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*Finding Best Approximation Pairs for Two Intersections of Closed Convex Sets*

The problem of finding a best approximation pair of two sets, which in turn generalizes the well known convex feasibility problem, has a long history that dates back to work by Cheney and Goldstein in 1959.

In 2018, Aharoni, Censor, and Jiang revisited this problem and proposed an algorithm that can be used when the two sets are finite intersections of halfspaces. Motivated by their work, we present alternative algorithms that utilize projection and proximity operators. Numerical experiments indicate that these methods are competitive and sometimes superior to the one proposed by Aharoni et al.