PMRF-ISSS Teaching Programme

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

Module PMRF-ISSS026/2024

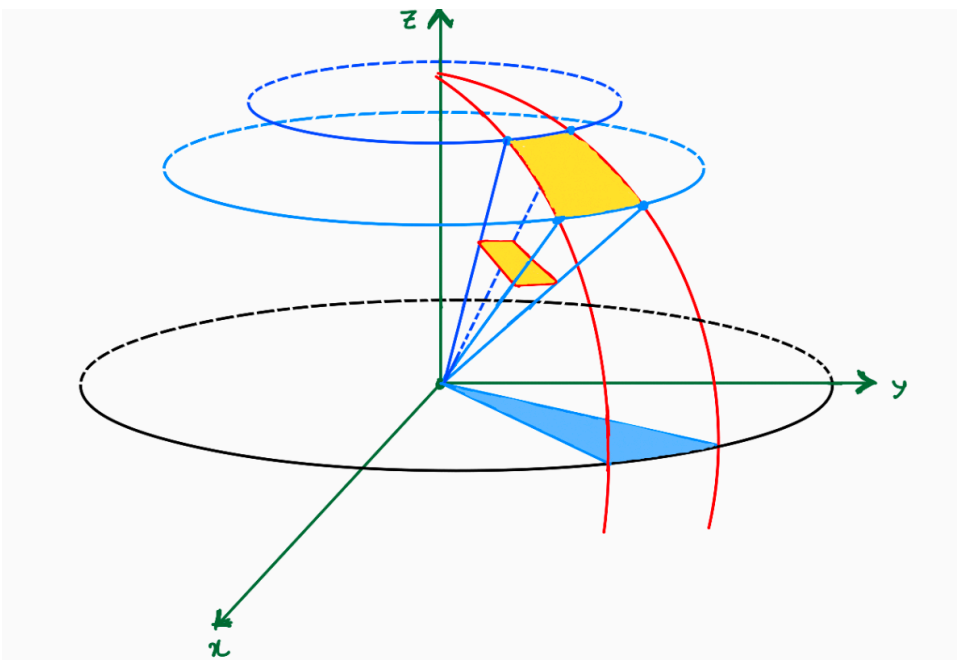
Mathematical Methods in Physics - I

Name of the PMRF student

Subrata Samanta

Required background of the students taught

This course is designed to be comprehensive on its own, yet having a foundational understanding of basic calculus at the undergraduate level would be beneficial for students.



Details of the content of the module

This mathematical physics course has two parts, and we're covering the first part here. The main aim is to build a strong math foundation for students who want to learn physics and related stuff on their own.

We'll mainly cover the following topics in this course:

- **Linear Vector Space [5]**
- **Linear Ordinary Differential Equations [4]**
- **Linear Differential Operator [4]**
- **Green's Functions [3]**
- **Partial Differential Equations [4]**
- **Integral Transforms and Their Applications [5]**
- **Tensor Algebra [5]**

Aside: We'll demonstrate how to use Mathematica for additional insights during the course.

Schedule of the module

Classes: Saturday (17:00 - 19:00)

Duration: Feb 17, 2024 – May 31, 2024

Total number of lectures: 30 (1 hour) / 15 (2 hour)

Meeting link : Will be shared later

Link

Contact email ID: isss.forum@gmail.com

Registration link:

https://forms.gle/P28dchb8TYyUcddu8