



UNIVERSITÀ DI PARMA

DIPARTIMENTO DI SCIENZE MATEMATICHE, FISICHE E INFORMATICHE

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SEMINARIO

Prof.ssa **Alice Garbagnati** (Università degli Studi di Milano)

Manifolds with trivial canonical bundle

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Aula A, Plesso di Matematica/Informatica

Abstract: The manifolds with trivial canonical bundle form a special set of manifolds: they have some peculiar properties, which are not properties of the manifolds which have a non trivial canonical bundle (for example the manifolds with trivial canonical bundle have no a "natural" projective model which encodes their main properties). Viceversa the manifolds with trivial canonical bundle share some properties (they often have an infinite automorphism group; there is a good construction of their moduli spaces, the Hodge structure of their middle cohomology is very interesting).

There are essentially three kinds of manifolds with trivial canonical bundle: the tori, the Hyperkähler manifolds, the Calabi--Yau manifolds. The aim of this talk is to describe properties of these manifolds, to relate the different kinds of manifolds with trivial canonical bundle and to construct explicitly examples of manifolds with trivial canonical bundle obtained by considering the quotient of product of manifolds of lower dimension by finite automorphisms. In order to do this one has to discuss some birational invariants of these manifolds and problems related with the desingularization of quotient singularities.

Tutti gli interessati sono invitati a partecipare.

Organizzatori: prof. Adriano Tomassini, dott. Andrea Cattaneo,
dott. Tommaso Sferruzza