

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

Title:	Non-holomorphic scalar sequestering
Speaker:	Sabyasachi Chakraborty, Department of Physics, TIFR, Mumbai
Date:	June 08, 2018 (Friday)
Time:	3:00 p.m.
Venue:	Theoretical Physics Seminar Room (C406), 3rd Floor, Centenary Building, IACS
Abstract:	Scalar sequestering ensures vanishing masses for squarks and sleptons as well as all the Higgs mass matrix elements at some high scale. This interesting feature is a result of superconformal strong dynamics in the hidden sector. In such a scenario, gaugino mediated log enhanced but loop suppressed contributions generate scalar masses at the TeV scale. Naturally right handed sleptons turn out to be the lightest SUSY particle (LSP) resulting in a cosmologically unfavourable spectrum. In this work, we propose a solution to this problem by considering operators which give rise to non-holomorphic soft SUSY breaking terms. The presence of such terms leave a non-trivial imprint on the renormalization group evolutions of the scalar masses, particularly right handed sleptons. As a result, right sleptons masses can be increased through the RGEs by making use of the hypercharge D-terms, resulting in a viable spectrum.

All are cordially invited to attend the seminar