

Yurinsha Book News

Progress in Mathematics,

Vol. 290: Mantegazza, C.:

Lecture Notes on Mean Curvature Flow

454-118

This book is an introduction to the subject of mean curvature flow of hypersurfaces with special emphasis on the analysis of singularities. This flow occurs in the description of the evolution of numerous physical models where the energy is given by the area of the interfaces. These notes provide a detailed discussion of the classical parametric approach (mainly developed by R. Hamilton and G. Huisken). They are well suited for a course at PhD/PostDoc level and can be useful for any researcher interested in a solid introduction to the technical issues of the field.

All the proofs are carefully written, often simplified, and contain several comments.

Moreover, the author revisited and organized a large amount of material scattered around in literature in the last 25 years.

Table of contents: Foreword.- Chapter 1. Definition and Short Time Existence.- Chapter 2. Evolution of Geometric Quantities.- Chapter 3. Monotonicity Formula and Type I Singularities.- Chapter 4. Type II Singularities.- Chapter 5. Conclusions and Research Directions.- Appendix A. Quasilinear Parabolic Equations on Manifolds.- Appendix B. Interior Estimates of Ecker and Huisken.- Appendix C. Hamilton's Maximum Principle for Tensors.- Appendix D. Hamilton's Matrix Li-Yau-Harnack Inequality in R^n .- Appendix E. Abresch and Langer Classification of Homothetically Shrinking Closed Curves.- Appendix F. Important Results without Proof in the Book.- Bibliography.- Index.

June 2011

124 pp.

9783034801447

13,670.

Birkhauser

<http://www.yurinsha.com>

ホームページは毎月25日更新予定です

No. 454

Apr. 2011

敬理科学 友隣社 洋書専門

Student Mathematical Library,

Vol. 59: Etingof, P. /Golberg, O. /Hensel, S. /Liu, T. /
Schwendner, A. /Vaintrob, D. /Yudovina, E. :
Introduction to Representation Theory

Very roughly speaking, representation theory studies symmetry in linear spaces. It is a beautiful mathematical subject which has many applications, ranging from number theory and combinatorics to geometry, probability theory, quantum mechanics, and quantum field theory.

The goal of this book is to give a "holistic" introduction to representation theory, presenting it as a unified subject which studies representations of associative algebras and treating the representation theories of groups, Lie algebras, and quivers as special cases.

Using this approach, the book covers a number of standard topics in the representation theories of these structures.

Theoretical material in the book is supplemented by many problems and exercises which touch upon a lot of additional topics; the more difficult exercises are provided with hints.

454-066

Aug. 2011

232 pp.

9780821853511

5,250.

Mathematical Surveys and Monographs,

Vol. 173: Har-Peled, S.:

454-157

Geometric Approximation Algorithms

Exact algorithms for dealing with geometric objects are complicated, hard to implement in practice, and slow. Over the last 20 years a theory of geometric approximation algorithms has emerged. These algorithms tend to be simple, fast, and more robust than their exact counterparts.

This book is the first to cover geometric approximation algorithms in detail. In addition, more traditional computational geometry techniques that are widely used in developing such algorithms, like sampling, linear programming, etc., are also surveyed.

Other topics covered include approximate nearest-neighbor search, shape approximation, coresets, dimension reduction, and embeddings.

The topics covered are relatively independent and are supplemented by exercises. Close to 200 color figures are included in the text to illustrate proofs and ideas.

July 2011

358 pp.

9780821849118

12,250.

Clay Mathematics Proceedings,

Vol. 14: Ellwood, D. /Previato, E. (eds.):

454-065

Grassmannians, Moduli Spaces & Vector Bundles

This collection of cutting-edge articles on vector bundles and related topics originated from a CMI workshop, held in October 2006, that brought together a community indebted to the pioneering work of P.E.Newstead, visiting the United States for the first time since the 1960s.

Moduli spaces of vector bundles were then in their infancy, but are now, as demonstrated by this volume, a powerful tool in symplectic geometry, number theory, mathematical physics, and algebraic geometry.

In fact, the impetus for this volume was to offer a sample of the vital convergence of techniques and fundamental progress, taking place in moduli spaces at the outset of the twenty-first century.

June 2011

180 pp.

9780821852057

6,870.

A. M. S.

*Contemporary Mathematics,***Vol. 543: Doran, R. /Sally, Jr. P. /Spice, L. (eds.):** 454-062**Harmonic Analysis on Reductive, p-adic Groups**

This volume contains the proceedings of the AMS Special Session on Harmonic Analysis and Representations of Reductive, p-adic Groups, which was held on January 16, 2010, in San Francisco, California.

