ON UNIFORM DISTRIBUTION FOR INVARIANT EXTENSIONS OF THE LINEAR LEBESGUE MEASURE

<u>Gogi Pantsulaia</u>*, Alex Kirtadze**, Nino Rusiashvili*** * I.Vekua Institute of Applied Mathematics of Iv. Javakhishvili Tbilisi State University, Tbilisi, Georgia, g.pantsulaia @gtu.ge *** A.Razmadze Institute of Mathematics of Iv. Javakhishvili Tbilisi State University, Tbilisi, Georgia, a.kirtadze@gtu.ge ***Georgian Technical University, Department of Mathematics, Tbilisi, Georgia, n.rusiashvili@gtu.ge The concept of uniform distribution in [0,1] is extended for a certain strictly separated

maximal (in the sense of cardinality) family $(\lambda_t)_{t\in[0,1]}$ of invariant extensions of the linear Lebesgue measure λ (cf. [1]), and it is shown that the λ_t^{∞} measure of the set of all λ_t uniformly distributed sequences is equal to 1, where λ_t^{∞} denotes the infinite power of the measure λ_t . This result is an analogy of Hlawka's theorem [2] for λ_t -uniformly distributed sequences. In a similar manner the validity of an analogue of Weyl's theorem [3] is established.

Acknowlegment. This work was supported by financial support of Shota Rustaveli National Science Foundation (Grants: #GNFS 31/25, # GNFS/FR 1165-100/14)

References

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