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Recent Progress on Subset Sum via Additive Combinatorics

In the Subset Sum problem, we are given a set of n integers and the task is to decide if any subset of these integers sums up to 0. I will talk about a recent progress on algorithms for the Subset Sum problem. I will focus on different regimes of parameters for this problem. In the "dense regime," I will present methods that allow us to exploit the tools based on additive-combinatorics to improve the currently best approximation and pseudopolynomial time algorithms. I will also sketch the main additive structure used to improve upon the currently best algorithms for "sparse regime"