



Module PMRF-ISSS023/2024

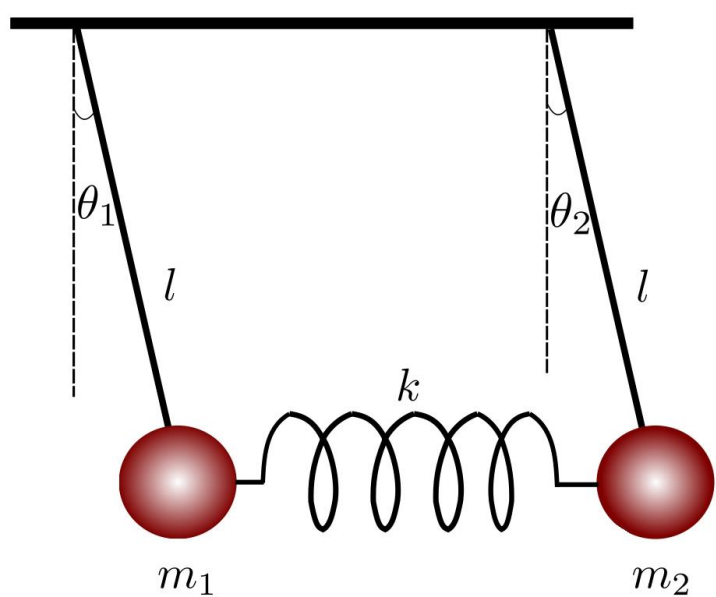
Classical Mechanics

Name of the PMRF student

Saikat Mondal

Required background of the students taught

Undergraduate/ postgraduate studies in Physics/ other related departments



Coupled pendulum

Details of the content of the module

There will be lectures on Classical Mechanics where the following topics will be covered:

1. Review of Newtonian Mechanics
2. Lagrangian Formulation, Euler- Lagrange equation
3. Hamilton's principle, variational principle
4. Symmetry and conservation laws, cyclic coordinates
5. Central force motion, Kepler problem
6. Small oscillations, coupled oscillations and normal modes
7. Hamiltonian and Hamilton's equations of motion
8. Canonical transformations, Poisson brackets, action-angle variables
9. Hamilton-Jacobi theory

Schedule of the module

Start Date: 03/02/2024

End Date: 04/04/2024 (Tentative)

Time: Saturday (5:00 PM – 7:00 PM),

Thursday (8:00 PM – 9:00 PM)

Meeting link : Will be shared later

[Link](#)

Contact email ID: issf.forum@gmail.com

Registration link:

<https://forms.gle/XKZbeHD6zpvQ9anC9>