

Residues of Eisenstein series and generalized Shalika models for SO_{4n}

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Abstract. We introduce the generalized Shalika model for $SO(4n)$, the split even orthogonal group of rank $2n$, and develop the local and global compatibilities with the Shalika model for $GL(2n)$, the general linear group of rank $2n$. As result, we determine the existence of poles of certain Eisenstein series on $SO(4n)$ in terms of the Shalika model on the cuspidal datum $(GL(2n), \pi)$, and give a different proof for the determination of the pole at $s = 1$ of the exterior square L-function $L(s, \pi, \Lambda^2)$ in terms of the Shalika model on π .

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