

Seminari de Geometria Algebraica 2010/2011 (UB-UPC)
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<http://atlas.mat.ub.es/sga>

Characteristic numbers of algebraic varieties

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We determine which combinations of Hodge and Chern numbers of smooth complex projective varieties are topological invariants of the underlying manifolds, thus solving a long-standing open problem posed by Hirzebruch in the 1950s. Our results allow us to determine all the relations between Hodge, Chern and Pontryagin numbers of projective varieties, and to give several new characterisations of the Hirzebruch-Todd genera. (The talk is based in part on joint work with S. Schreieder.)
