

Theoretical Physics Seminars

Gravity, Thermodynamics and Null Surfaces

Speaker: Dr. Sumanta Chakraborty

From: Indian Association for the Cultivation of Science (IACS)

When: September 7th , 2017 Thursday 4:00 pm

Place: Room No. 469

In the first part of my talk I will discuss the variational principle for general relativity and some associated subtle facts not shared by other interactions present in nature. In particular null surfaces play a very interesting role throughout the development of general relativity on which I will elaborate upon. A brief idea of black hole thermodynamics and Hawking effect will also be provided.

In the second part of my talk, I will discuss the thermodynamics of null surfaces. In particular, I will show that three different projections of gravitational momentum related to an arbitrary null surface in the spacetime lead to three different equations, all of which have thermodynamic interpretations. The implications will be discussed.

All are welcome