



Yurinsha Book News

Andrews, G. /Berndt, B.:

No. 513-041

Ramanujan's Lost Notebook, Part V

In the spring of 1976, George Andrews of Pennsylvania State University visited the library at Trinity College, Cambridge, to examine the papers of the late G.N. Watson. Among these papers, Andrews discovered a sheaf of 138 pages in the handwriting of Srinivasa Ramanujan. This manuscript was soon designated, "Ramanujan's lost notebook." Its discovery has frequently been deemed the mathematical equivalent of finding Beethoven's tenth symphony. This fifth and final installment of the authors' examination of Ramanujan's lost notebook focuses on the mock theta functions first introduced in Ramanujan's famous Last Letter. This volume proves all of the assertions about mock theta functions in the lost notebook and in the Last Letter, particularly the celebrated mock theta conjectures. Other topics feature Ramanujan's many elegant Euler products and the remaining entries on continued fractions not discussed in the preceding volumes.

Review from the second volume:

"Fans of Ramanujan's mathematics are sure to be delighted by this book. While some of the content is taken directly from published papers, most chapters contain new material and some previously published proofs have been improved." -MathSciNet

Mar. 2018

240 pp.

9783319778327

18,880.

Springer

<http://www.yurinsha.com>

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No. 513

May - June 2018

敬理科学 **友 隣 社** 洋書専門

*Student Mathematical Library,***Vol. 85: Shapiro, J.:**

No. 513-155

Volterra Adventures

This book introduces functional analysis to undergraduate mathematics students who possess a basic background in analysis and linear algebra.

By studying how the Volterra operator acts on vector spaces of continuous functions, its readers will sharpen their skills, reinterpret what they already know, and learn fundamental Banach-space techniques —

all in the pursuit of two celebrated results: the Titchmarsh Convolution Theorem and the Volterra Invariant Subspace Theorem.

Exercises throughout the text enhance the material and facilitate interactive study.

May 2018
9781470441166

248 pp.

8,500.

*Graduate Studies in Mathematics,***Vol. 190: Hou, X.-D.:**

No. 513-066

Lectures on Finite Fields

The theory of finite fields encompasses algebra, combinatorics, and number theory and has furnished widespread applications in other areas of mathematics and computer science.

This book is a collection of selected topics in the theory of finite fields and related areas.

The topics include basic facts about finite fields, polynomials over finite fields, Gauss sums, algebraic number theory and cyclotomic fields, zeros of polynomials over finite fields, and classical groups over finite fields.

The book is mostly self-contained, and the material covered is accessible to readers with the knowledge of graduate algebra; the only exception is a section on function fields.

Each chapter is supplied with a set of exercises.

The book can be adopted as a text for a second year graduate course or used as a reference by researchers.

July 2018
9781470442897

240 pp.

13,560.

Vol. 189: Isaacs, M.:

No. 513-071

Characters of Solvable Groups

This book, which can be considered as a sequel of the author's famous book *Character Theory of Finite Groups*, concerns the character theory of finite solvable groups and other groups that have an abundance of normal subgroups.

It is subdivided into three parts: π -theory, character correspondences, and M -groups. The π -theory section contains an exposition of D.

Gajendragadkar's π -special characters, and it includes various extensions, generalizations, and applications of his work.

The character correspondences section proves the McKay character counting conjecture and the Alperin weight conjecture for solvable groups, and it constructs a canonical McKay bijection for odd-order groups.

In addition to a review of some basic material on M -groups, the third section contains an exposition of the use of symplectic modules for studying M -groups.

In particular, an accessible presentation of E. C. Dade's deep results on monomial characters of odd prime-power degree is included.

July 2018
9781470434854

384 pp.

15,090.

A. M. S.

*University Lecture Series,***Vol. 70: Putnam, I.:**

No. 513-089

Cantor Minimal Systems

Within the subject of topological dynamics, there has been considerable recent interest in systems where the underlying topological space is a Cantor set. Such systems have an inherently combinatorial nature, and seminal ideas of Anatoly Vershik allowed for a combinatorial model, called the Bratteli-Vershik model, for such systems with no non-trivial closed invariant subsets. This model led to a construction of an ordered abelian group which is an algebraic invariant of the system providing a complete classification of such systems up to orbit equivalence. The goal of this book is to give a statement of this classification result and to develop ideas and techniques leading to it.

