPboost for combining a set of weak learning functions into a global ranking function for predicting the order of a new subject. The notion of risk is translated as an appropriate concordance score (related to AUC and Kendall's tau), while the regularization mechanism results in a sparse solution useful for discovering structure in the specific task at hand. The result can be analyzed as a global linear programming problem, while a column generation approach yields a highly efficient implementation.

ON A REDUCTION LINE SEARCH FILTER METHOD FOR NONLINEAR SEMI-INFINITE PROGRAMMING PROBLEMS

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In this paper, a reduction-type method combined with a line search filter method to solve nonlinear semi-infinite programming problems is presented. The algorithm uses the simulated annealing method equipped with a function stretching technique as a multi-local procedure, and a penalty method for the finite optimization process. The filter method is used as an alternative to merit functions to guarantee convergence from any starting point. Numerical results with a preliminary problems test set is shown.