



INDIAN STATISTICAL INSTITUTE

Theoretical Statistics and Mathematics Unit, Kolkata

SEMINAR

Date: October 21, 2024

Time: 02:15 PM

VENUE:

L- infinity

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

TITLE:

Visibility domains in complex manifolds

SPEAKER:

Rumpa Masanta

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ABSTRACT:

In this talk, we extend the notion of visibility with respect to the Kobayashi distance to domains in arbitrary complex manifolds. Visibility here refers to a property resembling visibility in the sense of Eberlein--O'Neill for Riemannian manifolds. However, we do not assume Cauchy-completeness, with respect to the Kobayashi distance, of the domains in question. The visibility property of a domain D can be used to deduce many properties of certain holomorphic mappings into D , ranging from their continuous extendibility to the iterative dynamics of such self-maps of D . Here, we present a few sufficient conditions for visibility in the above setting, and with these conditions, we see that the class of domains with the visibility property is very large. Finally, we discuss an application of visibility and establish a far-reaching generalisation of the classical Wolff--Denjoy theorem.

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