June 2018 184 pp. 7,190.
9781470441159

*Proceedings of Symposia in Applied Mathematics,***Vol. 74: van Den Berg, B. /Lessard, J.-P.:**

No. 513-165

Rigorous Numerics in Dynamics

Nonlinear dynamics shapes the world around us, from the harmonious movements of celestial bodies, via the swirling motions in fluid flows, to the complicated biochemistry in the living cell. Mathematically these phenomena are modeled by nonlinear dynamical systems, in the form of ODEs, PDEs and delay equations. The presence of nonlinearities complicates the analysis, and the difficulties are even greater for PDEs and delay equations, which are naturally defined on infinite dimensional function spaces. With the availability of powerful computers and sophisticated software, numerical simulations have quickly become the primary tool to study the models. However, while the pace of progress increases, one may ask: just how reliable are our computations? Even for finite dimensional ODEs, this question naturally arises if the system under study is chaotic, as small differences in initial conditions (such as those due to rounding errors in numerical computations) yield wildly diverging outcomes.

June 2018 224 pp. 17,980.
9781470428143

*Theta Foundation International Book Series of
Mathematical Texts,***Vol. 22: Jaming, P. /Hartmann, A. /Kellay, K. /Kupin, S. /
Pisier, G. /Timotin, D.:****Harmonic Analysis, Function Theory,
Operator Theory, and Their Applications:**

Conference Proceedings, Bordeaux, June 1-4, 2015

Most of the papers present original work in harmonic analysis, function theory, operator theory, and their applications; others review known results and put them in a new perspective.

Among the subjects covered are: operators on spaces of holomorphic functions; Hankel and Toeplitz operators; Carleson measures for various spaces; spectral problems for differential operators; geometry of Banach spaces; linear dynamics; interpolation of functions; idempotents in Banach algebras; and magnetic distributions on thin plates.

Apr. 2018 267 pp. 11,080.
9786068443089

A. M. S.

*CBMS Regional Conference Series in Mathematics,***Vol. 126: Alesker, S.:**

No. 513-166

Introduction to the Theory of Valuations

This book, which can be considered as a sequel of the author's famous book *Character Theory of Finite Groups*, concerns the character theory of finite solvable groups and other groups that have an abundance of normal subgroups.

It is subdivided into three parts: π -theory, character correspondences, and M-groups.

The π -theory section contains an exposition of D. Gajendragadkar's π -special characters, and it includes various extensions, generalizations, and applications of his work.

The character correspondences section proves the McKay character counting conjecture and the Alperin weight conjecture for solvable groups, and it constructs a canonical McKay bijection for odd-order groups.

In addition to a review of some basic material on M-groups, the third section contains an exposition of the use of symplectic modules for studying M-groups. In particular, an accessible presentation of E. C. Dade's deep results on monomial characters of odd prime-power degree is included.

June 2018
9781470443597

88 pp.

8,500.

*Contemporary Mathematics,***Vol. 705: Malmendier, A. /Shaska, T. (eds.):**

No. 513-081

Higher Genus Curves in**Mathematical Physics and Arithmetic Geometry**

Algebraic curves and their fibrations have played a major role in both mathematical physics and arithmetic geometry.

This volume focuses on the role of higher genus curves; in particular, hyperelliptic and superelliptic curves in algebraic geometry and mathematical physics. The articles in this volume investigate the automorphism groups of curves and superelliptic curves and results regarding integral points on curves and their applications in mirror symmetry.

Moreover, geometric subjects are addressed, such as elliptic K3 surfaces over the rationals, the birational type of Hurwitz spaces, and links between projective geometry and abelian functions.

Apr. 2018
9781470428563

222 pp.

19,120.

Vol. 702: Grant, M. /Lupton, G. /Vandembroucq, L. (eds.):**Topological Complexity and Related Topics**

Topological complexity is a numerical homotopy invariant, defined by Farber in the early twenty-first century as part of a topological approach to the motion planning problem in robotics.

