

Between paracompactness and the D -property

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Resumo

A space X is a D -space if whenever a neighborhood $N(x)$ of x , for each $x \in X$, is given, then there is a closed discrete subset D of X such that $\{N(x) : x \in D\}$ covers X . It is a famous open question asked by van Douwen and Pfeffer in [3] whether for the regular spaces any of the standard covering properties, such as Lindelöf or paracompact, imply the D -property. In this talk we introduce a new class of topological spaces that is stronger than both the class of paracompact spaces and the class of D -spaces: the D -paracompact spaces. We also investigate the relationship between the D -paracompactness and other properties like Menger and metrizable as well as its behavior under the usual topological operations.

Referências

- [1] G. Gruenhage, *A survey of D -spaces*, Contemporary Mathematics **533** (2011), 13–28.
- [2] L. F. Aurichi, *D -spaces, topological games, and selection principles*, Topology Proceedings **36** (2010), 107–122.
- [3] Eric K. van Douwen and Washek F. Pfeffer, *Some properties of the Sorgenfrey line and related spaces*, Pacific Journal of Mathematics **81** (1979), 371–378.