

Area Seminar

Title	Memory-induced anomalous dynamics in a random walk model: emergence of diffusion, subdiffusion, and superdiffusion.
Date and Time	25/02/2011 16:00:00
Speaker	Dr. Niraj Kumar
Area	University of California, San Diago, La Jolla, California, USA
Venue	Theoretical Physics Room No. 469
Abstract	A random walk model that exhibits asymptotic anomalous behavior will be presented. We will discuss how memory can influence the dynamics leading to subdiffusive, diffusive, and superdiffusive behaviors. These kinds of dynamical behaviors are well observed in real systems. Using an analytically tractable model, we will show how this diverse scenario may arise as a result of walker's response to its memory. This seems to be the first random walk model that encompasses all known dynamical behaviors.