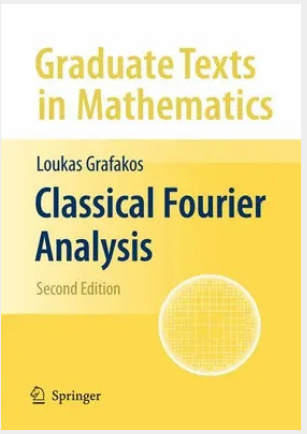
Grafakos

Classical Fourier Analysis



The primary goal of this text is to present the theoretical foundation of the field of Fourier analysis. This book is mainly addressed to graduate students in mathematics and is designed to serve for a three-course sequence on the subject. The only prerequisite for understanding the text is satisfactory completion of a course in measure theory, Lebesgue integration, and complex variables. This book is intended to present the selected topics in some depth and stimulate further study. Although the emphasis falls on real variable methods in Euclidean spaces, a chapter is devoted to the fundamentals of analysis on the torus. This material is included for historical reasons, as the genesis of Fourier analysis can be found in trigonometric expansions of periodic functions in several variables. While the 1st edition was published as a single volume, the new edition will contain 120 pp of new material, with an additional chapter on time-frequency analysis and other modern topics. As a result, the book is now being published in 2 separate volumes, the first volume containing the classical topics (Lp Spaces, Littlewood-Paley Theory, Smoothness, etc.), the second volume containing the modern topics (weighted inequalities, wavelets, atomic decomposition, etc.). From a review of the first edition: “Grafakos’s book is very user-friendly with numerous examples illustrating the definitions and ideas. It is more suitable for readers who want to get a feel for current research. The treatment is thoroughly modern with free use of operators and functional analysis. Morever, unlike many authors, Grafakos has clearly spent a great deal of time preparing the exercises.” - Ken Ross, MAA Online

The primary goal of these two volumes is to present the theoretical foundation of the field of Euclidean Harmonic analysis. The original edition was published as a single volume, but due to its size, scope, and the addition of new material, the second edition consists of two volumes. The present edition contains a new chapter on time-frequency analysis and the Carleson-Hunt theorem. The first volume contains the classical topics such as Interpolation, Fourier Series, the Fourier Transform, Maximal Functions, Singular Integrals, and Littlewood-Paley Theory. The second volume contains more recent topics such as Function Spaces, Atomic Decompositions, Singular Integrals of Nonconvolution Type, and Weighted Inequalities. These volumes are mainly addressed to graduate students in mathematics and are designed for a two-course sequence on the subject with additional material included for reference. The prerequisites for the first volume are satisfactory completion of courses in real and complex variables. The second volume assumes material from the first. This book is intended to present the selected topics in depth and stimulate further study. Although the emphasis falls on real variable methods in Euclidean spaces, a chapter is devoted to the fundamentals of analysis on the torus. This material is included for historical reasons, as the genesis of Fourier analysis can be found in trigonometric expansions of periodic functions in several variables. About the first edition: "Grafakos's book is very user-friendly with numerous examples illustrating the definitions and ideas. The treatment is thoroughly modern with free use of operators and functional analysis. Morever, unlike many authors, Grafakos has clearly spent a great deal of time preparing the exercises." - Kenneth Ross, MAA Online

50,24 €
46,95 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9780387094311
Medium: Buch
ISBN: 978-0-387-09431-1
Verlag: Springer Netherlands
Erscheinungstermin: 06.10.2008
Sprache(n): Englisch
Auflage: 2. Auflage 2008
Serie: Graduate Texts in Mathematics
Produktform: Gebunden
Gewicht: 1960 g
Seiten: 492
Format (B x H): 155 x 235 mm

Kundenservice Verlag Dr. Otto Schmidt KG
Neumannstraße 10, 40235 Düsseldorf | kundenservice@otto-schmidt.de | 0221-93738-997 (Inland)