1125-28-1732 **Dong Hyun Cho*** (j94385@kyonggi.ac.kr), Department of Mathematics, Kyonggi University, Youngtong-Gu, Suwon, Kyonggido 16227. *Scale transforms of unbounded functions on an analogue of Wiener space.*

Let $C[0,T]$ denote the space of real-valued continuous functions on $[0,T]$. Let a be in $C[0,T]$ and let h be of bounded variation with $h \neq 0$ a.e. on $[0,T]$. Define $Z : C[0,T] \times [0,T] \to \mathbb{R}$ by $Z(x,t) = (h\chi_{[0,t]}, x) + x(0) + a(t)$. For a partition $0 = t_0 < t_1 < \ldots < t_n < t_{n+1} = T$ of $[0,T]$, define random vectors $Z_n : C[0,T] \to \mathbb{R}^{n+1}$ and $Z_{n+1} : C[0,T] \to \mathbb{R}^{n+2}$ by $Z_n(x) = (Z(x,t_0), Z(x,t_1), \ldots, Z(x,t_n))$ and $Z_{n+1}(x) = (Z(x,t_0), Z(x,t_1), \ldots, Z(x,t_n), Z(x,t_{n+1}))$. With the conditioning functions Z_n and Z_{n+1}, we evaluate the conditional Fourier-Feynman transforms and convolution products of the functions given by

$$f((v_1, Z(x,\cdot)), \ldots, (v_r, Z(x,\cdot))) \int_{L_2[0,T]} \exp\{i(v, Z(x,\cdot))\} d\sigma(v),$$

where $\sigma \in \mathcal{M}(L_2[0,T])$ and $f \in L_p(\mathbb{R}^r)$. We show that the conditional Fourier-Feynman transform of the conditional convolution product for the functions can be expressed by the product of transforms of each function with a change of scale. Finally the effects of drift will be investigated on the polygonal function of a. (Received September 19, 2016)