

# Abstract

**Speaker:** Jean-Pierre Demailly (Grenoble)

**Title:** Rationally connected manifolds and semipositivity of the Ricci curvature

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In this talk, we explain a structure theorem for compact Kähler manifolds with semipositive anticanonical bundle. Up to finite étale cover, it will be proved that such manifolds split holomorphically and isometrically as a product of Ricci flat varieties and of rationally connected manifolds. The proof is based on a characterization of rationally connected manifolds through the non existence of certain twisted contravariant tensor products of the tangent bundle, along with a generalized holonomy principle for pseudoeffective line bundles. A crucial ingredient for this is the characterization of uniruledness by the property that the anticanonical bundle is not pseudoeffective. (recent joint work with Frédéric Campana and Thomas Peternell).