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Barrier resilience of visibility polygons

Abstract

In barrier resilience problems, we are given a set of barriers and two points s and t. The task is to find the minimum number of barriers one has to remove such that there is a path between s and t that does not cross a barrier. The barrier resilience of arrangements of geometric objects such as circles and line segments have been considered. We will consider the problem of computing the barrier resilience of a set of visibility polygons inside a polygon. In simple polygons the problem is solvable in time linear in the number of edges. In polygons with holes the problem is APX-hard, but for special cases there are polynomial time algorithms.

Biography

Zahra Momtazian *is a MSc student at Sharif university under the supervision of Prof. Ghodsi. Her research interests lie in Computational Geometry.*