1067-11-260 **Bei Zhang*** (zbtai@math.northwestern.edu), 914 A Crain Street, Apt 2S, Evanston, IL 60202.
Fourier-Jacobi coefficients of Eisenstein series on unitary group and the application in Iwasawa main conjecture.

In this talk, I will explain my work about the calculation of the Fourier-Jacobi expansion of Eisenstein series on $U(3,1)$, or more generally on any non quasi-split unitary group. I relate the Fourier-Jacobi coefficient of the Eisenstein series with special values of L-functions. It can help verify the existence of certain p-integral Eisenstein series on $U(3,1)$ which does not vanish modulo p. This is a crucial step towards the main conjecture for $GL_2 \times K^\times$ using Eisenstein congruence method. (Received August 14, 2010)