SOME RESULTS IN PROBABILISTIC ADDITIVE COMBINATORICS

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We shall discuss some problems and results in the area of probabilistic extremal problems, with emphasis on problems from additive combinatorics. In particular, we shall discuss results on the density of Sidon sets contained in random sets of integers, mostly obtained by estimating the number of Sidon sets of a given cardinality. As it turns out, our counting results also help us address a problem proposed by Cameron and Erdős. This is joint work with Sangjune Lee, Vojtěch Rödl, and Wojciech Samotij.