

Workshop Calabi-Yau Motives

28.-30.01.2019

Speakers:

Neil Dummigan (University of Sheffield)

Moduli of congruences appearing in L-values

The congruence in question is $A(F,p) \equiv a(f,p) + p + p^2 \pmod{q}$, where F is a genus 2, weight 3 Siegel cuspidal eigenform of paramodular level, f is a genus 1, weight 4 cuspidal eigenform, and $A(F,p)$, $a(f,p)$ are Hecke eigenvalues at any good prime p .

I will explain how according to the Bloch-Kato conjecture, q^2 should appear in the denominator of $L(2,F,\text{spin})$ and q in the numerator of $L(3,f)$ (suitably normalised). I will explore the relation of the former to recent work of Ryan and Tornaria on a generalisation of Boecherer's conjecture, and the latter to recent work of J. Brown and H. Li.