

Speaker: Wei Zhang

Title: p -adic Heights of the arithmetic diagonal cycles

Abstract: This is a work in progress joint with Daniel Disegni. We formulate a p -adic analogue of the Arithmetic Gan–Gross–Prasad conjecture for unitary groups, relating the p -adic height pairing of the arithmetic diagonal cycles to the first central derivative (along the cyclotomic direction) of a p -adic Rankin–Selberg L-function associated to cuspidal automorphic representations. In the good ordinary case we are able to prove the conjecture, at least when the ramifications are mild at inert primes. We deduce some applications to the p -adic version of the Bloch-Kato conjecture.