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Titolo Lebesgue points and summability of higher dimensional Fourier series /

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Nota di contenuto One-dimensional Fourier series -- Iq-summability of higher

dimensional Fourier series -- Rectangular summability of higher dimensional Fourier series -- Lebesgue points of higher dimensional

functions.

Sommario/riassunto This monograph presents the summability of higher dimensional

Fourier series, and generalizes the concept of Lebesgue points. Focusing on Fejér and Cesàro summability, as well as theta-summation, readers will become more familiar with a wide variety of summability methods. Within the theory of higher dimensional

summability of Fourier series, the book also provides a much-needed simple proof of Lebesgue's theorem, filling a gap in the literature. Recent results and real-world applications are highlighted as well, making this a timely resource. The book is structured into four chapters, prioritizing clarity throughout. Chapter One covers basic results from the one-dimensional Fourier series, and offers a clear proof of the Lebesgue theorem. In Chapter Two, convergence and boundedness results for the lq-summability are presented. The restricted and unrestricted rectangular summability are provided in

Chapter Three, as well as the sufficient and necessary condition for the

norm convergence of the rectangular theta-means. Chapter Four then introduces six types of Lebesgue points for higher dimensional functions. Lebesgue Points and Summability of Higher Dimensional Fourier Series will appeal to researchers working in mathematical analysis, particularly those interested in Fourier and harmonic analysis. Researchers in applied fields will also find this useful.