

Minicourse 2: Introduction to Fourier Analysis

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Abstract: This course offers an introduction to Fourier analysis, focusing on its theoretical foundations. Topics include classical Fourier series and the Fourier transform, with an emphasis on convergence and summability methods, and standard tools such as interpolation of operators and maximal functions, particularly in the context of L^p spaces. If time permits, we will delve into other topics, such as the Hilbert transform and other singular integrals, and the role of Fourier analysis in sampling theory and signal processing.