

Yurinsha Book News

Mathematical Surveys and Monographs,

Vol. 211: Hardouin, C. /

501-089

**Sauloy, J. / Singer, M.:
Galois Theories of
Linear Difference Equations:
An Introduction**

This book is a collection of three introductory tutorials coming out of three courses given at the CIMPA Research School "Galois Theory of Difference Equations" in Santa Marta, Columbia, 2012.

The aim of these tutorials is to introduce the reader to three Galois theories of linear difference equations and their interrelations. Each of the three articles addresses a different galoisian aspect of linear difference equations.

The authors motivate and give elementary examples of the basic ideas and techniques, providing the reader with an entry to current research.

In addition each article contains an extensive bibliography that includes recent papers; the authors have provided pointers to these articles allowing the interested reader to explore further.

May 2016

171 pp.

9781470426552

18,810.

Vol. 210: Bell, J. / Ghioca, D.:

501-065

The Dynamical Mordell-Lang Conjecture

Apr. 2016 280 pp.

9781470424084

18,810.

A. M. S.

<http://www.yurinsha.com>

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No. 501

May - June 2016

敬理科学 **友 隣 社** 洋書専門

Yurinsha Book News

Mathematical Surveys and Monographs,

Vol. 210: Bell, J. /Ghioca, D.: 501- 065
The Dynamical Mordell-Lang Conjecture

The Dynamical Mordell-Lang Conjecture is an analogue of the classical Mordell-Lang conjecture in the context of arithmetic dynamics. It predicts the behavior of the orbit of a point x under the action of an endomorphism f of a quasiprojective complex variety X . More precisely, it claims that for any point x in X and any subvariety V of X , the set of indices n such that the n -th iterate of x under f lies in V is a finite union of arithmetic progressions.

Apr. 2016 280 pp. 18,810.
9781470424084

Contemporary Mathematics,

Vol. 664: Jiang, D. /Shahidi, F. /Soudry, D. (eds.): 501- 093
Advances in the Theory of

Automorphic Forms and Their L-Functions

Specifically, the papers cover aspects of representation theory of p -adic groups, classification of automorphic representations through their Fourier coefficients and their liftings, L -functions for classical groups, special values of L -functions, Howe duality, subconvexity for L -functions, Kloosterman integrals, arithmetic geometry and cohomology of arithmetic groups, and other important problems on L -functions, nodal sets and geometry.

May 2016 376 pp. 18,470.
9781470417093

Vol. 663: Kohel, D. /Shparlinski, I. (eds.): 501- 095
Frobenius Distributions

This is mostly driven by two famous conjectures: the Sato-Tate conjecture, which has been recently proved for elliptic curves by L. Clozel, M. Harris and R. Taylor, and the Lang-Trotter conjecture, which is still widely open. Investigations in this area are based on a fine mix of algebraic, analytic and computational techniques, and the papers contained in this volume give a balanced picture of these approaches.

May 2016 238 pp. 18,470.
9781470419479

Vol. 660: Ammari, H. / 501-115
Capdeboscq, Y. /Kang, H. /Sim, I. (eds.):

**Imaging, Multi-scale and High Contrast
Partial Differential Equations**

If the material parameters of the partial differential equation present high contrast ratio, then the solution to the PDE becomes particularly challenging to analyze and compute. On the other hand, imaging in highly heterogeneous media poses significant challenges to the mathematical community.

May 2016 148 pp. 18,470.
9781470419233

Vol. 661: Hardin, D. /Lubinsky, D. /Simanek, B.: 501- 152
Modern Trends in Constructive Function Theory

The papers in this volume contain results on polynomial approximation, rational approximation, Log-optimal configurations on the sphere, random continued fractions, ratio asymptotics for multiple orthogonal polynomials, etc.

May 2016 297 pp. 18,470.
9781470425340

A. M. S

Davvaz, B.:

501-076

Semihypergroup Theory

This book is the first book devoted to the semihypergroup theory and it includes basic results concerning semigroup theory and algebraic hyperstructures, which represent the most general algebraic context in which reality can be modelled.

July 2016

216 pp.

9780128098158

12,820.

Neelacanta, S.:

501-102

**Introduction to
Finite and Infinite Dimensional Lie (Super)Algebras**

Lie superalgebras are a natural generalization of Lie algebras, having applications in geometry, number theory, gauge field theory, and string theory.

