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TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS Colloquium

Title : The Impossible Dream of Neutrino Astronomy

Speaker : Basudeb Dasgupta, Tata Institute of Fundamental Research, Mumbai

Date : Monday, October 29, 2018

Time : 3:00 PM

Venue : Emmy Noether Seminar Room, ICTS Campus, Bangalore

Abstract : Neutrinos are unique: almost massless, barely interacting, and capable of preserving quantum coherence over macroscopic distances. This unique mix of properties proves to be both a blessing and a curse. On one hand, it makes neutrinos an extraordinary tool, allowing us to probe new regions and physical regimes that remain invisible using conventional astronomy. On the other hand, these same properties make it extremely challenging to detect them and interpret the physics contained in them. In spite of these challenges, the dream of neutrino astronomy does not seem so impossible after all. In this talk, I will review ideas and progress in this area of research, with emphasis on recent progress made using the IceCube neutrino telescope.