
KATIE TSUJI, University of Waterloo

Finding Monotone Path Systems in Regions with Holes

A monotone path system (MPS) is a finite set of pairwise-disjoint paths (polygonal arcs) in the plane such that every horizontal line intersects each of the paths in at most one point. Consider a simple polygon in the xy -plane which bounds the polygonal region D . Let T and B be two finite, disjoint, equicardinal sets of points of D . Cameron and Sachs gave a polynomial-time algorithm to find a MPS whose top points are T and whose bottom points are B , or to determine that no such MPS exists. We consider polygonal regions with holes. Joint work with Kathie Cameron.