CS 478 Project Proposal

**Project Name:** Implementation of Two Delaunay Triangulation Algorithms and Comparing Their Performance (2 Students)

**Students:** Özugur Abi (21902358), Ali Dogaç Urkaya (21903213)

**Project Description**

The following algorithms will be used to compute a Delaunay triangulation from a set of random points on a 2D plane:

- Randomized Incremental Algorithm
- Divide-and-conquer algorithm

The program will set up a set of random points using various distributions as input. Then the program will create Delaunay triangulation as an output and visualize it. The user will be able to specify number of points and edit the point set (add/remove points). The program will allow users to zoom in/out, rotate and translate Delaunay triangulation visualization.

The program will be tested with a number of arbitrary point sets. Performance results will be noted and performance of the algorithms will be compared for different number of points.