

Abelian varieties over ample fields of positive characteristic

(Joint work with Arno Fehm)

A field K is called *ample*, if every smooth curve C/K satisfies $C(K) = \emptyset$ or $|C(K)| = \infty$.

Theorem. Let A be a non-zero abelian variety over an ample field K . Then the rank of the abelian group $A(K)$ is infinite.

In the special case $\text{char}(K) = 0$ we established this Theorem about one year ago. Now we can prove it in the (more complicated) case $\text{char}(K) > 0$ as well, making use of work of Ghioca and Moosa and of Kim on the Mordell-Lang conjecture in positive characteristic.