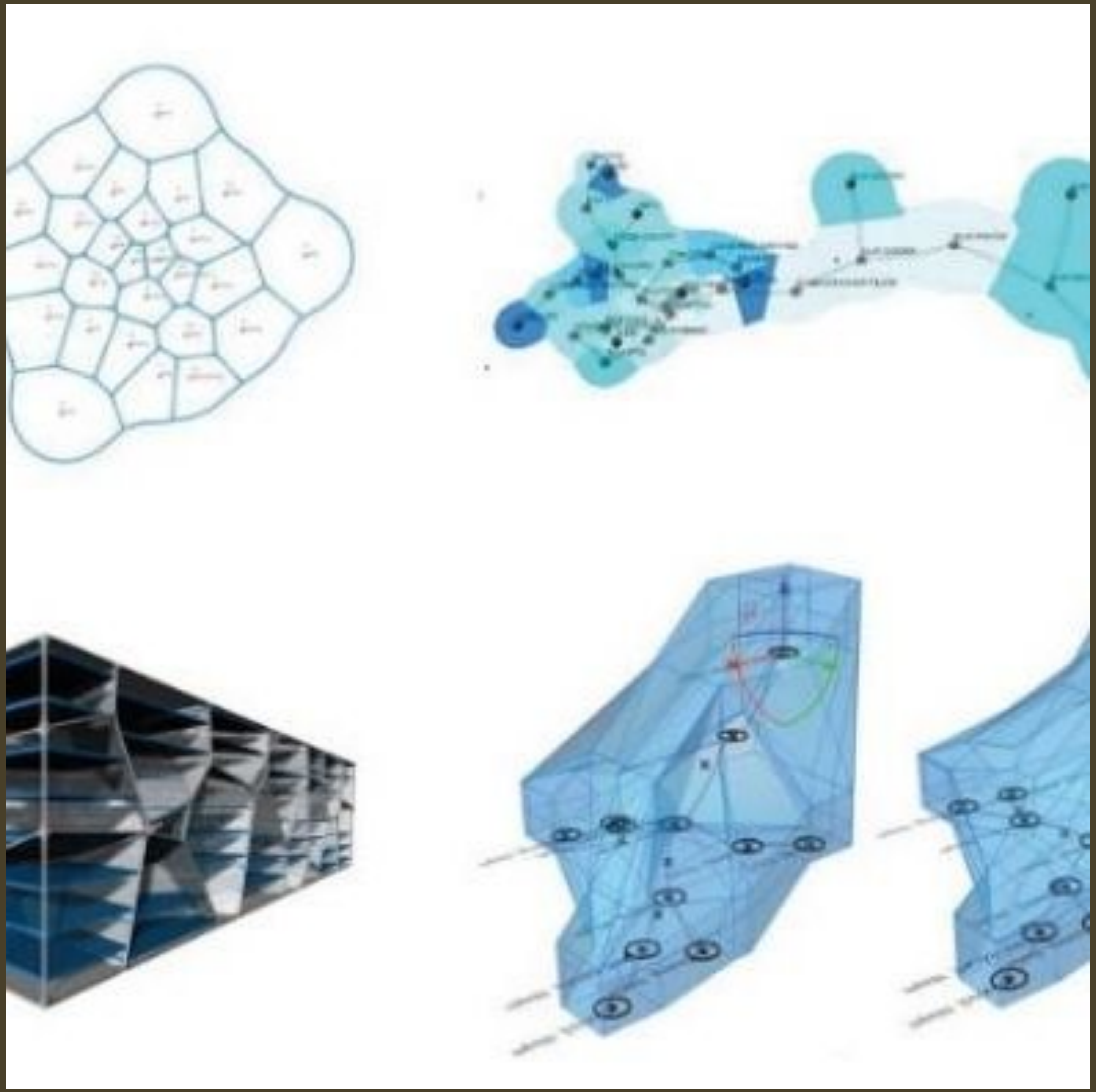

Delaunay Triangulation

This section explains why the Delaunay triangulation is beyond the scope of this article and why its discussion was omitted from the first version of this article.

A triangulation of a set of two dimensional points represents a planar sub-division into a set of triangles. For a given set of points, there exist many triangulations. A Delaunay triangulation is, in some aspects, the most perfect one and it is the dual graph of a Voronoi diagram (see Figure 6). A vertex of a Delaunay triangulation corresponds to a Voronoi cell and its site. The connectivity of vertices in a Delaunay triangulation is defined by boundary edges of Voronoi cells. The Delaunay triangulation has a number of interesting properties that makes it useful in a wide range of practical applications [3].

