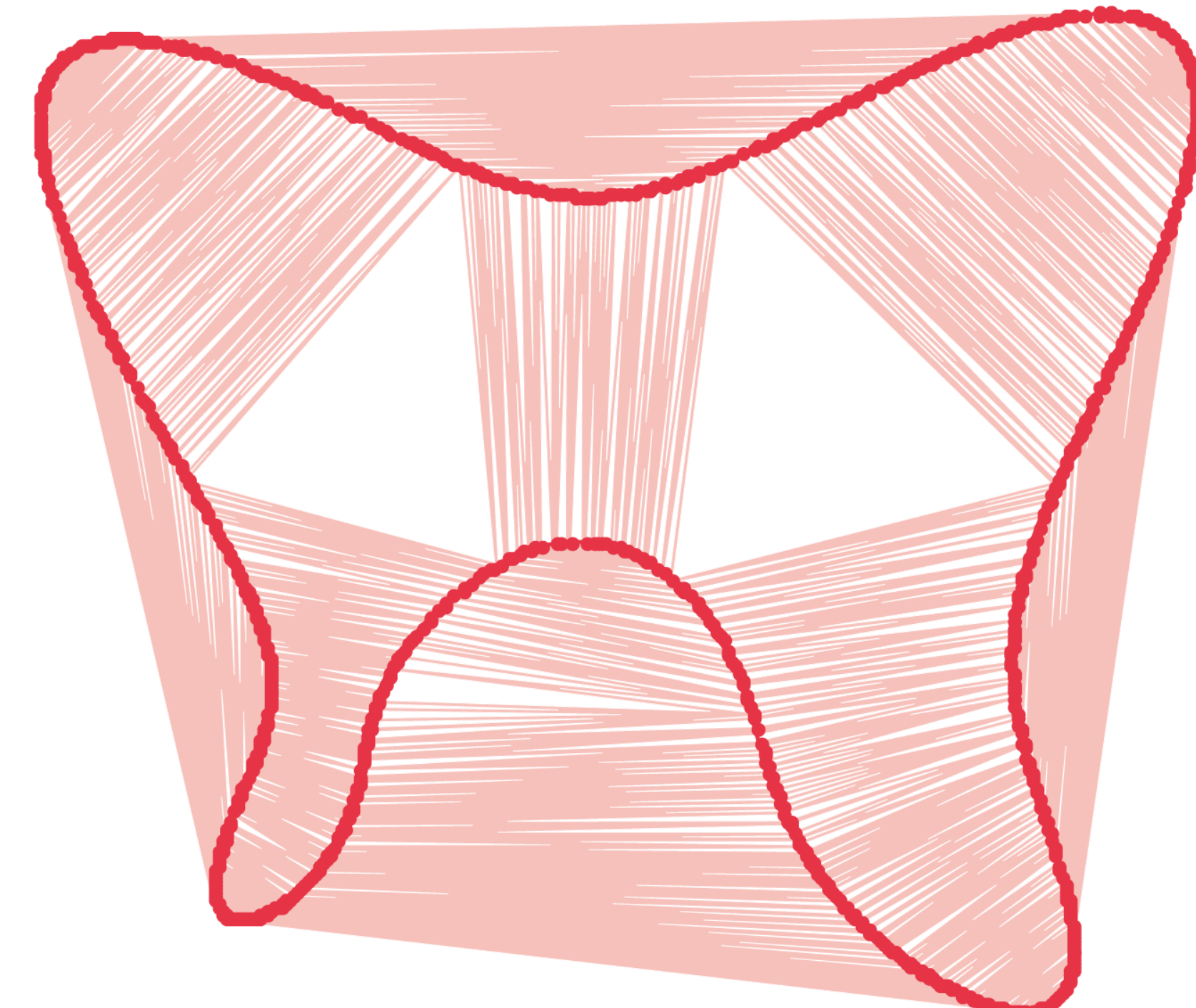
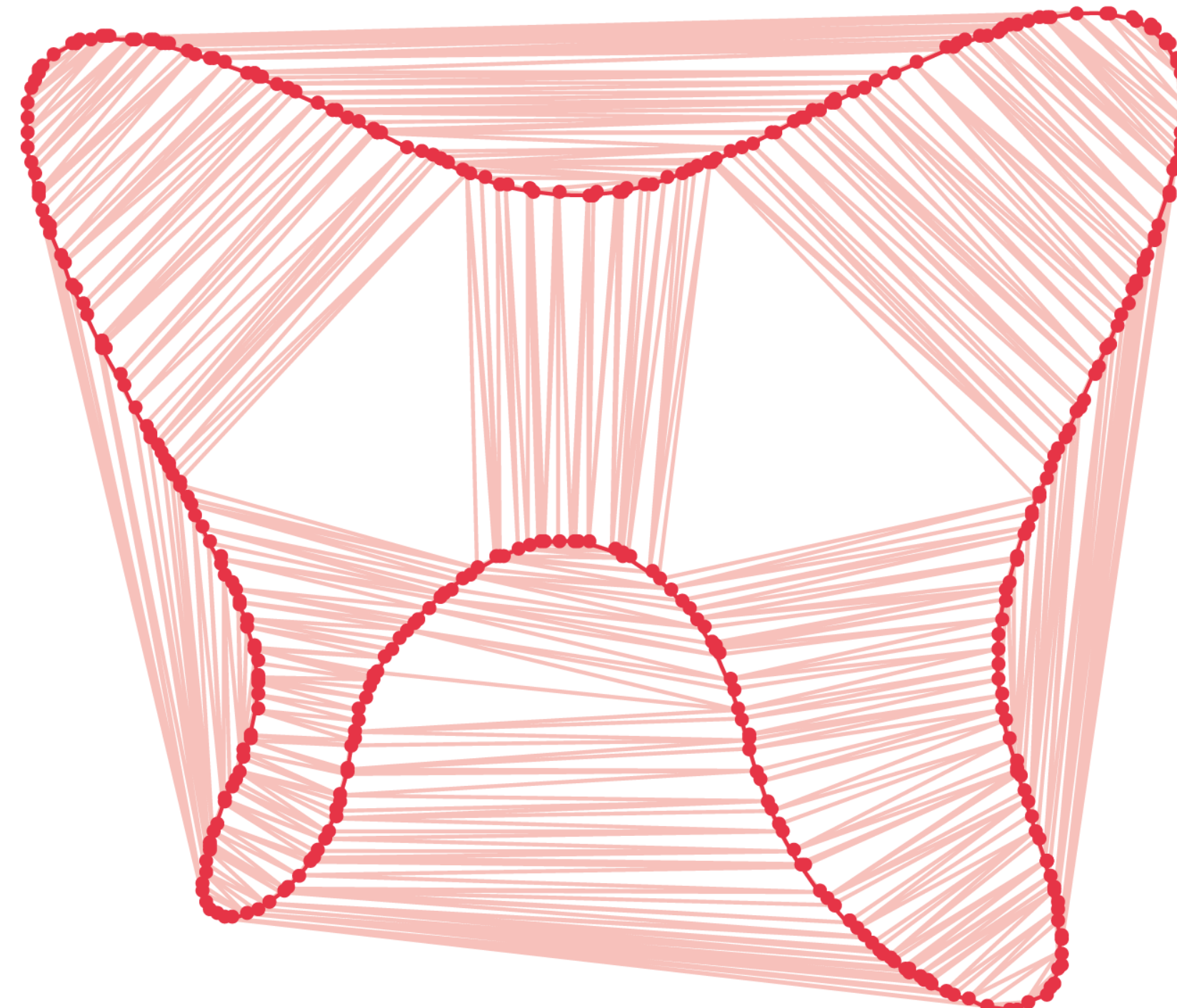
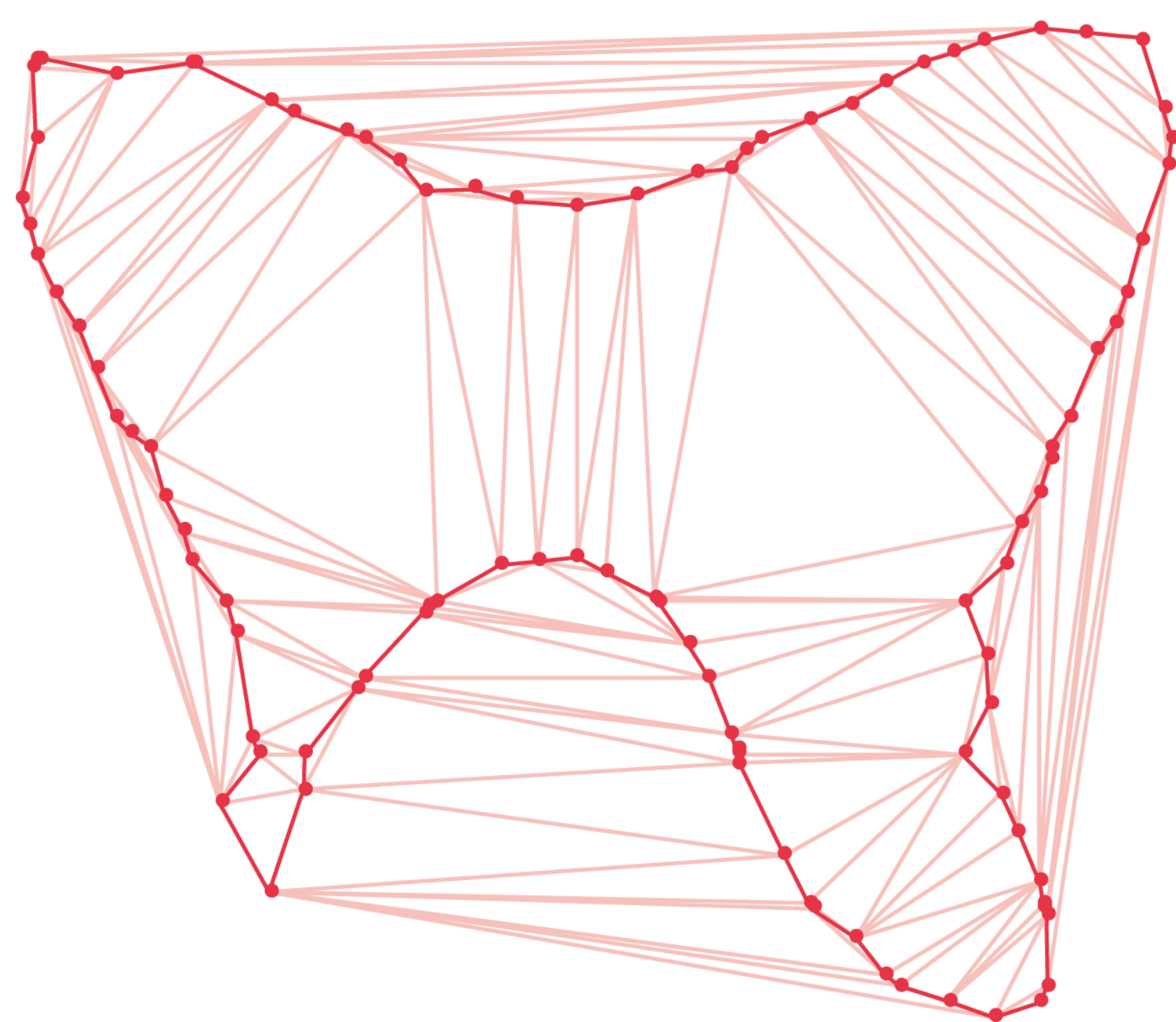
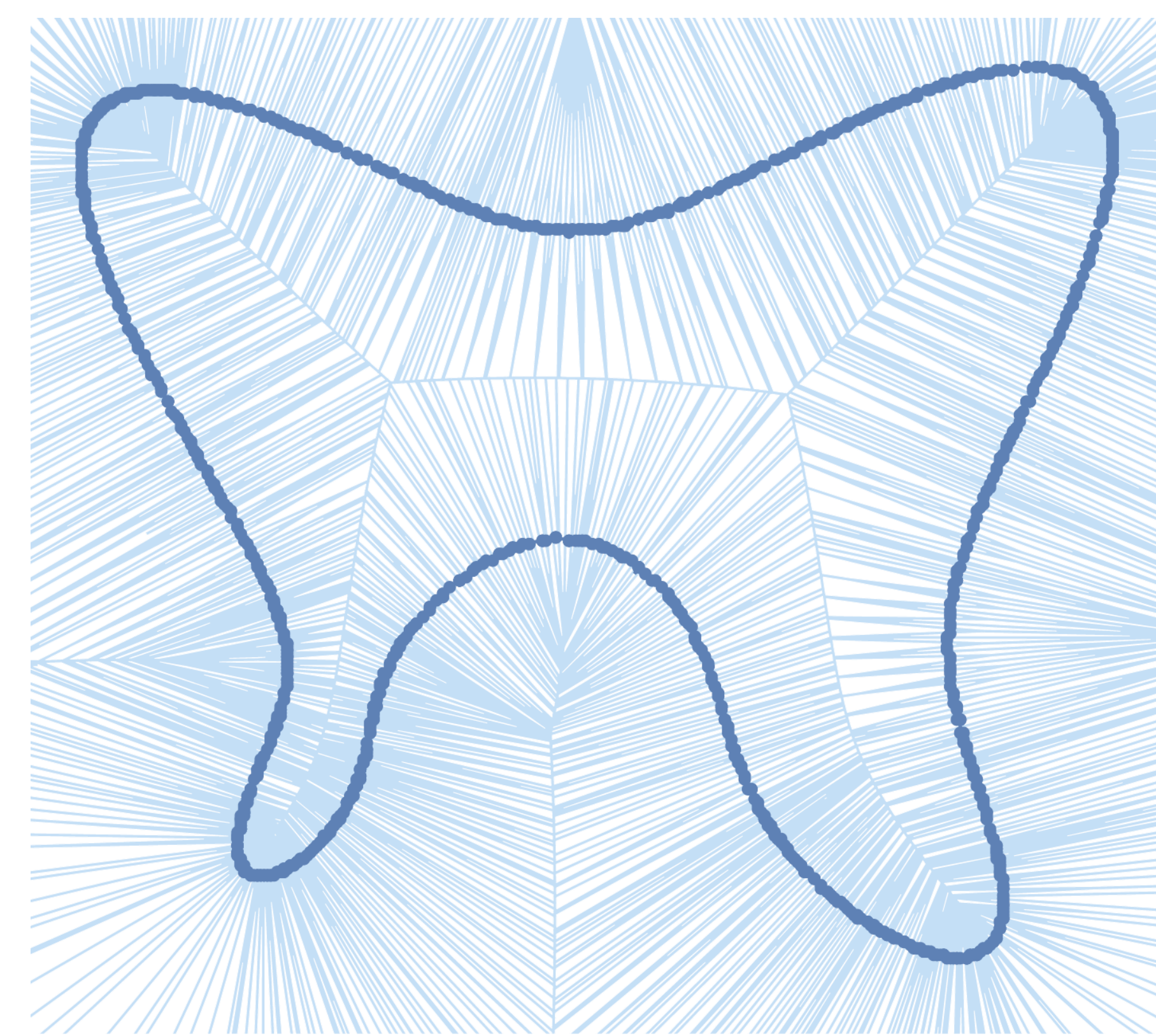
