Séminaire de théorie des nombres

Le 17 janvier 2022 à 14h (Jussieu)

Finiteness of the p-torsion of the Brauer group of abelian varieties

Exposé de Marco D'Addezio
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Résumé : I will present a new finiteness result for the Brauer group of abelian varieties over finitely generated fields of positive characteristic. More precisely, I will explain how to prove in this case that the transcendental Brauer group has finite exponent. The proof uses the crystalline Tate conjecture, proven by de Jong, and an ad-hoc comparison between the fppf cohomology of $Z_p(1)$ and the crystalline cohomology over imperfect fields. In the end, I will also explain why certain p-divisible p-torsion classes of the Brauer group over the algebraic closure (which are not in the transcendental Brauer group by the main theorem) give an obstruction for the surjectivity of the specialisation morphism of the Néron–Severi group.