

1030-20-138

Yujun Qin* (yjqin@math.ecnu.edu.cn), Department of Mathematics, East China Normal University, No. 500 DongChuan Road, ShangHai, 200241, Peoples Rep of China. *Shalika models and functoriality.*

This is report on my recent work (joint with Jiang, D.H and Nien, C.F). Let F be a p -adic field, π be an irreducible selfdual supercuspidal representation of $GL_n(F)$. We show that $L(s, \pi, \Lambda^2)$ has a pole at $s = 0$ if and only if π has a nonzero Shalika functional, which is equivalent to the induced representation $I(s, \pi)$ of $SO_{4n}(F)$ has a nonzero generalized Shalika model at $s = 1$. And if it is this case, $I(s, \pi)$ is reducible. As an application, by Shahidi's method and Ginzburg, Rallis and Soudry's work, π has a nonzero linear model. We also show other applications. (Received August 03, 2007)