

N. A. KACHANOVSKY¹, V. A. TESKO²

Stochastic Integral of Hitsuda-Skorohod Type Connected with Processes of Meixner Type

¹ *Institute of Mathematics, Kyiv, Ukraine*

² *Institute of Mathematics, Kyiv, Ukraine*

E-mail: tesko@imath.kiev.ua

It is well known that the Hitsuda-Skorohod integral as an operator on the Fock space is a natural generalization of the Itô integral not only in the Wiener case but in the case of any normal martingale with Chaos Representation Property (CRP). In this talk we introduce and study an analog of the Hitsuda-Skorohod integral connected with processes of Meixner type (these processes, with the exception of Wiener and Poissonian ones, have no CRP). We define this integral by analogy with the classical case, but using instead of the Fock space the more complicated extended Fock space. In such a way one obtains a natural generalization of the Itô integral with respect to processes of Meixner type.

[1] N.A. Kachanovsky, V.A. Tesko, *Ukr. Math. J.* **61**, (2009), no. 6. p. 733-764.

[2] N.A. Kachanovsky, *Meth. Funct. Anal. and Top.* **13**, (2007), no. 4. p. 338-379.