

Reid Huntsinger

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Dr. Reid Huntsinger currently serves as a Professor at the Community College of Philadelphia. Dr. Huntsinger obtained his Ph.D. in Mathematics from the University of Chicago in 1997, advised by Dr. Paul Sally Jr.

Dr. Huntsinger and his advisor studied the behavior of the Fourier transform of a nilpotent orbital integral. Dr. Sally believed it was possible to represent $\check{T}(X)$ - when $\check{T} \in J(\mathfrak{g})$ and $X \in \mathfrak{g}^{r.s.s.}$ - locally by a constant function on $\mathfrak{g}^{r.s.s.}$. Dr. Huntsinger was able to prove it, and through his proof, he came up with and proved the following two theorems:

Theorem 6.1.2: (Reid Huntsinger) *Let K be any compact open subgroup of G and let dk denote the normalized Haar measure on K . For all $X \in \mathfrak{g}^{r.s.s.}$ we have*

$$\hat{\mathcal{O}}_{\mu}(X) = \mathcal{O}_{\mu}(Y \mapsto \int_K \Lambda(\text{tr}(Y \cdot {}^k X)) dk).$$

Theorem 6.2.1: (Reid Huntsinger) *Fix $r \in \mathbb{R}$. If $T \in J(\mathfrak{g}_r)$, then \hat{T} is represented on $\mathfrak{g}^{r.s.s.}$ by*

$$X \mapsto T(\eta_X).$$

Here, for $Y \in \mathfrak{g}$, $\eta_X(Y) := \int_K (\Lambda(\text{tr}(Y \cdot {}^k X))) dk$. (As before, K is a compact open subgroup, and dk is the normalized Haar measure on K .)

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