PROPERTIES OF GENERALIZED SET-VALUED STOCHASTIC INTEGRALS

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Abstract

The paper is devoted to properties of generalized set-valued stochastic integrals defined in [10]. These integrals generalize set-valued stochastic integrals defined by E.J. Jung and J.H. Kim in the paper [4]. Up to now we were not able to construct any example of set-valued stochastic processes, different on a singleton, having integrably bounded set-valued integrals defined in [4]. It was shown by M. Michta (see [11]) that in the general case set-valued stochastic integrals defined by E.J. Jung and J.H. Kim, are not integrably bounded. Generalized set-valued stochastic integrals, considered in the paper, are in some non-trivial cases square integrably bounded and can be applied in the theory of stochastic differential equations with set-valued solutions.

Keywords: set-valued mappings, set-valued integrals, set-valued stochastic processes.

2010 Mathematics Subject Classification: 60H05, 28B20, 47H04.

References


Received 25 April 2014