Séminaire de théorie des nombres

Le 09 octobre 2023 à 14h (Jussieu)

On the geometricity of adelic Galois sections of hyperbolic curves

Exposé de Yuichiro Hoshi (Kyoto University)

Résumé : A Galois section of a hyperbolic curve over a field is defined to be a continuous section of the natural continuous surjective outer homomorphism from the etale fundamental group of the given curve to the absolute Galois group of the basefield. Grothendieck's section conjecture states that, for a given hyperbolic curve over a number field, an arbitrary Galois section of the curve is geometric, i.e., the image of an arbitrary Galois section of the curve is contained in a decomposition subgroup associated to a closed point of the curve. After a brief state of the background, this talk will report on recent and future developments concerning this conjecture. In particular, I will explain a proof of the geometricity of an adelic Galois section of a "sufficiently small" hyperbolic curve over a number field. This talk is based on a joint work with Shinichi Mochizuki.