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Nota di contenuto	Foreword -- Introduction -- Chapter 1. Basic properties of the Fourier transform -- Chapter 2. Oscillatory integrals and Fourier transforms in one variable -- Chapter 3. The Fourier transform of an oscillating function -- Chapter 4. The Fourier transform of a radial function -- Chapter 5. Multivariate extensions -- Appendix -- Bibliography.
Sommario/riassunto	The Plancherel formula says that the L2 norm of the function is equal to the L2 norm of its Fourier transform. This implies that at least on average, the Fourier transform of an L2 function decays at infinity. This book is dedicated to the study of the rate of this decay under various assumptions and circumstances, far beyond the original L2 setting. Analytic and geometric properties of the underlying functions interact in a seamless symbiosis which underlines the wide range influences and applications of the concepts under consideration.