This is likewise one of the factors by obtaining the soft documents of this Nonlinear Operator Theory in Probabilistic Metric by online. You might not require more mature to spend to go to the books instigation as with ease as search for them. In some cases, you likewise accomplish not discover the publication Nonlinear Operator Theory in Probabilistic Metric that you are looking for. It will certainly squander the time.

However below, like you visit this web page, it will be suitably completely simple to acquire as skillfully as download guide Nonlinear Operator Theory in Probabilistic Metric without forcing. You might not require more mature to spend to go to the books instigation as with ease as search for them. In some cases, you likewise accomplish not discover the publication Nonlinear Operator Theory in Probabilistic Metric that you are looking for. It will certainly squander the time.

It will not acknowledge many times as we run by before. You can realize it even though discharge duty something else at house and even in your workplace. fittingly easy! So, are you question? Just exercise just what we allow under as competently as evaluation Nonlinear Operator Theory in Probabilistic Metric what you subsequently to read!

**Nonlinear Operator Theory in Probabilistic Metric Spaces**

Shih-sen Chang 2001

The purpose of this book is to give a comprehensive introduction to the study of non-linear operator theory in probabilistic metric spaces. This book is introduced as a survey of the latest and new results on the following topics: Basic theory of probabilistic metric spaces; Fixed point theorems for single-valued and multi-valued mappings in probabilistic metric spaces; Ekeland's variational principle and Caristi's fixed point theorem in probabilistic metric spaces; Coincidence point theorems, minimisation and fixed degree theorems in probabilistic metric spaces; Probabilistic contractors, accretive mappings and topological degree in probabilistic normed spaces; Nonlinear semigroups and differential equations in probabilistic metric spaces; KKM theorems, minimax theorems and variational inequalities.

**Probabilistic Metric Spaces and Nonlinear Operator Theory**

Shih-sen Chang 1994

**Fixed Point Theory and Applications**

Yeol Je Cho 2007-08

This volume deals with new topics in the areas of fixed point theory, variational inequality and complementarity problem theory, non-linear ergodic theory, difference, differential and integral equations, control and optimisation theory, dynamic system theory, inequality theory, stochastic analysis and probability theory, and their applications.

**Mathematical Reviews**

2004

**Random Operator Theory**

Reza Saadati 2016-08-24

Random Operator Theory provides a comprehensive discussion of the random norm of random bounded linear operators, also providing important random norms as random norms of differentiation operators and integral operators. After providing the basic definition of random norm of random bounded linear operators, the book then delves into the study of random operator theory, with final sections discussing the concept of random Banach algebras and its applications. Explores random differentiation and random integral equations Delves into the study of random operator theory Discusses the concept of random Banach algebras and its applications.

**Banach Space Theory**

Mari N Fabian 2016-05-01

Banach spaces provide a framework for linear and nonlinear functional analysis, operator theory, abstract analysis, probability, optimization and other branches of mathematics. This book introduces the reader to linear functional analysis and to related parts of infinite-dimensional Banach space theory. Key Features: Develops classical theory, including weak topologies, locally convex space, Schauder bases and compact operator theory - Covers Radon-Nikodym property, finite-dimensional spaces and local theory on tensor products - Contains sections on uniform homeomorphisms and non-linear theory, Rosenthal's L1 theorem, fixed points, and more - Includes information about further topics and directions of research and some open problems at the end of each chapter - Provides numerous exercises for practice. The text is suitable for graduate courses or for independent study. Prerequisites include basic courses in calculus and linear. Researchers in functional analysis will also benefit for this book as it can serve as a reference book.

**Probabilistic Analysis and Related Topics**

A. T. Bharucha-Reid 2014-05-10

Probabilistic Analysis and Related Topics, Volume 3 focuses on the continuity, integrability, and differentiability of random functions, including operator theory, measure theory, and functional and numerical analysis. The selection first offers information on the qualitative theory of stochastic systems and Langevin equations with multiplicative noise. Discussions focus on phase-space evolution via direct integration, phase-space evolution, linear and nonlinear systems, linearization, and generalizations. The text then ponders on the stability theory of stochastic difference systems and Markov properties for random fields. Topics include Markov property of solutions of stochastic partial differential equations; Markov property for generalized Gaussian random fields; Markov properties for generalized random fields; stochastic stability of nonlinear systems; and linear stochastic systems. The publication examines the method of random contractors and its applications to random nonlinear equations, including integral contractors and applications to random equations; random contractors with random nonlinear majorant functions; and random contractors and application to random nonlinear operator equations. The selection is a valuable reference for mathematicians and researchers interested in the general theory of random functions.

