# LIGHTFACE $\Delta_1^1$-SUBSETS OF $^{\omega_1}\omega_1$

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ABSTRACT. We say that a set of functions from $\omega_1$ to $\omega_1$ is $\boldsymbol{\Delta}_1^1$ if it is definable over $H(\omega_2)$ by a $\Delta_1$-formula with parameters. It is well-known that many basic questions about the structural properties of this class are not decided by the axioms of ZFC together with large cardinal axioms. In my talk, I want to present examples of such questions that are settled by large cardinal axioms when we restrict ourselves to sets of functions defined by $\Delta_1$-formulas whose parameters are contained in $L(\mathbb{R})$.

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