Introduction to Finite and Infinite Dimensional Lie Algebras and Superalgebras introduces the theory of Lie superalgebras, their algebras, and their representations.

The material covered ranges from basic definitions of Lie groups to the classification of finite-dimensional representations of semi-simple Lie algebras.

Apr. 2016

502 pp.

9780128046753

25,650.

Alfuraidan, M. /Ansari, Q.:

501-114

Fixed Point Theory and Graph Theory

Fixed Point Theory and Graph Theory provides an intersection between the theories of fixed point theorems that give the conditions under which maps (single or multivalued) have solutions and graph theory which uses mathematical structures to illustrate the relationship between ordered pairs of objects in terms of their vertices and directed edges.

This edited reference work is perhaps the first to provide a link between the two theories, describing not only their foundational aspects, but also the most recent advances and the fascinating intersection of the domains.

June 2016

312 pp.

9780128042953

17,090.

Eshaghi Gordji, M. /Abbaszadeh, S.:

501-137

**Theory of Approximate Functional Equations:
In Banach Algebras, Inner Product Spaces & Amenable Groups**

Presently no other book deals with the stability problem of functional equations in Banach algebras, inner product spaces and amenable groups. Moreover, in most stability theorems for functional equations, the completeness of the target space of the unknown functions contained in the equation is assumed.

Mar. 2016

148 pp.

9780128039205

12,820.

Morgan, F.:

501-215

**Geometric Measure Theory:
A Beginner's Guide, 5th ed.**

This book, Fifth Edition provides the framework readers need to understand the structure of a crystal, a soap bubble cluster, or a universe.

The book is essential to any student who wants to learn geometric measure theory, and will appeal to researchers and mathematicians working in the field.

June 2016

272 pp.

9780128044896

17,090.

Academic

Yurinsha Book News

Abramsky, S. / Kontinen, J. / Vaananen, J. / Vollmer, H. (eds.):

Dependence Logic:

501-051

Theory and Applications

In this volume, different aspects of logics for dependence and independence are discussed, including both the logical and computational aspects of dependence logic, and also applications in a number of areas, such as statistics, social choice theory, databases, and computer security.

June 2016

265 pp.

9783319318011

18,430.

Trends in the History of Science

Conte, A. / Casnati, G. / Gatto, L. / Giacardi, L. /

501-012

Marchisio, M. / Verra, A. (eds.):

From Classical to Modern Algebraic Geometry:

Corrado Segre's Mastership and Legacy

This book is the product of a conference held in Turin, Italy, to commemorate the 150th birthday of Corrado Segre. Including both survey articles and original research papers, the book is divided into two parts: section one focuses on the implications of Segre's work in a historic light, while section two presents new results in his field, namely Algebraic Geometry.

Aug. 2016

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9783319329925

32,010.

Flicker, Y.:

**Arthur's Invariant Trace Formula and
Comparison of Inner Forms**

501-083

This monograph provides an accessible and comprehensive introduction to James Arthur's invariant trace formula, a crucial tool in the theory of automorphic representations. It synthesizes two decades of Arthur's research and writing into one volume, treating a highly detailed and often difficult subject in a clearer and more uniform manner without sacrificing any technical details. The book begins with a brief overview of Arthur's work and a proof of the correspondence between $GL(n)$ and its inner forms in general. Subsequent chapters develop the invariant trace formula in a form fit for applications, starting with Arthur's proof of the basic, non-invariant trace formula, followed by a study of the non-invariance of the terms in the basic trace formula, and, finally, an in-depth look at the development of the invariant formula.

June 2016

490 pp.

9783319315911

21,150.

*Progress in Nonlinear Differential Equations &
Their Applications,*

Vol. 88: Bastin, G. / Coron, J.-M:

**Stability and Boundary Stabilization of
1-D Hyperbolic Systems**

501-118

This monograph explores the modeling of conservation and balance laws of one-dimensional hyperbolic systems using partial differential equations. It presents typical examples of hyperbolic systems for a wide range of physical engineering applications, allowing readers to understand the concepts in whichever setting is most familiar to them.

With these examples, it also illustrates how control boundary conditions may be defined for the most commonly used control devices.

June 2016

273 pp.

9783319320601

15,520.

