

*Séminaire des doctorants en Théorie des Nombres*  
*"Jouve-Pazuki"*

Bordeaux, IMB - vendredi 29 novembre 2012, 11h, salle 2

**Algebraic points of fixed degree on a variety.**

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Let  $A$  be an abelian variety over a number field  $K$ . We investigate the behaviour of the rank of  $A$  in field extensions  $L/K$  of fixed degree. We do this by studying algebraic points of fixed degree on  $A$ . For elliptic curves, we present a result of da Costa. He proved that, for any integer  $m > 1$ , the rank of an elliptic curve  $E/K$  increases in infinitely many degree  $m$  extensions  $L/K$ .