ASYMPTOTICALLY DOUBLE λ_2 -STATISTICALLY EQUIVALENT SEQUENCES OF INTERVAL NUMBERS

AYHAN ESI, SHYAMAL DEBNATH, and SUBRATA SAHA

Abstract. In this paper we have introduced the concept of λ_2 - asymptotically double statistical equivalent of interval numbers and strong λ_2 - asymptotically double statistical equivalent of interval numbers. We have investigated the relations related to these spaces.

MSC 2010. 40C05, 46A45.

Key words. Asymptotically, interval number, λ_2 -statistically.

REFERENCES

- N.D. Aral and S. Konca, Asymptotically f-lacunary statistical equivalent of set sequences in Wijsman sense, J. Inequal. Spec. Funct., 9 (2018), 1–14.
- [2] N.L. Braha, On asymptotically Δ^m lacunary statistical equivalent sequences, Appl. Math. Comput., 219 (2012), 280–288.
- [3] H. Cakalli, A study on statistical convergence, Funct. Anal. Approx. Comput., 1 (2009), 19-24.
- K.P. Chiao, Fundamental properties of interval vector max-norm, Tamsui Oxford Journal of Mathematical Sciences, 18 (2002), 219–233.
- [5] S. Debnath, A.J. Datta and S. Saha, Regular matrix of interval numbers based on fibonacci numbers, Afr. Mat., 26 (2015), 1379–1385.
- [6] S. Debnath, B. Sarma and S. Saha, On some sequence spaces of interval vectors, Afr. Mat., 26 (2015), 673–678.
- S. Debnath and S. Saha, On statistically convergent sequence spaces of interval numbers, in Proceedings of IMBIC, 3 (2014), 178–183.
- [8] P.S. Dwyer, *Linear computation*, Wiley, New York, 1951.
- [9] P.S. Dwyer, Errors of matrix computations, in Simultaneous Linear Equations and the Determination of Eigenvalues, NBS AMS, 29 (1953), 49–58.
- [10] A. Esi, Strongly almost λ-convergence and statically almost λ-convergence of interval numbers, Scientia Magna, 7 (2011), 117–122.
- [11] A. Esi, Lacunary sequence spaces of interval numbers, Thai J. Math., 10 (2012), 445– 451.
- [12] A. Esi, A new class of interval numbers, Journal of Qafqaz University, Mathematics and Computer Science, 33 (2012), 98–102.
- [13] A. Esi, Double lacunary sequence spaces of double sequence of interval numbers, Proyecciones, **31** (2012), 297–306.

DOI: 10.24193/mathcluj.2020.1.05

The authors would like to thank the referee(s) for their valuable and useful comments, which helped the improvement of this work to the present form.

- [14] A. Esi and A. Esi, Asymptotically lacunary statistically equivalent sequences of interval numbers, International Journal of Applied Mathematics, 1 (2013), 43–48.
- [15] A. Esi and B. Hazarika, Some ideal convergence of double Λ-interval number sequences defined by Orlicz function, Global Journal of Mathematical Analysis, 1 (2013), 110–116.
- [16] A. Esi and N. Braha, On asymptotically λ -statistical equivalent sequences of interval numbers, Acta Scientiarum Technology, **35** (2013), 515–520.
- [17] A. Esi, λ -sequence spaces of interval numbers, Appl. Math. Inf. Sci., 8 (2014), 1099–1102.
- [18] A. Esi, Statistical and lacunary statistical convergence of interval numbers in topological groups, Acta Scientiarum Technology, 36 (2014), 491–495.
- [19] H. Fast, Sur la convergence statistique, Colloq. Math., 2 (1951), 241–244.
- [20] P.S. Fischer, Automatic propagated and round-off error analysis, in 13th National Meeting of the Association for Computing Machinary, June 1958.
- [21] J.A. Fridy, On statistical convergence, Analysis, 5 (1985), 301–313.
- [22] S. Konca and M. Kucukaslan, On asymptotically f-statistical equivalent sequences, J. Indones. Math. Soc., 24 (2018), 54–61.
- [23] I.J. Maddox, On strong almost convergence, Math. Proc. Cambridge Philos. Soc., 85 (1979), 345–350.
- [24] M. Marouf, Asymptotic equivalence and summability, Int. J. Math. Math. Sci., 16 (1993), 755–762.
- [25] H.I. Miller, A measure theoretical subsequence characterization of statistical convergence, Trans. Amer. Math. Soc., 347 (1995), 1811–1819.
- [26] R.E. Moore, Automatic error analysis in digital computation, in LSMD-48421, Lockheed Missiles and Space Company, 1959.
- [27] R.E. Moore and C.T. Yang, Theory of an interval algebra and its application to numeric analysis, in RAAG Memories II, Gaukutsu Bunken Fukeyu-kai, Tokyo, 1962.
- [28] M. Mursaleen and O.H. Edely, *Statistical convergence of double sequences*, J. Math. Anal. Appl., 288 (2003), 223–231.
- [29] F. Patterson and E. Savaş, On asymptotically lacunary statistical equivalent sequences, Thai J. Math., 4 (2006), 267–272.
- [30] R.F. Patterson, On asymptotically statistically equivalent sequences, Demonstr. Math., 36 (2003), 149–153.
- [31] I.J. Schoenberg, The integrability of certain functions and related summability methods, Amer. Math. Monthly, 66 (1959), 361–375.
- [32] M. Sengonul and A. Eryilmaz, On the sequence spaces of interval numbers, Thai J. Math., 8 (2010), 503–510.

Received September 17, 2018 Accepted February 20, 2019 Malatya Turgut Ozal University Engineering Faculty Department of Basic Engineering Sciences 44040, Malatya, Turkey E-mail: aesi23@hotmail.com

Tripura University (A Central University), India Department of Mathematics E-mail: shyamalnitamath@gmail.com E-mail: subratasaha2015@gmail.com