Birkhauser

*Progress in Mathematics,***Vol. 317: Moeglin, C. / Waldspurger, J.-L.:
Stabilisation de la formule des traces tordue, Vol. 2**

501- 099

Ce travail en deux volumes donne la preuve de la stabilisation de la formule des trace tordue. Stabiliser la formule des traces tordue est la methode la plus puissante connue actuellement pour comprendre l'action naturelle du groupe des points adeliques d'un groupe reductif, tordue par un automorphisme, sur les formes automorphes de carre integrable de ce groupe. Cette comprehension se fait en reduisant le probleme, suivant les idees de Langlands, a des groupes plus petits munis d'un certain nombre de donnees auxiliaires; c'est ce que l'on appelle les donnees endoscopiques. L'analogie non tordu a ete resolu par J. Arthur et dans ce livre on suit la strategie de celui-ci.

Oct. 2016

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9783319300573

24,020.

**Vol. 315: Faber, C. / Farkas, G. / van der Geer, G. (eds.):
K3 Surfaces and Their Moduli**

501- 081

This book provides an overview of the latest developments concerning the moduli of K3 surfaces. It is aimed at algebraic geometers, but is also of interest to number theorists and theoretical physicists, and continues the tradition of related volumes like "The Moduli Space of Curves" and "Moduli of Abelian Varieties," which originated from conferences on the islands Texel and Schiermonnikoog and which have become classics.

Mar. 2016

400 pp.

9783319299587

21,450.

*Operator theory: Advances and Applications,***Vol. 255: Eisner, T. / Jacob, B. / Ran, A. / Zwart, H. (eds.):
Operator Theory,****Function Spaces, and Applications**

501- 133

This volume collects a selected number of papers presented at the International Workshop on Operator Theory and its Applications (IWOTA) held in July 2014 at Vrije Universiteit in Amsterdam. Main developments in the broad area of operator theory are covered, with special emphasis on applications to science and engineering. The volume also presents papers dedicated to the eightieth birthday of Damir Arov and to the sixty-fifth birthday of Leiba Rodman, both leading figures in the area of operator theory and its applications, in particular to systems theory.

Sep. 2016

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9783319313818

19,500.

Vol. 254: Mantoiu, M. /

501- 166

Raikov, G. / Tiedra de Aldecoa, R. (eds.):**Spectral Theory and Mathematical Physics**

The present volume contains the Proceedings of the International Conference on Spectral Theory and Mathematical Physics held in Santiago de Chile in November 2014.

Main topics are: Ergodic Quantum Hamiltonians; Magnetic Schrodinger Operators; Quantum Field Theory; Quantum Integrable Systems; Scattering Theory; Semiclassical and Microlocal Analysis; Spectral Shift Function and Quantum Resonances.

Sep. 2016

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9783319299907

19,500.

Birkhauser

Yurinsha Book News

London Mathematical Society Lecture Note Series,

Vol. 435: Hazrat, R.: 501-091

**Graded Rings and
Graded Grothendieck Groups**

This study of graded rings includes the first systematic account of the graded Grothendieck group, a powerful and crucial invariant in algebra which has recently been adopted to classify the Leavitt path algebras.

The book begins with a concise introduction to the theory of graded rings and then focuses in more detail on Grothendieck groups, Morita theory, Picard groups and K-theory.

The author extends known results in the ungraded case to the graded setting and gathers together important results which are currently scattered throughout the literature.

Aug. 2016 242 pp. 13,680.
9781316619582

Vol. 434: Taira Kazuaki : 501- 188

**Analytic Semigroups and
Semilinear Initial Boundary Value Problems, 2nd ed.**

A careful and accessible exposition of a functional analytic approach to initial boundary value problems for semilinear parabolic differential equations, with a focus on the relationship between analytic semigroups and initial boundary value problems.

This semigroup approach is distinguished by the extensive use of the ideas and techniques characteristic of the recent developments in the theory of pseudo-differential operators, one of the most influential works in the modern history of analysis.

Complete with ample illustrations and additional references, this new edition offers both streamlined analysis and better coverage of important examples and applications.

A powerful method for the study of elliptic boundary value problems, capable of further extensive development, is provided for advanced undergraduates or beginning graduate students, as well as mathematicians with an interest in functional analysis and partial differential equations.

