

Big Image of Automorphic Galois Representations and Congruence Ideals

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Abstract

In a work in progress with J. Tilouine, we show the existence of a principal congruence subgroup contained in the image of the Galois representation associated to a p -adic family of modular forms for $GL(2)$ and $GSp(4)$. This defines an ideal, called Galois level; we relate this ideal with congruence ideals and p -adic L -functions.