PMRF-ISSS Teaching Programme Prime Minister Research Fellowship students' teaching requirement facilitated by the Institute of Smart Structures and Systems

Module PMRF-ISSS068/2023 Advanced Statistical Mechanics-I

Name of the PMRF student

ARNAB DAS

Required background of the students taught

Basic knowledge of statistical mechanics, quantum mechanics and condensed matter physics

Online Session Coordinator

STATISTICAL ENSEMBLES

Canonical

(const. NVT)

Grand Canonical

(const. µVT)

Will be chosen from the list of registrants

Details of the content of the module

This will be a lecture series on advanced statistical mechanics aiming to build a good understanding of the origin of ensemble theory and its interesting physics which leads the way for quantum statistics. The broad topics that will be coved are:

- 1. Review of Basics of Statistical Mechanics
- 2. The Ensemble Theory and Micro Canonical Ensemble
- 3. Canonical Ensemble
- 4. Grand Canonical ensemble
- 5. Introduction to Quantum Statistics

Schedule of the module

Microcanonical (const. NVE) nsulation

Start Date: 06.12.2023

End Date: 31.03.2024 (Tentative)

Timings: Wednesday: 7.00pm-8.30pm

Sunday: 11.00am-12.30pm

Meeting link : Will be shared later

Link

Contact email ID: isss.forum@gmail.com

Registration link:

https://forms.gle/QZLynidtshAAYbuR6