One of the original guiding philosophies of harmonic analysis on p-adic groups was Harish-Chandra's Lefschetz principle, which suggested a strong analogy with real groups.

From this beginning, the subject has developed a surprising variety of tools and applications. To mention just a few, Moy-Prasad's development of Bruhat-Tits theory relates analysis to group actions on locally finite polysimplicial complexes; the Aubert-Baum-Plymen conjecture relates the local Langlands conjecture to the Baum-Connes conjecture via a geometric description of the Bernstein spectrum; the p-adic analogues of classical symmetric spaces play an essential role in classifying representations; and character sheaves, originally developed by Lusztig in the context of finite groups of Lie type, also have connections to characters of p-adic groups.

June 2011

277 pp.

9780821849859

12,370.

Vol. 542: Loubeau, E. /Montaldo, S. (eds.): 454-160**Harmonic Maps and Differential Geometry**

This volume contains the proceedings of a conference held in Cagliari, Italy, from September 7-10, 2009, to celebrate John C. Wood's 60th birthday.

These papers reflect the many facets of the theory of harmonic maps and its links and connections with other topics in Differential and Riemannian Geometry.

Two long reports, one on constant mean curvature surfaces by F. Pedit and the other on the construction of harmonic maps by J.C. Wood, open the proceedings. These are followed by a mix of surveys on Prof. Wood's area of expertise: Lagrangian surfaces, biharmonic maps, locally conformally Kahler manifolds and the DDVV conjecture, as well as several research papers on harmonic maps. Other research papers in the volume are devoted to Willmore surfaces, Goldstein-Pedrich flows, contact pairs, prescribed Ricci curvature, conformal fibrations, the Fadeev-Hopf model, the Compact Support Principle and the curvature of surfaces.

May 2011

281 pp.

9780821849873

12,370.

Vol. 539: Ebrahimi-Fard, K. /Marcolli, M. / van Suijlekom, W. (eds.): 454-064**Combinatorics and Physics**

This book is based on the mini-workshop Renormalization, held in December 2006, and the conference Combinatorics and Physics, held in March 2007.

Both meetings took place at the Max-Planck-Institut für Mathematik in Bonn, Germany.

Research papers in the volume provide an overview of applications of combinatorics to various problems, such as applications to Hopf algebras, techniques to renormalization problems in quantum field theory, as well as combinatorial problems appearing in the context of the numerical integration of dynamical systems, in noncommutative geometry and in quantum gravity. In addition, it contains several introductory notes on renormalization Hopf algebras, Wilsonian renormalization and motives.

May 2011

465 pp.

9780821853290

16,250.

A. M. S.

Progress in Mathematics,

<< (Birkhäuser Advanced Texts / Basler Lehrbücher)

Vol. 291: Greene, R. /Kim, K.-T. /Krantz, S.: 454-073

The Geometry of Complex Domains

<< The Automorphism Group of Domains

The geometry of complex domains is a subject with roots extending back more than a century, to the uniformization theorem of Poincaré and Koebe and the resulting proof of existence of canonical metrics for hyperbolic Riemann surfaces.

In modern times, developments in several complex variables by Bergman, Hormander, Andreotti-Vesentini, Kohn, Fefferman, and others have opened up new possibilities for the unification of complex function theory and complex geometry. In particular, geometry can be used to study biholomorphic mappings in remarkable ways. This book presents a complete picture of these developments.

Beginning with the one-variable case --- background information which cannot be found elsewhere in one place --- the book presents a complete picture of the symmetries of domains from the point of view of holomorphic mappings. It describes all the relevant techniques, from differential geometry to Lie groups to partial differential equations to harmonic analysis.

June 2011 << Mar. 2011

300 pp.

9780817641399

13,670.

Pseudo-Differential Operators,

Vol. 6: Wong, M.:

454-129

Discrete Fourier Analysis

This is a mathematical book on Fourier analysis. The aim is to present the basic notions and techniques of Fourier analysis in discrete settings, thus opening up this area of mathematics to a wide readership.

Exercises provided make this book suitable for a classroom setting.

The book consists of two parts. The first thirteen chapters contain topics related to the finite Fourier transform and can be fully understood by undergraduate students with basic knowledge of linear algebra and calculus.

The following ten chapters are built on Hilbert spaces and Fourier series.

