

STRUCTURAL PROPERTIES OF DEFINABLE CLUBS

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ABSTRACT. Analogous to the study of analytical real numbers, the work presented in this talk deals with the definability of subsets of uncountable regular cardinals by formulas using only simple parameters, focusing on closed unbounded subsets of singular cardinals of countable cofinality. These results establish strong connections between the structural behavior of classes of such definable closed unbounded sets and strong combinatorial properties of the given singular cardinal. Moreover, they also reveal interesting connections to other areas of set-theoretic research, like the study of cardinal invariants of the continuum. This is joint work with Omer Ben-Neria (Jerusalem).