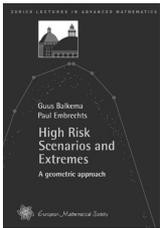




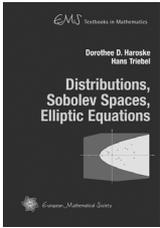
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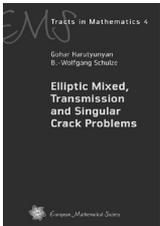
Guus Balkema (University of Amsterdam, The Netherlands), Paul Embrechts (ETH Zurich, Switzerland)
High Risk Scenarios and Extremes – A Geometric Approach (Zurich Lectures in Advanced Mathematics)
ISBN 978-3-03719-035-7. 2007. 388 pages. Softcover. 17.0 cm x 24.0 cm. \$64.00

Quantitative Risk Management (QRM) has become a field of research of considerable importance to numerous areas of application, including insurance, banking, energy, medicine, reliability. Mainly motivated by examples from insurance and finance, the authors develop a theory for handling multivariate extremes. The approach borrows ideas from portfolio theory and aims at an intuitive approach in the spirit of the Peaks over Thresholds method. The book is based on a graduate course on point processes and extremes and primarily aimed at students in statistics and finance as well as professionals involved in risk analysis.



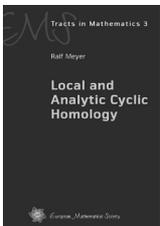
Dorothee D. Haroske (University of Jena, Germany), Hans Triebel (University of Jena, Germany)
Distributions, Sobolev spaces, Elliptic equations (EMS Textbooks in Mathematics)
ISBN 978-3-03719-042-5. 2007. 303 pages. Hardcover. 16.5 cm x 23.5 cm. \$68.00

It is the main aim of this book to develop at an accessible, moderate level an L_2 theory for elliptic differential operators of second order on bounded smooth domains in Euclidean n -space, including a priori estimates for boundary-value problems in terms of (fractional) Sobolev spaces on domains and on their boundaries, together with a related spectral theory. The presentation is preceded by an introduction to the classical theory for the Laplace–Poisson equation, and some chapters providing required ingredients such as the theory of distributions, Sobolev spaces and the spectral theory in Hilbert spaces.



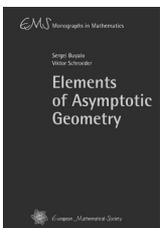
Gohar Harutyunyan (University of Oldenburg, Germany), B.-Wolfgang Schulz (University of Potsdam, Germany)
Elliptic Mixed, Transmission and Singular Crack Problems (EMS Tracts in Mathematics Vol. 4)
ISBN 978-3-03719-040-1. 2007. 777 pages. Hardcover. 17.0 cm x 24.0 cm. \$158.00

Mixed, transmission, or crack problems belong to the analysis of boundary value problems on manifolds with singularities. The Zaremba problem with a jump between Dirichlet and Neumann conditions along an interface on the boundary is a classical example. The central theme of this book is to study mixed problems in standard Sobolev spaces as well as in weighted edge spaces where the interfaces are interpreted as edges. Parametices and regularity of solutions are obtained within a systematic calculus of boundary value problems on manifolds with conical or edge singularities.



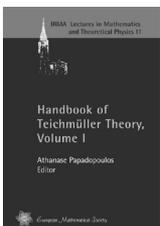
Ralf Meyer (University of Göttingen, Germany)
Local and Analytic Cyclic Homology (EMS Tracts in Mathematics Vol. 3)
ISBN 978-3-03719-039-5. 2007. 368 pages. Hardcover. 17.0 cm x 24.0 cm. \$78.00

Periodic cyclic homology is a homology theory for non-commutative algebras that plays a similar role in non-commutative geometry as de Rham cohomology for smooth manifolds. While it produces good results for algebras of smooth or polynomial functions, it fails for bigger algebras such as most Banach algebras or C^* -algebras. Analytic and local cyclic homology are variants of periodic cyclic homology that work better for such algebras. In this book the author develops and compares these theories, emphasising their homological properties.



Sergei Buyalo (Steklov Institute of Mathematics, St. Petersburg, Russia), Viktor Schroeder (University of Zurich, Switzerland)
Elements of Asymptotic Geometry (EMS Monographs in Mathematics)
ISBN 978-3-03719-036-4. 2007. 212 pages. Hardcover. 16.5 cm x 23.5 cm. \$78.00

Asymptotic geometry is the study of metric spaces from a large scale point of view, where the local geometry does not come into play. An important class of model spaces are the hyperbolic spaces (in the sense of Gromov), for which the asymptotic geometry is nicely encoded in the boundary at infinity. In the first part of this book, in analogy with the concepts of classical hyperbolic geometry, the authors provide a systematic account of the basic theory of Gromov hyperbolic spaces. In the second part of the book, various aspects of the asymptotic geometry of arbitrary metric spaces are considered.



Handbook of Teichmüller Theory, Volume I (IRMA Lectures in Mathematics and Theoretical Physics)
Athanase Papadopoulos (IRMA, Strasbourg, France), Editor
ISBN 978-3-03719-029-6. 2007. 802 pages. Hardcover. 17.0 cm x 24.0 cm. \$128.00

The Teichmüller space of a surface was introduced by O. Teichmüller in the 1930s. It is a basic tool in the study of Riemann's moduli space and of the mapping class group. These objects are fundamental in several fields of mathematics including algebraic geometry, number theory, topology, geometry, and dynamics. The purpose of this handbook is to give a panorama of some of the most important aspects of Teichmüller theory. The handbook will be useful to specialists in the field, to graduate students, and more generally to mathematicians who want to learn about the subject. All the chapters are self-contained and have a pedagogical character. They are written by leading experts in the subject.



Andrzej Schinzel, Selecta (Heritage of European Mathematics)
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Henryk Iwaniec (Rutgers University, USA), Władysław Narkiewicz (University of Wrocław, Poland), Jerzy Urbanowicz (IM PAN, Warsaw, Poland), Editors
ISBN 978-3-03719-038-8. 1417 pages. Hardcover. 17.0 cm x 24.0 cm. \$218.00

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