Séminaire de théorie des nombres

Le 17 juin 2024 à 14h (Jussieu)

The six functor formalism for perverse Nori motives

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Résumé : Let k be a field of characteristic 0. As envisioned by Grothendieck, Beilinson, Deligne, and others, there should exist an abelian category of mixed motives over k defining the universal $\mathbb{Q}$-linear cohomology theory for algebraic k-varieties. The existence of the category of mixed motives is still conjectural ; however, in the 1990's an abelian category carrying (in a suitable sense) a universal cohomology theory for k-varieties was constructed unconditionally by M. Nori. In the last decade, there have been several attempts at extending Nori's construction to a theory of motivic sheaves endowed with a six functor formalism. After reviewing Nori's theory in some detail, I will present the theory of perverse Nori motives introduced by F. Ivorra and S. Morel. By work of Ivorra–Morel and of myself, a complete six functor formalism is now available in this setting ; the final goal of my talk is to sketch the main ideas behind its construction.