

Yurinsha Book News

New Mathematical Monographs,

Vol. 16: Bloch, S.:

446-056

Lectures on Algebraic Cycles, 2nd ed.

Spencer Bloch's 1979 Duke lectures, a milestone in modern mathematics, have been out of print almost since their first publication in 1980, yet they have remained influential and are still the best place to learn the guiding philosophy of algebraic cycles and motives. This edition, now professionally typeset, has a new preface by the author giving his perspective on developments in the field over the past 30 years.

The theory of algebraic cycles encompasses such central problems in mathematics as the Hodge conjecture and the Bloch-Kato conjecture on special values of zeta functions.

The book begins with Mumford's example showing that the Chow group of zero-cycles on an algebraic variety can be infinite-dimensional, and explains how Hodge theory and algebraic K-theory give new insights into this and other phenomena.

Contents: Preface to the second edition; Introduction; 1. 0-cycles on surfaces; Lecture 1 Appendix. On an argument of Mumford in the theory of algebraic cycles; 2. Curves on threefolds and intermediate Jacobians; 3. Curves on threefolds and intermediate Jacobians - the relative case; 4. K-theoretic and cohomological methods; 5. Torsion in the Chow group; 6. Complements on $H_2(K_2)$; 7. Diophantine questions; 8. Relative cycles and zeta functions; 9. Relative cycles and zeta functions (continued); References; Index.

Aug. 2010

160 pp.

9780521118422

7,790.

Cambridge

<http://www.yurinsha.com>

ホームページは毎月25日更新予定です

No. 446

Aug. 2010

敬理科学 **友 隣 社** 洋書専門

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Key Word 等 必要の項目をお申し出下さい

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7-8月の夏季期間中も平常通り営業いたします
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自 9月7日/ 至 9月9日早稲田大学早稲田キャンパスにて
開催の2010年度統計関連学会連合大会
会場にて、統計学関連書籍の展示をおこないます

また、自 9月22日/ 至 9月25日 名古屋大学にて
開催の日本数学会2010年度秋季総合分科会では
数学関連書籍の展示を行います
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*Mathematical Surveys and Monographs,***Vol. 166: Lee, K. /Raymond, F.:**

446-111

Seifert Fiberings

This book describes in a unified way their structure, how they arise, and how they are classified and used in applications.

Manifolds possessing such fiber structures are discussed and range from the classical three-dimensional Seifert manifolds to higher dimensional analogues encompassing, for example, flat manifolds, infra-nil-manifolds, space forms, and their moduli spaces.

The necessary tools not covered in basic graduate courses are treated in considerable detail. These include transformation groups, cohomology of groups, and needed Lie theory.

Inclusion of the Bieberbach theorems, existence, uniqueness, and rigidity of Seifert fiberings, aspherical manifolds, symmetric spaces, toral rank of spherical space forms, equivariant cohomology, polynomial structures on solv-manifolds, fixed point theory, and other examples, exercises and applications attest to the breadth of these fiberings.

Oct. 2010

411 pp.

9780821852316

13,660.

Vol. 165: Andreu-Vaillo, F. /

446-100

Mazon, J. /Rossi, J. /Toledo-Melero, J.:**Nonlocal Diffusion Problems**

This book presents recent results on nonlocal evolution equations with different boundary conditions, starting with the linear theory and moving to nonlinear cases, including two nonlocal models for the evolution of sandpiles. Both existence and uniqueness of solutions are considered, as well as their asymptotic behaviour.

Moreover, the authors present results concerning limits of solutions of the nonlocal equations as a rescaling parameter tends to zero.

With these limit procedures the most frequently used diffusion models are recovered: the heat equation, the p -Laplacian evolution equation, the porous media equation, the total variation flow, a convection-diffusion equation and the local models for the evolution of sandpiles due to Aronsson-Evans-Wu and Prigozhin.

Oct. 2010

264 pp.

9780821852309

11,320.

*CRM Proceedings and Lecture Notes,***Vol. 52: Jakobson, D. /Nonnenmacher, S. /Polterovich, I. (eds.):
Spectrum and Dynamics:****Proceedings of the Workshop Held in Montreal, 2008**

This volume contains a collection of papers presented at the workshop on Spectrum and Dynamics held at the CRM in April 2008.

In recent years, many new exciting connections have been established between the spectral theory of elliptic operators and the theory of dynamical systems.

