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▶ L. v Wolfersdorf, Zeitschrift fur Angewandte Mathematik und Mechanik, 1995.

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▶ L.L. Schumaker, Mathematical Reviews, 2005

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▶Nicholas Witte, Australian Mathematical Society Gazette, 2006

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▶ Jointly published with PHASIS. Original Russian edition by PHASIS, Moscow, Russia

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▶ Originally published by Nauka, Moscow, 1974

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▶ Original French edition published by Editions Belin et Editions ESPACES 34, Paris, France

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▶ Marco Andreatta, Mathematical Reviews, 2001

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▶ Originally published by W.A. Benjamin, 1969

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▶ Matthew Roughan, The Australian Mathematical Society Gazette, 2005

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► Originally published as volume 2 in the series: Encyclopaedia of Mathematical Sciences with the title: Dynamical Systems II

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▶ G. Kowol, Monatshefte der Mathematik, 2003

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▶ C.W. Kilmister, The Mathematical Gazette, 2005

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▶ Tzanko D. Donchev, Mathematical Reviews, 2005

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▶ **Transl. German: W. Rheinboldt**

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▶ Jean-Claude Thomas, Belgian Mathematical Society, 2003

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▶ Original Russian edition published by Izdatel'skij Dom, Udmurtskij Universitet, 1998

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▶ Matti Vuorinen, Zentralblatt MATH, 2004

▶ Originally published as Volume 2 in the series: Lecture Notes in Computational Science and Engineering

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▶ A. Ostermann, Internationale Mathematische Nachrichten, 2005

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▶ Stefan Schröer, Zentralblatt MATH, 2005

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▶ Original Russian edition published by Nauka, Moscow, 1974

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► Adhemar Bultheel, Bulletin of the Belgian
Mathematical Society, 2005

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► Coauthor: **C. Evertsz, M. Gutzwiller**
► Foreword by: **P. Jones**

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The approach taken by the authors is based on the principle that questions focus and orient the mind. The book is a collection of about 500 problems in algebraic number theory, systematically arranged to reveal ideas and concepts in the evolution of the subject. For this new edition a chapter is added and several sections revised.

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▶ Originally published as a monographie

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▶ Transl. German: **N. Schappacher**

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► C. J. Chapman, Journal of Fluid Mechanics, 2004

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► Transl. English: **K. Mayes**

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► Dr. Y. D. Shikhmurzaev, Contemporary Physics, 2005

► 1st edition published by Hafner, New York, 1952. Original German edition published by Vieweg Verlag/ GWV Fachverlage (10th ed. 2001)

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A. Parshin, I. Shafarevich, Steklov Institute of Mathematics, Moscow, Russia (Eds.)

Algebraic Geometry V

Fano Varieties

Transl. Russian: **Y. Prokhorov, S. Tregub**
► With contrib. by: **V. Iskovskikh, Y. Prokhorov**

This EMS volume provides an exposition of the structure theory of Fano varieties, i.e. algebraic varieties with an ample anticanonical divisor. This book will be very useful as a reference and research guide for researchers and graduate students in algebraic geometry.

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► André Hautot, Physicalia, 2005

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Geometry VI

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▶ Original Russian edition published by Faktorial, Moscow, 1998

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▶ Translated by: **D. Leites**

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▶ Original Russian edition published by Moscow Center for Continuous Math. Education, 2001

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Y. Reshetnyak, Russian Academy of Sciences, Novosibirsk, Russia (Ed.)

Geometry IV

Non-regular Riemannian Geometry

► Transl. Russian: **E. Primrose**
► With contrib. by: **V. Berestovskij, I. Nikolaev, Y. Reshetnyak**

This book contains two surveys on modern research into non-regular Riemannian geometry, carried out mostly by Russian mathematicians. Coverage examines two-dimensional Riemannian manifolds of bounded curvature and metric spaces whose curvature lies between two given constants. This book will be immensely useful to graduate students and researchers in geometry, in particular Riemannian geometry.

► Originally published by VINITI, Moscow, 1989

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► Ali-Akbar Jafarian, Zentralblatt MATH, 2006

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▶ Original French edition published by Société Mathématique France, 1977

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► Transl. Russian: **M. Reid**

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► Transl. Russian: **M. Reid**

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► 1st printing of this edition published as "Algebra I" by Kostrikin,A., Shafarevich, I.R.(Eds.), Springer 1990.
► Russian edition published by VINITI, Moscow 1986

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Responsables pédagogiques de l'épreuve pour les mathématiques, l'informatique et la physique, L. Decreusefond et A. Maruani ont contribué de manière significative à la conception et à la mise en œuvre des TIPE. Cet ouvrage présente neuf dossiers de mathématiques, de physique ou d'informatique proposés au concours. Chaque sujet est accompagné de remarques générales, d'un commentaire, d'une suggestion de plan, de questions qu'un jury aurait pu poser et d'un développement replaçant le thème du dossier dans son contexte scientifique.

