



Physical Research Laboratory, Ahmedabad

COLLOQUIUM - 14 - 07

- Speaker:** Dr. Deshdeep Sahdev
Department of Physics, IIT Kanpur.
- Title:** “Indigenous technology in a Globalized World: A Case Study or Resolving Atoms in our Backyards”
- Time:** Wednesday, 23 April, 2014, 16.00 hrs.
- Venue:** K. R. Ramanathan Auditorium, PRL.

Abstract

It is an interesting and remarkable fact that every Nobel-prize winning piece of work in Experimental Physics has been carried out on apparatus which has been designed and developed by the physicist in question, be it Raman, Mossbauer or Binnig. This makes the question of how we build an instrumentational base for cutting-edge research in India relevant. I will discuss this in the context of several hi-tech instruments which my team has developed: Scanning Tunneling Microscopes for various applications, Physical Properties Measurement Systems, High-end Gas Chromatographs, Mass Flow Controllers, and Data Acquisition Systems - to mention but a few. The talk will, in addition, focus on how the expertise we have built up can help in facilitating research (in the pertinent fields) at all our institutions.

The Speaker

Dr. Deshdeep Sahdev obtained his doctoral degree from Case Western Reserve University, USA. Subsequently he carried out postdoctoral research at Cornell University, USA, at the University of Pennsylvania, USA, at the Abdus Salam International Centre for Theoretical Physics (ASICTP), Trieste, Italy and at the Tata Institute of Fundamental Research (TIFR), Mumbai. Dr. Sahdev joined the Physics Department of IITK in 1989. He is a theoretical High Energy Physicist, whose chief interest lies in Cosmology. Dr. Sahdev is a co-discoverer of radiation zeroes and of their use in determining the anomalous magnetic moment of the W-boson. He is one of the original pioneers of the field of higher-dimensional cosmologies. He has worked on the non-linear dynamics of Josephson-Junction arrays and has developed several algorithms for simulating them. More recently, he has made important contributions to the area of indigenous instrumentation. In particular, he and his group have developed several Scanning Probe Microscopes, Physical Properties Measurement and Data-acquisition Systems, all of which have reached internationally competitive standards.

Tea at 15:30 hrs.

ALL ARE WELCOME