A number of articles in the proceedings highlight these discoveries.

The volume features a diversity of topics, such as quantum chaos, spectral geometry, semiclassical analysis, number theory and ergodic theory.

Apart from the research papers aimed at the experts, this book includes several survey articles accessible to a broad mathematical audience.

Titles in this series are co-published

446-129

Aug. 2010

207 pp.

9780821847787

13,660.

A. M. S.

Contemporary Mathematics,

Vol. 523: Bruen, A./Wehlau, D. (eds.): 446-057

**Error-Correcting Codes,
Finite Geometries and Cryptography**

This interdisciplinary volume contains papers from both a conference and special session on Error-Control Codes, Information Theory and Applied Cryptography.

The conference was held at the Fields Institute in Toronto, ON, Canada, 2007, and the special session was held at the Canadian Mathematical Society's winter meeting in London, ON, Canada, 2007.

The volume features cutting-edge theoretical results on the Reed-Muller and Reed-Solomon codes, classical linear codes, codes from nets and block designs, LDPC codes, perfect quantum and orthogonal codes, iterative decoding, magnetic storage and digital memory devices, and MIMO channels.

There are new contributions on privacy reconciliation, resilient functions, cryptographic hash functions, and new work on quantum coins.

Related original work in finite geometries concerns two-weight codes coming from partial spreads, $(0,1)$ matrices with forbidden configurations, Andre embeddings, and representations of projective spaces in affine planes.

Oct. 2010 244 pp.

9780821849569 10,900.

Vol. 522: Garcia-Prada, O./Newstead, P. / 446-070

dAlvarez-Consul, L./Biswas, I./Bradlow, S./Gomez, T. (eds.):

Vector Bundles and Complex Geometry

This volume contains a collection of papers from the Conference on Vector Bundles held at Miraflores de la Sierra, Madrid, Spain on June 16-20, 2008, which honored S. Ramanan on his 70th birthday.

The main areas covered in this volume are vector bundles, parabolic bundles, abelian varieties, Hilbert schemes, contact structures, index theory, Hodge theory, and geometric invariant theory.

Professor Ramanan has made important contributions in all of these areas.

Oct. 2010 206 pp.

9780821847503 9,520.

Clay Mathematics Proceedings,

Vol. 10: Einsiedler, M./Ellwood, A./Eskin, A. / 446-066

Kleinrock, D./Lindenstrauss, E./Margulis, G. /

Marmi, S./occoz, J.-C. (eds.):

Homogeneous Flows, Moduli Spaces & Arithmetic

Topics covered include the following: (a) Unipotent flows: non-divergence, the classification of invariant measures, equidistribution, orbit closures. (b) Actions of higher rank diagonalizable groups and their invariant measures, including entropy theory for such actions. (c) Interval exchange maps and their connections to translation surfaces, ergodicity and mixing of the Teichmüller geodesic flow, dynamics of rational billiards. (d) Application of homogeneous flows to arithmetic, including applications to the distribution of values of indefinite quadratic forms at integral points, metric Diophantine approximation, simultaneous Diophantine approximations, counting of integral and rational points on homogeneous varieties. (e) Eigenfunctions of the Laplacian, entropy of quantum limits, and arithmetic quantum unique ergodicity. (f) Connections between equidistribution and automorphic forms and their L-functions.

Sep. 2010 440 pp.

9780821847428 13,660.

A. M. S.

Yadav, B. /Mohan, M. (eds.):

446-036

Ancient Indian Leaps into Mathematics

This book presents contributions of mathematicians covering topics from ancient India, placing them in the broader context of the history of mathematics.

Although the translations of some Sanskrit mathematical texts are available in the literature, Indian contributions are rarely presented in major Western historical works.

Yet some of the well-known and universally-accepted discoveries from India, including the concept of zero and the decimal representation of numbers, have made lasting contributions to the foundation of modern mathematics.

Nov. 2010 290 pp.
9780817646943 12,670.

ANHA: Applied and Numerical Harmonic Analysis

Barral, J. /Seuret, S. (eds.):

446-105

Recent Developments in Fractals and Related Fields

This book - an outgrowth of an international conference held in honor of Jacques Peyriere - provides readers with an overview of recent developments in the mathematical fields related to fractals.

Included are original research contributions as well as surveys written by experts in their respective fields.