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Proceedings of a Conference held at the Mathematisches Forschungsinstitut, Oberwolfach, November 25–December 1, 2001

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▶ * € (D) 83,46 | € (A) 85,80 | sFr 128,00

Sale price
▶ € 39,90 | £30.50
▶ * € (D) 42,69 | € (A) 43,89 | sFr 65,00

N. Balakrishnan, McMaster University, Hamilton, ON, Canada; **R. Aggarwala**, University of Calgary, Calgary, AB, Canada

Progressive Censoring

Theory, Methods, and Applications

This new book offers a guide to the theory and methods of progressive censoring. In many industrial experiments involving lifetimes of machines or units, experiments have to be terminated early. Progressive Censoring first introduces progressive sampling foundations, and then discusses various properties of progressive samples. The book points out the greater efficiency gained by using this scheme instead of classical right-censoring methods.

2000. XV, 248 p., 1 illus. (Statistics for Industry and Technology) Hardcover
ISBN ▶ 978-0-8176-4001-9

List price
▶ € 108,00 | £83.00
▶ * € (D) 115,56 | € (A) 118,80 | sFr 148,00

Sale price
▶ € 56,95 | £42.00
▶ * € (D) 60,94 | € (A) 62,65 | sFr 95,00

C. Bandt, U. Mosco, M. Zähle (Eds.)

Fractal Geometry and Stochastics III

This up-to-date monograph, providing an up-to-date overview of the field of Hepatitis Prevention and Treatment, includes contributions from internationally recognized experts on viral hepatitis, and covers the current state of knowledge and practice regarding the molecular biology, immunology, biochemistry, pharmacology and clinical aspects of chronic HBV and HCV infection. The book provides the latest information, with sufficient background and discussion of the literature to benefit the newcomer to the field.

2004. X, 262 p. (Progress in Probability, Volume 57) Hardcover
ISBN ▶ 978-3-7643-7070-1

List price
▶ € 88,00 | £67.50
▶ * € (D) 94,16 | € (A) 96,80 | sFr 142,00

Sale price
▶ € 44,90 | £34.50
▶ * € (D) 48,04 | € (A) 49,39 | sFr 75,00

E. Bolthausen, University of Zürich, Switzerland;
A. Sznitman, ETH Zentrum, Zürich, Switzerland

Ten Lectures on Random Media

The field of random media has been the object of intensive activity over the last twenty-five years. It gathers a variety of models generally originating from physical sciences, where certain materials or substances have defects or inhomogeneities. This feature can be taken into account by letting the medium be random. This monograph grew out of the DMV Lectures on Random Media held by the authors at the Mathematical Research Institute in Oberwolfach in 1999 and gives an account of the developments in the field. It will be a valuable resource for postgraduates and researchers in probability theory and mathematical physics.

2002. VI, 116 pp. (Oberwolfach Seminars, Volume 32) Softcover
ISBN ▶ 978-3-7643-6703-9

List price
▶ € 26,00 | £20.00
▶ * € (D) 27,82 | € (A) 28,60 | sFr 42,00

Sale price
▶ € 19,90 | £15.50
▶ * € (D) 21,29 | € (A) 21,89 | sFr 32,90

A. Böttcher, S. M. Grudsky

Toeplitz Matrices, Asymptotic Linear Algebra, and Functional Analysis

This publication is an introduction to some problems for Toeplitz matrices that are placed in the borderland between linear algebra and functional analysis. It illustrates the asymptomatics of several linear algebra characteristics depend in a fascinating way on functional analytic properties of infinite matrices.

▶ Distribution rights for India: Hindustan Book Agency, New Delhi, India

2000. 124 p. Hardcover
ISBN ▶ 978-3-7643-6290-4

List price
▶ € 31,00 | £24.00
▶ * € (D) 33,17 | € (A) 34,10 | sFr 52,00

Sale price
▶ € 19,90 | £15.50
▶ * € (D) 21,29 | € (A) 21,89 | sFr 32,90

J. Buescu, Lisbon, Portugal; S. Castro, A. P. Dias, I. S. Labouriau, Universidade do Porto, Portugal (Eds.)

Bifurcation, Symmetry and Patterns

This book represents the latest developments on both the theory and applications of bifurcations with symmetry. It includes recent experimental work as well as new approaches to and applications of the theory to other sciences. It shows the range of dissemination of the work of Martin Golubitsky and Ian Stewart and its influence in modern mathematics at the same time as it contains work of young mathematicians in new directions. The range of topics includes mathematical biology, pattern formation, ergodic theory, normal forms, one-dimensional dynamics and symmetric dynamics.

2003. 224 p. (Trends in Mathematics) Hardcover
ISBN ▶ 978-3-7643-7020-6

List price
▶ € 78,00 | £60.00
▶ * € (D) 83,46 | € (A) 85,80 | sFr 124,00

Sale price
▶ € 39,90 | £30.50
▶ * € (D) 42,69 | € (A) 43,89 | sFr 65,00

C. Cercignani, Politechnico di Milano, Italy;
G. M. Kremer, Universidade Federal do Parana, Curitiba, Brazil

The Relativistic Boltzmann Equation: Theory and Applications

The aim of this book is to present the theory and applications of the relativistic Boltzmann equation in a self-contained manner, even for those readers who have no familiarity with special and general relativity. Though an attempt is made to present the basic concepts in a complete fashion, the style of presentation is chosen to be appealing to readers who want to understand how kinetic theory is used for explicit calculations.

