Yurinsha Book News

Collected Works,

Vol. 26: Bryant, R. /Green, M. (eds.): Selected Works of 2 Vols. Set
Philip A. Griffiths with Commentary

In the period since the original four volumes of Phillip Griffiths's Selecta were published (Selected Works of Phillip A. Griffiths with Commentary), Parts 1-4, Collected Works, Volume 18), Griffiths has continued to produce beautiful and important work. The current two-part publication brings Griffiths's Selecta up to date by including the majority of his recent articles, as well as two older papers on differential geometry whose length had precluded their inclusion in the original Selecta. The papers are organized along the three main topics: Differential Geometry and Hodge Theory (Part 5) and Algebraic Cycles (Part 6). 509-004

In addition to his papers, Griffiths has been an author of a number of research monographs. To give the reader an overview of what these monographs contain, introductions to some of these are also included.

Nov. 2017 785 pp.
9781470436551 42,530.

Vol. 18: Arbarello, E.et al. (eds.): 4 Vols Set.

Selected Works of Phillip A. Griffiths with Commentary,

Oct. 2003 2598 pp. 9780821810668 58,860.

A. M. S.

http://www.yurinsha.com

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No.509 Sep. - Oct. 2017

数理科学 友 隣 社 洋書専門

CBMS Regional Conference Series in Mathematics,

Vol. 124: Lin, H.: No. 509-131

From the Basic Homotopy Lemma to the Classification of C*-Algebras

This book examines some recent developments in the theory of C*-algebras, which are algebras of operators on Hilbert spaces.
An elementary introduction to the technical part of the theory is given via a basic homotopy lemma concerning a pair of almost commuting unitaries.
The book presents an outline of the background as well as some recent results of the classification of simple amenable C*-algebras, otherwise known as the Elliott program. This includes some stable uniqueness theorems and a reviiting of Bott maps via stable homotopy.
Furthermore, KK-theory related rotation maps are introduced.

Oct. 2017 240 pp.
9781470434908 8,850.

Graduate Studies in Mathematics,

Vol. 182: Schneider, G. /Uecker, H.: No. 509-147

Nonlinear PDEs: A Dynamical Systems Approach

The presentation is example-oriented, and new mathematical tools are developed step by step, giving insight into some important classes of nonlinear PDEs and nonlinear dynamics phenomena which may occur in PDEs.
The book consists of four parts. Parts I and II are introductions to finite- and infinite-dimensional dynamics defined by ODEs and by PDEs over bounded domains, respectively, including the basics of bifurcation and attractor theory.
Part III introduces PDEs on the real line, including the Korteweg-de Vries equation, the Nonlinear Schrodinger equation and the Ginzburg-Landau equation. These examples often occur as simplest poss ble models, namely as amplitude or modulation equations, for some real world phenomena such as nonlinear waves and pattern formation.
Part IV explores in more detail the connections between such complicatedphysical systems and the reduced models. For many models, a mathematicallyrigorous justification by approximation results is given.

Oct. 2017 584 pp.
9781470436131 16,840.

Vol. 181: Leoni, G.: No. 509-129

A First Course in Sobolev Spaces, 2nd ed.

This book is about differentiation of functions.
It is divided into two parts, which can be used as different textbooks, one for an advanced undergraduate course in functions of one variable and on for a graduate course on Sobolev functions.
The first part develops the theory of monotone, absolutely continuous, and bounded variation functions of one variable and their relationship with Lebesgue-Stieltjes measures and Sobolev functions.
It also studies decreasing rearrangement and curves.
The second edition includes a chapter on functions mapping time into Banach spaces.
The second part of the book studies functions of several variables.

Nov. 2017 731 pp.
9781470429218 15,990.

A.M.S.

