THE UNIVERSITY   OF HONG KONG

Institute of Mathematical Research
Department of Mathematics

Geometry Seminar

Proper holomorphic maps of irreducible bounded symmetric domains of rank ≥ 2

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Abstract

Let $D \Subset \mathbb{C}^n$ be a bounded domain and H be a finite group of automorphisms of D. Then the quotient map $F : D \longrightarrow D/H$ is a surjective proper holomorphic map, where D/H is endowed with the unique structure as a normal complex space. In the case where $D = \Omega$ is an irreducible bounded symmetric domain of rank at least 2, in a recent joint work with N. Mok and Z. Tu we showed that any surjective proper holomorphic map from Ω to a complex analytic space is essentially given by the above construction. We will discuss the methods and geometric notions involved in the work, such as radial limits of bounded holomorphic functions on the unit disk and invariantly geodesic subspaces of Hermitian symmetric spaces.

Date: March 15, 2010 (Monday)

Time: 4:00 – 5:00pm

Place: Room 210, Run Run Shaw Bldg., HKU

All are welcome