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TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS Seminar

Title : Sheets and Mass deformations of the Hitchin system

Speaker : Aswin Balsubramanian, NHETC, Rutgers

Date : Friday, January 18, 2019

Time : 10:00 AM

Venue : Feynman Lecture Hall, ICTS Campus, Bangalore

Abstract : There are a large class of 4d $N=2$ Super-Conformal Field Theories (SCFTs) that are described by the tame Hitchin system. It is interesting to study the Seiberg-Witten geometries associated to their Coulomb branches for non-zero values of hyper-multiplet masses. In my talk, I will describe recent work with J. Distler (1810.10652) where we gave a complete a classification of all mass deformations of the Coulomb branch of an associated 3d $N=4$ theory. The classification is intimately tied to the mathematical theory of sheets in a complex Lie algebra, a subject of interest in geometric representation theory. If there is time, I will describe some ongoing work on Gukov-Witten surface operators where sheets in the Group make an appearance.