Mathematical Surveys and Monographs,

Vol. 224: **Exel, R.:** No. 509-063

Partial Dynamical Systems, Fell Bundles and Applications

Partial dynamical systems, originally developed as a tool to study algebras of operators in Hilbert spaces, has recently become an important branch of algebra. Its most powerful results allow for understanding structural properties of algebras, both in the purely algebraic and in the C*-contexts, in terms of the dynamical properties of certain systems which are often hiding behind algebraic structures.
The first indication that the study of an algebra using partial dynamical systems may be helpful is the presence of a grading. While the usual theory of graded algebras often requires gradings to be saturated, the theory of partial dynamical systems is especially well suited to treat nonsaturated graded algebras which are in fact the source of the notion of "partiality".
One of the main results of the book states that every graded algebra satisfying suitable conditions may be reconstructed from a partial dynamical system via a process called the partial crossed product.

Oct. 2017 321 pp.
9781470437855 19,730.

IAS/Park City Mathematics Series,

Vol. 24: **Bezrukavnikov, R. /Braverman, A. (eds.):** No. 509-048

Geometry of Moduli Spaces and Representation Theory

Geometric representation theory is a young but fast developing research area at the intersection of these subjects. An early profound achievement was the famous conjecture by Kazhdan-Lusztig about characters of highest weight modules over a complex semi-simple Lie algebra, and its subsequent proof by Beilinson-Bernstein and Brylinski-Kashiwara.
Two remarkable features of this proof have inspired much of subsequent development: intricate algebraic data turned out to be encoded in topological invariants of singular geometric spaces, while proving this fact required deep general theorems from algebraic geometry.
Another focus of the program was enumerative algebraic geometry. Recent progress showed the role of Lie theoretic structures in problems such as calculation of quantum cohomology, K-theory, etc.

Oct. 2017 448 pp.
9781470435745 17,690.

Courant Lecture Notes,

Vol. 28: **Erdos, L. /Yau, H.-T.:** No. 509-061

Dynamical Approach to Random Matrix Theory

Random matrix theory is a fast expanding research area, and this book mainly focuses on the methods that the authors participated in developing over the past few years.
Many other interesting topics are not included, and neither are several new developments within the framework of these methods.
The authors have chosen instead to present key concepts that they believe are the core of these methods and should be relevant for future applications.

Sep. 2017 226 pp.
9781470436483 7,310.

A.M.S.

London Mathematical Society Lecture Note Series,

Vol. 444: Kropholler, P. /Leary, I.: No. 509-075

Geometric and Cohomological Group Theory

This volume provides state-of-the-art accounts of exciting recent developments in the rapidly-expanding fields of geometric and cohomological group theory. The research articles and surveys collected here demonstrate conne diverse areas as geometric and low-dimensional topology, analysis, homological algebra and logic.

Topics include various constructions of Thompson-like groups, Wise's theory of special cube complexes, groups with exotic homological properties, the Farrell?Jones assembly conjectures and new applications of Garside structures.

Its mixture of surveys and research makes this book an excellent entry point for young researchers as well as a useful reference work for experts in the field.

Dec. 2017 278 pp.

9781316623220 15,110.

Cambridge Tracts in Mathematics,

Vol. 211: Johnson, C. /Saiago, C.: No. 509-071

Eigenvalues, Multiplicities and Graphs

The arrangement of nonzero entries of a matrix, described by the graph of the matrix, limits the possible geometric multiplicities of the eigenvalues, which are far more limited by this information than algebraic multiplicities or the numerical values of the eigenvalues.

This book gives a unified development of how the graph of a symmetric matrix influences the possible multiplicities of its eigenvalues.

While the theory is richest in cases where the graph is a tree, work on eigenvalues, multiplicities and graphs has provided the opportunity to identify which ideas have analogs for non-trees, and those for which trees are essential. It gathers and organizes the fundamental ideas to allow students and researchers to easily access and investigate the many interesting questions in the subject.

Dec. 2017 330 pp.

9781107095458 20,980.