No. 513-062

It continues to be the subject of intensive research by homotopy theorists, partly due to its potential applicability, and partly due to its close relationship to more classical invariants, such as the Lusternik-Schnirelmann category and the Schwarz genus.

This volume contains survey articles and original research papers on topological complexity and its many generalizations and variants, to give a snapshot of contemporary research on this exciting topic at the interface of pure mathematics and engineering.

Feb. 2018
9781470434366

176 pp.

19,120.

A. M. S.

Cantone, D. / Ursino, P.:

No. 513-033

**An Introduction to the Technique of
Formative Processes in Set Theory**

This book presents an intuitive picture-oriented approach to the formative processes technique and to its applications. In the first part the authors introduce basic set-theoretic terminology and properties, the decision problem in set theory, and formative processes. The second part of the book is devoted to applications of the technique of formative processes to decision problems.

Mar. 2018
9783319747774140 pp.
14,940.***ANHA: Applied and Numerical Harmonic Analysis*****Waldron, S.:**

No. 513-162

An Introduction to Finite Tight Frames

This textbook is an introduction to the theory and applications of finite tight frames, an area that has developed rapidly in the last decade. Stimulating much of this growth are the applications of finite frames to diverse fields such as signal processing, quantum information theory, multivariate orthogonal polynomials, and remote sensing.

Feb. 2018
9780817648145587 pp.
16,160.***Progress in Mathematics,*****Vol. 325: Chambert-Loir, A. / Nicaise, J. / Sebag, J.:**

No. 513-053

Motivic Integration

This monograph focuses on the geometric theory of motivic integration, which takes its values in the Grothendieck ring of varieties. This theory is rooted in a groundbreaking idea of Kontsevich and was further developed by Denef & Loeser and Sebag.

It is presented in the context of formal schemes over a discrete valuation ring, without any restriction on the residue characteristic. The text first discusses the main features of the Grothendieck ring of varieties, arc schemes, and Greenberg schemes. It then moves on to motivic integration and its applications to birational geometry and non-Archimedean geometry. Also included in the work is a prologue on p-adic analytic manifolds, which served as a model for motivic integration.

July 2018
9781493978854531 pp.
19,900.***Progress in Nonlinear Differential Equations & Their Applications,*****Vol. 90: Barbu, V.:**

No. 513-246

Control Systems Governed by Non-Linear PDEs

This monograph presents controllability and stabilization methods in control theory that solve parabolic boundary value problems.

Starting from foundational questions on Carleman inequalities for linear parabolic equations, the author addresses the controllability of parabolic equations on a variety of domains and the spectral decomposition technique for representing them.

This method is, in fact, designed for use in a wider class of parabolic systems that include the heat and diffusion equations.

May 2018
9783319766652575 pp.
26,260.**Birkhauser**

*Cambridge Studies in Advanced Mathematics,***Vol. 178: Ogus, A.:**

No. 513-085

Lectures on Logarithmic Algebraic Geometry

This graduate textbook offers a self-contained introduction to the concepts and techniques of logarithmic geometry, a key tool for analyzing compactification and degeneration in algebraic geometry and number theory.

It features a systematic exposition of the foundations of the field, from the basic results on convex geometry and commutative monoids to the theory of logarithmic schemes and their de Rham and Betti cohomology.

The book will be of use to graduate students and researchers working in algebraic, analytic, and arithmetic geometry as well as related fields.

Oct. 2018

480 pp.

9781107187733

13,070.

*Cambridge Tracts in Mathematics,***Vol. 214: Ivanov, A.:**

No. 513-072

The Mathieu Groups

The Mathieu groups have many fascinating and unusual characteristics and have been studied at length since their discovery.

This book provides a unique, geometric perspective on these groups.

The amalgam method is explained and used to construct M24, enabling readers to learn the method through its application to a familiar example.

The same method is then used to construct, among others, the octad group, the Witt design and the Golay code.

This book also provides a systematic account of 'small groups', and serves as a useful reference for the Mathieu groups.

