Séminaire de théorie des nombres

Le 18 septembre 2017 à 14h (PRG)

On the Gross–Stark Conjecture

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Résumé : In 1980, Gross conjectured a formula for the expected leading term at $s = 0$ of the Deligne–Ribet p-adic L-function associated to a totally even character ψ of a totally real field F. The conjecture states that after scaling by $L(\psi\omega^{-1}, 0)$, this value is equal to a p-adic regulator of units in the abelian extension of F cut out by $\psi\omega^{-1}$. In this talk we describe a proof of Gross's conjecture. This is joint work with Mahesh Kakde and Kevin Ventullo. If time permits, we will briefly describe joint work with Michael Spiess on a refinement of Gross's conjecture that gives a formula for the characteristic polynomial of the regulator matrix. This refined conjecture is still open.