

ON GENERALIZED GEOMETRIC DIFFERENCE OF SIX DIMENSIONAL ROUGH IDEAL CONVERGENT OF TRIPLE SEQUENCE DEFINED BY MUSIELAK–ORLICZ FUNCTION

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Abstract. We introduce a rough ideal convergent of triple sequence spaces defined by Musielak–Orlicz function, using an six dimensional infinite matrix, and a generalized geometric difference Zweier six dimensional matrix operator $B_{(abc)}^p$ of order p . We obtain some topological and algebraic properties of these spaces.

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REFERENCES

- [1] M. AIYUB, A. ESI AND N. SUBRAMANIAN, *The triple entire difference ideal of fuzzy real numbers over fuzzy p -metric spaces defined by Musielak Orlicz function*, Journal of Intelligent & Fuzzy Systems, **33** (2017), 1505–1512.
- [2] S. AYTAR, *Rough statistical convergence*, Numer. Funct. Anal. Optim., **29** (2008), No. 3, 291–303.
- [3] A. ESI AND E. SAVAS, *On lacunary statistically convergent triple sequences in probabilistic normed space*, Appl. Math. Inf. Sci., **9** (2015), No. 5, 2529–2534.
- [4] S. DEBNATH, B. SARMA AND B. C. DAS, *Some generalized triple sequence spaces of real numbers*, J. Nonlinear Anal. Optim., **6** (2015), No. 1, 71–79.
- [5] A. J. DUTTA, A. ESI AND B. C. TRIPATHY, *Statistically convergent triple sequence spaces defined by Orlicz function*, J. Math. Anal., **4**, (2013), No. 2, 16–22.
- [6] Y. FADILE KARABABA AND A. ESI, *On some strong zweier convergent sequence spaces*, Acta Univ. Apulensis Math. Inform., **29** (2012), 9–15.
- [7] P. K. KAMTHAN AND M. GUPTA, *Sequence Spaces and Series, Lecture notes, Pure and Applied Mathematics*, Marcel Dekker Inc., New York, 1981.
- [8] V. A. KHAN, K. EBADULLAH, A. ESI, N. KHAN AND M. SHAFIQ, *On paranorm Zweier I -convergent sequence spaces*, J. Math., **2013**, Article ID 653501, 6pp.
- [9] J. LINDENSTRAUSS AND L. TZAFRIRI, *On Orlicz sequence spaces*, Israel J. Math., **10** (1971), 379–390.
- [10] J. MUSIELAK, *Orlicz Spaces, Lectures Notes in Mathematics 1034*, Springer-Verlag, 1983.
- [11] S. K. PAL, D. CHANDRA AND S. DUTTA, *Rough ideal Convergence*, Hacet. J. Math. Stat., **42** (2013), No. 6, 633–640.
- [12] H. X. PHU, *Rough convergence in normed linear spaces*, Numer. Funct. Anal. Optim., **22** (2001), 201–224.
- [13] A. SAHINER, M. GURDAL AND F. K. DUDEN, *Triple sequences and their statistical convergence*, Selcuk J. Appl. Math., **8** (2007), No. 2, 49–55.
- [14] A. SAHINER AND B. C. TRIPATHY, *Some I related properties of triple sequences*, Selcuk J. Appl. Math., **9** (2008), No. 2, 9–18.
- [15] N. SUBRAMANIAN AND A. ESI, *The generalized tripled difference of χ^3 sequence spaces*, Global Journal of Mathematical Analysis, **3** (2015), No. 2, 54–60.