İSTANBUL ANALYSIS SEMINARS

MONOTONICITY, SMOOTHNESS, AND FOURIER TRANSFORM

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Abstract: The famous Riemann-Lebesgue lemma states that the Fourier transform of an integrable function vanishes at infinity. The first quantitative result of this type, also proved by Lebesgue just over 100 years ago, tells us the speed of convergence to zero in terms of some measure of smoothness of a function. In this talk we discuss recent results related to this problem, where monotonicity plays an important role.

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