

ON DP-APPROACH TO FRACTAL PROPERTIES OF RANDOM VARIABLES WITH INDEPENDENT IDENTICALLY DISTRIBUTED LML-SYMBOLS

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The talk is devoted to the metric and dimensional theories of LML-expansions of real numbers which are generalizations of the corresponding theories of Lüroth expansions, GLS-expansions and $x - Q_\infty$ -expansions.

We also develop probabilistic theory of such expansions and study fine fractal properties of the corresponding singularly continuous probability distributions.

During the talk we will discuss DP-approach for the study of properties of such distributions which is based on deep connections between transformations preserving the Hausdorff dimension and the faithfulness of Vitaly coverings.

References

- [1] R. Nikiforov, G. Torbin, *On the Hausdorff dimension of generalized self-similar sets generated by infinite IFS (In Ukrainian)*. Transactions of Dragomanov National Pedagogical University. Series 1: Phys.-Math. Sciences 13 (1) , Kyiv, 2012, 151-162.
- [2] I. Garko, G. Torbin, *$x - Q_\infty$ -expansions of real numbers and related problems (In Ukrainian)*. Abstracts of the International Conference "Asymptotic Methods in Theory of Differential Equations", December 13-14, 2012, Kyiv, 48-50.