The chapters are thematically organized into five major sections: * Geometric Measure Theory and Multifractals; * Harmonic and Functional Analysis and Signal Processing; * Dynamical Systems and Analysis on Fractals; * Stochastic Processes and Random Fractals; * Combinatorics on Words.

Sep. 2010 430 pp.
9780817648879 18,580.

Cohen, J. /Zayed, A. (eds.):

Wavelets: Past, Present, and Future Perspectives

Dec. 2010 300 pp. 9780817680947 17,410.

Progress in Mathematics,

Vol. 285: Soifer, A. (ed.):

446-090

Ramsey Theory: Yesterday, Today, and Tomorrow

Ramsey theory possesses its own unifying ideas, and some of its results are among the most beautiful theorems of mathematics.

The underlying theme of Ramsey theory can be formulated as: any finite coloring of a large enough system contains a monochromatic subsystem of higher degree of organization than the system itself, or as T. S. Motzkin famously put it, absolute disorder is impossible.

Ramsey Theory: Yesterday, Today, and Tomorrow explores the theory's history, recent developments, and some promising future directions through invited surveys written by prominent researchers in the field.

The first three surveys provide historical background on the subject; the last three address Euclidean Ramsey theory and related coloring problems.

In addition, open problems posed throughout the volume and in the concluding open problem chapter will appeal to graduate students and mathematicians alike.

Oct. 2010 230 pp.
9780817680916 12,890.

Birkhauser

*Encyclopedia of Mathematics and its Applications,***Vol. 139: Fiedler, M.:**

446-166

Matrices and Graphs in Geometry

Simplex geometry is a topic generalizing geometry of the triangle and tetrahedron. The appropriate tool for its study is matrix theory, but applications usually involve solving huge systems of linear equations or eigenvalue problems, and geometry can help in visualizing the behaviour of the problem.

In many cases, solving such systems may depend more on the distribution of non-zero coefficients than on their values, so graph theory is also useful. The author has discovered a method that in many (symmetric) cases helps to split huge systems into smaller parts.

Jan. 2011 << June 2002

250 pp.

9780521461931

10,560.

New Series: Institute of Mathematical Statistics Monographs,

Cambridge University Press is delighted to announce that, in conjunction with the Institute of Mathematical Statistics, it is to establish the **IMS Monographs**. This new series will contain concise research monographs of high quality on any branch of statistics or probability of sufficient interest to warrant publication as books.

Vol. 1: Efron, B.:

446-196

Large-Scale Inference:**Empirical Bayes Methods for Estimation, Testing, & Prediction**

We live in a new age for statistical inference, where modern scientific technology such as microarrays and fMRI machines routinely produce thousands and sometimes millions of parallel data sets, each with its own estimation or testing problem. Doing thousands of problems at once is more than repeated application of classical methods.

Taking an empirical Bayes approach, Bradley Efron, inventor of the bootstrap, shows how information accrues across problems in a way that combines Bayesian and frequentist ideas.

Aug. 2010

275 pp.

9780521192491

7,920.

New Series: Institute of Mathematical Statistics Textbooks,

Cambridge University Press is delighted to announce that, in conjunction with the Institute of Mathematical Statistics, it is to establish the **IMS Textbooks**. This new series will contain compact books that give introductory accounts of topics from statistics or probability of current interest, suitable for advanced courses at master's level, for doctoral students and for individual study.

Vol. 1: Grimmett, G.:

446-200

Probability on Graphs:**Random Processes on Graphs and Lattices**

Topics covered include random walk, percolation, self-avoiding walk, interacting particle systems, uniform spanning tree, random graphs, as well as the Ising, Potts, and random-cluster models for ferromagnetism, and the Lorentz model for motion in a random medium.

Schramm-Lowner evolutions (SLE) arise in various contexts.

Special features include a simple account of Smirnov's proof of

Cardy's formula for critical percolation, and a fairly full account of the theory of influence and sharp-thresholds.

Aug. 2010

258 pp.

9780521197984/9780521147354

13,070./4,880. (Paper ed.)

Cambridge

Vol. 12: Novak, E./Wozniakowski, H.:

446-139

**Tractability of Multivariate Problems, Vol. II:
Standard Information for Functionals**

This three-volume set is a comprehensive study of the tractability of multivariate problems.

The present second volume deals with algorithms using standard information consisting of function values for the approximation of linear and selected nonlinear functionals.

An important example is numerical multivariate integration.

The proof techniques used in volumes I and II are quite different.

