

Meeting: 1004, Bowling Green, Kentucky, SS 9A, Special Session on L-Functions

1004-11-169 **Ze-Li Dou*** (z.dou@tcu.edu), Department of Mathematics, Box 298900, Texas Christian University, Fort Worth, TX 76129. *Zeta functions and theta lifts.*

Special values of automorphic L -functions may be interpreted by periods of automorphic forms. Period relations may therefore be obtained through investigation of liftings of automorphic forms and of the associated L -functions.

In this talk we report some recent progress in the context of Shimura's period conjectures. We construct a zeta function associated to several systems of Hecke eigenvalues, one sufficiently simple to allow the consideration of theta lifts within. We then discuss the analytic and arithmetic properties of this zeta function. (Received January 24, 2005)