# Physical Research Laboratory, Ahmedabad

## SPECIAL COLLOQUIUM - 13 – 28

**Speaker:** **Prof. Prasanta K. Panigrahi**
**Indian Institute of Science Education and Research (IISER), Kolkata.**

**Title:** **Viewing Nature Through Wavelet**

## Abstract

Wavelets are 'small waves' which provide a 'microscopic' view of nature. By translation and 'zooming' actions, this 'mathematical microscope' captures the multi-scale behavior of diverse physical phenomena, which soundly complements the 'prismic' view of nature through 'Fourier transform'. We illustrate its application in capturing multi-fractality, nature of singularity and non-stationary patterns in data sets ranging from 'Tree-ring temperature' to financial domains.

## The Speaker

Prof. Prasanta K. Panigrahi did his B.Sc. (1978) and M.Sc. (1980) in Physics from the Ravenshaw College, Utkal University, Bhubaneswar. He obtained his PhD (1978) from University of Rochester, worked as a Post-Doc Research work (Field theory), University of Illinois at Chicago, USA, (1988-1990) and University of Montreal, Canada, (1990-1993). He was a faculty member at School of Physics, University of Hyderabad, Central University Campus, Hyderabad (1993-2002). Subsequently he joined PRL and remained here till 2007. Presently he is a Professor and Dean of Faculty at IISER, Kolkata. Areas of his research interests are Bose-Einstein Condensates, Cold fermions, Nonlinear Dynamics, Quantum Computation and Quantum Information, Non-Commutative Field Theory and Many body physics and Wavelet Transform. He is a fellow of the National Academy of Sciences, Allahabad and Gujarat Science Academy.

**Tuesday: 29 October, 2013, 16:00 hrs**

**K.R. Ramanathan Auditorium, PRL**

**Tea at 15:30 hrs**

**ALL ARE WELCOME**