The material is presented in such a way that it guides the reader smoothly and intuitively through the process, leading to a deeper understanding of the topic.

Sep. 2018

186 pp.

9781108429788

20,070.

*London Mathematical Society Lecture Note Series,***Vol. 451: Broaddus, N. /Davis, M. /Lafont, J.-F. /Ortiz, I.:**

No. 513-050

Topological Methods in Group Theory

This volume collects the proceedings of the conference "Topological methods in group theory" held at Ohio State University in 2014 in honor of Ross Geoghegan's 70th birthday.

It consists of eleven peer-reviewed papers on some of the most recent developments at the interface of topology and geometric group theory.

The authors have given particular attention to clear exposition, making this volume especially useful for graduate students and for mathematicians in other areas interested in gaining a taste of this rich and active field.

A wide cross-section of topics in geometric group theory and topology are represented, including left-orderable groups, groups defined by automata, connectivity properties and Σ -invariants of groups, amenability and non-amenability problems, and boundaries of certain groups.

Also included are topics that are more geometric or topological in nature, such as the geometry of simplices, decomposition complexity of certain groups, and problems in shape theory.

Sep. 2018

217 pp.

9781108437622

13,070.

Cambridge

Brown, R.:**A Modern Introduction to Dynamical Systems**

This text is a high-level introduction to the modern theory of dynamical systems; an analysis-based, pure mathematics course textbook in the basic tools, techniques, theory and development of both the abstract and the practical notions of mathematical modelling, using both discrete and continuous concepts and examples comprising what may be called the modern theory of dynamics.

June 2018 400 pp.
9780198743286/9780198743279 11,950./5,970. (Paper ed.)

Oxford Mathematical Monographs**Edmunds, D. /Evans, D.:**

No. 513-117

Spectral Theory and Differential Operators, 2nd ed.

This book is an updated version of the classic 1987 monograph "Spectral Theory and Differential Operators". The original book was a cutting edge account of the theory of bounded and closed linear operators in Banach and Hilbert spaces relevant to spectral problems involving differential equations.

It is accessible to a graduate student as well as meeting the needs of seasoned researchers in mathematics and mathematical physics.

This revised edition corrects various errors, and adds extensive notes to the end of each chapter which describe the considerable progress that has been made on the topic in the last 30 years.

May 2018 656 pp. 18,920.
9780198812050

Mann, P.:

No. 513-266/267

Lagrangian and Hamiltonian Dynamics

An introductory textbook exploring the subject of Lagrangian and Hamiltonian dynamics, with a relaxed and self-contained setting.

Lagrangian and Hamiltonian dynamics is the continuation of Newton's classical physics into new formalisms, each highlighting novel aspects of mechanics that gradually build in complexity to form the basis for almost all of theoretical physics.

Lagrangian and Hamiltonian dynamics also acts as a gateway to more abstract concepts routed in differential geometry and field theories and can be used to introduce these subject areas to newcomers.

May 2018 544 pp. 11,950./5,970. (Paper ed.)
9780198822370/9780198822387

Binetruy, P.:

No. 513-314

Gravity!:**The Quest for Gravitational Waves**

What force do the Big Bang, the expansion of the Universe, dark matter and dark energy, black holes, and gravitational waves all have in common?

This book uncovers gravity as a key to understanding these fascinating phenomena that have so captivated public interest in recent years.

Readers will discover the latest findings on how this familiar force in our everyday lives powers the most colossal changes in the Universe.

Written by the widely recognized French public scientist and leading astrophysicist Pierre Binetruy, the book also explains the recent experimental confirmation of the existence of gravitational waves.

May 2018 232 pp. 3,980.
9780198796510

Oxford

*Ergebnisse der Mathematik und ihrer Grenzgebiete 3 Folge***Band 68: Baladi, V.:**

No. 513-044

**Dynamical Zeta Functions and
Dynamical Determinants for Hyperbolic Maps**

The spectra of transfer operators associated to dynamical systems, when acting on suitable Banach spaces, contain key information about the ergodic properties of the systems.

