A new method of discretization and the feasible direction method based on the Zoutendijk algorithm in semi-infinite programming

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1):a new method of discretization:

We introduce a new method of discretization according to the finite covering theory of compact set, some new result of semi-infinite programming are provided by means of epi-convergence, simultaneously, the relation between this new method and the method of grid is considered.

2):the method of feasible direction based on Zoutendijk algorithm:

Firstly, we have a new feasible direction algorithm by improving Zoutendijk algorithm of  $\varepsilon$ -active constraint, the convergence is also achieved.

Secondly, with Reduction Ansatz, we apply the algorithm above to Generalized semi-infinite programming, the same convergence can also be obtained.