

The Picard Motive of a Variety

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Let X be a variety defined over a field k and A_X be its Albanese variety. For various cohomology theories, the identity

$$H_*^1(X, *) \cong H_*^1(A_X, *)$$

holds. As the category of motives is a universal (Weil) cohomology theory, a similar identity must hold for the motives, i.e. the Picard motives should be isomorphic:

$$h^1(X) \simeq h^1(A_X) \tag{1}$$

In this talk we will first introduce the category of Chow motives, and then we will show that the identity (1) holds.