

Prof. Masaaki Furusawa

Title: On Special Values of Certain L-functions

Abstract:

Let f be a holomorphic newform of weight k and let π denote the attached cuspidal representation of $GL_2(\mathbb{A}_Q)$. Let V be a quadratic space defined over Q such that $V \otimes_Q \mathbb{R}$ is anisotropic. Let τ be an irreducible automorphic representation of $SO(V, \mathbb{A}_Q)$ whose infinity component τ_∞ is the trivial representation. Then we prove an algebraicity result on the special value of $LS(s, \pi \otimes \tau)$ at a point, which seems to be the rightmost critical point. As a special case we prove a new algebraicity result on the special value of the Rankin triple L-function for $GL(2)$ in some unbalanced case, which conforms with Deligne's conjecture on special values of motivic L-functions made explicit by Blasius in the aforementioned case. This is a joint work with Kazuki Morimoto.