

1106-53-1724

Luis Ugarte* (ugarte@unizar.es), Departamento de Matemáticas, Instituto de Matemáticas y Aplicaciones -IUMA, Universidad de Zaragoza, 50009 Zaragoza, Spain. *Special Hermitian metrics on compact complex manifolds and holomorphic deformations.*

In this talk we focus on the interaction of several complex invariants and metric properties of compact complex manifolds, as well as their behaviour under holomorphic deformations. Strongly Gauduchon (sG) metrics were introduced by Dan Popovici and they constitute an important class of metrics lying between the balanced Hermitian and the usual Gauduchon metrics. Recently, a new class of compact complex manifolds, the sGG class, given by those manifolds whose Gauduchon cone coincides with the sG cone has been considered, and numerical characterizations of sGG manifolds involving certain Hodge, Bott-Chern and Betti numbers are given. We exhibit the relations among the balanced, sG and sGG manifolds and other properties like the $\partial\bar{\partial}$ -lemma or the degeneration of the Frölicher spectral sequence. Motivated by the study of deformation limits of *class C* manifolds, we also show the behaviour of these properties under holomorphic deformations. (The talk is based on results obtained in collaboration with M. Ceballos, A. Fino, D. Popovici, A. Otal and R. Villacampa.) (Received September 15, 2014)