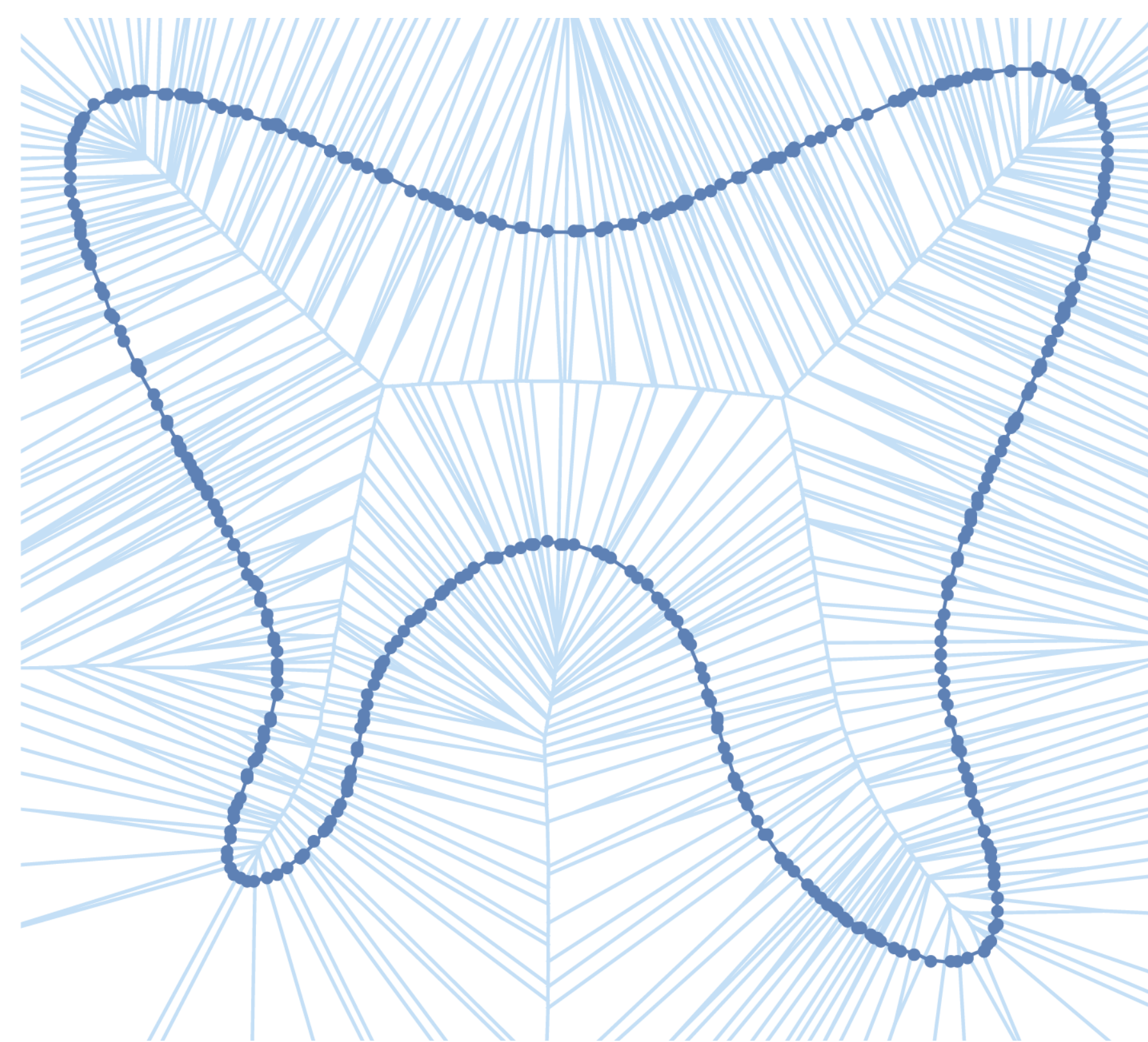
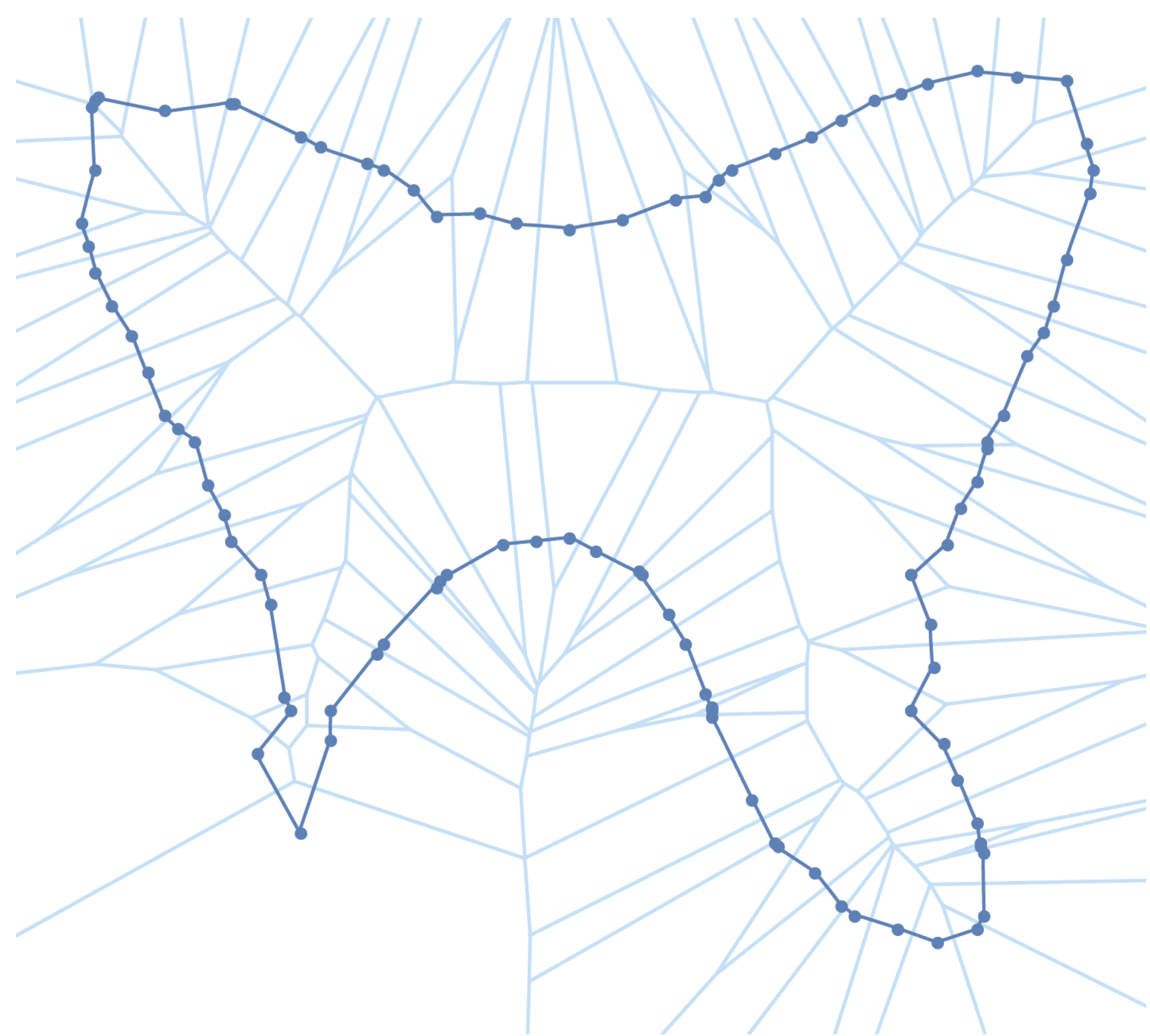


# VORONOI AND DELAUNAY CELLS FOR PLANE CURVES