July 2016 331 pp. 15,390.
9781316620861

Cambridge Studies in Advanced Mathematics,

Vol. 157: Robinson, J. /Rodrigo, J. /Sadowski, W.: 501- 181

The Three-Dimensional Navier-Stokes Equations

This book provides a rigorous but accessible introduction to the mathematical theory of the three-dimensional Navier-Stokes equations, providing self-contained proofs of some of the most significant results in the area, many of which can only be found in research papers.

Highlights include the existence of global-in-time Leray-Hopf weak solutions and the local existence of strong solutions; the conditional local regularity results of Serrin and others; and the partial regularity results of Caffarelli, Kohn and Nirenberg.

Appendices provide background material and proofs of some 'standard results' that are hard to find in the literature.

A substantial number of exercises are included, with full solutions given at the end of the book.

Aug. 2016 13,680.
9781107019669

Cambridge

Yurinsha Book News

de Gruyter Studies in Mathematics,

Vol. 18: Touraev, V.: 501- 361

**Quantum Invariants of
Knots and 3-Manifolds, 3rd Corrected ed.**

The third edition of this monograph provides a systematic treatment of topological quantum field theories in three dimensions, inspired by the discovery of the Jones polynomial of knots, the Witten-Chern-Simons field theory, and the theory of quantum groups.

July 2016 595 pp. 30,550.
9783110442663

de Gruyter Textbook

Yan, M.: 501- 223

Introduction to Topology

In this book, author uses knowledge from analysis course as a starting point and gradually builds up more abstract concepts in topology for students. Point set topology and combinatorial topology are arranged in alternating order to alleviate learning pressure and exercises are immersed into discussions. The introduction of a concept is followed by examples immediately, and then followed by relevant exercises to facilitate the learning process.

Feb. 2016 249 pp. 5,720.
9783110378153

de Gruyter Studies in Mathematical Physics,

Vol. 34: Fet, A.: 501- 325

Group Theory of Elements:

Structure and Properties of Chemical Elements and Compounds
In this monograph, group-theoretical approaches are used to build a system of hadrons and qualitatively describe the properties of chemical compounds. This serves as a complement to numerically and approximately solve the many-electron Schrodinger equation, in order to understand the behavior of chemical elements.

Sep. 2016 280 pp. 22,910.
9783110475180

de Gruyter

EMS Textbooks in Mathematics

Salamon, D.: 501-184

Measure and Integration

The book is intended as a companion to a one semester introductory lecture course on measure and integration.

After an introduction to abstract measure theory it proceeds to the construction of the Lebesgue measure and of Borel measures on locally compact Hausdorff spaces, L^p spaces and their dual spaces and elementary Hilbert space theory.

Special features include the formulation of the Riesz Representation Theorem in terms of both inner and outer regularity, the proofs of the Marcinkiewicz Interpolation Theorem and the Calderon-Zygmund inequality as applications of Fubini's theorem and Lebesgue differentiation, the treatment of the generalized Radon-Nikodym theorem due to Fremlin, and the existence proof for Haar measures.

Mar. 2016 363 pp. 9,170.
9783037191590

European Mathematical Society

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Bourbaki: Elements of Mathematics, Series

Bourbaki,N.:

501- 193

**Topologie algebrique:
Chapitres 1 a 4**

Ce livre des Elements de mathematique est consacre a la Topologie algebrique. Les quatre premiers chapitres presentent la theorie des revetements d'un espace topologique et du groupe de Poincare. On construit le revetement universel d'un espace connexe pointe delacable et on etablit l'equivalence de categories entre revetements de cet espace et actions du groupe de Poincare.

Mar. 2016

498 pp.

9783662493601

6,800.

Problem Books in Mathematics

Gera,R./Hedetniemi,S./Larson,C. (eds.):

501- 024

Graph Theory:

Favorite Conjectures and Open Problems -1.

This is the first in a series of volumes, which provide an extensive overview of conjectures and open problems in graph theory.

The readership of each volume is geared toward graduate students who may be searching for research ideas.

However, the well-established mathematician will find the overall exposition engaging and enlightening. Each chapter, presented in a story-telling style, includes more than a simple collection of results on a particular topic. Each contribution conveys the history, evolution, and techniques used to solve the authors' favorite conjectures and open problems, enhancing the reader's overall comprehension and enthusiasm.

Aug. 2016

300 pp.

9783319319384

13,000.

