



# Theoretical Statistics and Mathematics Unit

## Seminar

### **SOMESH CHANDRA BAGCHI MEMORIAL LECTURE**

Date: September 11, 2018

Time: 04:15 P.M.

Venue: NAB - 1, Stat-Math Unit (Ground Floor, A.N. Kolmogorov Bhavan)

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Homogeneous Hermitian holomorphic vector bundles and the Cowen-Douglas class over bounded symmetric domains

Abstract

It is known that all the homogeneous Hermitian holomorphic vector bundles can be obtained by holomorphic induction from representations of a certain group on finite-dimensional inner product spaces. The representations and the induced bundles have a composition series with irreducible factors. We write down an equivariant constant coefficient differential operator that intertwines the bundle with the direct sum of its "irreducible factors". As an application, we show that in the case of the closed unit ball, all the homogeneous  $n$ -tuples of Cowen-Douglas operators are similar to direct sums of certain basic  $n$ -tuples.

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