

beforestart french

Séminaire de théorie des nombres

Le 03 mai 2021 à 14h (BigBlueButton)

On the Zilber-Pink conjecture for complex abelian varieties and distinguished categories

Exposé de Gabriel Dill
(Oxford)

Résumé : I will report on recent joint work with Fabrizio Barroero in which we proved that the Zilber-Pink conjecture for a complex abelian variety A can be deduced from the same statement for its trace, i.e., the largest abelian subvariety of A that can be defined over the algebraic numbers. This gives some unconditional results, e.g., the conjecture for curves in complex abelian varieties (over the algebraic numbers, this is due to Habegger and Pila) and the conjecture for arbitrary subvarieties of powers of elliptic curves that have transcendental j -invariant. While working on this project we realised that many definitions, statements, and proofs were formal in nature and we came up with a categorical setting that contains most known examples and in which (weakly) special subvarieties can be defined and a Zilber-Pink statement can be formulated. We obtain some conditional as well as some unconditional results.