

Grubb, D. J.

Signed quasi-measures and dimension theory. (English) Zbl 0942.28011

Proc. Am. Math. Soc. 128, No. 4, 1105-1108 (2000).

Let X be a compact Hausdorff space. Then, the main result of this paper is that if the covering dimension $\dim(X) \leq 1$, then every signed quasi-measure on X extends to a regular Borel signed measure on X (that is, every quasi-linear functional on $C(X)$ is linear). In order to prove this, the author presents and uses the following interesting extension theorem of signed quasi-measures: Let μ be a signed quasi-measure on X satisfying that $\mu(U) + \mu(V) = \mu(U \cup V) + \mu(U \cap V)$ for every open subset U and V of X . Then μ extends to a regular Borel signed measure on X .

Reviewer: M.Matsuda (Ohya / Shizuoka)

MSC:

28C15 Set functions and measures on topological spaces (regularity of measures, etc.) Cited in 1 Document

Keywords:

quasi-linear quasi-measure; covering dimension; signed quasi-measure; regular Borel signed measure

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