Notwithstanding the use of the language of measure theory in the second part of the book, much of the contents are accessible to students familiar with an undergraduate course in real analysis.

July 2011

150 pp.

9783034801157

6,830.

Progress in Probability,

Vol. 64: Lenz, D. /Sobieczky, F. /Woess, W. (eds.):

Random Walks, Boundaries and Spectra

These proceedings represent the current state of research on the topics 'boundary theory' and 'spectral and probability theory' of random walks on infinite graphs. 454-200

They are the result of the two workshops held in Styria (Graz and St. Kathrein am Offenegg, Austria) between June 29th and July 5th, 2009. Many of the participants joined both meetings.

Even though the perspectives range from very different fields of mathematics, they all contribute with important results to the same wonderful topic from structure theory, which, by extending a quotation of Laurent Saloff-Coste, could be described by 'exploration of groups by random processes'.

May 2011

350 pp.

9783034602433

15,380.

Birkhäuser

Heck, R.:

Frege's Theorem

454-011

The Theorem is the central contribution of Gottlob Frege's formal work on arithmetic. It tells us that the axioms of arithmetic can be derived, purely logically, from a single principle: the number of these things is the same as the number of those things just in case these can be matched up one-to-one with those. But that principle seems so utterly fundamental to thought about number that it might almost count as a definition of number.

If so, Frege's Theorem shows that arithmetic follows, purely logically, from a near definition. As Crispin Wright was the first to make clear, that means that Frege's logicism, long thought dead, might yet be viable.

Aug. 2011

378 pp.

9780199695645

7,070.

Polkinghorne, J.:

Meaning in Mathematics

454-019

Is mathematics a highly sophisticated intellectual game in which the adepts display their skill by tackling invented problems, or are mathematicians engaged in acts of discovery as they explore an independent realm of mathematical reality?

Why does this seemingly abstract discipline provide the key to unlocking the deep secrets of the physical universe?

How one answers these questions will significantly influence metaphysical thinking about reality.

May 2011

192 pp.

9780199605057

3,830.

Stenholm, S.:

The Quest for Reality:

454-023

Bohr and Wittgenstein—Two Complementary Views

In both science and philosophy, the twentieth century saw a radical breakdown of certainty in the human worldview, as quantum uncertainty and linguistic ambiguity destroyed the comfortable certitudes of the past.

As these disciplines form the foundation for a human position in the world, a major epistemological reorganization had to take place.

In this book, quantum theorist Stig Stenholm presents Bohr and Wittgenstein, in physics and in philosophy, as central figures representing this revision.

Each of them took up the challenge of replacing apparent order and certainty with a provisional understanding based on limited concepts in constant flux.

Stenholm concludes that the modern synthesis created by their heirs is far from satisfactory, and the story is so far an unfinished one.

May 2011

304 pp.

9780199603589

7,070.

Bell, J.:

(Now in Paperback ed.)

Set Theory:**Boolean-Valued Models and Independence Proofs, 3rd ed.**

This third edition, now available in paperback, is a follow up to the author's classic *Boolean-Valued Models and Independence Proofs in Set Theory*.

It provides an exposition of some of the most important results in set theory obtained in the 20th century: the independence of the continuum hypothesis and the axiom of choice.

This new paperback edition includes additional corrections and, for the first time, will make this landmark text accessible to students in logic and set theory.

Apr. 2011

216 pp.

9780199609161

454-031

4,540.

Oxford

Narkiewicz, W.: 454-083
Rational Number Theory in the 20th Century:
From PNT to FLT

The last one hundred years have seen many important achievements in the classical part of number theory. After the proof of the Prime Number Theorem in 1896, a quick development of analytical tools led to the invention of various new methods, like Brun's sieve method and the circle method of Hardy, Littlewood and Ramanujan; developments in topics such as prime and additive number theory, and the solution of Fermat's problem.

Rational Number Theory in the 20th Century: From PNT to FLT offers a short survey of 20th century developments in classical number theory, documenting between the proof of the Prime Number Theorem and the proof of Fermat's Last Theorem.

Aug. 2011 634 pp.
 9780857295316 17,090.

Abel Symposia,

Vol. 6: Floystad, G. /Johnsen, T. /Knutsen, A. (eds.): 454-068
Combinatorial Aspects of
Commutative Algebra and Algebraic Geometry:
The Abel Symposium 2009

The Abel Symposium 2009 "Combinatorial aspects of Commutative Algebra and Algebraic Geometry", held at Voss, Norway, featured talks by leading researchers in the field.

