

MA4198 PROJECT PROPOSAL (PROJECT CUM SEMINAR GROUP)

SUPERVISOR'S INFO

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PROJECT ID: PS2610-05

TITLE

Random Matrix Theory

BRIEF DESCRIPTION OF PROJECT

Random Matrix Theory (RMT) is the study of matrices whose entries are random variables. Alternatively, we can also view it as the study of matrix-valued (rather than the more familiar scalar-valued) random variables. RMT is an area of mathematics with connections to probability, linear algebra, analysis, combinatorics, statistics, mathematical physics, and more. Students will learn some shared foundational ideas and then choose projects that branch in different directions according to their interests.

EXPECTATION/S

Students are expected to

- Attend and participate in regular seminar meetings;
- Independently study appropriate source material;
- Collaborate with other members of the seminar group;
- Give several presentations at seminar meetings;
- Submit occasional short reflections or reports;

Write a final report to be submitted at the end of the project.

PREREQUISITE/S (at level 3000 or below, with at most one course at level 3000)

MA2116, MA2101, MA3209

READING REFERENCE/S

Introduction to Random Matrices, Livan et al; An Introduction to Random Matrices, Anderson et al.