**On a constructive approach to optimality conditions for convex SIP problems with polyhedral index sets**

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**Abstract:** In the paper, we consider a problem of convex Semi-Infinite Programming with an infinite index set in the form of a convex polyhedron. In study of this problem, we apply the approach suggested in our recent paper [Kostyukova OI, Tchemisova TV. Sufficient optimality conditions for convex Semi Infinite Programming. Optim. Methods Softw. 2010;25:279–297], and based on the notions of immobile indices and their immobility orders. The main result of the paper consists in explicit optimality conditions that do not use constraint qualifications and have the form of criterion. The comparison of the new optimality conditions with other known results is provided.

**Keywords:** Semi-Infinite Programming, optimality conditions, polyhedral index set.

1. BSUIR [↑](#footnote-ref-1)
2. Foreign [↑](#footnote-ref-2)