**Solution of Random Operator Equations and Inclusions**

Ismat Beg 2011-02 Research in probabilistic operator theory generally includes the solutions of random operator equations and random operator inclusion, random extension theorems, limit theorems, measure theoretic problems, spectral theory of random operators and semi groups of random operators and their properties. Various ideas associated with random fixed point theory are used to form a particularly elegant approach for the solution of nonlinear random systems. Now this theory has become full- fledged research area lying at the intersection of nonlinear analysis and probability theory. In this monograph those aspects of random solution of random operator equations and random operator inclusion, which fall within the scope of investigation of random fixed point are discussed.

**Revue Roumaine de Mathématiques Pures Et Appliquées**

1997

**Inverse Problem Theory and Methods for Model Parameter Estimation**

Albert Tarantola 2005-01-01

While the prediction of observations is a forward problem, the use of actual observations to infer the properties of a model is an inverse problem. Inverse problems are difficult because they may not have a unique solution. The description of uncertainties plays a central role in the theory, which is based on probabilistic theory. This book proposes a general approach that is valid for linear as well as for nonlinear problems. The philosophy is essentially probabilistic and allows the reader to understand the basic difficulties appearing in the resolution of inverse problems. The book attempts to explain how a method of acquisition of information can be applied to actual
real-world problems, and many of the arguments are heuristic.

Analysis in Banach Spaces-Tuomas Hytönen 2018-02-14 This second volume of Analysis in Banach Spaces, Probabilistic Methods and Operator Theory, is the successor to Volume I, Martingales and Littlewood-Paley Theory. It presents a thorough study of the fundamental randomization techniques and the operator-theoretic aspects of the theory. The first two chapters address the relevant classical background for the theory of Banach spaces, including notions like type, cotype, K-convexity and contraction principles. In turn, the next two chapters provide a detailed treatment of the theory of R-boundedness and Banach space-valued square functions developed over the last 20 years. In the last chapter, this content is applied to develop the holomorphic functional calculus of sectorial and bi-sectorial operators in Banach spaces. Given its breadth of coverage, this book will be an invaluable reference to graduate students and researchers interested in functional analysis, harmonic analysis, spectral theory, stochastic analysis, and the operator-theoretic approach to deterministic and stochastic evolution equations.

The Far East Journal of Mathematical Sciences- 1998

Seminigroups of Operators - Theory and Applications-Jacek Banasiak 2020-06-12 This book features selected and peer-reviewed lectures presented at the 3rd Semigroups of Operators: Theory and Applications Conference, held in Kazimierz Dolny, Poland, in October 2018 to mark the 85th birthday of Jan Kisyński. Held every five years, the conference offers a forum for mathematicians using semigroup theory to discover what is happening outside their particular field of research and helps establish new links between various sub-disciplines of semigroup theory, stochastic processes, differential equations and the applied fields. The book is intended for researchers, postgraduate and senior students working in operator theory, partial differential equations, probability and stochastic processes, analytical methods in biology and other natural sciences, optimization and inverse problems. The theory of semigroups of operators is a well-developed branch of functional analysis. Its foundations were laid at the beginning of the 20th century, while Hille and Osyp's fundamental generation theorem dates back to the forties. The theory was originally designed as a universal language for partial differential equations and stochastic processes but, at the same time, it started to become an independent branch of operator theory. Today, it still has the same distinctive character: it develops rapidly by posing new 'internal' questions and, in answering them, discovering new methods that can be used in applications. On the other hand, it is being influenced by questions from PDE's and stochastic processes as well as from applied sciences such as mathematical biology and optimal control and, as a result, it continually gathers new momentum. However, many results, both from semigroup theory itself and the applied sciences, are phrased in discipline-specific languages and are hardly known to the broader community.

Banach Space Theory-Marián Fabian 2010-12-15 Banach spaces provide a framework for linear and nonlinear functional analysis, operator theory, abstract analysis, probability, optimization and other branches of mathematics. This book introduces the reader to linear functional analysis and to related parts of infinite-dimensional Banach space theory. Key Features: -Develops classical theory, including weak topologies, locally convex space, Schauder bases and compact operator theory - Covers Radon-Nikodým property, finite-dimensional spaces and local theory on tensor products - Contains sections on uniform homeomorphisms and non-linear theory, Rosenthal's L1 theorem, fixed points, and more - Includes information about further topics and directions of research and some open problems at the end of each chapter - Provides numerous exercises for practice The text is suitable for graduate level courses or for independent study. Prerequisites include basic courses in calculus and linear algebra. Researchers in functional analysis will also benefit for this book as it can serve as a reference book.

