



ICTS

INTERNATIONAL
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THEORETICAL
SCIENCES

TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS Seminar

Title : Applications of M-theory Uplifted Desingularized Conifold Geometries Relevant to Holographic Thermal QCD at Finite Coupling

Speaker : Karunava Sil, Indian Institute of Technology Roorkee, Uttarakhand

Date : Tuesday, November 21, 2017

Time : 11:30 AM

Venue : Nambu Discussion Room (Left), ICTS Campus, Bangalore

Abstract : Using a top-down holographic dual of large- N thermal QCD of Dasgupta et al [2009], its type IIA mirror and M-theory uplift worked out by Dhuria and Misra [2013], we will discuss holographic computation of lattice compatible deconfinement temperature, the temperature dependence of DC conductivity and the N (ext to) L (eading) O (rder) correction to diffusion constant, speed of sound, the shear-viscosity-to -entropy-density ratio of large- N thermal QCD. On the holographic phenomenology side, we will discuss evaluation of 0^{++} , 0^{--} , 0^{-+} , 1^{++} , 2^{++} Glueball masses using the same gravitational dual(s).