

Poulios, C.

Regular methods of summability in some locally convex spaces. (English) Zbl 1212.46005
Commentat. Math. Univ. Carol. 50, No. 3, 401-411 (2009).

Summary: Suppose that X is a Fréchet space, $\langle a_{ij} \rangle$ is a regular method of summability and (x_i) is a bounded sequence in X . We prove that there exists a subsequence (y_i) of (x_i) such that: either (a) all the subsequences of (y_i) are summable to a common limit with respect to $\langle a_{ij} \rangle$; or (b) no subsequence of (y_i) is summable with respect to $\langle a_{ij} \rangle$. This result generalizes the Erdős-Magidor theorem which refers to summability of bounded sequences in Banach spaces. We also show that two analogous results for some ω_1 -locally convex spaces are consistent with ZFC.

MSC:

46A04 Locally convex Fréchet spaces and (DF)-spaces
46A35 Summability and bases in topological vector spaces

Cited in **2** Documents

Keywords:

Fréchet space; regular method of summability; summable sequence; Galvin-Prikry theorem; Erdős-Magidor theorem

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