2002. X, 384 p. (Progress in Mathematical Physics, Volume 22) Hardcover
ISBN ▶ 978-3-7643-6693-3

List price
▶ € 88,00 | £67.50
▶ * € (D) 94,16 | € (A) 96,80 | sFr 142,00

Sale price
▶ € 44,90 | £34.50
▶ * € (D) 48,04 | € (A) 49,39 | sFr 75,00

P. Dehornoy, Universite Campus 2, Caen, France

Braids and Self-Distributivity

From the Reviews ▶ *In this book ... P. Dehornoy has accomplished with remarkable success the task of presenting the area of interaction where Artin's braid groups, left self-distributive systems (LD-systems) and set theory come together in a rigorous and clear manner ... The exposition is self-contained and there are no prerequisites. A number of basic results about braid groups, self-distributive algebras, and set theory are provided.*
▶ Mathematical Reviews

2000. XIX, 623 p. (Progress in Mathematics, Volume 192) Hardcover
ISBN ▶ 978-3-7643-6343-7

List price
▶ € 99,00 | £76.00
▶ * € (D) 105,93 | € (A) 108,90 | sFr 158,00

Sale price
▶ € 49,90 | £38.50
▶ * € (D) 53,39 | € (A) 54,89 | sFr 85,00

M. Demuth, Technische Universität Clausthal, Germany; **J. A. van Casteren**, University of Antwerp, Belgium

Stochastic Spectral Theory for Selfadjoint Feller Operators

A functional integration approach

In this book, a beautiful interplay between probability theory (Markov processes, martingale theory) on the one hand and operator and spectral theory on the other yields a uniform treatment of several kinds of Hamiltonians such as the Laplace operator, relativistic Hamiltonian, Laplace-Beltrami operator, and generators of Ornstein-Uhlenbeck processes. The unified approach provides a new viewpoint of and a deeper insight into the subject.

2000. XII, 463 p. (Probability and its Applications) Hardcover
ISBN ► 978-3-7643-5887-7

List price
► € 148,00 | £114.00
► * € (D) 158,36 | € (A) 162,80 | sFr 238,00

Sale price
► **€ 74,90 | £57.50**
► *** € (D) 80,14 | € (A) 82,39 | sFr 129,00**

J. Dittrich, **P. Exner**, **M. Tater** (Eds.)

Mathematical Results in Quantum Mechanics

QMath7 Conference, Prague, June 22–26, 1998

This book constitutes the proceedings of the QMath 7 Conference on Mathematical Results in Quantum Mechanics held in Prague, Czech Republic in June, 1998. The volume addresses mathematicians and physicists interested in contemporary quantum physics and associated mathematical questions, presenting new results on Schrödinger and Pauli operators with regular, fractal or random potentials, scattering theory, adiabatic analysis, and interesting new physical systems such as photonic crystals, quantum dots and wires.

1999. 404 p. Hardcover
ISBN ► 978-3-7643-6097-9

List price
► € 158,00 | £121.50
► * € (D) 169,06 | € (A) 173,80 | sFr 228,00

Sale price
► **€ 79,90 | £61.50**
► *** € (D) 85,49 | € (A) 87,89 | sFr 135,00**

B. Duplantier, CEA, Saclay, France; **V. Rivasseau**, Université Paris XI, Orsay, France (Eds.)

Poincaré Seminar 2002

Vacuum Energy, Renormalization

This volume collects lectures of the 2002 Poincaré Seminars at the Institut Henri Poincaré in Paris. The topic of the first lecture is vacuum energy, in particular the Casimir effect and the nature of the cosmological constant. The second concentrates on renormalization, its mathematical structure and applications to high energy physics, statistical mechanics and classical mechanics. These introductory talks open the way to the frontiers of experimental and theoretical research.

2003. 340 p. (Progress in Mathematical Physics, Volume 30) Hardcover
ISBN ► 978-3-7643-0579-6

List price
► € 68,00 | £52.50
► * € (D) 72,76 | € (A) 74,80 | sFr 108,00

Sale price
► **€ 34,90 | £27.00**
► *** € (D) 37,34 | € (A) 38,39 | sFr 59,90**

A. v. Essen, University of Nijmegen, The Netherlands

Polynomial Automorphisms

and the Jacobian Conjecture

From the Reviews ► *… This book is a valuable reference for the study of polynomial automorphisms, due to its breadth of coverage and clarity of exposition.* ► Mathematical Reviews

2000. XVIII, 329 pp. (Progress in Mathematics, Volume 190) Hardcover
ISBN ► 978-3-7643-6350-5

List price
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► * € (D) 94,16 | € (A) 96,80 | sFr 138,00

Sale price
► **€ 44,90 | £34.50**
► *** € (D) 48,04 | € (A) 49,39 | sFr 75,00**

D. Gaspar, University of the West, Timisoara, Romania; **I. Gohberg**, Tel Aviv University, Ramat Aviv, Israel; **D. Timotin**, Romanian Academy, Bucharest, Romania; **F. H. Vasilescu**, University of Lille, France; **L. Zsido**, University of Roma "Tor Vergata", Italy (Eds.)