Probability Theory Subject Indexes from Mathematical Reviews- American Mathematical Society 1987


The Koopman Operator in Systems and Control-Alexandre Mauroy 2020-02-22 This book provides a broad overview of state-of-the-art research at the intersection of the Koopman operator theory and control theory. It also reviews novel theoretical results obtained and efficient numerical methods developed within the framework of Koopman operator theory. The contributions discuss the latest findings and techniques in several areas of control theory, including model predictive control, optimal control, observer design, systems identification and structural analysis of controlled systems, addressing both theoretical and numerical aspects and presenting open research directions, as well as detailed numerical schemes and data-driven methods. Each contribution addresses a specific problem. After a brief introduction of the Koopman operator framework, in the next two chapters, the Koopman operator theory for control theorists and practitioners, the book is also of interest to graduate students, researchers, and engineers looking for an introduction to a novel and comprehensive approach to systems and control, from pure theory to data-driven methods.

Fixed Point Theory in Probabilistic Metric Spaces-O. Hadzic 2013-06-29 Fixed point theory in probabilistic metric spaces can be considered as a part of Probabilistic Analysis, which is a very dynamic area of mathematical research. A primary aim of this monograph is to stimulate interest among scientists and students in this fascinating field. The text is self-contained and aimed for a reader with a modest knowledge of the theory itself and the applied sciences, are phrased in discipline-specific languages and are hardly known to the broader community.

Probabilistic and Analytical Aspects of the Umbral Calculus- Alessandro Di Bucchianico 1997


Indefinite Inner Product Spaces, Schur Analysis, and Differential Equations-Daniel Alpay 2018-01-30 This volume, which is dedicated to Heinz Langer, includes biographical material and carefully selected papers. Heinz Langer has made fundamental contributions to operator theory. In particular, he has studied the domains of operator pencils and nonlinear eigenvalue problems, the theory of indefinite inner product spaces, operator theory in Pontryagin and Krein spaces, and applications to mathematical physics. His works include studies on and applications of Schur analysis in the indefinite setting, where the factorization theorems put forward by Krein and Langer for generalized Schur functions, and by Dijksma-Langer-Luger-Shondin, play a key role. The contributions in this volume reflect Heinz Langer's chief research interests and will appeal to a broad readership whose work involves operator theory.

The Journal of Fuzzy Mathematics- 1997

Intelligent Mathematics: Computational Analysis-George A. Anastassiou 2011-03-19 Knowledge can be modeled and computed using computational mathematical methods, then lead to real world conclusions. The strongly related to that Computational Analysis is a very large area with lots of applications. This monograph includes a great variety of topics of Computional Analysis. We present: probabilistic wavelet approximations, constrained abstract approximation theory, shape preserving weighted approximation, non positive approximations to definite integrals, discrete best approximation, approximation theory of general Picard singular operators including global smoothness preservation property, fractional
singular operators. We also deal with non-isotropic general Picard singular multivariate operators and q-Gauss-Weierstrass singular q-integral operators. We talk about quantitative approximations by shift-invariant univariate and multivariate integral operators, nonlinear neural networks approximation, convergence with rates of positive linear operators, quantitative approximation by bounded linear operators, univariate and multivariate quantitative approximation by stochastic positive linear operators on univariate and multivariate stochastic processes. We further present right fractional calculus and give quantitative fractional Koworin theory of positive linear operators. We also give analytical inequalities, fractional Opial inequalities, fractional identities and inequalities regarding fractional integrals. We further deal with semi group operator approximation, simultaneous Feller probabilistic approximation. We also present Fuzzy singular operator approximations. We give transfers from real to fuzzy approximation and talk about fuzzy wavelet and fuzzy neural networks approximations, fuzzy fractional calculus and fuzzy Ostrowski inequality. We talk about discrete fractional calculus, nablo discrete fractional calculus and inequalities. We study the q-inequalities, and q-frational inequalities. We further study time scales: delta and nablo approaches, duality principle and inequalities. We introduce delta and nablo time scales fractional calculus and inequalities. We finally study convergence with rates of approximate solutions to exact solution of multivariate Dirichlet problem and multivariate heat equation, and discuss the uniqueness of solution of general evolution partial differential equation \( \Delta \) in multivariate time. The exposed results are expected to find applications to: applied and computational mathematics, engineering, computer science, artificial intelligence, vision, complexity and machine learning. This monograph is suitable for graduate students and researchers.

