



Module PMRF-ISSS094/II/2024

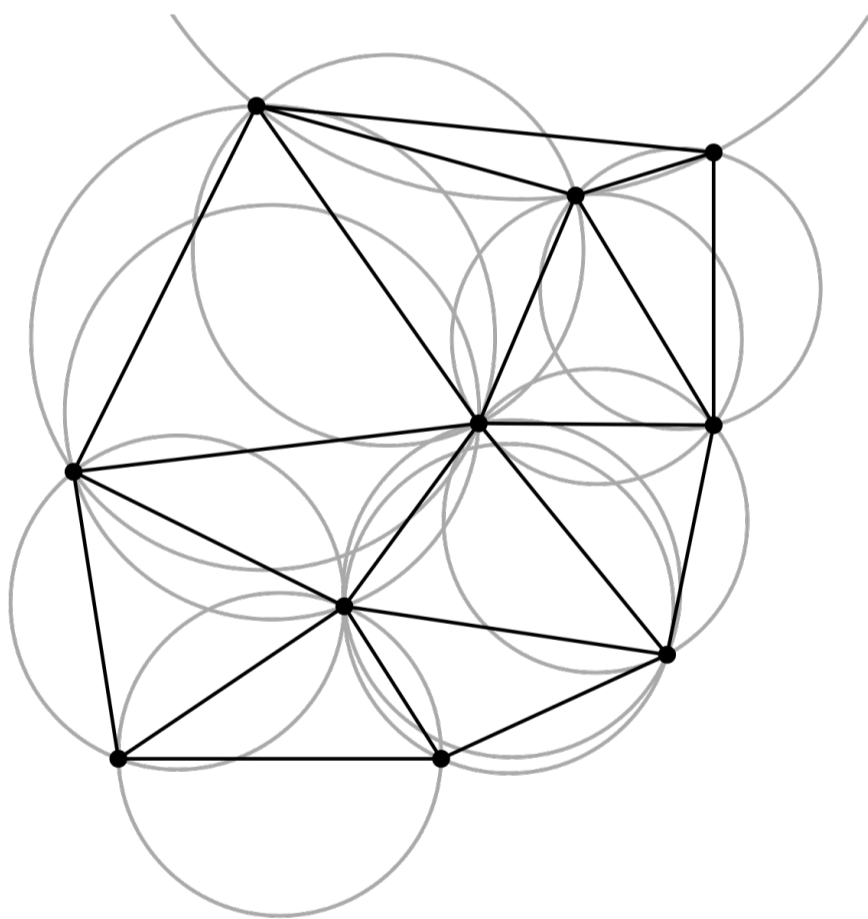
Computational Geometry

Name of the PMRF student

Rachana Gusain

Required background of the students taught

An undergraduate course on Data Structures and Algorithms



Details of the content of the module

Module 1. Convex hull, Skyline.

Module 2. Line segment intersection, Art Gallery problem, monotone polygon triangulation

Module 3. Voronoi Diagram, Delaunay triangulation.

Module 4. Orthogonal range searching, range trees, kd-trees, interval trees, priority search trees, segment trees.

Module 5. Line Arrangement, Zone Theorem, Halfplane discrepancy, discrepancy and duality.

Module 6. VC dimension, Sauer-Shelah Lemma.

Schedule of the module

Starts on 01 August 2024

Ends on 31 December 2024

Class Schedule: Thursday & Friday, 06:00 to 07:00 pm.

Total 35 lectures (1 hour per lecture)

Meeting link : Will be shared later

Contact email ID: issforum@gmail.com

Registration link:

<https://forms.gle/BYtrH4yRkuBn3rL5A>