Recent Advances in Operator Theory, Operator Algebras, and their Applications

XIXth International Conference on Operator Theory, Timisoara (Romania), 2002

This book offers peer-reviewed articles from the 19th International Conference on Operator Theory, Summer 2002. It contains recent developments in a broad range of topics from operator theory, operator algebras and their applications, particularly to differential analysis, complex functions, ergodic theory, mathematical physics, matrix analysis, and systems theory. The book covers a large variety of topics including single operator theory, C*-algebras, diffrential operators, integral transforms, stochastic processes and operators, and more.

2005. XVI, 344 p. Hardcover
ISBN ► 978-3-7643-7127-2

List price
► € 128,00 | £98.50
► * € (D) 136,96 | € (A) 140,80 | sFr 208,00

Sale price
► **€ 64,90 | £50.00**
► *** € (D) 69,44 | € (A) 71,39 | sFr 109,00**

G. v. d. Geer, University of Amsterdam, The Netherlands; **C. Faber**, Kungiga Tekniska Högskolan, Stockholm, Sweden; **F. Oort**, University of Utrecht, The Netherlands (Eds.)

Moduli of Abelian Varieties

Abelian varieties and their moduli are a topic of increasing importance in today`s mathematics, applications ranging from algebraic geometry and number theory to mathematical physics. This collection of 17 refereed articles originates from the third "Texel Conference" held in 1999. Leading experts discuss and study the structure of the moduli spaces of abelian varieties and related spaces, giving an excellent view of the state of the art in this field.

2001. XII, 518 p. (Progress in Mathematics, Volume 195) Hardcover
ISBN ► 978-3-7643-6517-2

List price
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► * € (D) 136,96 | € (A) 140,80 | sFr 198,00

Sale price
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► *** € (D) 69,44 | € (A) 71,39 | sFr 109,00**

I. Gohberg, Tel Aviv University, Ramat Aviv, Israel;
N. Manojlovic, Universidade do Algarve, Faro,
Portugal; **A. F. dos Santos**, Instituto Superior Tecnico,
Lisbon, Portugal (Eds.)

Factorization and Integrable Systems

Summer School in Faro, Portugal, September 2000

This volume comprises the specially prepared lecture notes of a a Summer School on "Factorization and Integrable Systems" held in September 2000 at the University of Algarve in Portugal. The main aim of the school was to review the modern factorization theory and its application to classical and quantum integrable systems. The program consisted of a number of short courses given by leading experts in the field.

2003. VI, 219 p. Hardcover
ISBN ▶ 978-3-7643-6938-5

List price
▶ € 118,00 | £91.00
▶ * € (D) 126,26 | € (A) 129,80 | sFr 188,00

Sale price
▶ € 59,90 | £46.00
▶ * € (D) 64,09 | € (A) 65,89 | sFr 105,00

I. Gohberg, Tel Aviv University, IL-Ramat Aviv, Israel;
S. Goldberg, Silver Spring, MD, USA; **N. Krupnik**, Bar
Ilan University, Ramat Gan, Israel

Traces and Determinants of Linear Operators

This book is dedicated to a theory of traces and determinants on embedded algebras of linear operators, where the trace and determinant are extended from finite rank operators by a limit process. The self-contained material should appeal to a wide group of mathematicians and engineers, and is suitable for teaching.

2000. IX, 258 p. Hardcover
ISBN ▶ 978-3-7643-6177-8

List price
▶ € 148,00 | £114.00
▶ * € (D) 158,36 | € (A) 162,80 | sFr 238,00

Sale price
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▶ * € (D) 80,14 | € (A) 82,39 | sFr 129,00

C. E. Gutierrez, Temple University, Philadelphia, PA,
USA

The Monge-Ampere Equation

The Monge-Ampère equation has attracted considerable interest in recent years because of its important role in several areas of applied mathematics. Monge-Ampère type equations have applications in the areas of differential geometry, the calculus of variations, and several optimization problems, such as the Monge-Kantorovitch mass transfer problem. This book stresses the geometric aspects of this beautiful theory, using techniques from harmonic analysis – covering lemmas and set decompositions.

