

ON THE CHOICE OF PARAMETERS IN THE QUASISOLUTION METHOD FOR THE CORRECTION OF IMPROPER CONVEX PROGRAMS

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The paper is devoted to finding approximation solutions of improper convex programs. For such programs, a correction model is considered in the form of the problem of minimizing the objective function of the original problem on the set of extremal points of a penalty function, which aggregates the inconsistent constraints. For the penalty function, the Eremin–Zangwill exact penalty function is chosen. Under an approximately given input, a generalized solution of the improper convex program is obtained by applying the quasisolution method known in the theory of ill-posed problems. Estimates characterizing the quality of the correction are given. Iterative schemes implementing this approach are proposed.

Keywords: convex programming, improper problem, optimal correction, exact penalty function method, quasisolution method.

MSC: 47N05, 37N25, 37N40

DOI: 10.21538/0134-4889-2020-26-3-187-197

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Received March 3, 2020

Revised April 6, 2020

Accepted April 20, 2020

Funding Agency: This study is a part of the research carried out at the Ural Mathematical Center and was supported by the Russian Foundation for Basic Research (project no. 19-07-01243).

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V. D. Skarin. On the choice of parameters in the quasisolution method for the correction of improper convex programs, *Trudy Instituta Matematiki i Mekhaniki URO RAN*, 2020, vol. 26, no. 3, pp. 187–197.