1118-60-64 **Dong Hyun Cho*** (j94385@kyonggi.ac.kr), Department of Mathematics, Kyonggi University, Suwon, Kyonggido 16227, South Korea. *Change of scale formulas using a multivariate normal distribution on a function space.*

Let $a \in C[0,T]$, h is of bounded variation with $h \neq 0$ a.e. on $[0,T]$ and define a stochastic process $Z : C[0,T] \to \mathbb{R}$ by

$$Z(x,t) = \int_0^t h(s)dx(s) + x(0) + a(t)$$

for $x \in C[0,T]$ and for $t \in C[0,T]$, where the integral denotes a generalized Paley-Wiener-Zygmund integral. For a partition $t_0 = 0 < t_1 < \cdots < t_n < t_{n+1} = T$ 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

$$Z_n(x) = (Z(x,t_0), \cdots, Z(x,t_n))$$

and

$$Z_{n+1}(x) = (Z(x,t_0), \cdots, Z(x,t_n), Z(x,t_{n+1})).$$

Using simple formulas for generalized conditional Wiener integrals on $C[0,T]$ with the conditioning function Z_n and Z_{n+1} we evaluate generalized analytic conditional Wiener integrals of the cylinder function

$$F(x) = f\bigg(\int_0^t v_1(s)dZ(x,s), \cdots, \int_0^t v_r(s)dZ(x,s)\bigg),$$

where $f \in L_p(\mathbb{R}^r)$ with $1 \leq p \leq \infty$ and $\{v_1, \cdots, v_r\}$ is an orthonormal subset of $L_2[0,T]$. We then establish various change of scale transformations for the generalized analytic conditional Wiener integrals of F with Z_n and Z_{n+1} using a multivariate normal distribution. (Received January 20, 2016)