THE ALGEBRAIC DIFFERENCES AND SUMS OF CANTOR SETS

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Denote by $C(a) \subset [0,1]$ the central Cantor set generated by a sequence $a = (a_n) \in (0,1)^{\mathbb{N}}$. It is known that the difference set $C(a) - C(a)$ has one of three possible forms: a finite union of closed intervals, a Cantor set, or a Cantorval ([1]). Our main results describe two different conditions for (a_n) which guarantee that $C(a) - C(a)$ is a Cantorval. Examples of application of both results will be also presented. We will also give sufficient and necessary conditions for the set $C(a) - C(b)$ to be an interval and some corollaries from these results. We will also consider another types of Cantor sets. The talk will be based on the papers: [2], [3], [4], [5] and [6].

References

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