Séminaire de théorie des nombres

Le 20 Juin 2011 à 14h (à Chevaleret)

Galois-theoretic characterization of isomorphism classes of monodromically full hyperbolic curves of genus zero

Exposé de Yuichiro Hoshi
(RIMS, Kyoto University)

Résumé : By various works concerning Grothendieck's anabelian conjecture, it was proven that the isomorphism class of a hyperbolic curve over a number field is completely determined by the associated pro-l outer Galois representation. In this talk, we will discuss a stronger version of the above result, i.e., if a hyperbolic curve over a number field is of genus 0 and l-monodromically full, then the isomorphism class of the hyperbolic curve is completely determined by the kernel of the associated pro-l outer Galois representation. Note that the property of being monodromically full may be regarded as an analogue for hyperbolic curves of the property of not admitting complex multiplication for elliptic curves. From this point of view, this stronger version may be regarded as a genus 0 analogue of a result by Mochizuki which asserts that the isomorphism class of an elliptic curve which does not admit complex multiplication over a number field is completely determined by the kernels! of the natural Galois representations on the various finite quotients of its Tate module.