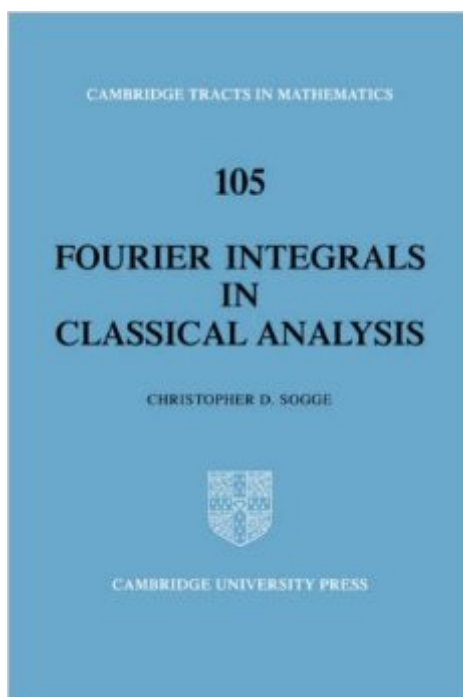# Fourier Integrals In Classical Analysis (Cambridge Tracts In Mathematics)

Synopsis

Fourier Integrals in Classical Analysis is an advanced treatment of central problems in harmonic analysis. The main theme of the book is the interplay between ideas used to study the propagation of singularities for the wave equation and their counterparts in classical analysis. Using microlocal analysis, the author in particular studies problems involving maximal functions and Riesz means using the so-called half-wave operator. This self-contained book starts with a rapid review of important topics in Fourier analysis. The author then presents the necessary tools from microlocal analysis, and goes on to give a proof of the sharp Weyl formula which he then modifies to give sharp estimates for the size of eigenfunctions on compact manifolds. Finally, the tools that have been developed are used to study the regularity properties of Fourier integral operators, culminating in the proof of local smoothing estimates and their applications to singular maximal theorems in two and more dimensions.

Book Information

Series: Cambridge Tracts in Mathematics (Book 105)

Paperback: 252 pages

Publisher: Cambridge University Press; 1 edition (April 24, 2008)

Language: English

ISBN-10: 0521060974

ISBN-13: 978-0521060974

Product Dimensions: 6 x 0.6 x 9 inches

Shipping Weight: 15.7 ounces (View shipping rates and policies)

Average Customer Review: Be the first to review this item

Best Sellers Rank: #3,185,474 in Books (See Top 100 in Books)   #196 in Books > Science & Math > Mathematics > Infinity   #608 in Books > Science & Math > Mathematics > Pure Mathematics > Algebra > Abstract   #1625 in Books > Science & Math > Mathematics > Applied > Differential Equations

Download to continue reading...

Fourier Integrals in Classical Analysis (Cambridge Tracts in Mathematics) Irresistible Integrals: Symbolics, Analysis and Experiments in the Evaluation of Integrals Designs and their Codes (Cambridge Tracts in Mathematics) The Monster Group and Majorana Involutions (Cambridge Tracts in Mathematics) Forcing Idealized (Cambridge Tracts in Mathematics) Stochastic Approximation (Cambridge Tracts in Mathematics) Classical and Multilinear Harmonic Analysis

(Cambridge Studies in Advanced Mathematics) (Volume 1) Pocket Book of Integrals and Mathematical Formulas, 5th Edition (Advances in Applied Mathematics) The Ark of Mathematics Part 4: Multivariable Calculus Integrals Fourier Analysis on Number Fields (Graduate Texts in Mathematics) (v. 186) Fourier Analysis (Graduate Studies in Mathematics) Etale Cohomology Theory: Revised Edition (Nankai Tracts in Mathematics (Hardcover)) Fibonacci and Lucas Numbers with Applications, Volume One (Pure and Applied Mathematics: A Wiley Series of Texts, Monographs and Tracts) Haydn's 'Farewell' Symphony and the Idea of Classical Style: Through-Composition and Cyclic Integration in his Instrumental Music (Cambridge Studies in Music Theory and Analysis) Inside Interesting Integrals: A Collection of Sneaky Tricks, Sly Substitutions, and Numerous Other Stupendously Clever, Awesomely Wicked, and ... (Undergraduate Lecture Notes in Physics) Math Shorts - Integrals An introduction to nonharmonic Fourier series, Volume 93 (Pure and Applied Mathematics) An Introduction to Laplace Transforms and Fourier Series (Springer Undergraduate Mathematics Series) An Introduction to Lebesgue Integration and Fourier Series (Dover Books on Mathematics) Schaum's Outline of Fourier Analysis with Applications to Boundary Value Problems