It is especially hard to establish meaningful lower error bounds for the approximation of functionals by using finitely many function values.

Here, the concept of decomposable reproducing kernels is helpful, allowing it to find matching lower and upper error bounds for some linear functionals.

It is then possible to conclude tractability results from such error bounds.

July 2010

675 pp.

9783037190845

16,560.

Vol. 10: Turaev, V.:

Homotopy Quantum Field Theory

With Appendices by

446-182

Michael Muger and Alexis Virelizier

Homotopy Quantum Field Theory (HQFT) is a branch of Topological Quantum Field Theory founded by E.Witten and M.Atiyah.

It applies ideas from theoretical physics to study principal bundles over manifolds and, more generally, homotopy classes of maps from manifolds to a fixed target space.

This book is the first systematic exposition of Homotopy Quantum Field Theory. It starts with a formal definition of an HQFT and provides examples of HQFTs in all dimensions. The main body of the text is focused on 2-dimensional and 3-dimensional HQFTs.

A study of these HQFTs leads to new algebraic objects: crossed Frobenius group-algebras, crossed ribbon group-categories, and Hopf group-coalgebras.

June 2010

290 pp.

9783037190869

10,090.

IRMA - Lecture Notes in Mathematics and Theoretical Physics,

Vol. 16: Cortes, V. (ed.):

446-011

**Handbook of Pseudo-Riemannian Geometry
and Supersymmetry**

The main themes covered are: *special geometry and supersymmetry

*generalized geometry *geometries with torsion *para-geometries

*holonomy theory *symmetric spaces and spaces of constant curvature

*conformal geometry *wave equations on Lorentzian manifolds

The intended audience consists of advanced students and researchers working in differential geometry, string theory and related areas.

The emphasis is on geometrical structures occurring on target spaces of supersymmetric field theories. Some of these structures can be fully described in the classical framework of pseudo-Riemannian geometry.

Others lead to new concepts relating various fields of research, such as special Kahler geometry or generalized geometry.

June 2010

964 pp.

9783037190791

20,530.

European Mathematical Society

*Trends in Logic,***Vol. 32: Poggiolesi, F.:**

446-042

Gentzen Calculi for Modal Propostional Logic

The book is about proof theory for (the main systems of) modal logic. It is divided in three parts: the first part introduces and discusses the main philosophical ideas linked with proof theory, and defines what a good sequent calculus is. In the second part, presented in an uniform and detailed way, the attempts made from the 1950's until today in order to provide modal logic with Gentzen calculi. In the last and final part, it analyzes new calculi, called tree-hypersequent calculi and recently introduced by the author, for modal logics.

Sep. 2010

250 pp.

9789048196692

17,390.

*Springer Monographs in Mathematics***Jarden, M.:**

446-074

Algebraic Patching

Assuming only basic algebra and Galois theory, the book develops the method of "algebraic patching" to realize finite groups and, more generally, to solve finite split embedding problems over fields. The method succeeds over rational function fields of one variable over "ample fields".

Among others, it leads to the solution of two central results in "Field Arithmetic": (a) The absolute Galois group of a countable Hilbertian pac field is free on countably many generators; (b) The absolute Galois group of a function field of one variable over an algebraically closed field C is free of rank equal to the cardinality of C .

Table of contents: 1. Algebraic Patching. 2. Normed Rings 3. Several Variables 4. Constant Split Embedding Problems over Complete Fields. 5. Ample Fields. 6. Non-Ample Fields. 7. Split Embedding Problems over Complete Fields. 8. Split Embedding Problems over Ample Fields. 9. The Absolute Galois Group of $C(t)$. 10. Semi-Free Profinite Groups. 11. Function Fields of One Variable over PAC Fields. 12. Complete Noetherian Domains. Open Problems. References. Glossary of Notation. Index.

Oct. 2010

290 pp.

9783642151279

13,510.

*Ergebnisse der Mathematik und ihrer Grenzgebiete 3 Folge***Band 54: Talagrand, M.:**

446-219

**Mean Field Models for Spin Glasses:
Basic Examples, 2nd Revised ed.**

This is a new, completely revised, updated and enlarged edition of the author's *Ergebnisse* vol. 46: "Spin Glasses: A Challenge for Mathematicians". This new edition will appear in two volumes, the present first volume presents the basic results and methods, the second volume is expected to appear in 2011. In the eighties, a group of theoretical physicists introduced several models for certain disordered systems, called "spin glasses".