2001. LXXX, 127 p. 6 illus. (Progress in Nonlinear Differential Equations and Their Applications, Volume 44) Hardcover
ISBN ▶ 978-0-8176-4177-1

List price
▶ € 72,00 | £55.50
▶ * € (D) 77,04 | € (A) 79,20 | sFr 118,00

Sale price
▶ € 39,90 | £30.50
▶ * € (D) 42,69 | € (A) 43,89 | sFr 65,00

A. Guzman, The City College of New York, NY, USA

Continuous Functions of Vector Variables

From the Reviews ▶ *The book is devoted to mathematical analysis in multi-dimensional spaces, including infinite-dimensional ones…One of the important characteristics of the text is the topological approach. …It is worth mentioning that all these ideas are presented in conformity with the situation, i.e. they are strictly related to normed spaces and no unnecessary abstract setting is used. … The language is very clear and sometimes very 'fresh' if compared with classical textbooks, so that it may better appeal to the reader. There are many exercises, and the book concludes with a chapter containing solutions.*
▶ Mathematical Reviews

2002. X, 207 p. 26 illus. Softcover
ISBN ▶ 978-0-8176-4273-0

List price
▶ € 58,00 | £44.50
▶ * € (D) 62,06 | € (A) 63,80 | sFr 98,00

Sale price
▶ € 29,90 | £23.00
▶ * € (D) 31,99 | € (A) 32,89 | sFr 49,90

V. P. Havin, St. Petersburg University, Russia;
N. K. Nikolski, Universite de Bordeaux I, Talence,
France (Eds.)

Complex Analysis, Operators, Related Topics

The S.A. Vinogradov Memorial Volume

This volume is devoted to some topical problems and various applications of operator theory and its interplay with modern complex analysis. 30 carefully selected surveys and research papers are united by the "operator theoretic ideology" and systematic use of modern function theoretical techniques.

2000. X, 408 p. Hardcover
ISBN ▶ 978-3-7643-6214-0

List price
▶ € 158,00 | £121.50
▶ * € (D) 169,06 | € (A) 173,80 | sFr 250,00

Sale price
▶ € 79,90 | £61.50
▶ * € (D) 85,49 | € (A) 87,89 | sFr 135,00

M. Iannelli, University of Trento, Italy; **G. Lumer**,
University of Mons-Hainaut, Belgium (Eds.)

Evolution Equations: Applications to Physics, Industry, Life Sciences and Economics

EVEQ2000 Conference in Levico Terme (Trento, Italy), October 30 – November 4, 2000

The international conference on which the book is based brought together many of the world's leading experts, with particular effort on the interaction between established scientists and emerging young promising researchers, as well as on the interaction of pure and applied mathematics. All material has been rigorously refereed. The contributions contain much material developed after the conference, continuing research and incorporating additional new results and improvements. In addition, some up-to-date surveys are included.

2003. VIII, 423 p. (Progress in Nonlinear Differential Equations and Their Applications, Volume 55) Hardcover
ISBN ▶ 978-3-7643-0374-7

List price
▶ € 124,00 | £95.50
▶ * € (D) 132,68 | € (A) 136,40 | sFr 198,00

Sale price
▶ € 64,90 | £50.00
▶ * € (D) 69,44 | € (A) 71,39 | sFr 109,00

P. Imkeller, Humboldt-Universität zu Berlin, Germany; **J. v. Storch**, University of Hamburg, Germany (Eds.)

Stochastic Climate Models

A collection of articles written by mathematicians and physicists, designed to describe the state of the art in climate models with stochastic input. Mathematicians will benefit from a survey of simple models, while physicists will encounter mathematically relevant techniques at work.

2001. XVII, 398 pp. (Progress in Probability, Volume 49) Hardcover
ISBN ▶ 978-3-7643-6520-2

List price
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▶ * € (D) 136,96 | € (A) 140,80 | sFr 198,00

Sale price
▶ € 64,90 | £50.00
▶ * € (D) 69,44 | € (A) 71,39 | sFr 109,00

G. Jäger, H. Läuchli, B. Scarpellini, V. Strassen

Ernst Specker Selecta

From the Reviews ▶ *This is a good selection from the works of Ernst Specker who 'made decisive contributions towards shaping directions in topology, algebra, mathematical logic, combinatorics and algorithmic over the last 40 years'. The following are a few points which go to the credit of this publication… the selection of 30 out of the total 42 publications of Specker is done in the best possible way … the comments in English on each of these papers written by one of the four editors helps the reader to get a clear idea about the content .. the complete bibliography and the list of Ph. D. theses written under the supervision of Specker are given.. 'The Story of a Friend' written by Jonas Meon on Specker gives an idea about the man and his life-sketch.* ▶ T. Thrivikraman, Zentralblatt MATH Database

1990. 397 p. Hardcover
ISBN ▶ 978-3-7643-2408-7

List price
▶ € 119,63 | £92.00
▶ * € (D) 128,00 | € (A) 131,59 | sFr 196,00

Sale price
▶ € 59,90 | £46.00
▶ * € (D) 64,09 | € (A) 65,89 | sFr 105,00

J. Janas, Institute of Mathematics PAN, Cracow, Poland; **P. Kurasov**, Stockholm University, Sweden; **S. Naboko**, St. Petersburg University, Russia (Eds.)

Spectral Methods for Operators of Mathematical Physics

This book presents recent results in the following areas: spectral analysis of one-dimensional Schrödinger and Jacobi operators, discrete WKB analysis of solutions of second order difference equations, and applications of functional models of non-selfadjoint operators. Several developments treated appear for the first time in a book. It is addressed to a wide group of specialists working in operator theory or mathematical physics.