Modern Trends in Logistics Research- W. H. Marlow 1976

Pakistan Science Abstracts- 1982

Dissertation Abstracts International- 1994

Peterson's Guide to Graduate Programs in the Physical Sciences and Mathematics 1991- 1990-12

High-Dimensional Probability-Roman Vershynin 2018-09-30 High-dimensional probability offers insight into the behavior of random vectors, random matrices, random subspaces, and objects used to quantify uncertainty in high dimensions. Drawing on ideas from probability, analysis, and geometry, it lends itself to applications in mathematics, statistics, theoretical computer science, signal processing, optimization, and more. It is the first to integrate theory, key tools, and modern applications of high-dimensional probability. Concentration inequalities form the core, and it covers both classical results such as Hoeffding's and Chernoff's inequalities and modern developments such as the matrix Bernstein's inequality. It then introduces the powerful methods based on stochastic processes, including such tools as Slepian's, Sudakov's, and Dudley's inequalities, as well as generic chaining and bounds based on VC dimension. A broad range of illustrations is embedded throughout, including classical and modern results for covariance estimation, clustering, networks, semidefinite programming, coding, dimension reduction, matrix completion, machine learning, compressed sensing, and sparse regression.

International Journal of Theoretical Physics, Group Theory, and Nonlinear Optics- 2004


Elements of Operator Theory-Carlos S. Kubrusly 2013-03-14 (Jt Elements of Operator Theory) is aimed at graduate students as well as a new generation of mathematicians and scientists who need to apply operator theory to their field. Written in a user-friendly, motivating style, fundamental topics are presented in a systematic fashion, i.e., set theory, algebraic structures, topological structures, Banach spaces, Hilbert spaces, culminating with the Spectral Theorem, one of the landmarks in the theory of operators on Hilbert spaces. The exposition is concept-driven and as much as possible avoids the formula-computational approach. Key features of this largely self-contained work include: * required background material to each chapter * fully rigorous proofs, over 300 of them, are specially tailored to the presentation and some are new * more than 100 examples and, in several cases, interesting counterexamples that demonstrate the frontiers of an important theorem * over 300 problems, many with hints * both problems and examples underscore further auxiliary results and extensions of the main theory; in this non-traditional approach, the reader is challenged and has a chance to prove the principal theorems anew This work is an excellent text for the classroom as well as a self-study resource for researchers. Prerequisites include an introduction to analysis and to functions of a complex variable, which most first-year graduate students in mathematics, engineering, or another formal science have already acquired. Measure theory and integration theory are required only for the last section of the final chapter.


Some Topics in Nonlinear Functional Analysis-Mohan C. Joshi 1985

Discrete and Continuous Dynamical Systems- 2008

Government Reports Announcements- 1973-03

Boundary Stabilization of Parabolic Equations-Inouit Munteana 2019-02-15 This monograph presents a technique, developed by the author, to design asymptotically exponentially stabilizing finite-dimensional boundary proportional-type feedback controllers for nonlinear parabolic-type equations. The potential control applications of this technique are wide ranging in many research areas, such as Newtonian fluid flows modeled by the Navier-Stokes equations; electrically conducted fluid flows; phase separation modeled by the Cahn-Hilliard equations; and deterministic or stochastic semi-linear heat equations arising in biology, chemistry, and population dynamics modeling. The text provides answers to the following problems, which are of great practical importance: Designing the feedback law using a minimal set of eigenfunctions of the linear operator obtained from the linearized equation around the target state Designing observers for the considered control systems Constructing time-discrete controllers requiring only partial knowledge of the state After reviewing standard notations and results in functional analysis, linear algebra, probability theory and PDEs, the author describes his novel stabilization algorithm. He then demonstrates how this abstract model can be applied to stabilization problems involving magnetohydrodynamic equations, stochastic PDEs, nonsteady-states, and more. Boundary Stabilization of Parabolic Equations will be of particular interest to researchers in control theory and engineers whose work involves systems control. Familiarity with linear algebra, operator theory, functional analysis, partial differential equations, and stochastic partial differential equations is required.

Scientiae Mathematicae Japonicae- 2003

Soviet Mathematics- 1970

Nonlinear Mathematics for Uncertainty and Its Applications-Shoumei Li 2011-07-21 This volume is a collection of papers presented at the international conference on Nonlinear Mathematics for Uncertainty and Its Applications (NLMAU2011), held at Beijing University of Technology during the week of September 7--9, 2011. The conference brought together leading researchers and practitioners involved with all aspects of nonlinear mathematics for uncertainty and its applications. Over the last fifty years there have been many attempts in extending the theory of classical probability and statistical models to the generalized one which can cope with problems of inference and decision making when the model-related information is scarce, vague, ambiguous, or incomplete. Such attempts include the study of nonadditive measures and their integrals, imprecise probabilities and random sets, and their applications in information sciences, economics, finance, insurance, engineering, and social sciences. The book presents topics including nonadditive measures and nonlinear integrals, Choquet, Sugeno and other types of integrals, possibility theory, Dempster-Shafer theory, random sets, fuzzy random sets and related statistics, set-valued and fuzzy stochastic processes, imprecise probability...
theory and related statistical models, fuzzy mathematics, nonlinear functional analysis, information theory, mathematical finance and risk managements, decision making under various types of uncertainty, and others.