

## MA4198 PROJECT PROPOSAL (PROJECT CUM SEMINAR GROUP)

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### SUPERVISOR'S INFO

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**PROJECT ID: PS2420-05**

### TITLE

Optimal control theory and applications

### BRIEF DESCRIPTION OF PROJECT

This project explores selected topics in the theory and applications of optimal control of stochastic and deterministic differential equations, with some applications in physics, engineering or data science.

### EXPECTATION/S

Each student is expected to learn the basic theory of optimal control and discuss at least one application in detail.

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

MA2001, MA3220

### READING REFERENCE/S

Liberzon, D. Calculus of Variations and Optimal Control Theory: A Concise Introduction; Princeton University Press: Princeton 2012.