MATHEMATICS

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DEFINING PARAMETERS OF RANK RATING SCALE FOR MULTI-DIMENSIONAL OBJECTS WITH NON-HOMOGENEOUS CHARACTERISTICS

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Bagretsov Sergey Alekseevich – Doctor of Technical Science, Doctor of Economic Science, Professor, Head of the Laboratory of Design Researches and Development, Russian Presidential Academy of National Economy and Public Administration, Pushkinskaya St., 8a, Rostov-on-Don, 344002, Russia.

Kostetskaya Galina Sergeevna – Candidate of Physical and Mathematical Science, Associate Professor, Department of differential and Integral Equations, Vorovich Institute of Mathematics and Computer Science of the Southern Federal University, Milchakov St., 8a, Rostov-on-Don, 344090, Russia.

We offer a solution for the problem of defining coefficients of linear convolution of normed parameters describing statuses of objects that ensure a maximum correspondence of objects from learning sample to the system of fuzzy rank relations. It is supposed that parameters of objects' description are presented by index numbers and qualitative variables with a probability or fuzzy distribution. The problem deals with the Spearman's rank correlation coefficient modified for interval measures as the criterion.

Keywords: *fuzzy sets, membership function, rank scale, correlation coefficients.*

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THE FAIR PRICE DETERMINING FOR EUROPEAN LOOKBACK PUT OPTION IN THE CASE OF (B,S)-MARKET DIFFUSION MODEL WITH STOCHASTIC SWITCHING OF PARAMETERS

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Beliavsky Grigory Isaakovich – Doctor of Technical Science, Professor, Head of High Mathematics and Operations Research Department, Vorovich Institute of Mathematics and Computer Science of the Southern Federal University, Milchakov St., 8a, Rostov-on-Don, 344090, Russia, e-mail: beliavsky@hotmail.com.

Danilova Natalia Victorovna – Candidate of Physical and Mathematical Science, Associate Professor, Department of High Mathematics and Operations Research, Vorovich Institute of Mathematics and Computer Science of the Southern Federal University, Milchakov St., 8a, Rostov-on-Don, 344090, Russia, e-mail: danilova198686@mail.ru.

The diffusion (B,S)-market model with stochastic switching of parameters is considered. The way of fair price calculation in case of lookback put option is presented.

Keywords: *Wiener process, Girsanov transformation, martingale measure, option, stopping time, density process, market.*

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