The Namer–Claimer game

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In each round of the Namer–Claimer game,

- *Namer* names a distance $d \in \mathbb{N}$;

- *Claimer* claims a subset of $[n]$ not containing any two points at distance d.

How quickly can Claimer claim subsets covering $[n]$ if Namer is trying to slow them down?

In this talk I won't give the direct argument showing that the answer is $O(\log \log n)$. Instead, I'll highlight connections with the Ramsey theory of Hilbert cubes and pose some generalisations of this problem.