These models are simple and rather canonical random structures, of considerable interest for several branches of science (statistical physics, neural networks and computer science). The physicists studied them by non-rigorous methods and predicted spectacular behaviors.

The first volume of this new and completely rewritten edition presents six fundamental models and the basic techniques to study them.

Oct. 2010

490 pp.

9783642152016

21,960.

Springer

Vol. 2007: Gromadzki, G. /

446-072

Gamboa, J. / Cirre, F. / Bujalance, E.:

Symmetries of Compact Riemann Surfaces

This monograph deals with symmetries of compact Riemann surfaces. A symmetry of a compact Riemann surface S is an antianalytic involution of S . It is well known that Riemann surfaces exhibiting symmetry correspond to algebraic curves which can be defined over the field of real numbers. In this monograph we consider three topics related to the topology of symmetries, namely the number of conjugacy classes of symmetries, the numbers of ovals of symmetries and the symmetry types of Riemann surfaces.

Oct. 2010 166 pp.
9783642148279 6,080.

Vol. 2006: Rouault, A. / Lejay, A. / Donati-Martin, C. (eds.):

Seminaire de Probabilites XLIII

This volume contains J. Picard's advanced course on the representation formulae for the fractional Brownian motion. The regular chapters cover a wide range of themes, such as stochastic calculus and stochastic differential equations, stochastic differential geometry, filtrations, analysis of Wiener space, random matrices and free probability, as well as mathematical finance.

Oct. 2010 490 pp. 446-214
9783642152160 11,820.

Vol. 2005: Yuan, W. / Sickel, W. / Yang, D.:

446-154

**Morrey and Campanato Meet Besov,
Lizorkin and Triebel**

During the last 60 years the theory of function spaces has been a subject of growing interest and increasing diversity. Based on three formally different developments, namely, the theory of Besov and Triebel-Lizorkin spaces, the theory of Morrey and Campanato spaces and the theory of Q spaces, the authors develop a unified framework for all of these spaces. As a byproduct, the authors provide a completion of the theory of Triebel-Lizorkin spaces when $p = [\infty]$.

Oct. 2010 272 pp. 446-118
9783642146053 7,600.

Vol. 2004: Diethelm, K.:

446-118

The Analysis of Fractional Differential Equations

Sep. 2010 246 pp. 9783642145735 7,600.

Vol. 2003: Cousin, A. et al. (eds.):

446-194

**Paris -Princeton Lectures on
Mathematical Finance 2010**

The aim is to produce a series of articles that can serve as an introductory reference source for research in the field.

The articles are the result of frequent exchanges between the finance and financial mathematics groups in Paris and Princeton.

The present volume sets standards with articles by Areski Cousin, Monique Jeanblanc and Jean-Paul Laurent, Stephane Crepey, Olivier Guéant, Jean-Michel Lasry and Pierre-Louis Lions, David Hobson, and Peter Tankov.

Sep. 2010 278 pp. 446-194
9783642146596 7,820.

Springer

Graduate Texts in Mathematics,

446-151

**Vol. 259: Ward, T./Einsiedler, M:
Ergodic Theory:
with A View Towards Number Theory**

This text is a rigorous introduction to ergodic theory, developing the machinery of conditional measures and expectations, mixing, and recurrence. Beginning by developing the basics of ergodic theory and progressing to describe some recent applications to number theory, this book goes beyond the standard texts in this topic.

Applications include Weyl's polynomial equidistribution theorem, the ergodic proof of Szemerédi's theorem, the connection between the continued fraction map and the modular surface, and a proof of the equidistribution of horocycle orbits.

This book will appeal to mathematicians with some standard background in measure theory and functional analysis.

Oct. 2010

467 pp.

9780857290205

10,130.

*Algebra and Applications,***Vol. 12: Lee, G.:**

446-172

**Group Identities on Units and
Symmetric Units of Group Rings**

Let FG be the group ring of a group G over a field F .

Write $U(FG)$ for the group of units of FG . It is an important problem to determine the conditions under which $U(FG)$ satisfies a group identity.

In the mid 1990s, a conjecture of Hartley was verified, namely, if $U(FG)$ satisfies a group identity, and G is torsion, then FG satisfies a polynomial identity. Necessary and sufficient conditions for $U(FG)$ to satisfy a group identity soon followed.