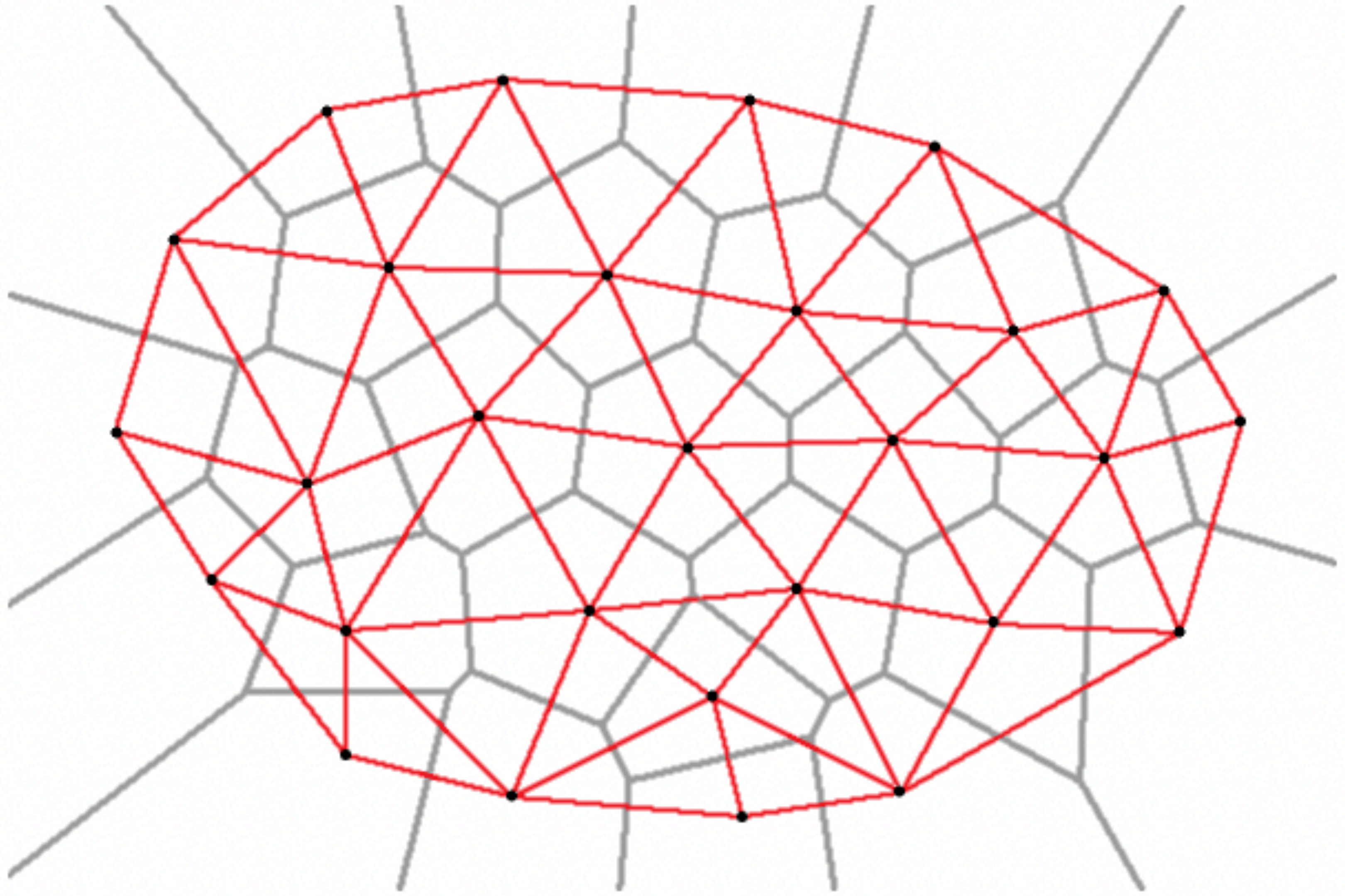

Figure 6: A Delaunay triangulation (in red) and a Voronoi diagram (boundaries of cells in gray) of a set of points. The Delaunay triangulation is visualized by drawing line segments between sites of adjacent Voronoi cells. A line segment does not necessarily intersect a corresponding boundary edge of a Voronoi cell. Note that the triangulation covers only the region inside the convex hull of the input set of points.