

Séminaire de théorie des nombres

Le 05 octobre 2026 à 14h (Jussieu)

Finiteness and density problems for (positive) integral points on Mordell–Schinzel surfaces

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Résumé : In 1952, Mordell erroneously claimed that the surface $xyz = G(x, y)$ has infinitely many integral points for any $G \in \mathbb{Z}[x, y]$. I will discuss a classification for finiteness and Zariski density of (positive) integral points on these log K3 surfaces when the coefficients of G are non-negative. This combines a dynamical argument proposed by Mordell, the theory of generalized cluster algebras, and the Killing–Cartan classification of semisimple Lie algebras. This talk is partially based on joint work with Antoine de Saint Germain.