2004. VIII, 244 p. Hardcover
ISBN ▶ 978-3-7643-7133-3

List price
▶ € 118,00 | £91.00
▶ * € (D) 126,26 | € (A) 129,80 | sFr 188,00

Sale price
▶ € 59,90 | £46.00
▶ * € (D) 64,09 | € (A) 65,89 | sFr 105,00

A. Jüngel, University of Konstanz, Germany

Quasi-hydrodynamic Semiconductor Equations

This book presents a hierarchy of macroscopic models for semiconductor devices, studying three classes of models in detail: isentropic drift-diffusion equations, energy-transport models, and quantum hydrodynamic equations. The derivation of each, including physical discussions, is shown. Numerical simulations for modern semiconductor devices are performed, showing the particular features of each. The author develops modern analytical techniques, such as positive solution methods, local energy methods for free-boundary problems and entropy methods.

2001. X, 293 p. (Progress in Nonlinear Differential Equations and Their Applications, Volume 41) Hardcover
ISBN ▶ 978-3-7643-6349-9

List price
▶ € 128,00 | £98.50
▶ * € (D) 136,96 | € (A) 140,80 | sFr 198,00

Sale price
▶ € 64,90 | £50.00
▶ * € (D) 69,44 | € (A) 71,39 | sFr 109,00

M. Kashiwara, T. Miwa (Eds.)

MathPhys Odyssey 2001

Integrable Models and Beyond

Developments in mathematical physics during the second half of the 20th century influenced a number of mathematical areas, among them representation theory, differential equations, combinatorics, and algebraic geometry. In all of these, the dynamic role of integrable models has been central. This volume focuses on the ongoing importance of integrability in conformal field theory, massive quantum field theory, solvable lattice models, quantum affine algebras, the Painlevé equations and combinatorics.

2002. XI, 474 p. 46 illus. (Progress in Mathematical Physics, Volume 23) Hardcover
ISBN ▶ 978-0-8176-4260-0

List price
▶ € 138,00 | £106.00
▶ * € (D) 147,66 | € (A) 151,80 | sFr 228,00

Sale price
▶ € 69,90 | £54.00
▶ * € (D) 74,79 | € (A) 76,89 | sFr 119,00

S. Kaufmann

A Crash Course in Mathematica

From the Reviews ▶ *Written with the beginner in mind...[the book] is easier to handle than the standard manual... Exercises are set throughout the text ... to provide a graduated introduction ... This crash course will appeal to teachers and to enthusiastic computer literate students wanting to be 'fast-tracked' into MATHEMATICA®. It is clearly written, and should work well as a tutorial text.* ▶ The Australian Mathematics Teacher

1999. 200 p. Softcover
ISBN ▶ 978-3-7643-6127-3

List price
▶ € 29,00 | £22.50
▶ * € (D) 31,03 | € (A) 31,90 | sFr 46,00

Sale price
▶ € 19,90 | £15.50
▶ * € (D) 21,29 | € (A) 21,89 | sFr 32,90

N. D. Kopachevskii, S. G. Krein, Taurida National
V. Vernadsky University, Simferopol, Ukraine

Operator Approach in Linear Problems of Hydrodynamics

Volume 1: Self-adjoint Problems for an Ideal Fluid

This is the first volume, of a set of two, devoted to the operator approach to linear problems in hydrodynamics.

2001. XXIV, 384 p. Hardcover
ISBN ▶ 978-3-7643-5406-0

List price
▶ € 208,00 | £160.00
▶ * € (D) 222,56 | € (A) 228,80 | sFr 338,00

Sale price
▶ **€ 109,00 | £84.00**
▶ *** € (D) 116,63 | € (A) 119,90 | sFr 179,00**

N. D. Kopachevskii, S. G. Krein, Taurida National
V. Vernadsky University, Simferopol, Ukraine

Operator Approach to Linear Problems of Hydrodynamics

Volume 2: Nonself-adjoint Problems for Viscous Fluids

This is the second volume of a set of two devoted to the operator approach to linear problems in hydrodynamics. It presents functional analytical methods applied to the study of small movements and normal oscillations of hydromechanical systems having cavities filled with either ideal or viscous fluids. The second part of the present volume collects nonself-adjoint problems on small motions and normal oscillations of a viscous fluid filling a bounded region.

2003. XXIV, 444 p. Hardcover
ISBN ▶ 978-3-7643-2190-1

List price
▶ € 188,00 | £144.50
▶ * € (D) 201,16 | € (A) 206,80 | sFr 278,00

Sale price
▶ **€ 99,00 | £76.00**
▶ *** € (D) 105,93 | € (A) 108,90 | sFr 169,00**

R. S. Krausshar, University of Ghent, Belgium

Generalized Analytic Automorphic Forms in Hypercomplex Spaces

This book offers basic theory on hypercomplex-analytic automorphic forms and functions for arithmetic subgroups of the Vahlen group in higher dimensional spaces. Vector- and Clifford algebra-valued Eisenstein and Poincaré series are constructed within this framework and a detailed description of their analytic and number theoretical properties is provided. It establishes explicit relationships to generalized variants of the Riemann zeta function and Dirichlet L-series, and introduces hypercomplex multiplication of lattices.