This is the proceedings of the Symposium, presenting contributions on syzygies, tropical geometry, Boij-Soderberg theory, Schubert calculus, and quiver varieties. The volume also includes an introductory survey on binomial ideals with applications to hypergeometric series, combinatorial games and chemical reactions.

May 2011 198 pp.
 9783642194917 15,380.

Applied Mathematical Sciences,

Vol. 141: Naber, G.: 454-161
Topology, Geometry & Gauge Fields: Interactions, 2nd ed.

This volume is intended to carry on the program, initiated in *Topology, Geometry, and Gauge Fields: Foundations*(2010), of exploring the interrelations between particle physics and topology that arise from their shared notion of a gauge field. The text begins with a synopsis of the geometrical background assumed of the reader. There follows a lengthy, and somewhat informal discussion of a number of the most basic of the classical gauge theories arising in physics, including classical electromagnetic theory and Dirac monopoles, the Klein-Gordon and Dirac equations and SU(2) Yang-Mills-Higgs theory. The real purpose here is to witness such things as space-time manifolds, spinor structures, de Rham cohomology, and Chern classes arise of their own accord in meaningful physics.

Mar. 2011 419 pp.
 9781441978943 10,250.

Texts in Applied Mathematics,

Vol. 25: Naber, G.:
Topology, Geometry & Gauge Fields: Foundations, 2nd ed.

Oct. 2010 437 pp. 9781441972538 10,250.

Springer

Lecture Notes in Mathematics,

Vol. 2021: Defant, A.: 454-107

**Classical Summation in
Commutative and Noncommutative Lp-Spaces**

The aim of this research is to develop a systematic scheme that makes it possible to transfer important parts of the by now classical theory of summation of general orthonormal series into a similar theory for series in noncommutative Lp-spaces built over a noncommutative measure space (a von Neumann algebra of operators acting on a Hilbert space together with a faithful normal state on this algebra).

June 2011 160 pp.
9783642204371 5,980.

Abate, M. /Tovena, F.: 454-132

Curves and Surfaces

The theory of curves starts with a discussion of possible definitions of the concept of curve, proving in particular the classification of 1-dimensional manifolds.

We then present the classical local theory of parametrized plane and space curves: curvature, torsion, Frenet's formulas and the fundamental theorem of the local theory of curves.

Then, after a self-contained presentation of degree theory for continuous self-maps of the circumference, we study the global theory of plane curves, introducing winding and rotation numbers, and proving the Jordan curve theorem for curves of class C², and Hopf theorem on the rotation number of closed simple curves.

Oct. 2011 393 pp.
9788847019409 10,250.

CMS Books in Mathematics

Bauschke, H. /Combettes, P.: 454-098

**Convex Analysis and
Monotone Operator Theory in Hilbert Spaces**

This book presents a largely self-contained account of the main results of convex analysis, monotone operator theory, and the theory of nonexpansive operators in the context of Hilbert spaces.

Unlike existing literature, the novelty of this book, and indeed its central theme, is the tight interplay among the key notions of convexity, monotonicity, and nonexpansiveness.

Apr. 2011 464 pp.
9781441994660 15,710.

Perez-Suarez, M.: 454-215

**Quantum Uncertainty Structures:
A Bayesian Approach to Quantum Randomness**

This book is the first full-sized monograph on the implications of Bayesian probability theory in regards to the structural elements and procedures of quantum information.

The irreducibility and algebraic features of quantum randomness are introduced through a discussion of Bell-type inequalities and the Kochen-Specker theorem in terms of the interplay of quantum states, PVMs, POVMs, and Kraus rule.

Apr. 2011 200 pp.
9781441982605 16,990.

Springer

de Longueville, M.:

454-028

A Course in Topological Combinatorics

A Course in Topological Combinatorics is the first undergraduate textbook on the field of topological combinatorics, a subject that has become an active and innovative research area in mathematics over the last thirty years with growing applications in math, computer science, and other applied areas. Topological combinatorics is concerned with solutions to combinatorial problems by applying topological tools.

In most cases these solutions are very elegant and the connection between combinatorics and topology often arises as an unexpected surprise.

Mar. 2011

240 pp.

9781441979094

7,690.

Bezandry, P. /Diagana, T.:

454-101

Almost Periodic Stochastic Processes

This book lays the foundations for a theory on almost periodic stochastic processes and their applications to various stochastic differential equations, functional differential equations with delay, partial differential equations, and difference equations.

