

# The Cardinality of Infinite Sets under Determinacy

William Chan (*University of North Texas*)

We will discuss the size of familiar infinite sets under the axiom of determinacy. The talk will especially focus on the known structure of the cardinalities under the injection relation below the power set of the first uncountable cardinal under various determinacy assumptions. We will also formulate a notion of regularity and cofinality for cardinalities in this choiceless setting and survey the known results. This talk includes joint work with Stephen Jackson and Nam Trang.