Leibniz Universität Hannover

Oberseminar
Institut für Algebraische Geometrie

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The standard conjecture of Hodge type for abelian fourfolds

Let S be a surface, V be the $\mathbb{Q}$-vector space of divisors on S modulo numerical equivalence and d be the dimension of V. The intersection product defines a non degenerate quadratic form on V. The Hodge index theorem says that it is of signature $(1, d-1)$. In the Sixties Grothendieck conjectured a generalization of this statement to cycles of any codimension on a variety of any dimension. In characteristic zero this conjecture is a consequence of Hodge theory but in positive characteristic almost nothing is known. Instead of studying these quadratic forms at the archimedean place we will study them at p-adic places. It turns out that this question is more tractable, thanks to p-adic Hodge theory. Moreover, using classical product formulas on quadratic forms, the p-adic result will give non-trivial informations on the archimedean place. For instance, we will prove the original conjecture for abelian fourfolds.

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16:30 - 17:30

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Alle Interessierten sind herzlich eingeladen.