

Iwasawa-Greenberg Main Conjectures for Rankin-Selberg p -adic L-functions

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Abstract

In this talk I will prove an Iwasawa-Greenberg main conjecture for Rankin-Selberg p -adic L-functions for a general modular form and a CM form such that the CM form has higher weight, using Eisenstein series on $U(3,1)$, under the assumption that the CM form is ordinary (no ordinary conditions on the general modular form). This has many arithmetic applications including proving an anticyclotomic main conjecture in the $\text{sign}=-1$ case (formulated by Perrin-Riou). In view of the Beilinson-Flach elements this gives one way of proving the Iwasawa main conjecture for supersingular elliptic curves formulated in different ways by Kato, Kobayashi and Perrin-Riou.