Philadelphia Area Number Theory Seminar

Sam Mundy
Princeton University

The nonvanishing of Selmer groups for certain symplectic Galois representations

Abstract: Given an automorphic representation of $SO(n, n+1)$ with certain nice properties at infinity, one can nowadays attach to a p-adic Galois representation R of dimension $2n$. The Bloch–Kato conjectures then predict in particular that if the L-function of R vanishes at its central value, then the Selmer group attached to a particular twist of R is nontrivial.

I will explain work in progress proving the nonvanishing of these Selmer groups for such representations R, assuming the L-function of R vanishes to odd order at its central value. The