London Mathematical Society Student Texts,

Vol. 89: Garling, D.: No. 509-113/114

Analysis on Polish Spaces and An Introduction to Optimal Transportation

A large part of mathematical analysis, both pure and applied, takes place on Polish spaces: topological spaces whose topology can be given by a complete metric. This analysis is not only simpler than in the general case, but, more crucially, contains many important special results.

This book provides a detailed account of analysis and measure theory on Polish spaces, including results about spaces of probability measures. Containing more than 200 elementary exercises, it will be a useful resource for advanced mathematical students and also for researchers in mathematical analysis. The book also includes a straightforward and gentle introduction to the theory of optimal transportation, illustrating just how many of the results established earlier in the book play an essential role in the theory.

Feb. 2018 ....

9781108421577/9781108431767 15,110./7,550. (Paper ed.)

Cambridge

Encyclopedia of Mathematics and its Applications,

Vol. 166: Baake, M. /Grimm, U.: No. 509-162

Aperiodic Order, Vol. 2:
Crystallography and Almost Periodicity

Quasicrystals are non-periodic solids that were discovered in 1982 by Dan Shechtman, Nobel Prize Laureate in Chemistry 2011.
The mathematics that underlies this discovery or that proceeded from it, known as the theory of Aperiodic Order, is the subject of this comprehensive multi-volume series.
This second volume begins to develop the theory in more depth.
A collection of leading experts, among them Robert V. Moody, cover various aspects of crystallography, generalising appropriately from the classical case to the setting of aperiodically ordered structures.
A strong focus is placed upon almost periodicity, a central concept of crystallography that captures the coherent repetition of local motifs or patterns, and its close links to Fourier analysis.
The book ends with an epilogue on the emergence of quasicrystals from the perspective of physical sciences, written by Peter Kramer, one of the founders of the field on the side of theoretical and mathematical physics.

Dec. 2017 399 pp.
9780521869928 23,500.

Cambridge Texts in Applied Mathematics,

Vol. 56: Wendland, H.: No. 509-093/094

Numerical Linear Algebra:
An Introduction

This self-contained introduction to numerical linear algebra provides a comprehensive, yet concise, overview of the subject.
It includes standard material such as direct methods for solving linear systems and least-squares problems, error, stability and conditioning, basiciterative methods and the calculation of eigenvalues.
Later chapters cover more advanced material, such as Krylov subspace methods, multigrid methods, domain decomposition methods, multipole expansions, hierarchical matrices and compressed sensing.

Nov. 2017 418 pp.
9781107147133 /9781316601174 16,790./7,550. (Paper ed.)

Cambridge IISc Series

Nandakumaran, A. /Datti, P.: No. 509-137

Ordinary Differential Equations:
Principles and Applications

Written in a clear, logical nd concise manner, this comprehensive resource allows students to quickly understand the key principles, techniques and applications of ordinary differential equations.
Important topics including first and second order linear equations, initial value problems and qualitative theory are presented in separate chapters.
The concepts of two point boundary value problems, physical models and first order partial differential equations are discussed in detail.
The text uses tools of calculus and real analysis to get solutions in explicit form.
While discussing first order linear systems, linear algebra techniques are used.

May 2017 344 pp.
9781108416412 12,590.

Cambridge

EMS Series of Lectures in Mathematics,

Vol. 28: Michel, F. /Weber, C.: No. 509-079

Higher-Dimensional Knots According to Michel Kervaire

This book is written to provide graduate students with the basic concepts necessary to read texts in higher-dimensional knot theory and its relations with singularities.
The first chapters are devoted to a presentation of Pontrjagin's construction, surgery and the work of Kervaire and Milnor on homotopy spheres.
We pursue with Kervaire□ fundamental work on the group of a knot, knot modules and knot cobordism. We add developments due to Levine.
Tools (like open books, handlebodies, plumbings,)often used but hard to find in original articles are presented in appendices.
We conclude with a description of the Kervaire invariant and the consequences of the Hill-Hopkins-Ravenel results in knot theory.

