

Sidon sets and competing Fourier analyses

Some arguments using Fourier analysis can be expressed equally clearly through cyclic groups $\mathbb{Z}/n\mathbb{Z}$ or through the group \mathbb{R}/\mathbb{Z} , and some arguments cannot. This talk will discuss the relative strengths of the two settings, using $B_h[g]$ sets as an example. The set S is a $B_h[g]$ set if the coefficients of $(\sum_{a \in S} z^a)^h$ are bounded by $h!g$, and the main question is to bound the size of a $B_h[g]$ set contained in $\{1, 2, \dots, n\}$.

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