

ROOT Graphics and Math

ROOT 2d graphs (class `TGraph2D`) implement the Delaunay triangulation technique to display 2D surfaces and to interpolate data points. The current implementation is not optimal. In particular a better data structure in memory would be helpful to further explore the possibilities this technique offers. The student work will have several aspects:

1. Provide a better implementation of the Delaunay triangulation (see free code).
2. Investigate other interpolation techniques.
3. Provide an interface to Voronoï diagrams (Delaunay triangle dual).
4. Generates `TH2Poly` from Delaunay triangles and/or Voronoï diagrams.

Other specific requirement:

The candidates should be familiar with the C++ programming language.

Some knowledge in computer graphics would be also useful.

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Student: computer scientist