A Projective Separating Plane Method with Additional Clipping and its Application to the Transportation Problems

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We consider a separating plane algorithm with additional clipping [1]. The algorithm is used for solving the unconstrained non-smooth convex optimization problem. The latter problem can be reformulated as the computation of a conjugate function value at the origin [2].

The algorithm was successfully applied to the solution of transportation problems with two-sided constraints. The presence of such constraints is often a problem for the method of potentials and the simplex method. The linear programming task was replaced by a linear variety projection task. Results of numerical experiments are presented.

REFERENCES

1. E. Vorontsova. *A Projective Separating Plane Method with Additional Clipping for Non-Smooth Optimization* — WSEAS Transactions on Mathematics, vol. 13, 2014, pp. 115–121.
2. E.A. Nurminski. *Separating plane algorithms for convex optimization* — Mathematical Programming, № 76, 1997, pp. 373–391.