July 2017 144 pp.
9783037191804 6,270.

EMS Textbooks in Mathematics

Vol. 19: Justesen, J. /Hoholdt, T.: No. 509-073

A Course in Error-Correcting Codes, 2nd ed.

This book, updated and enlarged for the second edition, is written as a text for a course aimed at 3rd or 4th year students.
Only some familiarity with elementary linear algebra and probability is directly assumed, but some maturity is required.
The students may specialize in discrete mathematics, computer science, or communication engineering. The book is also a suitable introduction to coding theory for researchers from related fields or for professionals who want to supplement their theoretical basis.
The book gives the coding basics for working on projects in any of the above areas, but material specific to one of these fields has not been included.
The chapters cover the codes and decoding methods that are currently of most interest in research, development, and application.

July 2017 226 pp.
9783037191798 7,740.

European Mathematical Society

AMS Chelsea Publishing, Series

Goffman, C. /Pedrick, G: No. 509-115

A First Course in Functional Analysis, 2nd ed.

This text starts on an intermediate level of generality: sufficiently general to convey to the student the flavor of abstract methods in analysis and to cover many important applications, and still down-to-earth to make easy reading for beginners. The tradition founded by Banach, and favorable experiences from many courses, point to metric spaces as a suitable initial subject, and the present book keeps in this traditio--- The authors have selected and presented in a clear and readable way the basic material which is most likely to be used frequently. A wealth of examples, counterexamples, applications and exercises accompany the abstract theory throughout. --- Mathematical Reviews

Feb. 2017 284 pp.
9781470429690 8,510.

AMS Chelsea Publishing

Publications mathematiques,

Vol. 125: **Borodin, A. /Gorin, V. /Guionnet, A.:** No. 509-003
Gaussian Asymptotics of Discrete β -Ensembles and Other 3titles

Cornulier,Y./Tessera,R.:
Geometric presentations of Lie groups and their Dehn functions
Janda,F./Pandharipande,R./Pixton,A./Zvonkine,D.:
Double ramification cycles on the moduli spaces of curves
Gautam,S./Toledano Laredo,V.:
Meromorphic tensor equivalence for Yangians and quantum loop algebras

June 2017 337 pp.
9781000023619 価格未定

The Publications Mathematiques de l'IHES

Documents mathematiques,

Vol. 15: **S. M. F.:** No. 509-026
OEuvres mathematiques de Rene Thom(Vol. I):
Ouvrage publie en collaboration avec L'Institut des Hautes Etudes Scientifiques

This first volume of Rene Thom's complete mathematical works contains the articles published before 1960, together with fascinating previously unpublished texts and comments putting the whole into perspective.
This includes the essential of Thom's contribution to algebraic and differential topology, born on contact with Henri Cartan and Charles Ehresmann, and for which Thom was awarded a Fields medal in 1958.
Next come the articles founding singularity theory, which will be developed in the sixties and give birth to catastrophe theory.
The volume begins with a substantial biographical notice and a bibliography of Thom's works, mathematical or not.

Sep. 2017 573 pp.
9782856298169 17,250.

Asterisque,

Bourbaki, N.: No. 509-051
Seminaire Bourbaki Volume 2015/ 2016,
Exposes 1104-1119

This 68th volume of the Bourbaki Seminar contains the texts of the sixteen survey lectures done during the year 2015/2016: analytic number theory, binormal flow and the Schrodinger equation, combinatorics and the independence property in model theory, formal moduli problems, geometric Langlands program, Hilbert-Smith conjecture in differential geometry, Hodge theory of the decomposition theorem, Monge-Ampere equation in complex algebraic geometry, motives and periods, resolution of underdetermined linear systems, sofic entropy, subriemannian geometry, spectral theory.

