

1. Record Nr.	UNINA9910826096203321
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Titolo	Hilbert spaces with applications // Lokenath Debnath, Piotr Mikusinski
Pubbl/distr/stampa	Amsterdam ; ; Boston, : Elsevier Academic Press, c2005
ISBN	1-280-63062-0 9786610630622 0-08-045592-1
Edizione	[3rd. ed.]
Descrizione fisica	1 online resource (599 p.)
Altri autori (Persone)	MikusinskiPiotr
Disciplina	515/.733 515.733
Soggetti	Hilbert space
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references (p. 565-569) and index.
Nota di contenuto	Contents; Preface to the Third Edition; Preface to the Second Edition; Preface to the First Edition; Normed Vector Spaces; Introduction; Vector Spaces; Normed Spaces; Banach Spaces; Linear Mappings; Banach Fixed Point Theorem; Exercises; The Lebesgue Integral; Introduction; Step Functions; Lebesgue Integrable Functions; The Absolute Value of an Integrable Function; Series of Integrable Functions; Norm in $L_1(\mathbb{R})$; Convergence Almost Everywhere; Fundamental Convergence Theorems; Locally Integrable Functions; The Lebesgue Integral and the Riemann Integral; Lebesgue Measure on \mathbb{R} Complex-Valued Lebesgue Integrable FunctionsThe Spaces $L_p(\mathbb{R})$; Lebesgue Integrable Functions on \mathbb{R}^n ; Convolution; Exercises; Hilbert Spaces and Orthonormal Systems; Introduction; Inner Product Spaces; Hilbert Spaces; Orthogonal and Orthonormal Systems; Trigonometric Fourier Series; Orthogonal Complements and Projections; Riesz Representation Theorem; Exercises; Linear Operators on Hilbert Spaces; Introduction; Examples of Operators; Bilinear Functionals and Quadratic Forms; Adjoint and Self-Adjoint Operators; Normal, Isometric, and Unitary Operators; Positive Operators; Projection Operators Compact OperatorsEigenvalues and Eigenvectors; Spectral Decomposition; Unbounded Operators; Exercises; Applications to Integral and Differential Equations; Introduction; Basic Existence

Theorems; Fredholm Integral Equations; Method of Successive Approximations; Volterra Integral Equations; Method of Solution for a Separable Kernel; Abel's Integral Equation; Ordinary Differential Equations; Sturm-Liouville Systems; Inverse Differential Operators; The Fourier Transform; Applications of the Fourier Transform; Exercises; Generalized Functions and Partial Differential Equations; Introduction Distributions Sobolev Spaces; Fundamental Solutions; Elliptic Boundary Value Problems; Applications of the Fourier Transform; Exercises; Mathematical Foundations of Quantum Mechanics; Introduction; Basic Concepts and Equations; Postulates of Quantum Mechanics; The Heisenberg Uncertainty Principle; The Schrodinger Equation of Motion; The Schrodinger Picture; The Heisenberg Picture; The Interaction Picture; The Linear Harmonic Oscillator; Angular Momentum Operators; The Dirac Relativistic Wave Equation; Exercises; Wavelets and Wavelet Transforms; Brief Historical Remarks
Continuous Wavelet Transforms The Discrete Wavelet Transform; Multiresolution Analysis; Examples of Orthonormal Wavelets; Exercises; Optimization Problems and Other Miscellaneous Applications; Introduction; The Gateaux and Frechet Differentials; Optimization Problems; Minimization of Quadratic Functionals; Variational Inequalities; Optimal Control Problems; Approximation Theory; The Shannon Sampling Theorem; Linear and Nonlinear Stability; Bifurcation Theory; Exercises; Hints and Answers to Selected Exercises; 1.7 Exercises; 2.16 Exercises; 3.8 Exercises; 4.12 Exercises; 5.13 Exercises 6.7 Exercises

Sommario/riassunto

Building on the success of the two previous editions, Introduction to Hilbert Spaces with Applications, 3E, offers an overview of the basic ideas and results of Hilbert space theory and functional analysis. It acquaints students with the Lebesgue integral, and includes an enhanced presentation of results and proofs. Students and researchers will benefit from the wealth of revised examples in new, diverse applications as they apply to optimization, variational and control problems, and problems in approximation theory, nonlinear instability, and bifurcation. The text also includes a popular cha
