PMRF-ISSS Teaching Programme

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

Module PMRF- ISSS044/II/2023

Transportation Optimization

Name of the PMRF student
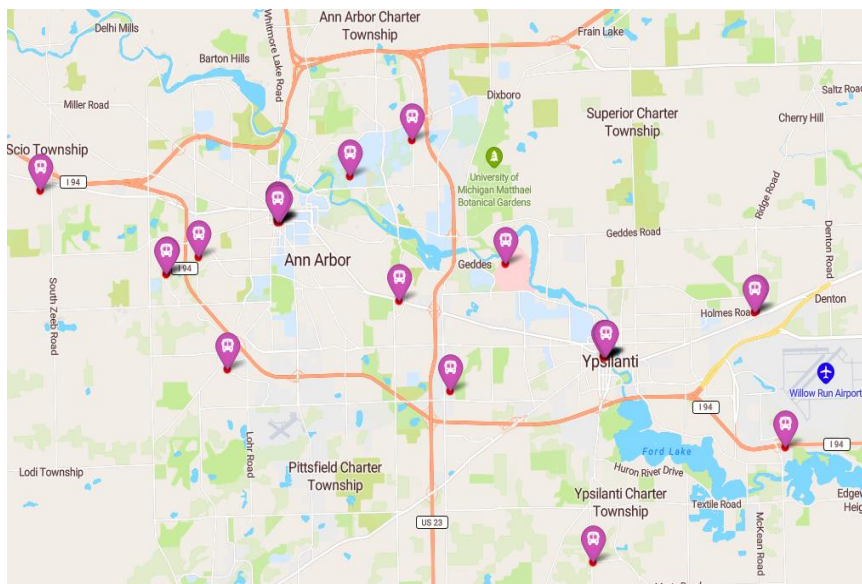
Rito Brata Nath

Required background of the students taught

Open to all UG/PG/Ph.D. students from an Engineering background interested in Optimization and Algorithms.

No pre-requisites but background on Linear Algebra and Python programming will be useful.

Online session coordinator

Will be chosen from the list of registrants

Details of the content of the module

Module 1: Basics of Linear Programming

Module 2: Mixed Integer Programming

Module 3: Shortest Path Algorithms

Module 4: Solving MIP models using CPLEX solver in Python

Module 5: Multiple Depot Vehicle Scheduling Problem

Module 6: Travelling Salesman Problem

Module 7: Solving TSPs using CPLEX

Module 8: Vehicle Routing Problem

Module 9: Electric Vehicle Scheduling Problem

Module 10: Charging Station Location Problem

Lectures and Problem-solving sessions.

Schedule of the module

Start date: September 25, 2023

Lecture days: Every Monday, Wednesday, and Friday, 7:00AM-9:00AM (IST) (Live lectures will be conducted / recorded lectures will be uploaded)

Total number of hours: 30

End date: October 27, 2023 (tentatively)

Meeting link : Will be shared later

Contact email ID: isss.forum@gmail.com

Registration link:

https://forms.gle/PaAHwZuBp6SRqZXr5