June 2017 533 pp.
9782856298558 価格未定

Societe Mathematique de France

Lecture Notes in Mathematics,

No. 509-218

Vol. 2203: Zacks, S.:

Sample Path Analysis and Distributions of Boundary Crossing Times

This monograph is focused on the derivations of exact distributions offirst boundary crossing times of Poisson processes, compound Poisson processes, and more general renewal processes.
The content is limited to the distributions of first boundary crossing times and their applications to various stochastic models.
This book provides the theory and techniques for exact computations of distributions and moments of level crossing times. In addition, these techniques could replace simulations in many cases, thus providing more insight about the phenomenona studied.

Nov. 2017 122 pp.
9783319670584 8,820.

Vol. 2201: Schafer, L.:

No. 509-178

Nearly Pseudo-Kahler Manifolds and Related Special Holonomies

Developing and providing an overview of recent results on nearly Kahler geometry on pseudo-Riemannian manifolds, this monograph emphasizes the differences with the classical Riemannian geometry setting.
The focal objects of the text are related to special holonomy and Killing spinors and have applications in high energy physics, such as supergravity and string theory.
Before starting into the field, a self-contained introduction to the subject is given, aimed at students with a solid background in differential geometry.
The book will therefore be accessible to masters and Ph.D. studentswho are beginning work on nearly Kahler geometry in pseudo-Riemannian signature, and also to non-experts interested in gaining an overview of the subject.

Sep. 2017 115 pp.
9783319658063 6,860.

No. 509-118

Vol. 2199: Gustafsson, B. /Putinar, M.:

Hyponormal Quantization of Planar Domains:
Exponential Transform in Dimension Two

This book exploits the classification of a class of linear bounded operators with rank-one self-commutators in terms of their spectral parameter, known as the principal function. The resulting dictionary between two dimensional planar shapes with a degree of shade and Hilbert space operators turns out to be illuminating and beneficial for both sides.
An exponential transform, essentially a Riesz potential at critical exponent, is at the heart of this novel framework; its best rational approximants unveil a new class of complex orthogonal polynomials whose asymptotic distribution of zeros is thoroughly studied in the text. Connections with areas of potential theory, approximation theory in the complex domain and fluid mechanics are established.
The text is addressed, with specific aims, at experts and beginners in a wide range of areas of current interest: potential theory, numerical linear algebra, operator theory, inverse problems, image and signal processing, approximation theory, mathematical physics.

Oct. 2017 136 pp.
9783319658094 6,860.

Springer

Lecture Notes in Mathematics,

Vol. 2198: **Guest, M. /Hertling, C.:** No. 509-117

Painleve III:

A Case Study in the Geometry of Meromorphic Connections

The purpose of this monograph is two-fold: it introduces a conceptual language for the geometrical objects underlying Painleve equations, and it offers new results on a particular Painleve III equation of type PIII (D6), called PIII (0, 0, 4, -4), describing its relation to isomonodromic families of vector bundles on P1 with meromorphic connections.
This equation is equivalent to the radial sine (or sinh) Gordon equation and, as such, it appears widely in geometry and physics.
It is used here as a very concrete and classical illustration of the modern theory of vector bundles with meromorphic connections.

Oct. 2017 207 pp.
9783319665252 6,860.

Vol. 2197: Chatterjee, S.: No. 509-192

Large Deviations for Random Grphs:

Ecole d'Ete de Probabilites de Saint-Flour XLV -2015

Sep. 2017 *152 pp.* *9783319658155* *15,090.*

Vol. 2196: **Cherniha, R. /Davydovych, V.:** No. 509-230

Nonlinear Reaction-Diffusion Sysytems:

Conditional Symmetry, Exact Solutions and their Applications in Biology

This book presents several fundamental results in solving nonlinear reaction-diffusion equations and systems using symmetry-based methods. Reaction-diffusion systems are fundamental modeling tools for mathematical biology with applications to ecology, population dynamics, pattern formation, morphogenesis, enzymatic reactions and chemotaxis.
The book discusses the properties of nonlinear reaction-diffusion systems, which are relevant for biological applications, from the symmetry point of view, providing rigorous definitions and constructive algorithms to search for conditional symmetry (a nontrivial generalization of the well-known Lie symmetry) of nonlinear reaction-diffusion systems.
In order to present applications to population dynamics, it focuses mainly on two- and three-component diffusive Lotka-Volterra systems.

