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A NEW TYPE CONVERGENCE FOR SEQUENCE OF FUNCTIONS

Γ -statistical convergence is a new type convergence for which a compact set of cluster points [1]. Some applications of this convergence were studied as a very useful and interesting tool in turnpike theory (see [2, 3, 4], and [5]). The main aim of this paper is to introduce the Γ -statistical convergence of a sequence of functions and also studied some of its properties. In most cases we also need a subset of $C(X)$ which closed, uniformly bounded and equicontinuous. We give examples and describe their structure and properties.

References

- [1] Pehlivan S., Güncan A., Mamedov M.A., *Statistical cluster points of sequences in finite dimensional spaces*, Czechoslovak Math. J. **54** (2004) 95–102.
- [2] Pehlivan S., Mamedov M.A., *Statistical cluster points and turnpike*, Optimization **48** (2000) 93–106.
- [3] Mammadov, M. A., Evans R.J., *Turnpike theorem for terminal functionals in infinite horizon optimal control problems*, J. Math. Anal. Appl. **428** (2015), no. 1147-1160
- [4] Sencimen, C., Pehlivan, S., *On exhaustive families of random functions and certain types of convergence* Stochastics **88** (2016), no. 2, 285-299.
- [5] Zaslavski A.J., *Turnpike properties in the calculus of variations and optimal control*, Springer-Verlag, 2006.

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