

Séminaire de théorie des nombres

Le 22 novembre 2021 à 14h (Jussieu)

The Hodge locus

Exposé de Gregorio Baldi
(IHES)

Résumé : I will report on a joint work with Klingler and Ullmo. Given a polarizable variation of Hodge structures on a smooth quasi-projective variety S (e.g. the one associated to a family of pure motives over S), Cattani, Deligne and Kaplan proved that its Hodge locus (the locus of closed points of S where exceptional Hodge tensors appear) is a *countable* union of closed algebraic subvarieties of S . I will discuss when this Hodge locus is actually algebraic. If time permits I will explain how a similar circle of ideas can be used to produce a genus four curve of “Mumford’s type” (thus answering a question of Gross/Serre).