Focusing on expanding and hyperbolic maps, this book gives a self-contained account on the relation between zeroes of dynamical determinants, poles of dynamical zeta functions, and the discrete spectra of the transfer operators. In the hyperbolic case, the first key step consists in constructing a suitable Banach space of anisotropic distributions.

The first part of the book is devoted to the easier case of expanding endomorphisms, showing how the (isotropic) function spaces relevant there can be studied via Paley-Littlewood decompositions, and allowing easier access to the construction of the anisotropic spaces which is performed in the second part.

May 2018
9783319776606

291 pp.

19,190.

*Problem Books in Mathematics***Caminha Muniz Neto, A:**

No. 513-051

**An Excursion Through Elementary Mathematics,
Volume III: Discrete Mathematics and Polynomial Algebra**

This book provides a comprehensive, in-depth overview of elementary mathematics as explored in Mathematical Olympiads around the world.

It expands on topics usually encountered in high school and could even be used as preparation for a first-semester undergraduate course.

This third and last volume covers Counting, Generating Functions, Graph Theory, Number Theory, Complex Numbers, Polynomials, and much more.

May 2018
9783319779768

605 pp.

12,120.

Caminha Muniz Neto, A:

No. 513-169

**An Excursion Through Elementary Mathematics,
Volume II: Euclidean Geometry**

This second volume covers Plane Geometry, Trigonometry, Space Geometry, Vectors in the Plane, Solids and much more.

May 2018
9783319779737

549 pp.

12,120.

Sedrakyan, H. /Sedrakyan, N.:

No. 513-093

Algebraic Inequalities

This unique collection of new and classical problems provides full coverage of algebraic inequalities. Many of the exercises are presented with detailed author-prepared-solutions, developing creativity and an arsenal of new approaches for solving mathematical problems.

Algebraic Inequalities can be considered a continuation of the book Geometric Inequalities: Methods of Proving by the authors.

This book can serve teachers, high-school students, and mathematical competitors. It may also be used as supplemental reading, providing readers with new and classical methods for proving algebraic inequalities.

June 2018
9783319778358

241 pp.

8,080.

Springer

Lee, G.:

No. 513-077

**Abstract Algebra:
An Introductory Course**

The first two chapters present preliminary topics such as properties of the integers and equivalence relations.

The author then explores the first major algebraic structure, the group, progressing as far as the Sylow theorems and the classification of finite abelian groups. An introduction to ring theory follows, leading to a discussion of fields and polynomials that includes sections on splitting fields and the construction of finite fields. The final part contains applications to public key cryptography as well as classical straightedge and compass constructions.

May 2018 281 pp. 7,070.
9783319776484

Bornemann, F.:

No. 513-252

Numerical Linear Algebra:**A Concise Introduction with MATLAB and Julia**

This book offers an introduction to the algorithmic-numerical thinking using basic problems of linear algebra. By focusing on linear algebra, it ensures a stronger thematic coherence than is otherwise found in introductory lectures on numerics.

The book highlights the usefulness of matrix partitioning compared to a component view, leading not only to a clearer notation and shorter algorithms, but also to significant runtime gains in modern computer architectures.

Feb. 2018 153 pp. 7,070.
9783319742212

Springer Proceedings in Mathematics and Statistics,

Vol. 234: Conder, M. /Deza, A. /Weiss, A. (eds.): No. 513-170

Discrete Geometry and Symmetry:**Veszprem, Hungary, 2015**

This book consists of contributions from experts, presenting a fruitful interplay between different approaches to discrete geometry.

Most of the chapters were collected at the conference

"Geometry and Symmetry" in Veszprem, Hungary, 2015.

The conference was dedicated to Karoly Bezdek and Egon Schulte on the occasion of their 60th birthdays, acknowledging their highly regarded contributions in these fields.

June 2018 19,190.
9783319784335

Vol. 230: Pinelas, S. /

No. 513-149

Caraballo, T. /Kloeden, P. /Graef, J. (eds.):

**Differential and Difference Equations
with Applications: ICDDEA, Amadora, 2017**

This book gathers papers from the International Conference on Differential & Difference Equations and Applications 2017 (ICDDEA 2017), held in Lisbon, Portugal on June 5-9, 2017.

