



INDIAN STATISTICAL INSTITUTE
Theoretical Statistics and Mathematics Unit, Kolkata

Thesis Pre- Submission Seminar

Date: June 27, 2024
Time: 02:00 PM

VENUE:

L-infinity

(5th Floor, A.N. Kolmogorov Bhavan), ISI Kolkata

TITLE:

Sphere fibration over highly connected manifolds

SPEAKER:

Aloke Kr Ghosh

Stat-Math Unit, ISI Kolkata

ABSTRACT:

We will discuss the construction of the sphere fibrations over $(n - 1)$ -connected $2n$ -manifolds for an even integer n such that the total space is a connected sum of sphere products, in a localized category of spaces. Integral results are obtained for $n=2, 4$. This is a joint work with Samik Basu. In the second part of the talk, we will discuss that for $n=4$, whether these bundles can be realised as a principal $SU(2)$ -bundle and the possible homotopy types of the total space of such a principal $SU(2)$ -bundle. Along the way, we will discuss the homotopy classification of certain 3-connected 11-dimensional complexes with torsion free homology. This is a joint work with Samik Basu and Shubankar Sau.

ALL ARE CORDIALLY INVITED