Séminaire de théorie des nombres Le 5 octobre 2009 à 14h

Reciprocity maps and Selmer groups

Exposé de Romyar Sharifi (University of Arizona)

Résumé : We will define and discuss the S-reciprocity map for a number field F, where S is a set of primes of F containing those over a fixed prime p. This is essentially a map from the S-units of F to a tensor product of pro-p abelian Galois groups with restricted ramification. Particular attention will be paid to its relationship with cup products and with Selmer groups (or complexes) of residual representations. For certain cyclotomic fields F, we will use this to suggest a connection with reductions of the p-adic L-functions of cuspidal eigenforms that satisfy mod p congruences with Eisenstein series.