Universitext

Komornik,V.:

501-160

**Lectures on Functional Analysis and
the Lebesgue Integral**

This textbook, based on three series of lectures held by the author at the University of Strasbourg, presents functional analysis in a non-traditional way by generalizing elementary theorems of plane geometry to spaces of arbitrary dimension.

This approach leads naturally to the basic notions and theorems.

Most results are illustrated by the small p spaces.

The Lebesgue integral, meanwhile, is treated via the direct approach of Frigyes Riesz, whose constructive definition of measurable functions leads to optimal, clear-cut versions of the classical theorems of Fubini-Tonelli and Radon-Nikodym.

Lectures on Functional Analysis and the Lebesgue Integral presents the most important topics for students, with short, elegant proofs.

The exposition style follows the Hungarian mathematical tradition of Paul Erdos and others.

The order of the first two parts, functional analysis and the Lebesgue integral, may be reversed. In the third and final part they are combined to study various spaces of continuous and integrable functions.

Several beautiful, but almost forgotten, classical theorems are also included.

June 2016

352 pp.

9781447168102

13,000.

Springer

Yurinsha Book News

Springer INdAM Series,

**Vol. 14: Callegaro, F. /Cohen, F. /De Concini, C. / 501-068
Feichtner, E. /Gaiffi, G. /Salvetti, M. (eds.):**

Configuration Spaces:

Geometry, Topology and Representation Theory

This book collects the scientific contributions of a group of leading experts who took part in the INdAM Meeting held in Cortona in September 2014. With combinatorial techniques as the central theme, it focuses on recent developments in configuration spaces from various perspectives. It also discusses their applications in areas ranging from representation theory, toric geometry and geometric group theory to applied algebraic topology.

June 2016 368 pp. 21,340.
9783319315799

Graduate Texts in Mathematics,

Vol. 274: Le Gall, J.-F.: 501-162

**Brownian Motion,
Martingales, and Stochastic Calculus**

This book offers a rigorous and self-contained presentation of stochastic integration and stochastic calculus within the general framework of continuous semimartingales. The main tools of stochastic calculus, including Ito's formula, the optional stopping theorem and Girsanov's theorem, are treated in detail alongside many illustrative examples. The book also contains an introduction to Markov processes, with applications to solutions of stochastic differential equations and to connections between Brownian motion and partial differential equations.

The theory of local times of semimartingales is discussed in the last chapter. Since its invention by Ito, stochastic calculus has proven to be one of the most important techniques of modern probability theory, and has been used in the most recent theoretical advances as well as in applications to other fields such as mathematical finance.

May 2016 241 pp. 11,110.
9783319310886

Vol. 233: Albiac, F. /Kalton, N.: 501-113

Topics in Banach Space Theory

This text provides the reader with the necessary technical tools and background to reach the frontiers of research without the introduction of too many extraneous concepts. Detailed and accessible proofs are included, as are a variety of exercises and problems. The two new chapters in this second edition are devoted to two topics of much current interest amongst functional analysts: Greedy approximation with respect to bases in Banach spaces and nonlinear geometry of Banach spaces.

This new material is intended to present these two directions of research for their intrinsic importance within Banach space theory, and to motivate graduate students interested in learning more about them.

This textbook assumes only a basic knowledge of functional analysis, giving the reader a self-contained overview of the ideas and techniques in the development of modern Banach space theory.

Special emphasis is placed on the study of the classical Lebesgue spaces L_p (and their sequence space analogues) and spaces of continuous functions.

The authors also stress the use of bases and basic sequences techniques as a tool for understanding the isomorphic structure of Banach spaces.

June 2016 484 pp. 13,650.
9783319315553

Springer

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Yurinsha Book News

Lecture Notes in Mathematics,

Vol. 2159: van de Geer, S.:

501- 257

Estimation and Testing Under Sparsity:

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

Taking the Lasso method as its starting point, this book describes the main ingredients needed to study general loss functions and sparsity-inducing regularizers.

It also provides a semi-parametric approach to establishing confidence intervals and tests. Sparsity-inducing methods have proven to be very useful in the analysis of high-dimensional data.

Examples include the Lasso and group Lasso methods, and the least squares method with other norm-penalties, such as the nuclear norm.

The illustrations provided include generalized linear models, density estimation, matrix completion and sparse principal components.

Each chapter ends with a problem section.

The book can be used as a textbook for a graduate or PhD course.

Aug. 2016

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9783319327730

8,580.

