

October 30, 2013: *The Bessel function of unramified principal series.*

Let G be a split reductive group over a non-archimedean field. We evaluate a canonically defined matrix coefficient of the principal series of G , known as the Bessel function, and show that it is related to the spherical function of G , another matrix coefficient. In particular, our method of evaluation mirrors that of the spherical function described by Casselman in 1980.