2004. XV, 167 p. (Frontiers in Mathematics) Softcover
ISBN ▶ 978-3-7643-7059-6

List price
▶ € 38,00 | £29.00
▶ * € (D) 40,66 | € (A) 41,80 | sFr 62,00

Sale price
▶ **€ 19,90 | £15.50**
▶ *** € (D) 21,29 | € (A) 21,89 | sFr 32,90**

V. Lakshmibai, Northeastern University, Boston, MA, USA; **V. Balaji, V. B. Mehta, K. R. Nagarajan, K. Paranjape, P. Sankaran, R. Sridharan** (Eds.)

A Tribute to C.S. Seshadri

A Collection of Articles on Geometry and Representation Theory

C.S. Seshadri turned seventy on the 29th of February, 2002. To mark this occasion, a symposium was held in Chennai, India, where some of his colleagues gave expository talks highlighting Seshadri's contributions to mathematics. This volume includes expanded texts of these talks as well as research and expository papers on geometry and representation theory. It will serve as an excellent reference for researchers and students in these areas.

2003. XXIX, 541 p. (Trends in Mathematics) Hardcover
ISBN ▶ 978-3-7643-0444-7

List price
▶ € 128,00 | £98.50
▶ * € (D) 136,96 | € (A) 140,80 | sFr 198,00

Sale price
▶ **€ 64,90 | £50.00**
▶ *** € (D) 69,44 | € (A) 71,39 | sFr 109,00**

J. Le Gall, Ecole Normale Superieure, Paris, France

Spatial Branching Processes, Random Snakes and Partial Differential Equations

From the Reviews ▶ *Concise and essentially self-contained… A very accessible text…written by a leading expert of the field… It provides a clear and precise presentation of several important aspects of the theory…developed over the recent years. There is no doubt that such a monograph will be used both by beginners to learn the theory and by experts as a reference text.* ▶ Zentralblatt Math

1999. IX, 163 p. (Lectures in Mathematics. ETH Zürich) Softcover
ISBN ▶ 978-3-7643-6126-6

List price
▶ € 23,00 | £17.50
▶ * € (D) 24,61 | € (A) 25,30 | sFr 38,00

Sale price
▶ **€ 19,90 | £15.50**
▶ *** € (D) 21,29 | € (A) 21,89 | sFr 32,90**

A. Locatelli, Politecnico di Milano, Italy

Optimal Control

An Introduction

From the Reviews ▶ *The style of the book reflects the author's wish to assist in the effective learning of optimal control by suitable choice of topics, the mathematical level used, and by including numerous illustrated examples. The book has been written for undergraduate and postgraduate students who already know control theory, basic linear systems and possess a background in calculus ... In my view the book suits its function and purpose, in that it gives a student a comprehensive coverage of optimal control in an easy-to-read fashion.* ▶ Measurement and Control

2001. VIII, 294 p. Hardcover
ISBN ▶ 978-3-7643-6408-3

List price
▶ € 45,00 | £34.50
▶ * € (D) 48,15 | € (A) 49,50 | sFr 72,00

Sale price
▶ **€ 24,90 | £19.00**
▶ *** € (D) 26,64 | € (A) 27,39 | sFr 42,90**

V. Palamodov, Tel Aviv University, Israel

Reconstructive Integral Geometry

This book covers facts and methods for the reconstruction of a function in a real affine or projective space from data of integrals, particularly over lines, planes, and spheres. Recent results stress explicit analytic methods. Coverage includes the relations between algebraic integral geometry and partial differential equations. The first half of the book includes the ray, the spherical mean transforms in the plane or in 3-space, and inversion from incomplete data.

2004. IX, 164 p. (Monographs in Mathematics, Volume 98) Hardcover
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A. O. Petters, Duke University, Durham, NC, USA; **H. Levine**, Brandeis University, Waltham, MA, USA; **J. Wambsganss**, University of Potsdam, Germany

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2001. XXV, 603 p. 184 illus. (Progress in Mathematical Physics, Volume 21) Hardcover
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P. Picco, CNRS, Marseille, France; **J. San Martin**, Universidad de Chile, Santiago, Chile (Eds.)

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CIMPA Summer School 2001

This volume is based on the lecture notes of six courses delivered at a Cimpa Summer School in Temuco, Chile, in January 2001. Leading experts contribute with introductory articles covering a broad area in probability and its applications, such as mathematical physics and mathematics of finance. Written at graduate level, the lectures touch the latest advances on each subject, ranging from classical probability theory to modern developments. Thus the book will appeal to students, teachers and researchers working in probability theory or related fields.

