

Abstract: Special subsets in the generalized Cantor space 2^κ

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My talk begins with an introduction to the generalized Cantor space 2^κ for an uncountable regular cardinal κ . This space is equipped with so-called bounded topology generated by the sets of all extensions of partial functions. In the recent years the generalized Cantor space has been a common subject of research with some analogies to descriptive set theory and set theory of the real line. I am planning to mention some basic properties of this space and describe some obstacles which appear when one tries to generalize the results from the Cantor space 2^ω .

Next, I am going to focus on the attempt to generalize various notions of special subsets of the real line to the case of general Cantor space. It turns out that many such generalization can be easily done, but sometimes one needs some additional assumptions. If the time permits, I am going to say a few words about the subject related to the convergence of sequences of functions $2^\kappa \rightarrow 2^\kappa$. The results which I am presenting are included in a paper by Prof. Tomasz Weiss and myself, which is in preparation.