This text is addressed to graduate students in mathematics and to interested researchers who wish to acquire an in-depth understanding of Euclidean Harmonic analysis. The text covers *modern* topics and techniques in function spaces, atomic decompositions, singular integrals of nonconvolution type, and the boundedness and convergence of Fourier series and integrals. The exposition and style are designed to stimulate further study and promote research. Historical information and references are included at the end of each chapter.

This third edition includes a new chapter entitled "Multilinear Harmonic Analysis" which focuses on topics related to multilinear operators and their applications. Sections 1.1 and 1.2 are also new in this edition. Numerous corrections have been made to the text from the previous editions and several improvements have been incorporated, such as the adoption of clear and elegant statements. A few more exercises have been added with relevant hints when necessary.

Reviews from the Second Edition
The books cover a large amount of mathematics. They are certainly a valuable and useful addition to the existing literature and can serve as textbooks or as reference books. Students will especially appreciate the extensive collection of exercises. **Andreas Seeger, Mathematical Reviews**

The exercises at the end of each section supplement the material of the section nicely and provide a good chance to develop additional intuition and deeper comprehension. The historical notes in each chapter are intended to provide an account of past research as well as to suggest directions for further investigation. The volume is mainly addressed to graduate students who wish to study harmonic analysis. **Leonid Golinskii, zbMATH**

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