

## $\Sigma_1$ -DEFINABILITY AT HIGHER CARDINALS

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ABSTRACT. Motivated by the deep and canonical structure theory of simply definable sets of real numbers, set theorists have started to study simply definable sets of higher cardinalities. In this talk, I will present results demonstrating that the structural properties of definable sets of low complexity at higher cardinals closely reflect the combinatorial properties of these cardinals. I will focus on recent joint work with Omer Ben-Neria (Jerusalem) that uses definability to analyze the extent of Ramsey-theoretic properties of singular cardinals.