Séminaire de théorie des nombres

Le 5 mars 2007 à 14h

On the p-adic elliptic polylogarithm and the two-variable p-adic L-function for CM elliptic curves

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Résumé : (Joint work with Shinichi Kobayashi and Takeshi Tsuji)

In this talk, we explicitly describe the de Rham realization of the elliptic polylogarithm for a single ellipitic curve, using rational functions derived from the theta function associated to the Poincare bundle. Using this description, we calculate the p-adic (rigid syntomic) realization of the elliptic polylogarithm, when the elliptic curve has complex multiplication and good reduction at the prime p. When p is an ordinary prime, we relate the specialization of the elliptic polylogarithm to the special values of the two-variable p-adic L-functions defined by Manin-Vishik and Katz, giving a p-adic Beilinson conjecture type result extending previous calculations of Coleman-de Shalit and the speaker concerning the one-variable case. The case when p is supersingular will also be discussed.