

**Speaker:** Samit Dasgupta

**Title:** Explicit formulae for Stark Units and Hilbert's 12th problem

**Abstract:** Hilbert's 12th problem is to provide explicit analytic formulae for elements generating the maximal abelian extension of a given number field. In this talk I will describe an approach to Hilbert's 12th that involves proving exact  $p$ -adic formulae for Gross-Stark units. This builds on prior joint work with Kakde and Ventullo in which we proved Gross's conjectural leading term formula for Deligne-Ribet  $p$ -adic L-functions at  $s = 0$ . This is joint work with Mahesh Kakde.