The editors have compiled the strongest research presented at the conference, providing readers with valuable insights into new trends in the field, as well as applications and high-level survey results.

May 2018 587 pp. 26,260.
9783319756462

Springer

Jeribi, A.:

No. 513-129

**Denseness, Bases and Frames in
Banach Spaces and Applications**

This monograph is devoted to recent developments concerning linear operators, covering topics such as the Cauchy problem, Riesz basis, spectral theory and applications to the Gribov operator.

Also, Integral and integro-differential equations as well as applications of the theory to problems in mathematical physics and mechanics are discussed.

Mar. 2018 406 pp.
9783110484885 24,230.

de Gruyter Expositions in Mathematics,

Vol. 65: Berkovich, Y. /Janko, Z.:

No. 513-046

Groups of Prime Power Order, Vol. 6

This is the sixth volume of a comprehensive and elementary treatment of finite group theory.

This volume contains many hundreds of original exercises (including solutions for the more difficult ones) and an extended list of about 1000 open problems.

The current book is based on Volumes 1-5 and it is suitable for researchers and graduate students working in group theory.

July 2018 400 pp.
9783110530971 32,310.

de Gruyter Textbook

Zou, Y.:

No. 513-164

**Single Variable Calculus:
A First Step**

The book is a comprehensive yet compressed entry-level introduction on single variable calculus, focusing on the concepts and applications of limits, continuity, derivative, definite integral, series, sequences and approximations.

Chapters are arranged to outline the essence of each topic and to address learning difficulties, making it suitable for students and lecturers in mathematics, physics and engineering.

Mar. 2018 414 pp.
9783110524628 10,090.

de Gruyter Studies in Mathematics,

Vol. 68/ No. 1: Zakharov, V. /Rodionov, T.:

No. 513-037

**Sets, Functions, Measures, Vol. 1:
Fundamentals of Set and Number Theory**

This comprehensive two-volume work is devoted to the most general beginnings of mathematics.

It goes back to Hausdorff's classic Set Theory (2nd ed., 1927), 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 initial work (1st ed., 1914), measure and integration theory is also included here as the third fundamental part of contemporary mathematics.

Feb. 2018 428 pp.
9783110550948 24,230.

de Gruyter

Adrian Albert, A.:

No. 513-038

Modern Higher Algebra

Abraham Adrian Albert was one of the 20th century's leading mathematicians. This 1937 monograph written by him was hailed by the Bulletin of the American Mathematical Society as "a welcome addition to the literature".

Besides furnishing an excellent introduction to abstract algebra and a detailed commentary on then-recent developments, the treatment's important features include chapters on matrices and matrix algebras, cyclic fields, and valuations.

Mar. 2018
9780486823843

336 pp.

2,560.

Chevalley, C.:

No. 513-054

Theory of Lie Groups

"Chevalley's most important contribution to mathematics is certainly his work on group theory ... [Theory of Lie Groups] was the first systematic exposition of the foundations of Lie group theory consistently adopting the global viewpoint, based on the notion of analytic manifold. This book remained the basic reference on Lie groups for at least two decades. --- Bulletin of the A. M. S.

Mar. 2018
9780486824536

224 pp.

2,400.

Roberts, J.:

No. 513-090

**The Real Number System in
An Algebraic Setting**

A grasp of the precision, beauty, and complexity of mathematics requires an understanding of some of the subject's technical aspects. The real number system provides an ideal framework for cultivating such an appreciation, and this detailed investigation of the system offers an accessible introduction. The treatment presumes only a familiarity with the basic properties of natural numbers, although readers must be willing to apply themselves.

Apr. 2018
9780486824512

160 pp.

2,400.

Gelfand, I. /Minlos, R.:

No. 513-061

**Representations of the Rotation and
Lorentz Groups and Their Applications**

This monograph on the description and study of representations of the rotation group of three-dimensional space and of the Lorentz group features advanced topics and techniques crucial to many areas of modern theoretical physics. Prerequisites include a familiarity with the differential and integral calculus of several variables and the fundamentals of linear algebra.

