

1096-22-1244

Christian Zorn* (christian.zorn79@gmail.com), 9330 Rock Ripple Lane, Laurel, MD 20723.

Building Toward a “Twisted” Theta Correspondence. Preliminary report.

The local theta lift over a p -adic field takes a pair of reductive groups $G := \mathbf{G}(F)$ and $G' = \mathbf{G}'(F)$ (with F a p -adic field) along with a symplectic vector space V over F for which $G \times G' \subset H := \mathrm{Sp}(V)$. There exists covering groups \tilde{G} , \tilde{G}' , and \tilde{H} and a representation ω of \tilde{H} so that its restriction to $\tilde{G} \times \tilde{G}'$ decomposes “nicely”. Representations $\pi \boxtimes \pi'$ appearing in this restriction are called *theta lifts* of each other.

In our talk, we discuss some results regarding theta lifts when G is a symplectic group and G' is an orthogonal group for an odd-dimensional orthogonal space. Namely, we aim to sketch a proof of the famous *theta dichotomy conjecture*. The proof relies heavily on the Rankin-Selberg-type doubling integral of Piatetski-Shapiro and Rallis. From there, We will introduce on-going research that defines the “twisted” doubling integral and attempt to compute their L -functions as well as interpret them in the theta correspondence framework. (Received September 13, 2013)