



DEPARTMENT OF PHYSICS, PONDICHERRY UNIVERSITY

Open Public Lecture On
Stretching the Limits

By
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Low Temperatures and High Magnetic fields (LTHM) environments are important and at times inevitable for condensed matter physics experiments. Regarding the subject areas are concerned, Superconductivity, correlated electron systems, Quantum Phase Transitions (QPT) and Novel Magnetism are a few to mention. Cryogenics are important in physics, cryogenic engines of rocket, mag-lev trains, metallurgy, chemistry, biology and food preservation as well. It is being planned to discuss the liquefaction of gases right from van der Waals equation of state and to develop the concept of order parameter. From this classical critical point one can slowly evolve in to quantum critical states.


In this talk the efforts by the authors' group at UGC-DAE CSR, Indore in setting up a front line laboratory from scratch to realise some of the tasks is being planned to be highlighted. The journey teaches us how to utilize existing resources, to build low cost instruments and how important is to have a developmental R & D in Indian Context to have a sustainable facility. Even though related but not directly, Scanning Probe Microscopy has an integral role in many of the areas and a bridge for interdisciplinary sciences. Certain interesting results on AFM, MFM and EFM will be touch upon with the back ground of a not so well known but evolving concept of 'Electret'.


The talk is intended for students and may be in popular style for general especially the students.

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Date : November 8, 2019 Time: 2.00 p.m. - 3.00 p.m.

Venue: Raman Seminar Hall, Department of Physics, Pondicherry University
All are invited


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