Apr. 2018
9780486823850

384 pp.

3,750.

Wasow, W.:

No. 513-163

**Asymptotic Expansions for
Ordinary Differential Equations**

"A book of great value ... it should have a profound influence upon future research." --- Mathematical Reviews In this outstanding text, author Wolfgang Wasow concentrates on the mathematical ideas underlying various asymptotic methods for ordinary differential equations that lead to full, infinite expansions.

Mar. 2018
9780486824581

384 pp.

8,830.

Dover

Clarke, B.:

No. 513-199

Robustness Theory and Application

Used to develop data analytical methods, which are resistant to outlying observations in the data, while capable of detecting outliers, robust statistics is extremely useful for solving an array of common problems, such as estimating location, scale, and regression parameters.

Written by an internationally recognized expert in the field of robust statistics, this book addresses a range of well-established techniques while exploring, in depth, new and exciting methodologies.

Local robustness and global robustness are discussed, and problems of non-identifiability and adaptive estimation are considered.

July 2018 240 pp. 15,940.
9781118669303

Furno, M. /Vistocco, D.:

No. 513-213

Quantile Regression, Vol. 2:**Estimation and Simulation**

This book provides an excellent reference for applied researchers without getting too technical about the statistical background.

Using an example based approach, topics such as inlier robustness, expectiles, linear programming, decomposition and constrained optimization are featured along with graphical representations to illustrate each method.

Examples from biostatistics and environmetrics as well as economics and finance are also featured.

Aug. 2018 220 pp. 17,110.
9781118863596

Wiley

A Publication of Hindustan Book Agency,

Vol. 75: Venkatachala, B.: *Text & Readings in Mathematics, Vol. 49***Inequalities:**

No. 513-161

An Approach Through Problems, 2nd ed.

This book is an introduction to basic topics in inequalities and their applications.

These include the arithmetic mean-geometric mean inequality, Cauchy-Schwarz inequality, Chebyshev inequality, rearrangement inequality, convex and concave functions and Muirhead's theorem.

More than 400 problems are included in the book and their solutions are explained.

May 2018 532 pp. 11,560.
9789386279682

Vol. 74: Deo, S.:

*Text & Readings in Mathematics, Vol. 27***Algebraic Topology: A Primer, 2nd ed. No. 513-171**

This is the second (revised and enlarged) edition of the book originally published in 2003. It introduces the first concepts of Algebraic Topology like general simplicial complexes, simplicial homology theory, fundamental groups, covering spaces and singular homology theory in detail.

The text has been designed for undergraduate and beginning graduate students of Mathematics. It assumes a minimal background of linear algebra, group theory and topological spaces.

May 2018 358 pp. 8,500.
9789386279675

Hindustan

Vol. 396: Sakellaridis, Y. /Venkatesh, A.: No. 513-092
Periods and Harmonic Analysis on
Spherical Varieties

This volume elaborates the idea that harmonic analysis on a spherical variety X is intimately connected to the Langlands program.

In the local setting, the key conjecture is that the spectral decomposition of $L^2(X)$ is controlled by a dual group attached to X .

Guided by this, the authors develop a Plancherel formula for $L^2(X)$, formulated in terms of simpler spherical varieties which model the geometry of X at infinity. This local study is then related to global conjectures - namely, conjectures about period integrals of automorphic forms over spherical subgroups.

Dec. 2017 360 pp. 14,140.
 9782856298718

Memoires de la Societe Mathematique de France,

Numero 153: Gualdani, M. /Mischler, S. /Mouhot, C.:
Factorization of Non-Symmetric Operators
and Exponential H-Theorem No. 513-126

We present an abstract method for deriving decay estimates on the resolvents and semigroups of non-symmetric operators in Banach spaces, in terms of estimates in another smaller reference Banach space. The core of the method is a high-order quantitative factorization argument on the resolvents and semigroups, and it makes use of a semigroup commutator condition of regularization. We then apply this approach to the Fokker-Planck equation, to the kinetic Fokker-Planck equation in the torus, and to the linearized Boltzmann equation in the torus. Thanks to the latter results and to a non-symmetric energy method, we obtain the first constructive proof of exponential decay, with sharp rate, towards global equilibrium for the full non-linear Boltzmann equation for hard spheres, conditionally to some smoothness and (polynomial) moment estimates; this solves a conjecture about the optimal decay rate of the relative entropy in the H -theorem.

