

I. Protasov, S. Slobodianiuk
Ultracompanions of subsets of a group

Comment.Math.Univ.Carolin. 55,2 (2014) 257–265.

Abstract: Let G be a group, βG be the Stone-Čech compactification of G endowed with the structure of a right topological semigroup and $G^* = \beta G \setminus G$. Given any subset A of G and $p \in G^*$, we define the p -companion $\Delta_p(A) = A^* \cap Gp$ of A , and characterize the subsets with finite and discrete ultracompanions.

Keywords: Stone-Čech compactification; ultracompanion; sparse and discrete subsets of a group

AMS Subject Classification: 54D35, 22A15, 20F69

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