Oct. 2017 157 pp.
9783319654652 6,860.

Vol. 2195: **Blanc-Centi, L. (ed.):** No. 509-099

Metrical and Dynamical Aspects in Complex Analysis

The central theme of this reference book is the metric geometry of complex analysis in several variables. Bridging a gap in the current literature, the text focuses on the fine behavior of the Kobayashi metric of complex manifolds and its relationships to dynamical systems, hyperbolicity in the sense of Gromov and operator theory, all very active areas of research.
The modern points of view expressed in these notes, collected here for the first time, will be of interest to academics working in the fields of several complex variables and metric geometry.

Oct. 2017 165 pp.
9783319658360 6,860.

Springer

Vol. 2193: **Pilyugin, S. /Sakai Kazuhiro : Shadowing and Hyperbolicity** No. 509-140

Focusing on the theory of shadowing of approximate trajectories (pseudo-trajectories) of dynamical systems, this book surveys recent progress in establishing relations between shadowing and such basic notions from the classical theory of structural stability as hyperbolicity and transversality. Special attention is given to the study of "quantitative" shadowing propertie such as Lipschitz shadowing (it is shown that this property is equivalent to strutural stability both for diffeomorphisms and smooth flows), and to the passage torobust shadowing (which is also equivalent to structural stability in the case of diffeomorphisms, while the situation becomes more complicated in the case of flows).

Sep. 2017 206 pp.

9783319651835 8,820.

Vol. 2190: **Frenod, E.: Two-Scale Approach to Oscillatory Singularly Perturbed Transport Equations** No. 509-111

This book presents the classical results of the two-scale convergence theory and explains --- using several figures --- why it works. It then shows how to use this theory to homogenize ordinary differential equations with oscillating coefficients as well as oscillatory singularly perturbed ordinary differential equations.
In addition, it explores the homogenization of hyperbolic partial differential equations with oscillating coefficients and linear oscillatory singularly perturbed hyperbolic partial differential equations.
Further, it introduces readers to the two-scale numerical methods that can be built from the previous approaches to solve oscillatory singularly perturbed transport equations (ODE and hyperbolic PDE) and demonstrates how they can be used efficiently.

Oct. 2017 95 pp.

9783319646671 6,860.

Vol. 2189: **Aubrun, G. /Aubrun, G. /Skalski, A. /Speicher, R.: Quantum Symmetries: Metabief, France 2014**

Sep. 2017 108 pp. 9783319632056 6,860.

Vol. 2185: **Candelpergher, B.: Ramanujan Summation of Divergent Series** No. 509-102

The aim of this monograph is to give a detailed exposition of the summation method that Ramanujan uses in Chapter VI of his second Notebook.
This method, presented by Ramanujan as an application of the Euler-MacLaurin formula, is here extended using a difference equation in a space of analytic functions. This provides simple proofs of theorems on the summation of some divergent series. Several examples and applications are given.
For numerical evaluation, a formula in terms of convergent series is provided by the use of Newton interpolation.
The relation with other summation processes such as those of Borel and Euler isalso studied.
Finally, in the last chapter, a purely algebraic theory is developed that unifies all these summation processes.

Sep. 2017 185 pp.

9783319636290 8,820.

Springer

Graduate Texts in Mathematics,

Vol. 278: **Ziemer, W.:** No. 509-154

Modern Real Analysis, 2nd ed.