Dec. 2017 137 pp. 价格未定
 9782856298749

Societe Mathematique de France*Munster Lectures in Mathematics*

Jahnke, F. /Palacin, D. /Tent, D. (eds.): No. 513-073
Lectures in Model Theory

Model theory is a thriving branch of mathematical logic with strong connections to other fields of mathematics. Its versatility has recently led to spectacular applications in areas ranging from diophantine geometry, algebraic number theory and group theory to combinatorics. This volume presents lecture notes from a spring school in model theory which took place in Munster, Germany. The notes are aimed at PhD students but should also be accessible to undergraduates with some basic knowledge in model theory.

They contain the core of stability theory, two chapters connecting generalized stability theory with group theory, as well as introductions to the model theory of valued fields (Hils, Jahnke) and motivic integration (Halupczok).

Apr. 2018 222 pp. 7,560.
 9783037191842

European Mathematical Society

Vol. 68: Ihara Kentaro (ed.):

No. 513-013

Various Aspects of Multiple Zeta Values

この講究録別冊は2013年7月に京都大学数理解析研究所で開催された研究集会「多重ゼータ値の諸相」の講演者による原著論文を編集したものである。

多重ゼータ値の山本積分の理論、 Φ コホモロジー理論、有限多重ゼータ値理論の解説などを含む、査読を経た13篇の論文で構成されており、多重ゼータ値研究の最新の進展を知ることができる。

Oct. 2017 208 pp. 価格未定
9781000023732

**Vol. 67: Okamoto Hisashi /Tsutsumi Yoshio /Ueki Naomasa /
Adachi Tadayoshi /Shimizu Senjo (eds.):**

No. 513-026

Workshop on

the Boltzmann Equation, Microlocal Analysis

この講究録別冊は2016年5月に京都大学百周年時計台記念館で開催された研究集会“Workshop on the Boltzmann Equation, Microlocal Analysis and Related Topics”の講演者による原著論文を編集したものである。厳しい査読を経た11篇の論文で構成されている。

Boltzmann方程式の測度値解についての最新の話題や、離散 Boltzmann 方程式を緩和的雙曲型保存則系と見做す手法についてのサーベイ、擬微分作用素の理論に基づく超局所解析の最近の話題と、その切断近似のない Boltzmann 方程式への応用のサーベイなど、Boltzmann 方程式と超局所解析についての最新の発展を知ることができる。

Oct. 2017 203 pp. 価格未定
9781000023725

Vol. 66: Fujii Michihiko /

No. 513-010

Kawazumi Nariya /Ohshika Ken'ichi (eds.):

Geometry and Analysis of Discrete Groups

この講究録別冊は2015年6月に数理解析研究所で開催された研究集会「離散群と双曲空間の幾何と解析」の講演者による原著論文11篇および講演内容と密接に関連する原著論文1篇から成っている。

すべての論文は査読を経ている。この講究録別冊では、コグゼター群、アルティン群、結び目群などの幾何学にあらわれる離散群およびリーマン面や双曲空間に関連する最新の発展を知ることができる。

June 2017 230 pp. 1,500.
9781000023695

Vol. 65: Kubo Hideo /Takaoka Hideo (eds.):

No. 513-016

Harmonic Analysis and

Nonlinear Partial Differential Equations

この講究録別冊は2016年7月に京都大学数理解析研究所で開催された研究集会「調和解析と非線形偏微分方程式」の講演者による原著論文を編集したものである。

厳しい査読を経た10篇の論文で構成されており、ラプラス・ベルトラミ作用素の固有関数の精緻な評価式を導く為の条件と波動方程式の解の挙動との興味深い関連性や非線形偏微分方程式の解析から生じる調和解析の話題など、調和解析と非線形偏微分方程式の相互作用による最新の発展を知ることができる。

May 2017 175 pp. 1,200.
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