

σ -Asymptotically Lacunary Statistical Equivalent Functions on Amenable Semigroups

Ömer Kişî¹ and ²Erhan Güler

^{1,2}Department of Mathematics, Bartın University, Bartın, Turkey

E-mails: okisi@bartin.edu.tr; eguler@bartin.edu.tr

Abstract: This study presents the following definitions which is a natural combination of the definition for asymptotically equivalent, λ -statistical convergence, lacunary convergence and σ -convergence. In this study we introduce the concepts of S_σ -asymptotically equivalent, $S_{\sigma,\lambda}$ -asymptotically equivalent, σ -asymptotically lacunary statistical equivalent and strong (σ, θ) -asymptotically equivalent functions defined on discrete countable amenable semigroups. In addition to these definitions, we give some inclusion theorems.

Keywords and phrases: Lacunary statistical convergence, σ -convergence, Amenable Semigroups.

References

- [1] Nuray F., Rhoades B.E., Asymptotically and Statistically Equivalent Functions Defined on Amenable Semigroups, Thai Journal of Mathematics, Volume 11 (2013) Number 2 : 303–311.
- [2] Savaş, E., Patterson, R.F. (2006) σ -asymptotically lacunary statistical equivalent sequences, CEJM 4(4), 648–655.
- [3] Savaş, E., & Nuray, F. (1993). *On σ -statistically convergence and lacunary σ -statistically convergence*. Math. Slovaca, 43 (3), 309-315.
- [4] Savaş, E., (1989). *Strongly σ -convergent sequences*, Bulletin of the Calcutta Mathematical Society, vol. 81, no. 4, pp. 295–300.
- [5] J.A. Fridy, and C. Orhan, Lacunary statistical convergence. Pacific Journal of Mathematics, 160(1), 43-51, 1993.
- [6] Savaş, E. and Başarır M. (2006). (σ, λ) -asymptotically statistical equivalent sequences Filomat 20:1 , 35–42.
- [7] Mursaleen, λ -statistical convergence, Math. Slovaca 50(1) (2000), 11-115.
- [8] Marouf M., (1993). *Asymptotic equivalence and summability*. Internat. J. Math. Math. Sci., 16(4), 755-762.
- [9] Nomika I., Folner's conditions for amenable semigroups, Math. Scand. 15 (1964) 18–28.