Presented in a definitive and self-contained manner, it features a natural progression of concepts from simple to difficult.
Several innovative topics are featured, including differentiation of measures, elements of Functional Analysis, the Riesz Representation Theorem, Schwartz distributions, the area formula, Sobolev functions and applications to harmonic functions. Together, the selection of topics forms a sound foundation in real analysis that is particularly suited to students going on to further study in partial differential equations.
This second edition of Modern Real Analysis contains many substantial improvements, including the addition of problems for practicing techniques, and an entirely new section devoted to the relationship between Lebesgue and improper integrals.

Oct. 2017 403 pp.
9783319646282 13,130.

Vol. 277: **Schmudgen, K.:** No. 509-146

The Moment Problem

This advanced textbook provides a comprehensive and unified account of the moment problem. It covers the classical one-dimensional theory and its multidimensional generalization, including modern methods and recent developments. In both the one-dimensional and multidimensional cases, the full and truncated moment problems are carefully treated separately. Fundamental concepts, results and methods are developed in detail and accompanied by numerous examples and exercises.
Particular attention is given to powerful modern techniques such as real algebraic geometry and Hilbert space operators.
A wide range of important aspects are covered, including the Nevanlinna parametrization for indeterminate moment problems, canonical and principal measures for truncated moment problems, the interplay between Positivstellensatze and moment problems on semi-algebraic sets, the fibre theorem, multidimensional determinacy theory, operator-theoretic approaches, and the existence theory and important special topics of multidimensional truncated moment problems.

Sep. 2017 490 pp.
9783319645452 12,660.

Universitext

Wallach, N.: No. 509-091

Geometric Invariant Theory:

Over the Real and Complex Numbers

Geometric Invariant Theory (GIT) is developed in this text within the context of algebraic geometry over the real and complex numbers.
This sophisticated topic is elegantly presented with enough background theory included to make the text accessible to advanced graduate students in mathematics and physics with diverse backgrounds in algebraic and differential geometry. Throughout the book, examples arecmphasized.
The exposition is divided into two parts. The first part, "background Theory is organized as a reference for the rest of the book.

Sep. 2017 190 pp.
9783319659053 11,170.

Springer

Springer Monographs in Mathematics

Krantz, S.: No. 509-125

Harmonic and Complex Analysis in Several Variables

Authored by a ranking authority in harmonic analysis of several complex variables, this book embodies a state-of-the-art entree at the intersection of two important fields of research: complex analysis and harmonic analysis.
Written with the graduate student in mind, it is assumed that the reader has familiarity with the basics of complex analysis of one and several complex variables as well as with real and functional analysis.
The monograph is largely self-contained and develops the harmonic analysis of several complex variables from the first principles.
The text includes copious examples, explanations, an exhaustive bibliography for further reading, and figures that illustrate the geometric nature of the subject.

Sep. 2017 491 pp.
9783319632292 21,560.

Ioffe, A.: No. 509-122

Variational Analysis of Regular Mappings: Theory and Applications

The present volume explores all basic aspects of the theory, from the most general problems for mappings between metric spaces to those connected with fairly concrete and important classes of operators acting in Banach and finite dimensional spaces.
Written by a leading expert in the field, the book covers new and powerful techniques, which have proven to be highly efficient even in classical settings, and outlines the theory's predominantly quantitative character, leading to a variety of new and unexpected applications.

Sep. 2017 495 pp.
9783319642765 21,560.

Springer INdAM Series,

Vol. 22: Colli, P. /Favini, A. /Rocca, E. / Schimperna, G. /Sprekels, J. (eds.): No. 509-103

Solvability, Regularity, and Optimal Control of Boundary Value Problems for PDEs: In Honour of Prof. Gianni Gilardi

These contributions are dedicated to Professor Gianni Gilardi on the occasion of his 70th birthday.
It particularly develops the following thematic areas: nonlinear dynamic and stationary equations; well-posedness of initial and boundary value problems for systems of PDEs; regularity properties for the solutions; optimal control problems and optimality conditions; feedback stabilization and stability results.
Most of the articles are presented in a self-contained manner, and describe new achievements and/or the state of the art in their line of research, providing interested readers with an overview of recent advances and future research directions in PDEs.

