



# Science Academies' Refresher Course in Statistical Physics

*sponsored by*

**Indian Academy of Sciences, Bangalore**

Indian National Science Academy, New Delhi  
The National Academy of Sciences, India, Allahabad

*in collaboration with*

**Nehru Science and Arts College, Kanhangad, Kerala**

**29 April–12 May 2012**

A Refresher Course in statistical physics for College/University teachers will be held at Nehru Science and Arts College, Kanhangad, Kerala, from 29 April to 12 May 2012. The course is aimed at college teachers of Statistical Mechanics courses at the B.Sc./M.Sc. level. The course will cover the basic concepts and techniques of Statistical Physics, in a pedagogical manner, through lectures and tutorials. Some advanced topics will also be covered. Discussions will include common difficulties faced by students, problems designed to explain concepts, and techniques to improve the presentation and teaching skills of participants. College/University teachers having at least a master's degree in Physics/Mathematics/Engineering are encouraged to apply.

**Topics:** Most of the topics in a standard B.Sc./M.Sc. level course syllabus will be covered. This will include thermodynamics, ensemble theory, noninteracting and interacting systems, quantum statistical mechanics, Bose–Einstein condensation, phase transitions, random walks, fluctuation-dissipation theorem and numerical techniques like exact enumeration, molecular dynamics and Monte Carlo simulations.

**Tentative list of lecturers:** D. Das (IITB), R. Rajesh (IMSc.), S. Sastry (TIFR-H), D. Dhar (TIFR), P. Shukla (NEHU), K. P. N. Murthy (Univ. of Hyderabad), G. I. Menon (IMSc.), A. Sain (IITB).

Teachers/research scholars who wish to participate in this Refresher Course should submit their curriculum vitae (including name, date of birth, sex, educational qualification with marks obtained, teaching experience, courses taught, positions held, postal and email addresses, phone numbers, etc.). The applications should be sent preferably by e-mail to [refresher@home.theory.tifr.res.in](mailto:refresher@home.theory.tifr.res.in)

or by regular mail to:

**Professor Deepak Dhar**  
C/o Course Director  
Department of Theoretical Physics  
Tata Institute of Fundamental Research  
Homi Bhabha Road  
Mumbai 400 005

Selected teachers will be provided local hospitality and round trip shortest train fare (3-tier AC).

Last date for receipt of applications: **29 February 2012**