

Lacunary Statistical Convergence of Complex Uncertain Sequence

Omer Kisi and Hatice Kubra Unal

Bartın University, Dept. of Mathematics, 74100, Bartın, Turkey

E-mail: okisi@bartin.edu.tr and hku.haticekubraunal@gmail.com

Abstract: This study introduces the lacunary statistically convergence concepts of complex uncertain sequences: lacunary statistically convergence almost surely (S_{θ} .a.s.), lacunary statistically convergence in measure, lacunary statistically convergence in mean, lacunary statistically convergence in distribution and lacunary statistically convergence uniformly almost surely (S_{θ} .u.a.s.). In addition, decomposition theorems and relationships among them are discussed.

Keywords: Uncertainty theory; complex uncertain variable; lacunary statistical convergence.

2010 Mathematics Subject Classification: 40A35, 40A05.

References

- [1] X. Chen, Y. Ning, X. Wang, Convergence of complex uncertain sequences, *Journal of Intelligent & Fuzzy Systems* 30(6), pp. 3357-3366, 2016.
- [2] B. Liu, Some research problems in uncertainty theory, *Journal of Uncertain Systems* 3(1), pp. 3-10, 2009.
- [3] B. Liu, Uncertainty risk analysis and uncertain reliability analysis, *Journal of Uncertain Systems* 4(3), pp. 163-170, 2010.
- [4] Z. X. Peng, Complex uncertain variable, Doctoral Dissertation, Tsinghua University (2012).
- [5] C. L. You, On the convergence of uncertain sequences, *Mathematical and Computer Modelling* 49, pp. 482-487, 2009.
- [6] B. C. Tripathy, P.K. Nath, Statistical Convergence of Complex Uncertain Sequences, *New Mathematics and Natural Computation*, 13(3), pp. 359-374, 2017.