Dec. 2017 510 pp.
9783319644882 21,560.

Vol. 21: Angella, D. /Tomassini, A. /Medori, C. (eds.): No. 509-157

Complex and Symplectic Geometry

Dec. 2017 250 pp. 9783319629131 18,620.

Springer

No. 509-133

Madden, D. /Aubrey, J.:
An Introduction to Proof Through Analysis

A mathematical proof is an inferential argument for a mathematical statement. Since the time of the ancient Greek mathematicians, the proof has been a cornerstone of the science of mathematics.
The goal of this book is to help students learn to follow and understand the function and structure of mathematical proof and to produce proofs of their own.

Aug. 2017 448 pp.
9781119314721 16,990.

Wiley Series in Probability and Statistics

No. 509-120

Hirotsu Chihiro :
Advanced Analysis of Variance

In this important book, internationally acclaimed statistician, Chihiro Hirotsu, goes beyond classical analysis of variance (ANOVA) model to offer a unified theory and advanced techniques for the statistical analysis of experimental data. Dr. Hirotsu introduces the groundbreaking concept of advanced analysis of variance (AANOVA) and explains how the AANOVA approach exceeds the limitations of ANOVA methods to allow for global reasoning utilizing special methods of simultaneous inference leading to individual conclusions.

Aug. 2017 416 pp.
9781119303336 21,250.

No. 509-186

Albrecher, H. /Beirlant, J.:
Reinsurance:
Actuarial and Statistical Aspects

This book provides a survey of both the academic literature in the field as well as challenges appearing in reinsurance practice and puts the two in perspective. The book is written for researchers with an interest in reinsurance problems, for graduate students with a basic knowledge of probability and statistics as well as for reinsurance practitioners.
The focus of the book is on modelling together with the statistical challenges that go along with it. The discussed statistical approaches are illustrated alongside six case studies of insurance loss data sets, ranging from MTPL over fire to storm and flood loss data.

Oct. 2017 345 pp.
9780470772683 14,450.

No. 509-193

Gross, D. /Gross, D.:
Fundamentals of Queueing Theory, 5th ed.

Thoroughly updated and expanded to reflect the latest developments in the field, this book presents the statistical principles and processes involved in the analysis of the probabilistic nature of queues.
Rather than focus narrowly on a particular application area, the authors illustrate the theory in practice across a range of fields, from computer science and variousengineering disciplines to business and operations research.
Critically, the text also provides a numericalapproach to understanding and making estimations with queueing theory and provides comprehensive coverage of both simple and advanced queueing models.
As with all preceding editions, this latest update of the classic text features a unique blend of thetheoretical and timely real-world applications.

Sep. 2017 576 pp.
9781118943526 22,100.

Wiley

de Gruyter Studies in Mathematics,

Vol. **: Mikhalev, A. /Rodionov, T. /Zakharov, V. .: No. 509-042
Fundamentals of
Functions and Measure Theory

The series is devoted to the publication of monographs and high-level textbooks in mathematics, mathematical methods and their applications.
Apart from covering important areas of current interest, a major aim is to make topics of an interdisciplinary nature accessible to the non-specialist.
The works in this series are addressed to advanced students and researchers in mathematics and theoretical physics. In addition, it can serve as a guide for lectures and seminars on a graduate level.

Jan. 2018 400 pp.
9783110550092 23,510.

Vol. **: Rodionov, T. /Zakharov, V.: No. 509-043
Fundamentals of
Set and Number Theory

This comprehensive two-volume work is devoted to the most general foundations of mathematics.
It goes back to Hausdorff's classic Set Theory, where set theory and the theory of functions were expounded as the fundamental parts of mathematics in such a way that there was no need for references to other sources.
Along the lines of Hausdorff's work, measure and integration theory is also included here as a basis of contemporary mathematics.

Jan. 2018 400 pp.
9783110550085 23,510.

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