2003. XVI, 219 p. (Progress in Probability, Volume 54) Hardcover
ISBN ▶ 978-3-7643-2169-7

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V. Pikulin, Moscow Power Engineering Institute, Russia; **S. I. Pohozaev**, Steklov Institute of Mathematics, Moscow, Russia

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Transl. Russian: **A. Iacob**

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▶ Original Russian edition published by Russian Academy of Sciences

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2004. XIV, 376 p. (Trends in Mathematics) Hardcover
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2003. X, 358 p. (International Series of Numerical Mathematics, Volume 144) Hardcover
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2001. XIII, 218 p., 25 illus. Softcover
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1999. 168 p. (International Series of Numerical Mathematics, Volume 127) Hardcover
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2004. XXI, 214 p. (Frontiers in Mathematics) Softcover
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2004. XI, 225 p. (Monografie Matematyczne, Volume 64) Hardcover
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Translated by: **J. Gage**

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2001. 642 S. Brosch.
ISBN ▶ 978-3-7643-6519-6

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1998. Mit CD-ROM. Brosch.
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1995. X, 154 S. Brosch.
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1998. 200 S. Mit CD-ROM. Brosch.
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2001. XVIII, 411 S. Geb.
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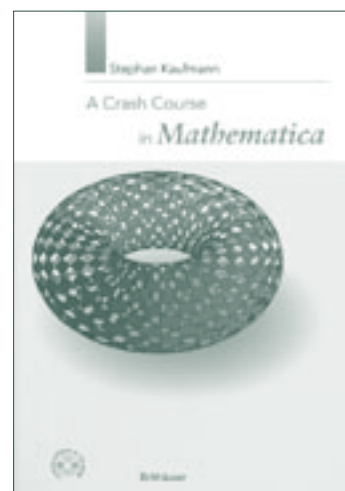▶ € 23,27 | £18.00
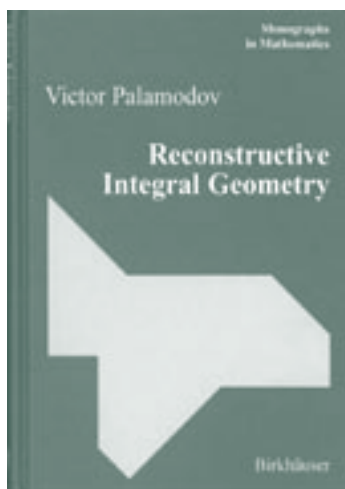▶ * € (D) 24,90 | € (A) 25,60 | sFr 39,90

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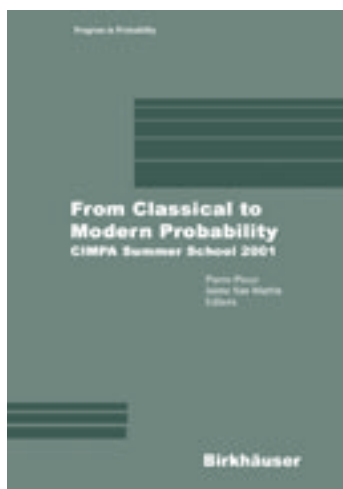ISBN 978-3-7643-6715-2

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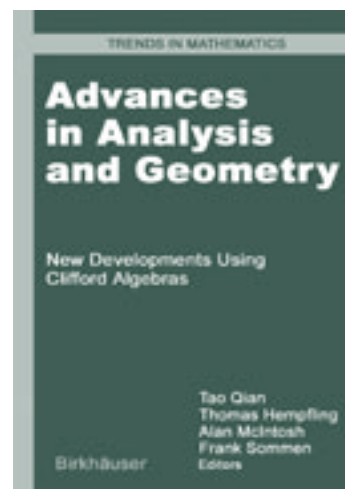
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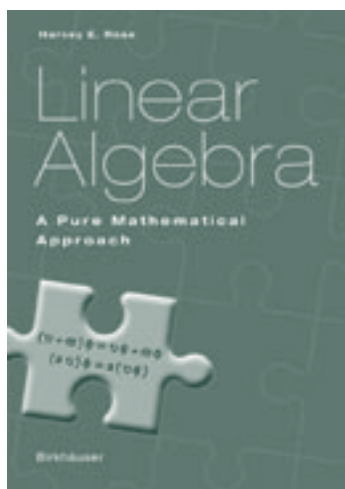
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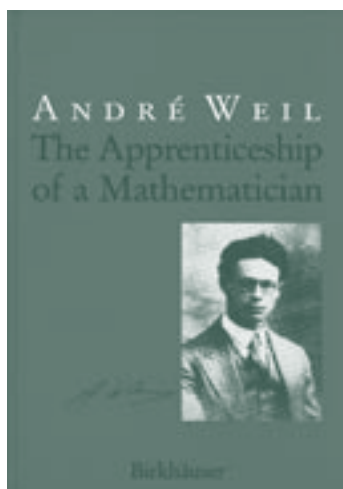
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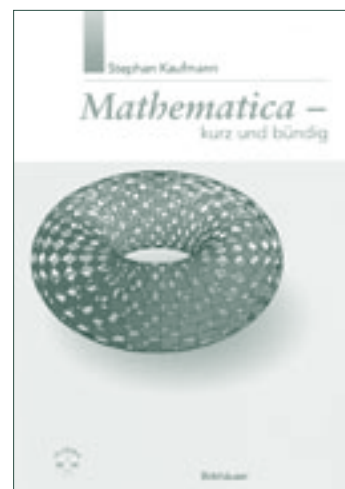
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