PMRF-ISSS Teaching Programme

Prime Minister Research Fellowship students' teaching requirement
facilitated by the Institute of Smart Structures and Systems

Module PMRF-ISSS059/III/2025

Combinatorial Geometry (Part 1)

Name of the PMRF student

Rachana Gusain
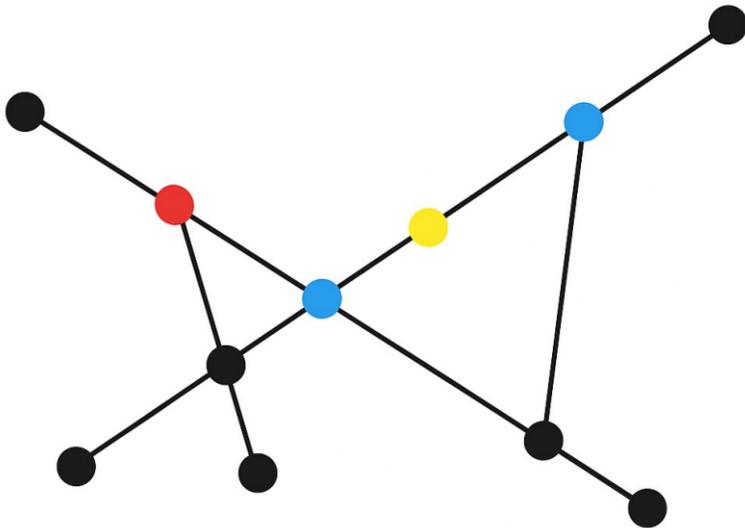
Required background of the students taught

Computer Science.
Prerequisite: Linear Algebra

Details of the content of the module

Week 1. Sylvester-Gallai Theorem, Review of Convexity, Carathéodory's Theorem, Radon's Lemma, Helly's Theorem.

Week 2-3. Centerpoint and Ham Sandwich theorem, Colorful Carathéodory, Colorful Helly.

Week 3-4. Convex Independent Subsets, Erdos-Szekeres Theorem, Horton Sets.

Schedule of the module

Starts on 7 July 2025

Ends on 31 July 2025

Class Schedule: Monday and Tuesday

05:30 pm to 07:00 pm

Total 8 lectures (1.5 hour per lecture)

Meeting link : Will be shared later

Contact email ID: isss.forum@gmail.com

Registration link:

https://forms.gle/vS5TUezSiF8ZT5Ut5