Since the late 1990s, many papers have been devoted to the study of the symmetric units; that is, those units u satisfying $u^* = u$, where $*$ is the involution on FG defined by sending each element of G to its inverse. The conditions under which these symmetric units satisfy a group identity have now been determined.

Sep. 2010

200 pp.

9781849965033

13,910.

Vol. **: Knebusch, M.:

446-078

**Specialization of Quadratic and
Symmetric Bilinear Forms**

The specialization theory of quadratic and symmetric bilinear forms over fields and the subsequent generic splitting theory of quadratic forms were invented by the author in the mid-1970's.

They came to fruition in the ensuing decades and have become an integral part of the geometric methods in quadratic form theory.

This book comprehensively covers the specialization and generic splitting theories. These theories, originally developed mainly for fields of characteristic different from 2, are explored here without this restriction.

In this book, a quadratic form $[fai]$ over a field of characteristic 2 is allowed to have a big quasilinear part $QL([fai])$ (defined as the restriction of $[fai]$ to the radical of the bilinear form associated to $[fai]$), while in most of the literature $QL([fai])$ is assumed to have dimension at most 1.

Sep. 2010

188 pp.

9781848822412

10,440.

Springer

Tu, L.:

446-181

An Introduction to Manifolds

Manifolds, the higher-dimensional analogs of smooth curves and surfaces, are fundamental objects in modern mathematics. Combining aspects of algebra, topology, and analysis, manifolds have also been applied to classical mechanics, general relativity, and quantum field theory. In this streamlined introduction to the subject, the theory of manifolds is presented with the aim of helping the reader achieve a rapid mastery of the essential topics. By the end of the book the reader should be able to compute, at least for simple spaces, one of the most basic topological invariants of a manifold, its de Rham cohomology. Along the way the reader acquires the knowledge and skills necessary for further study of geometry and topology.

Dec. 2010
9781441973993440 pp.
7,600.*Springer Texts in Statistics*

Jiang, J.:

446-203

Large Sample Techniques for Statistics

This book offers a comprehensive guide to large sample techniques in statistics. More importantly, it focuses on thinking skills rather than just what formulae to use; it provides motivations, and intuition, rather than detailed proofs; it begins with very simple techniques, and connects theory and applications in entertaining ways.

The first five chapters review some of the basic techniques, such as the fundamental epsilon-delta arguments, Taylor expansion, different types of convergence, and inequalities. The next five chapters discuss limit theorems in specific situations of observational data.

Each of the first 10 chapters contains at least one section of case study. The last five chapters are devoted to special areas of applications.

July 2010
9781441968265582 pp.
12,670.*Springer Series in Statistics*

Samaniego, F.:

446-216

A Comparison of the Bayesian and Frequentist Approaches to Estimation

The book is intended for an audience having a solid grounding in probability and statistics at the level of the year-long undergraduate course taken by statistics and mathematics majors.

The necessary background on Decision Theory and the frequentist and Bayesian approaches to estimation is presented and carefully discussed in Chapters 1-3. The "Threshold problem" — identifying the boundary between Bayes estimators which tend to outperform standard frequentist estimators and Bayes estimators which don't — is formulated in an analytically tractable way in Chapter 4. The formulation includes a specific (decision-theory based) criterion for comparing estimators.

The centerpiece of the monograph is Chapter 5 in which, under quite general conditions, an explicit solution to the threshold is obtained for the problem of estimating a scalar parameter under squared error loss.

July 2010
9781441959409226 pp.
10,410.**Springer**

Markley, N.:

446-082

Topological Groups: An Introduction

Written by an avid user of topological groups, this book provides a concrete introduction to metric and topological groups.

Important metric spaces are first introduced with the construction of a concrete metric, and a topological characterization of their open sets is immediately established.

Many proofs are presented in a purely topological fashion.

It is this use of topologies that affords the opportunity to discuss the limitations of some of the metric group results as well as the topological machinery needed to generalize them.

Sep. 2010 384 pp. 13,790.
9780470624517

Dixon, M. /Kurdachenko, L. /Subbotin, I.:

446-063

Algebra and Number Theory: An Integrated Approach

This book successfully blends algebra and number theory as an integrated discipline and consists of seven parts: Part 1 discusses the elements of set theory; Parts 2 and 3 address number systems; Parts 4 and 5 cover the main topics of linear algebra; Part 6 develops the main ideas of algebraic structures; and Part 7 demonstrates the applications of algebraic ideas to number theory. Based on the experience of the authors, this book was developed for one course that integrates three disciplines - linear algebra, abstract algebra, and number theory - in an effort to use time more efficiently.

