



School of Mathematics
Tata Institute of Fundamental Research

09 October, 2020

Zoom Colloquium

Speaker : *Pradeep Das*
Affiliation : *TIFR*
Title : *Kähler Geometry of Moduli of Representations of Quivers*
Date & Time : *Thursday, 15 October 2020, 04:00 P.M. (over Zoom)*

Abstract

In this talk, I shall discuss some holomorphic aspects of moduli spaces of finite dimensional semistable representations of a finite quiver. Namely, I shall describe the construction of a natural Hermitian holomorphic line bundle on the stratified moduli space of semistable representations, and show that the curvature of this line bundle on each stratum of the moduli space is a scalar multiple of the Kähler form of that stratum. I shall then recall the definition of the tensor product $Q \otimes Q'$ of two quivers Q and Q' , and define the tensor product $V \otimes W$ of a representation V of Q with a representation W of Q' , and discuss the semistability of $V \otimes W$. Moreover, I shall describe a relation between the natural line bundles on the moduli spaces of representations of Q, Q' and $Q \otimes Q'$.

Milind Pilankar