Density, Smital property and Quasicontinuity

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Abstract

The start point for our work is a well known property of the σ-field $\mathcal{L}$ of Lebesgue measurable sets on the real line $\mathbb{R}$ - Smital Lemma:

For any set $A \in \mathcal{L}$ of positive measure and for any dense set D the set $A + D$ is of full measure (its complement is a null set).

On the base of the abstract version of Smital Property we introduce an operator DS which is used in characterization of the class of semitopological groups, for which adding is a quasicontinuous operation.

References

[1] A. Bartoszewicz, M. Filipczak, T. Natkaniec, *On Smital properties,* Topology Appl. 158 (2011), 2066-2075, doi 10.1016/j.topol.2011.06.044.

[2] G. Horbaczewska, S. Lindner *Resolvability of measurable spaces,*. Bulletin of the Australian Mathematical Society, 94(1), 70-79. doi:10.1017/S0004972715001458

[3] A. Illanes *Finite and ω-resolvability* Proc. Amer. Math. Soc., 124 (1996), pp. 1243-1246

[4] Jiménez R., Malykhin V.I., *Structure resolvability* Comment. Math. Univ. Carolin. 39,2 (1998), 379-387.

[5] A. Nowik, *Marczewski–Burstin representations vs. Bernstein and dense subsets* Dem. Math. Vol. 49 No 4 2016 pp. 372 - 377

[6] M. Balcerzak, A. Bartoszewicz, K. Ciesielski *On Marczewski-Burstin Representations of Certain Algebras of Sets.* Real Anal. Exchange 26 (2000), no. 2, 581–592.