Séminaire d'algèbre, topologie et géométrie
Jeudi 11 octobre à 14h
Salle I

Fabrizio Anella

Rome

Rational curves on elliptic fiber spaces

Rational curves play an important role in many different fields, which ranges from algebraic and hyperbolic geometry to theoretical physics. A key piece in the theory is the existence of such curves on varieties with trivial canonical class. It is well-known that an abelian variety does not contain rational curves, and it is conjectured that this is the only case. This is completely proved only in dimension two by the works of Bogomolov and Mumford. There are many partial results in dimension three, but very little is known in higher dimension. In this talk we will give a constructive proof for the existence of uniruled divisors in varieties with an elliptic fiber space structure with some technical hypothesis. We will discuss, with some examples, which hypothesis are necessary and which ones can be relaxed.