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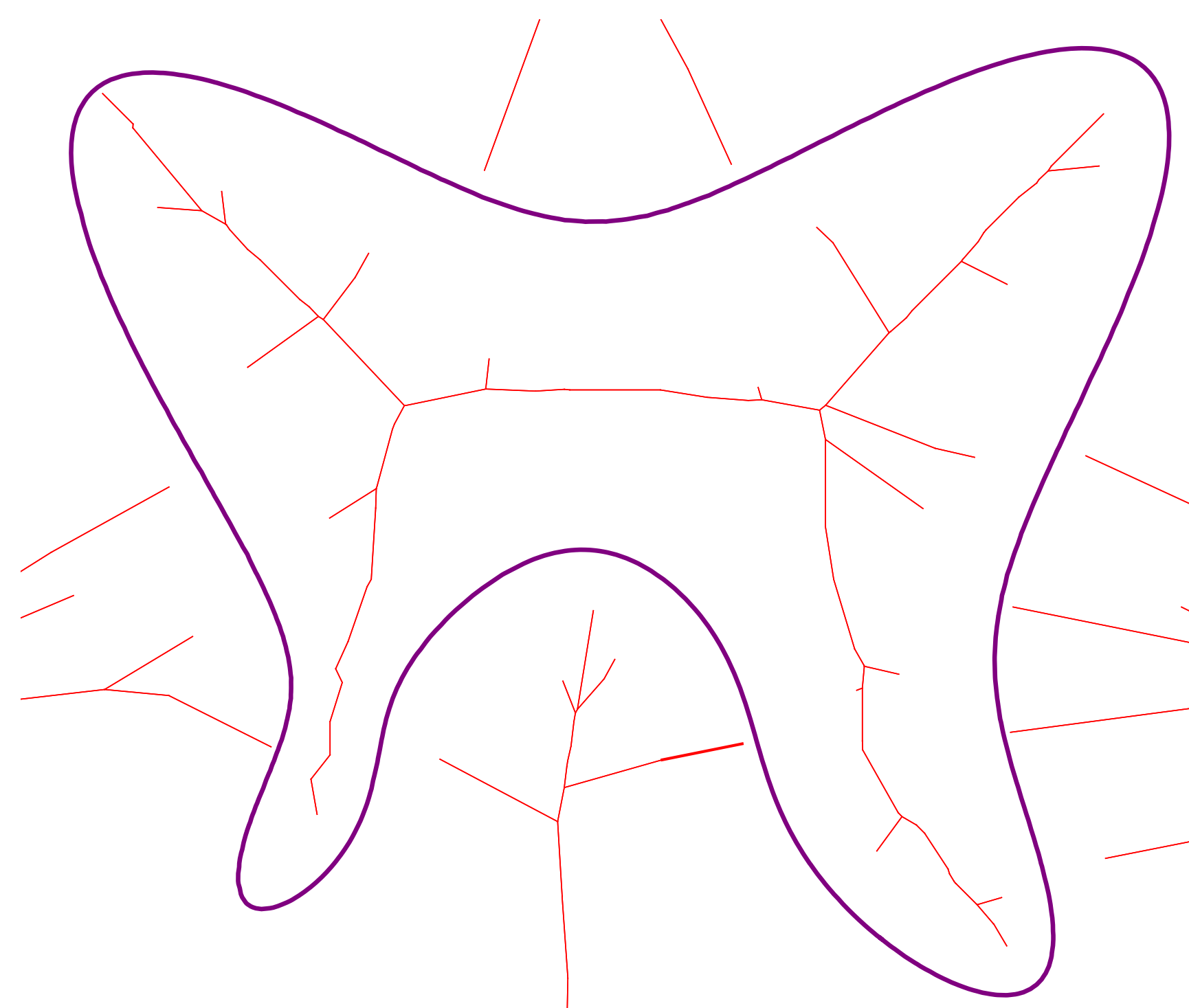
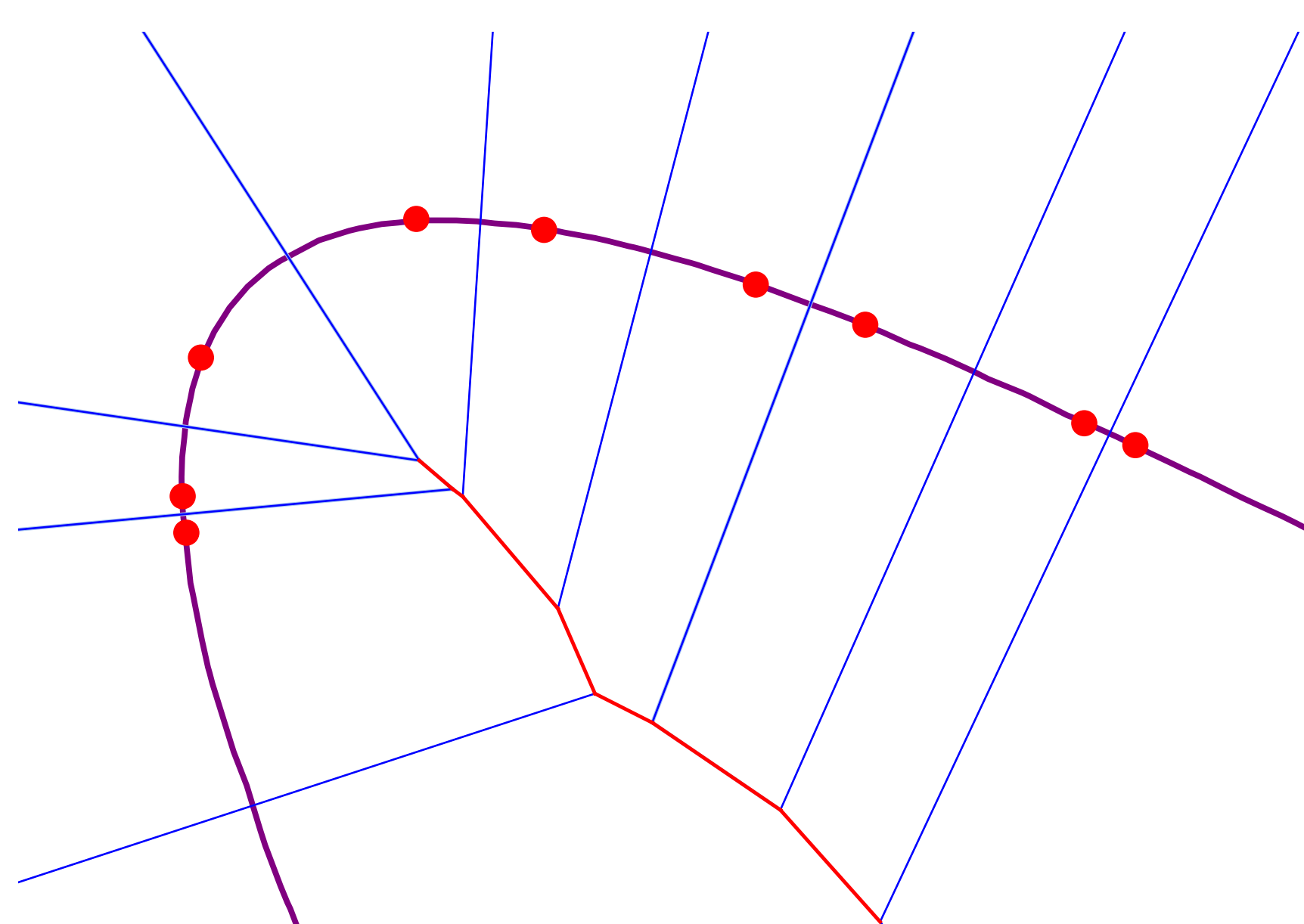


## Main Theorem

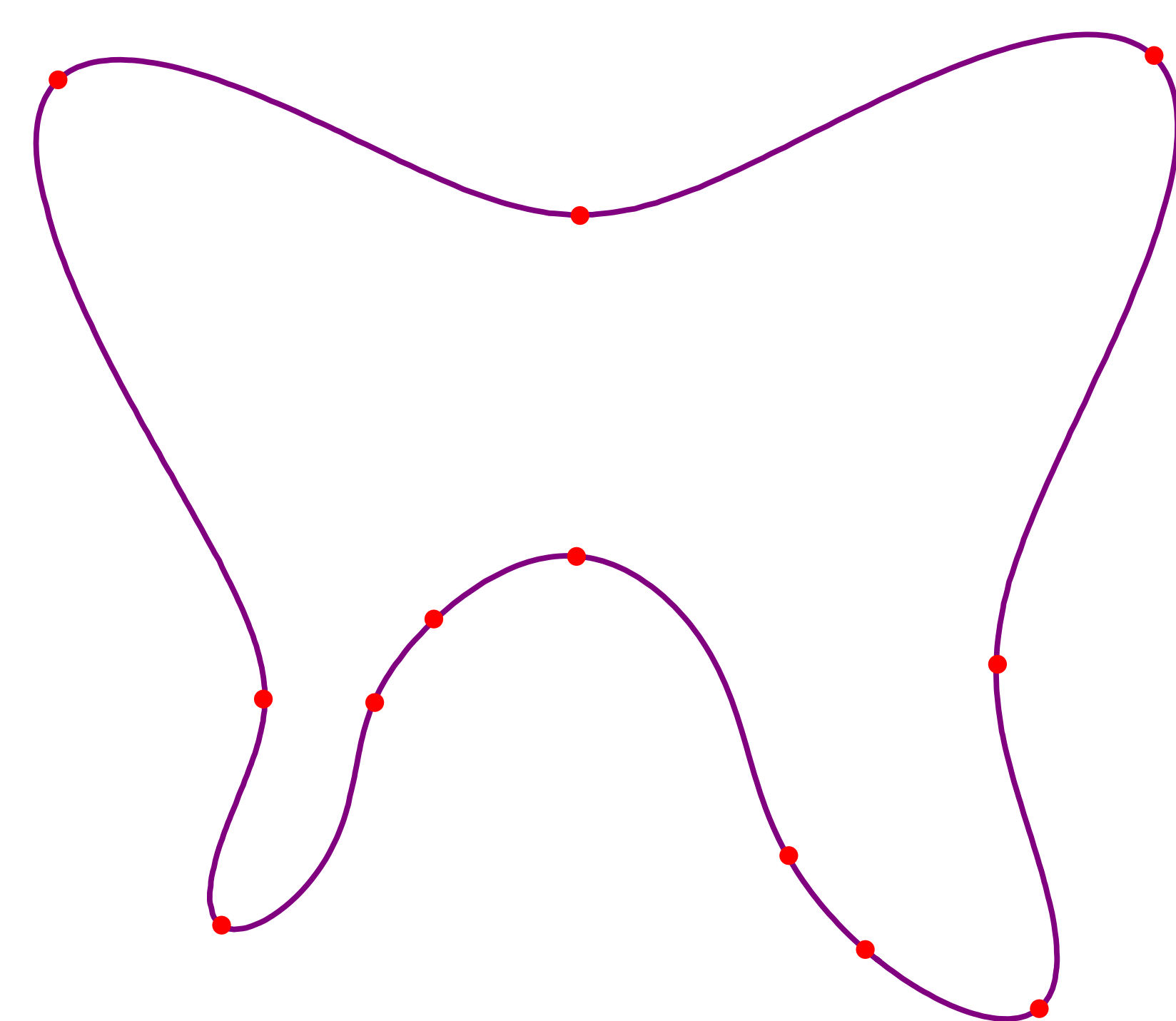
