



Information and Announcements

Science Academies' Refresher Course on Classical Mechanics and Electromagnetism

8–20 December 2014 at SDM College, Ujire, Karnataka

Sponsored by Indian Academy of Sciences, Bangalore

Indian National Science Academy, New Delhi

The National Academy of Sciences, India, Allahabad

A Refresher Course on Classical Mechanics and Electromagnetism for College/University teachers/research scholars will be held at the Department of Physics, SDM College, Ujire, Karnataka during 8–20 December 2014. The Course is primarily aimed at teachers involved in teaching classical mechanics and electromagnetism at the UG/PG level. A few seats may also be available for research scholars in physics. The Course will cover the basic and advanced topics of classical mechanics and electromagnetism, through lectures and tutorials. College/University teachers having at least a Master's Degree in Physics are particularly encouraged to apply.

Topics: Most of the topics in standard UG/PG level course syllabus will be covered. There will be four modules: Module 1: Newton's laws, Lagrangian mechanics: action principle, Euler-Lagrange equations, Noether's theorem, motion in non-inertial frames, special relativity.

Module 2: Phase space and portraits, Hamiltonian formulation, small oscillations, normal modes, Poisson brackets and canonical transformations, rigid body motion.

Module 3: Electrostatics, Magnetostatics; Faraday's law of induction.

Module 4: Electrodynamics; Maxwell's equations in free space, EM waves, polarization (plane and circular). Maxwell's equations in media, reflection, refraction. Poynting vector and electromagnetic energy density.

Resource Persons: Professors M. Lakshmanan (Bharathidasan University, Tiruchirapalli), H. S. Mani (Chennai Mathematical Institute), G. Rajasekaran (The Institute of Mathematical Sciences and Chennai Mathematical Institute) and Govind Krishnaswami (Chennai Mathematical Institute).

Course Director: Professor M. Lakshmanan; **Course Co-ordinator:** Dr. Chetan Rao

Outstation participants will be reimbursed three-tier A/c train fare to Ujire and back by the shortest route. Participants will also be provided with boarding and lodging during the Course.

Teachers/research scholars who wish to participate should send their application online using the following link: <http://web-japps.ias.ac.in:8080/Refreshcourse/RCCM.jsp>

A printed copy of the application through the Head of the Institution should be sent by speed post to: **Prof. M. Lakshmanan**, Center for Nonlinear Dynamics, Bharathidasan University, Tiruchirapalli 620024, India. For any further query, please email to: lakshman.cnld@gmail.com.

Last date for the receipt of applications: 10 September 2014.