Sep. 2010 528 pp. 17,250.
9780470496367

Gibbs, B.:

446-229

Least-Squares Estimation, Kalman Filtering and Modeling: A Practical Handbook

This book is intended primarily as a handbook for engineers who must design practical systems.

Its primary goal is to discuss model development in sufficient detail so that the reader may design an estimator that meets all application requirements and is robust to modeling assumptions.

Since it is sometimes difficult a priori to determine the best model structure, use of exploratory data analysis to define model structure is discussed.

Feb. 2011 600 pp. 20,010.
9780470529706

Wiley Series in Probability and Statistics

Chan, N.:

446-191

Time Series:

Applications to Finance with R and S-Plus(R), 2nd ed.

The author is well known for his clear, concise, and authentic presentation.

Two new chapters now appear on Bayesian methods and arbitrage statistics. Special emphasis is placed on applications from around the world, including, but not limited to, Asia; China; and Europe.

Challenging end-of-chapter exercises are provided, along with the solutions to most of these exercises at the end of the book.

Sep. 2010 330 pp. 15,870.
9780470583623

Wiley

新刊特集

Nankai Tracts in Mathematics,

Vol. 13: Fu, L.:

446-013

Etale Cohomology Theory

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Jan. 2011

550 pp.

9789814307727

16,680.

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200 pp.

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6,670.

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This volume aims to provide new eight- and twelve-dimensional complex solutions to these equations for the first time in order to reveal their richness and continued importance for advancing fundamental Physics.

If M-Theory is to keep its promise of defining the ultimate structure of matter and spacetime, it is only through the topological configurations of additional dimensionality (or degrees of freedom) that this will be possible. Stretching the exploration of complex space through all of the main equations of Physics should help tighten the noose on "the" fundamental theory.

Apr. 2011

350 pp.

9789814324243

15,180.

Algebra and Discrete Mathematics,

Vol. 2: Pankov, M.:

446-025

Grassmannians of Classical Buildings

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It gives a modern interpretation of some classical results from the geometry of linear groups.

The presented methods are applied to some geometric constructions non-related to buildings --- Grassmannians of infinite-dimensional vector spaces and the sets of conjugate linear involutions.

Nov. 2010

230 pp.

9789814317566

10,420.

World Scientific Pub.

Page 11

Bhatia, R. /Pal, A. /Rangarajan, G. /
Srinivas, V. /Vanninathan, V. (eds.):

446-005

**Proceedings of the
International Congress of Mathematicians 2001,
Hyderabad, India, 19-27 August 2010:**

**Vol. I: Plenary Lectures and Ceremonies/
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9789814324304

48,300.

Dutour Sikiric, M. /Itoh Yoshiaki :
Random Sequential Packing of Cubes

446-065

In this volume very simplified models are introduced to understand the random sequential packing models mathematically.

The 1-dimensional model is sometimes called the Parking Problem, which is known by the pioneering works by Flory (1939), Renyi (1958), Dvoretzky and Robbins (1962).

To obtain a 1-dimensional packing density, distribution of the minimum of gaps, etc., the classical analysis has to be studied.

The packing density of the general multi-dimensional random sequential packing of cubes (hypercubes) makes a well-known unsolved problem.

The experimental analysis is usually applied to the problem.

Contents: *Random Interval Packing *The Speed of Convergence to the Renyi Constant *The Dvoretzky Robbins Central Limit Theorem *Gap Size *The Minimum of Gaps *Kakutani's Interval Splitting *Sequential Bisection and Binary Search Tree *Car Parking with Spin *Golay Code and Random Packing *Discrete Cube Packing *Torus Cube Packing *Continuous Random Cube Packing in Cube and Torus *Combinatorial Enumeration

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200 pp.

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8,420.

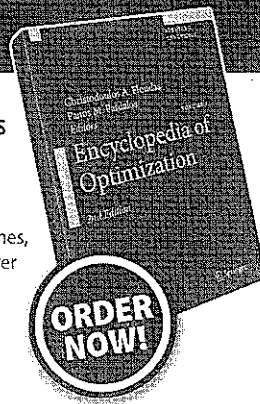
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