Let  $X$  be a compact algebraic curve in  $\mathbb{R}^2$  and  $\{A_\epsilon\}_{\epsilon \searrow 0}$  be an  $\epsilon$  approximation of  $X$  that contains all singular points.

1. Each Voronoi cell is the Wijsman limit of a sequence of Voronoi cells of  $A_\epsilon$ .
2. If  $X$  is Delaunay generic then each Delaunay cell is the Hausdorff limit of a sequence of Delaunay cells of  $A_\epsilon$ .

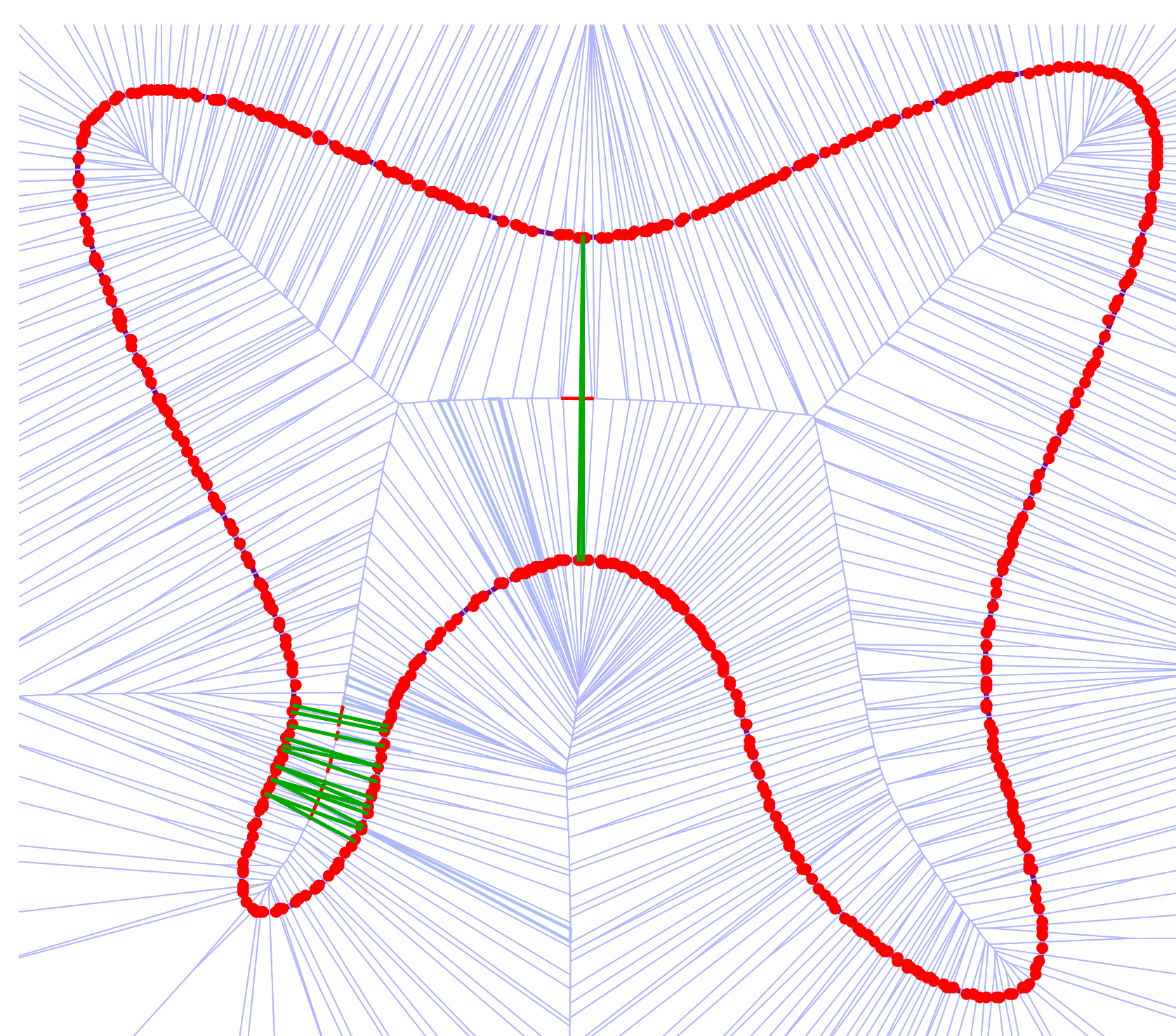
