

# CTS WORKSHOP

on

## PHYSICS OF WARPED EXTRA DIMENSIONS

21st to 23rd February 2008, IIT Kharagpur

Sponsors: DST, CSIR, IACS, IOP

VENUE: GARGI SEMINAR HALL, VIKRAMSHILA

### PROGRAMME

21st February (Thursday), 2008

**Inauguration : 9:30-10:00 a.m.:**

Prof. P. K. Chattaraj (Convenor,CTS)

Prof. B. K. Mathur (Head, Physics and Meteorology)

Dr. Sayan Kar (Convenor, Organising Committee)

**Session I: Warped Braneworld Models**

**Chairperson : Gautam Sengupta (IIT Kanpur)**

10:00-10:45	Soumitra Sengupta (IACS, Kolkata)	Some issues related to Randall–Sundrum braneworld models
10:45-11:00	Tea/Coffee	
11:00-11:25	Debaprasad Maity (IMSc, Chennai)	Cosmological Constant, brane tension and large hierarchy in a generalised Randall-Sundrum scenario
11:25-11:50	Ratna Koley (IACS, Kolkata)	Localisation of fields on the brane
11:50-12:15	Discussion	

**12:15-1:45 p.m.: LUNCH**

21st February (Thursday), 2008 (continued)

**Session II: Phenomenology of extra dimensional models I**

**Chairperson : Prakash Mathews (SINP, Kolkata)**

1:45-2:30	Anindya Dutta (CU, Kolkata)	Unraveling extra dimensions at the colliders
2:30-3:15	Anirban Kundu (CU, Kolkata)	Universal extra dimension
3:15-3:40	Biplob Bhattacharjee (CU, Kolkata)	Excited scalars of the UED model
3:40-4:05	Kirtiman Ghosh (CU, Kolkata)	Phenomenology of spinless adjoints in two universal extra dimensions
4:05-4:20	Tea/Coffee	
4:20-5:05	V. Ravindran (HRI, Allahabad)	Phenomenology of warped extra dimensions at LHC
5:05-5:30	M. C. Kumar (SINP, Kolkata)	Diphoton production in the RS model at the LHC
5:30-5:55	Sreerup Raychaudhuri (TIFR, Mumbai)	Identifying graviton signals at the LHC: a discussion

22nd February (Friday), 2008

**Session III: Effective Einstein equation and braneworld gravity**

**Chairperson : D. Sahdev (IIT, Kanpur)**

9:15-9:45	Sayan Kar (IIT Kharagpur)	Effective Einstein equations: review
9:45-10:30	Archan S. Majumdar (SNBNCBS, Kolkata)	Cosmology with primordial black holes motivated from extra dimensions

22nd February (Friday), 2008 (continued)

10:30-10:55	Supratik Pal (ISI, Kolkata)	Cosmological consequences of generalised RS II braneworlds
10:55-11:15	Tea/Coffee	
11:15-11:40	Subenoy Chakraborty (JU, Kolkata)	Matter in the bulk and its consequences on the brane: a possible source of dark energy
11:40-12:05	Anjan A. Sen (JMI, New Delhi)	Brane inflation: from supergravity to tachyonic
12:05-12:30	Sudipta Mukherji (IOP, Bhubaneswar)	Bouncing cosmology from brane models
12:30-12:55	Bikash C. Paul (NBU, Siliguri)	Extra dimensional effects on compact objects

**12:55-2:00 p.m.: LUNCH**

**Session IV: Phenomenology of extra dimensional models II**

**Chairperson : V. Ravindran (HRI, Allahabad)**

2:00-2:25	Parthasarathi Majumdar (SINP, Kolkata)	Axion-photon interactions in an RS1 braneworld and CMB anisotropy
2:25-2:50	Sourav Roy (IACS, Kolkata)	Constraining the Randall-Sundrum modulus in the light of recent PVLAS data
2:50-3:15	Suman Ghosh (IIT Kharagpur )	Particle creation in a warped spacetime with an extra dimension
3:15-3:25	Tea/Coffee	
3:25-3:50	Swarup K. Majee (HRI, Allahabad)	Supersymmetric neutral Higgs mass in the ED scenario
3:50-4:15	Prakash Mathews (SINP, Kolkata)	Unparticle physics at hadron colliders
4:15-4:30	Tea/Coffee	

22nd February (Friday), 2008 (continued)

**Session V: 'Seeing' extra dimensions**

**Chairperson : N. Banerjee (IISER, Kolkata)**

4:30-5:15	C. S. Unnikrishnan (TIFR, Mumbai)	Search for modified gravity and new short-range forces
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23rd February (Saturday), 2008

**Session VI: Warped braneworlds and string theory**

**Chairperson : A. Kumar (IOP, Bhubaneswar)**

9:15-10:00	Subir Mukhopadhyay (IOP, Bhubaneswar)	Warped braneworlds and flux compactification
10:00-10:25	Supriya K. Kar (DU, New Delhi)	Noncommutative brane-world and (Anti) de Sitter black holes
10:25-10:50	Gautam Sengupta (IIT Kanpur)	Black holes in a black string braneworld
10:50-11:15	Anurag Sahay (IIT Kanpur)	Braneworld black rings
11:15-11:30	Tea/Coffee	
11:30-12:00	Concluding Remarks	

**12:30-2:00 p.m.: LUNCH**