Séminaire de théorie des nombres

Le 14 juin à 14h

The Birch and Swinnerton-Dyer conjecture and visibility

Exposé d'Amod Agashe

Résumé : The second part of the Birch and Swinnerton-Dyer conjecture relates the special L-value of an abelian variety to certain arithmetic invariants of the abelian variety, including the order of its Shafarevich-Tate group. The theory of visibility, initiated by Mazur, can sometimes be used to prove the existence of non-trivial elements of the Shafarevich-Tate group. We will discuss how visibility can be used to show that a certain factor of the special L-value (assumed non-zero) divides the order of the Shafarevich-Tate group, under certain hypotheses, the most serious of which is the first part of the Birch and Swinnerton-Dyer conjecture on the rank.