

Professor Jagadishwar Mahanty Distinguished Lecture Series in Physics

DATE: 9TH OCTOBER 2017

TIME: 6:00 PM (Tea@5:30 PM)

VENUE: L17

KPZ story: a paradigm of interdisciplinary research

The celebrated KPZ equation (Kardar, Parisi, Zhang, 1986) is an important milestone in statistical physics, originally introduced to describe the late time dynamics in two dimensional growth models. Over the last 30 years, the KPZ story has evolved in various interesting directions, making links on the way to different areas of physics and mathematics. This includes in particular the link to the famous Tracy-Widom distribution in random matrix theory. The story of KPZ is a very successful one, involving theoretical physics, mathematics and experiments—a fertile playground for interdisciplinary science. In this talk, I will review the evolution of the KPZ story, pointing out the important landmarks as I go along. At the very end, I will discuss some recent developments establishing a nice link between the KPZ height fluctuations and the edge physics in cold atom systems.

Prof. Jagadishwar Mahanty

Prof. Jagadishwar Mahanty Lecture Series in Physics has been instituted by Dr. Siddharth Mahanty in memory of his father, Prof. Jagdishwar Mahanty, who was a faculty member of the Physics Department at IIT Kanpur from 1961-1972. He made important contributions to Condensed Matter Physics, particularly, to the study of many body physics, lattice dynamics, van-der-Waals interactions and electronic structure of solids. Prof. Mahanty was born on 20th July 1932 in Puri, Orissa. After his M. Sc. in Physics from Calcutta University, he worked for several years at the National Physical Laboratory. In 1956, he went to the University of Maryland, USA for his doctoral degree. After completing his Ph.D. in 1960 he joined Panjab University, Chandigarh and subsequently joined the Physics department of IIT Kanpur in 1961. He was instrumental in shaping the Physics department during its infancy. He was the Head of the Physics department from 1967 to 1972.



In 1971, Prof. Mahanty decided to concentrate on his own research and gave up the administrative responsibility. In 1972, he joined the prestigious Australian National University and superannuated from there in July 1995 due to ill health.

Prof. Mahanty was an excellent physicist with a very modest and kind personality. His helpful nature to both students and colleagues was a great asset of his character. He was a warm and caring person who is greatly missed by his family and friends.



SPEAKER: SATYA NARAYAN MAJUMDAR

Professor Satya Narayan Majumdar did his B. Sc. from Presidency college, Kolkata and M. Sc. from university of Calcutta, securing first rank in both the examinations. After his Ph. D from TIFR, Mumbai, he spent a few years as post-doctoral fellows at AT & T Bell Lab and Yale University, USA. Following a brief stay as a faculty at TIFR, Mumbai, he moved to CNRS, Université Paul Sabatier, Toulouse, France. Currently, he is the Directeur de Recherche (DR1) at LPTMS, Université Paris-Sud, Orsay, France. Prof. Majumdar is recipient of many awards and honors including 'Prime d'excellence Scientifique' (PES) (2009-2012, 2013-) by CNRS, Paul Langevin Medal for theoretical physics (2005), young scientist medal, INSA (1998). His research interests cover various problems in equilibrium and non-equilibrium statistical physics with applications in physics, computer science and biology.

