THE QUANTUM SPACETIME SEMINAR SERIES
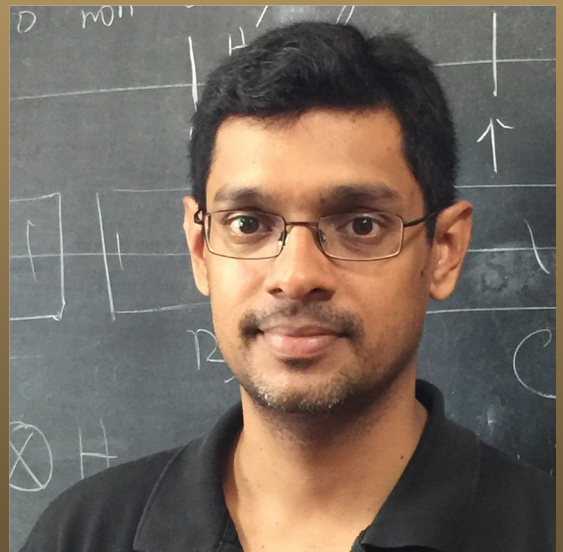
Department of Theoretical Physics

Surface operators in supersymmetric gauge theories

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Date : 5th & 6th March, 2018

Time : 11.30 am

Venue : A-304, TIFR

We study half-BPS surface operators in supersymmetric gauge theories in four dimensions following two different approaches. In the first approach we analyze the chiral ring equations for certain quiver theories in two dimensions, coupled to the four dimensional gauge theory of interest. The chiral ring equations, which arise from extremizing a twisted chiral superpotential, are solved as a power series in the infrared scales of the 2d quiver theories. In the second approach we use equivariant localization and obtain the twisted chiral superpotential as a function of the Coulomb moduli of the four dimensional gauge theory, and find a perfect match with the results obtained from the chiral ring equations.

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