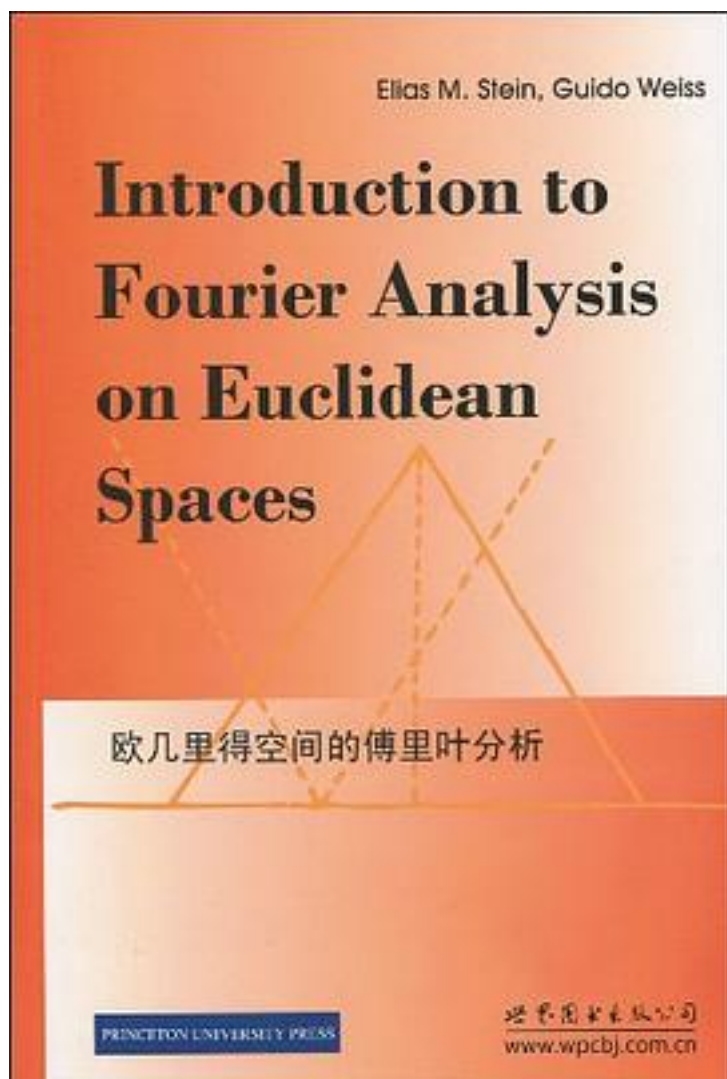


欧几里得空间的傅里叶分析



[欧几里得空间的傅里叶分析_下载链接1_](#)

著者:stein

出版者:世界图书出版公司

出版时间:2009-8

装帧:

isbn:9787510005329

《欧几里得空间的博里叶分析》内容简介：This book is designed to be an introduction to harmonic analysis in Euclidean spaces. The subject has seen a considerable flowering during the past twenty years. We have not tried to cover all phases of this development. Rather, our chief concern was to illustrate various methods used in this aspect of Fourier analysis that exploit the structure of Euclidean spaces. In particular, we try to show the role played by the action of translations, dilations, and rotations. Another concern, not independent of this chief one, is to motivate the study of harmonic analysis on more general spaces having an analogous structure (such as arises in symmetric spaces). It is our feeling that the study of Fourier analysis in that context and, also, in other general settings, is more meaningful once the special Euclidean case is understood.

作者介绍:

目录: Preface

CHAPTER I The Fourier Transform

1. The basic L^1 theory of the Fourier transform
2. The L^2 theory and the Plancherel theorem
3. The class of tempered distributions
4. Further results

CHAPTER II Boundary Values of Harmonic Functions

1. Basic properties of harmonic functions
2. The characterization of Poisson integrals
3. The Hardy-Littlewood maximal function and nontangential convergence of harmonic functions
4. Subharmonic functions and majorization by harmonic functions
5. Further results

CHAPTER III The Theory of H_p Spaces on Tubes

1. Introductory remarks
2. The H^2 theory
3. Tubes over cones
4. The Paley-Wiener theorem
5. The H_p theory
6. Further results

CHAPTER IV Symmetry Properties of the Fourier Transform

1. Decomposition of $L^2(E_z)$ into subspaces invariant under the Fourier transform
2. Spherical harmonics
3. The action of the Fourier transform on the spaces
4. Some applications
5. Further results

CHAPTER V Interpolation of Operators

1. The M. Riesz convexity theorem and interpolation of operators defined on L_p spaces
2. The Marcinkiewicz interpolation theorem
3. $L(p, q)$ spaces
4. Interpolation of analytic families of operators
5. Further results

CHAPTER VI Singular Integrals and Systems of Conjugate Harmonic Functions

1. The Hilbert transform
2. Singular integral operators with odd kernels
3. Singular integral operators with even kernels
4. H_p spaces of conjugate harmonic functions
5. Further results

CHAPTER VII Multiple Fourier Series

- 1.Elementary properties
- 2.The Poisson summation formula
- 3.Multiplier transformations
- 4.Summability below the critical index (negative results)
- 5.Summability below the critical index
- 6.Further results
- Bibliography
- Index
- • • • • (收起)

[欧几里得空间的傅里叶分析_下载链接1](#)

标签

调和分析

数学

Fourier分析

名人经典

stein

调和分析7

美国

分析

评论

欧式空间 E_n 的函数 f 转化为调和函数在高一维的欧式空间 E_{n+1} 的上半空间且边值等价于函数 f 。傅里叶分析与平移群作用与欧式空间相关，而调和分析与局部紧群相关。多重傅里叶级数仅仅是傅里叶分析在紧阿贝群上的特例；泊松求和与 n 维环面和 n 维欧氏空

间相关，欧式空间周期化有关

[欧几里得空间的傅里叶分析_下载链接1_](#)

书评

[欧几里得空间的傅里叶分析_下载链接1_](#)