Vol. 2158: Constantin, A. (ed.):

Nonlinear Water Waves:

501- 127

Cetraro, Italy 2013

This volume brings together four lecture courses on modern aspects of water waves. The intention, through the lectures, is to present quite a range of mathematical ideas, primarily to show what is possible and what, currently, is of particular interest. Water waves of large amplitude can only be fully understood in terms of nonlinear effects, linear theory being not adequate for their description.

Taking advantage of insights from physical observation, experimental evidence and numerical simulations, classical and modern mathematical approaches can be used to gain insight into their dynamics.

The book presents several avenues and offers a wide range of material of current interest.

May 2016

256 pp.

9783319314617

18,520.

Applied Mathematical Sciences,

Vol. 195: Haro, A. /Canadell, M. /

501- 154

Luque, A. /Mondelo, J. /Figueras, J.-L.:

**The Parameterization Method for
Invariant Manifolds**

This monograph presents some theoretical and computational aspects of the parameterization method for invariant manifolds, focusing on the following contexts: invariant manifolds associated with fixed points, invariant tori in quasi-periodically forced systems, invariant tori in Hamiltonian systems and normally hyperbolic invariant manifolds. This book provides algorithms of computation and some practical details of their implementation.

The methodology is illustrated with 12 detailed examples, many of them well known in the literature of numerical computation in dynamical systems. A public version of the software used for some of the examples is available online.

Apr. 2016

310 pp.

9783319296609

18,140.

Springer

Balakrishnan, N. /Kotz, S.:

Continuous Univariate Distributions, 3rd ed.

The first volume in what is widely recognized as the definitive work on statistical distributions, this book is a comprehensive revision of Johnson and Kotz's acclaimed 1994 volume. 501-225

It represents the next installment in a unique collection that encompasses continuous univariate distributions, discrete multivariate distributions, continuous multivariate distributions, and univariate discrete distributions. Presenting a comprehensive, authoritative, up-to-date treatment of continuous univariate distributions (CUD), this work focuses on the many ways in which various statistical distributions have been constructed, investigated, and applied over the past thirty-plus years.

June 2016 768 pp. 23,870.
9780471752875

Gruber, M. /Searle, S.:

501- 237

Linear Models, 2nd ed.

This book defines a broad spectrum of statistical linear models that is useful in the analysis of data. Considerable rewriting was done to make the book more reader friendly than the first edition.

The book is written in such a way as to be self-contained for a person with a background in basic statistics, calculus and linear algebra. The text includes numerous applied illustrations, numerical examples, and exercises, now augmented with computer outputs in SAS and R. Also new to this edition is: A greatly improved internal design and format. A short introductory chapter to ease understanding of the order in which topics are taken up. Discussion of additional topics including multiple comparisons and shrinkage estimators. Enhanced discussions of generalized inverses, the MINQUE, Bayes and Maximum Likelihood estimators for estimating variance components.

Oct. 2016 608 pp. 23,080.
9781118952832

Kibria, G. /Saleh, E.:

501- 238

Theory of Ridge Regression Estimators with Applications

This book discusses current methods of estimation in linear models. In particular, the authors address the methodology of linear multiple regression models that plays an important role in almost every scientific investigations in various fields, including economics, engineering, and biostatistics.

The standard estimation method for regression parameters is the ordinary least square (OLS) principal where residual squared errors are minimized.

Applied statisticians are often not satisfied with OLS estimators when the design matrix is ill-conditioned, leading to a multicollinearity problem and large variances that make the "prediction" inaccurate.

Sep. 2016 224 pp. 16,240.
9781118644614

Schott, J.:

詳報掲載 No. 254

Matrix Analysis for Statistics, 3rd ed.

July 2016 544 pp. 9781119092483 21,370.

Wiley

Yurinsha Book News

Research and Exposition in Mathematics,

Vol. 35: Chajda, I. /Paseka, J.: 501-071

Algebraic Approach to Tense Operators

Classical propositional logic was axiomatized by George Boole via Boolean algebras, but this was only a starting point for the formalization of logic. In 1930 intuitionistic logic was formalized by the use of Heyting algebras, in the late 1950's the many-valued Lukasiewicz logic was axiomatized by C. C. Chang by the so-called MV-algebras, many-valued Post logic by Post algebras and in recent decades fuzzy logic, relevance logic, Hájek's basic logic and linear logic by residuated lattices. Hence, we will use algebraic tools for the axiomatization of tense operators. Using the fact that these are modal operators, we will axiomatize also modal operators in this way.

