

The ordered anti-median problem with distances derived from a strictly convex norm

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In this talk a general model for locating a repulsive facility regarding a point set P in a bounded polygonal region is considered.

In order to have a finite set of candidates for the ordered anti-median problem, the tessellation given by the complete ordered Voronoi diagram is used.

However, even in the case of distances derived from strictly convex norm, the intersection of two bisectors of two different pairs of points can have an infinite number of connected components. Therefore, the class of strictly convex distances must be restricted. For this case an $O(sn^5)$ time algorithm is proposed, where s is a uniform bound on the number of intersections of two bisectors.

(joint work with Antonio J. Lozano and Frank Plastria)