

Visibility domains in complex manifolds

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In this talk, we extend the notion of visibility with respect to the Kobayashi distance to domains in arbitrary complex manifolds. Visibility here is a weak notion of negative curvature and 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 will discuss an application of visibility by discussing some generalizations of the classical Wolff–Denjoy theorem.