Leibniz Universität Hannover

Oberseminar Zahlentheorie und arithmetische Geometrie

Giacomo Mezzedimi

(Hannover)

Entropy on elliptic K3 surfaces

Entropy measures the 'disorder' created by a transformation of a compact metric space. It is usually difficult to compute, but in the case of complex Kähler manifolds a famous theorem by Gromov and Yomdin lets us calculate it more directly. If X is a K3 surface, it is often very hard to obtain informations on its group of automorphisms; however, entropy can help us shed some light on it. For instance, it naturally identifies the subset of 'ordered' automorphisms, i.e. of zero entropy. Following these ideas, we can say that a K3 surface has zero entropy if all its automorphisms have zero entropy: in some sense, these are the K3 surfaces with the 'easiest' automorphism group. In the talk we will see how the arithmetic of the Néron-Severi lattice entails the presence of automorphisms of positive entropy, and we will present a partial classification of K3 surfaces with zero entropy.

Donnerstag, 02.05.2018, 12:00 – 13:00, a410

Alle Interessierten sind herzlich eingeladen.