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On the Absolute Convergence of Small Gaps Fourier Series of Functions of $\bigwedge BV^{(p)}$

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Abstract:

Let f be a 2π periodic function in $L^1[0, 2\pi]$ and $\sum_{k=-\infty}^{\infty} \hat{f}(n_k) e^{in_k x}$ be its Fourier series with 'small' gaps $n_{k+1} - n_k \geq q \geq 1$. Here we have obtained sufficiency conditions for the absolute convergence of such series if f is of $\bigwedge BV^{(p)}$ locally. We have also obtained a beautiful interconnection between lacunary and non-lacunary Fourier series.



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