2015 204 pp. 6,110.
9783885382355

Vol. 34: Haviar, M. /Ivaska, M.: 501-090

Vertex Labellings of Simple Graphs

The area of graph labellings, on whose selected part this monograph is focussing, is very young. Roughly speaking, a graph labelling is an assignment of integers to the vertices or edges, or both, of a graph, subject to certain conditions. The bases of the theory of graph labellings were laid out in the late 1960s, and since then a plethora of graph labellings methods and techniques have been studied in over 1900 research papers, monographs and theses.

2015 155 pp. 5,350.
9783885382348

Heldermann

A publication of Hindustan Book Agency,

Vol. 72: Tubbs, R.: 501-049

Hilbert's Seventh Problem:

Solutions and Extensions

This exposition is primarily a survey of the elementary yet subtle innovations of several mathematicians between 1929 and 1934 that led to partial and then complete solutions to Hilbert's Seventh Problem.

This volume is suitable for both mathematics students wishing to experience how different mathematical ideas can come together to establish results and for research mathematicians interested in the fascinating progression of mathematical ideas that solved Hilbert's problem and established a modern theory of transcendental numbers.

Aug. 2016 94 pp. 4,790.
9789380250823

Vol. 71: Corvaja, P.: 501-074

Integral Points on Algebraic Varieties:

An Introduction to Diophantine Geometry

The text rapidly introduces problems in Diophantine geometry, especially those involving integral points, assuming a geometrical perspective. It presents recent results not available in textbooks and also new viewpoints on classical material. In some instances, proofs have been replaced by a detailed analysis of particular cases.

Readers are referred to the quoted papers for complete proofs. Siegel's finiteness theorem for integral points on curves plays a central role. The book ends with the analysis of integral points on surfaces.

Aug. 2016 84 pp. 4,790.
9789380250830

Hindustan

Page 56

Asterisque,

Vol. 377: Hurder, S. /Rechtman, A.: 501-281

The Dynamics of Generic Kuperberg Flows

In this work, we study the dynamical properties of Krystyna Kuperberg's aperiodic flows on 3-manifolds.

We introduce the notion of a "zippered lamination," and with suitable generic hypotheses, show that the unique minimal set for such a flow is an invariant zippered lamination. We obtain a precise description of the topological and dynamical properties of the minimal set, including the presence of non-zero entropy-type invariants and chaotic behavior.

June 2016

9782856298312

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価格未定

Vol. 376: Fukaya Kenji /

501-085

Oh, Y.-G. /Ohta Hiroshi /Ono Kaoru :

**Lagrangian Floer Theory and Mirror Symmetry
on Compact Toric Manifolds**

In this volume we study Lagrangian Floer theory on toric manifolds from the point of view of mirror symmetry.

We construct a natural isomorphism between the Frobenius manifold structures of the (big) quantum cohomology of the toric manifold and of Saito's theory of singularities of the potential function constructed in [Fukaya, Tohoku Math. J. 63 (2011)] via the Floer cohomology deformed by ambient cycles. Our proof of the isomorphism involves the open-closed Gromov-Witten theory of one-loop.

Feb. 2016

340 pp.

9782856298251

12,410.

Cours Specialises - Collection SMF,

Vol. 23: Langevin, R.:

501-096

**Integral Geometry From
Buffon to Geometers of Today**

Integral geometry, also called theory of geometric probabilities, followed during more than two centuries the development of probability, measure theory and geometry.

The birthdate of integral geometry is for us the publication of Buffon's "traite d'arithmetique morale" in 1777.

It is only almost a century later that Crofton will explicit what is a measure on a continuous set like the set of lines of the plane. The meaning of Cauchy-Crofton formula: "the length of a plane curve is proportional to the weighted measure of the set of lines intersecting it", is now clear.

At the beginning of the twentieth century, integral geometry considers shapes.

2016

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**Functional Calculus for First Order Systems of
Dirac Type and Boundary Value Problems**

It was shown recently that solutions of boundary value problems for some second order elliptic equations (or systems) in divergence form with measurable coefficients can be constructed from solutions of generalised Cauchy-Riemann systems, in the spirit of what can be done for the Laplace equation.

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