

October 4: Avraham Aizenbud (MIT), “Smooth transfer of Kloosterman integrals.”

Fix a local field F and its quadratic extension E . We consider an integral of a Schwartz function on $GL_n(F)$ along the orbits of the two-sided action of the groups of upper unipotent matrices twisted by a non-degenerate character. This gives a smooth function on the torus. We prove that the space of all functions obtained in such a way coincides with the space that is constructed analogously when $GL_n(F)$ is replaced with the variety of non-degenerate hermitian forms.

The non-Archimedean case is done by Jacquet and the Archimedean case is done by Gourevitch and myself. I will discuss the main ingredients of the proof, the difficulties that occurs in the Archimedean case and the methods we used to overcome them.