

On the large image conjecture

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Let G be a connected reductive group over a number field F . The conjectural global Langlands correspondence for G predicts a correspondence between certain automorphic representations of $G(\mathbb{A}_F)$ and certain families of ℓ -adic Galois representations ρ_{ℓ} valued in the L -group of G . In general, it is expected that the image of the residual representations $\bar{\rho}_{\ell}$ of ρ_{ℓ} should be as large as possible for almost all primes ℓ , unless there is an automorphic reason for it does not happen. In this talk we will survey some recent advances in this conjecture.

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