

**INDIAN ASSOCIATION FOR THE CULTIVATION OF SCIENCE**

**2A&B, Raja S.C. Mullick Road, Jadavpur, Kolkata-700032, India**

**Seminar Notice**  
Org. by  
**Theoretical Physics Department**

<b>Title:</b>	<b>Grand Unified Theories &amp; [(Topological defects + Baryon asymmetry of the Universe) + Dark Matter]</b>
<b>Speaker:</b>	<b>Joydeep Chakraborty, Department of Physics, IIT Kanpur</b>
<b>Date:</b>	<b>June 06, 2018 (Wednesday)</b>
<b>Time:</b>	<b>3:00 p.m.</b>
<b>Venue:</b>	<b>Theoretical Physics Seminar Room (C406), 3rd Floor, Centenary Building, IACS</b>
<b>Abstract:</b>	<p>I will discuss the theoretical aspects of <i>Grand Unified Theory (GUT)</i> in the light of <i>Topological defects (TD)</i>, and <i>dark matter</i>. To start with, I will introduce the basic and relevant aspects of <i>GUT</i>. I will focus on one intermediate scale in the form of <math>SU(N)_L \times SU(N)_R</math> starting from <math>SO(10)</math> and <math>E(6)</math>. Then I will discuss the possible emergence of <i>Topological defects</i> for different phase transitions (symmetry breaking), and how they can possibly constrain the intermediate scale. I will comment on the status of the unification pictures for all such scenarios. Then I will talk about <math>N=1</math> <i>Supergravity</i> scenario within unified framework. My talk will be based on our recent work: "Roadmap of left-right models based on <i>GUTs</i> ", arXiv:1711.11391 [hep-ph] (Accepted in PRD).</p>

**All are cordially invited to attend the seminar**