Speaker : Cristian Popescu

Title :   *An Equivariant Main Conjecture in Iwasawa Theory and Applications*

Abstract : In recent joint work with Greither, we proved an equivariant main conjecture in the Iwasawa theory of arbitrary global fields, under the assumption that the classical Iwasawa mu-invariants vanish. This is a refinement of earlier results of Wiles (in characteristic 0) and Deligne-Tate (in positive characteristic.) In the formulation and proof of our main conjecture, a crucial role is played by the Galois module structure of the l-adic realizations of certain (abstract) 1-motives.

In this talk, we will discuss the statement and sketch the proof of our main conjecture. Also, we will give various applications towards (refinements of) the Brumer-Stark and Coates-Sinnott conjectures, explicit l-adic models for Tate sequences and the Equivariant Tamagawa Number conjecture for Dirichlet motives.