Delaunay and data-dependent triangulations

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Abstract

The aim of this talk is to show a short introduction to the theory of Delaunay triangulations and an example of alternative triangulation when the first fail. More precisely, some definitions will be given about triangles and mesh triangulations, then I'll talk about the Voronoi diagram and how the Delaunay triangulation comes from it. After that, I'll show some algorithms in order to evaluate the Delaunay triangles and I'll conclude with some examples about how to work with delaunay( ) and voronoi( ) in the Matlab enviroment in order to show the relationship between the two functions. Last but not least I'll show some cases in which the Delaunay triangulation is not the most proper and how to deal with this issue.

References

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