

An observation on the Turán-Nazarov inequality

Omer Friedland, Yosef Yomdin

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The main observation of this note is that the Lebesgue measure μ in the Turán-Nazarov inequality for exponential polynomials can be replaced with a certain geometric invariant ω $\geq \mu$, which can be effectively estimated in terms of the metric entropy of a set, and may be nonzero for discrete and even finite sets. While the frequencies (the imaginary parts of the exponents) do not enter in the original Turán-Nazarov inequality, they necessarily enter the definition of ω .

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