

Séminaire de théorie des nombres

Le 21 octobre 2019 à 14h (Jussieu)

Mordell-Weil rank jumps and the Hilbert property

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Résumé : Let X be an elliptic surface with a section defined over a number field. Specialization theorems by Néron and Silverman imply that the rank of the Mordell-Weil group of special fibers is at least equal to the MW rank of the generic fiber. We say that the rank jumps when the former is strictly large than the latter. In this talk, I will discuss rank jumps for elliptic surfaces fibred over the projective line. If the surface admits a conic bundle we show that the subset of the line for which the rank jumps is not thin in the sense of Serre. This is joint work with Dan Loughran.