1145-60-2398   **David Eric Weisbart*** (`weisbart@math.ucr.edu`). *A Product Formula for Functional Integrals over Rational Adelic Paths.*

For any prime p, the fundamental solutions to heat equations given by a large class of p-adic pseudo-Laplace operators give rise to measures on the Skorokhod space of paths valued in $\mathbb{Q}_p$. The subset of Adelic paths has full measure in this product space if and only if the infinite sum of the diffusion constants in each p-adic component is convergent. Furthermore, the induced measure on the Adelic Skorohod space is a measure given by an Adelic heat equation. The path integral representation for the dynamical semigroup associated with the Adelic Schrödinger-type operator given by this Adelic heat equation and a bounded simple Adelic potential is a product of path integrals over the p-adic components. (Received September 25, 2018)