
Locating Obnoxious Facilities on a Line Segment

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Abstract

In this paper, we consider the problem of locating k obnoxious facilities of maximum radius, centered on a line segment $\overline{pq}$, amidst n demand points in the plane so that none of the existing facility sites are affected. An $(1-\epsilon)$ -approximation algorithm was given recently to solve the problem (CCCG2021), where $\epsilon > 0$. Here, we present two polynomial time exact algorithms based on two different approaches : (i) the algorithm is based on doing a binary search on all candidate radii.

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