Ladder representations and Galois distinction

Abstract:

The space $\text{GL}_n(E)/\text{GL}_n(F)$, for a quadratic extension $E/F$ of $p$-adic fields, serves as an approachable case for the study of harmonic analysis on $p$-adic symmetric spaces on one hand, while having ties with Asai L-functions on the other. It is long known that a $\text{GL}_n(F)$-distinguished representation of $\text{GL}_n(E)$ must be contragredient to its own Galois conjugate. Conversely, a conjecture often attributed to Jacquet states that the last-mentioned condition is close to being sufficient for distinction. We show the conjecture is valid for the class of ladder representations which was recently explored by Lapid and Minguez. Along the way, we will suggest a reformulation of the conjecture which concerns standard modules in place of irreducible representations.