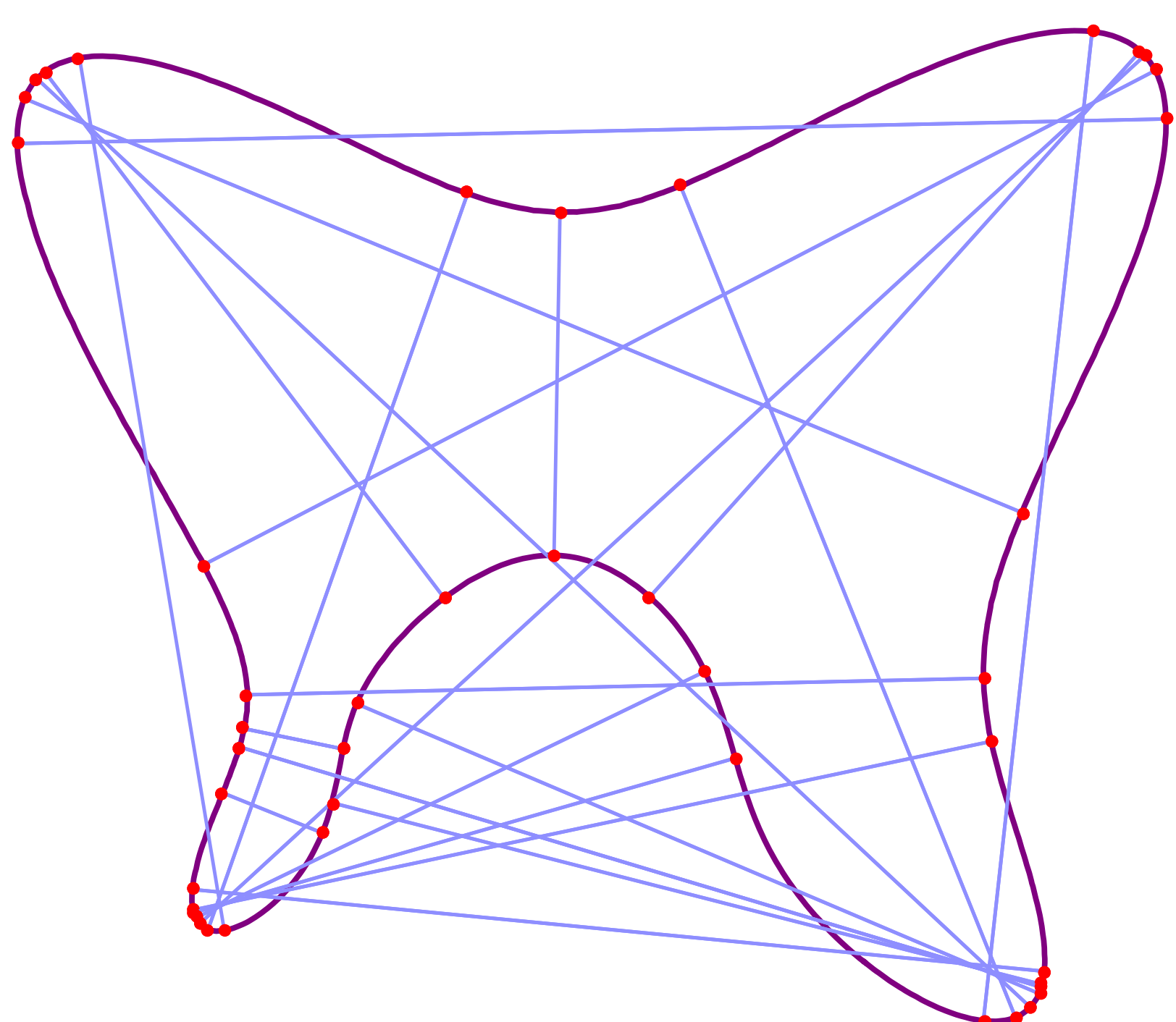
**Medial Axis** Which points in  $\mathbb{R}^2$  have more than one nearest point on  $X$ ?



**Critical curvature**



**Bottlenecks** Which points are contained in each other's normal spaces?



**Reach** At which distance from  $X$  do points have more than one nearest point?