It is in part a sequel of authors recent work on almost periodic stochastic difference and differential equations and has the particularity to be the first book that is entirely devoted to almost periodic random processes and their applications.

Apr. 2011

236 pp.

9781441994752

12,820.

Springer Series in Statistics

van der Laan, M. /Rose, S.:

454-230

Targeted Learning:

Causal Inference for Observational and Experimental Data

The statistics profession is at a unique point in history. The need for valid statistical tools is greater than ever; data sets are massive, often measuring hundreds of thousands of measurements for a single subject. The field is ready to move towards clear objective benchmarks under which tools can be evaluated.

Targeted learning allows (1) the full generalization and utilization of cross-validation as an estimator selection tool so that the subjective choices made by humans are now made by the machine, and (2) targeting the fitting of the probability distribution of the data toward the target parameter representing the scientific question of interest.

July 2011

644 pp.

9781441997814

11,960.

Lecture Notes in Statistics,

Vol. ***: Dorans, N. /Sinharay, S. (eds.):

454-183

Looking Back:

Proceedings of Aconference in Honor of Paul W. Holland

In 2008, ETS sponsored a conference, Looking Back, honoring his contributions to applied and theoretical psychometrics and statistics. Looking Back attracted a large audience that came to pay homage to Paul Holland and to hear presentations by colleagues who worked with him in special ways over those 40+ years.

Sep. 2011

205 pp.

9781441993885

10,250.

Springer

Wiley Series in Probability and Statistics

Ng, K.:

454-213

**Dirichlet and Related Distributions:
Theory, Methods and Applications**

This book provides a comprehensive review on the Dirichlet distribution including its basic properties, marginal and conditional distributions, cumulative distribution and survival functions. The authors provide insight into new materials such as survival function, characteristic functions for two uniform distributions over the hyper-plane and simplex distribution for linear function of Dirichlet components estimation via the expectation-maximization gradient algorithm and application. Two new families of distributions (GDD and NDD) are explored, with emphasis on applications in incomplete categorical data and survey data with non-response.

Apr. 2011

336 pp.

9780470688199

13,120.

Robert, C. /Mengersen, K. /Titterington, M.:

454-219

Mixture Estimation and Applications

This book uses the EM algorithm to simultaneously estimate the missing data and unknown parameter(s) associated with a data set. The parameters describe the component distributions of the mixture; the distributions may be continuous or discrete. The editors provide a complete account of the applications, mathematical structure and statistical analysis of finite mixture distributions along with MCMC computational methods, together with a range of detailed discussions covering the applications of the methods and features chapters from the leading experts on the subject.

Apr. 2011

328 pp.

9781119993896

12,500.

Montgomery, D.:

454-209

Introduction to Linear Regression Analysis, 5th ed.

Beginning with a general introduction to regression modeling, including typical applications, the book then outlines a host of technical tools that form the linear regression analytical arsenal, including: basic inference procedures and introductory aspects of model adequacy checking; how transformations and weighted leastsquares can be used to resolve problems of model inadequacy; how to deal with influential observations; and polynomial regression models and their variations.

Apr. 2011

672 pp.

9780470542811

15,620.

Zieffler, A. /Harring, J. /Long, J.:

454-229

Comparing Groups:**Randomization and Bootstrap Methods Using R**

This book, written by three behavioral scientists for other behavioral scientists, addresses common issues in statistical analysis for the behavioral and educational sciences.

Modern Statistical & Computing Methods for the Behavioral and Educational Sciences using R emphasizes the direct link between scientific research questions and data analysis.

Purposeful attention is paid to the integration of design, statistical methodology, and computation to propose answers to specific research questions.

May 2011

384 pp.

9780470621691

13,750.

Wiley

Cheban, D.: 454-105
**Ordinary Differential Equations:
 Problem Solver**

This is a textbook on ordinary differential equations in their applied aspects and it caters to students with a physico-mathematical profile, as well as those in informatics and cybernetics.

This book also caters to educators who study the pedagogy of teaching mathematics, especially on differential equations.

Containing over 400 solved examples and problems, its main objective is to promote a deep understanding on the theory, develop concrete mathematical thinking of students, nurture the skills in finding solutions to the problems, and understand their physical essence.

This book completely covers all parts of the course on ordinary differential equations taught at universities: first-order differential equations, high-order differential equations, systems of differential equations, stability theory and so on.

Mar. 2011 415 pp.
 9789814335959 8,620.

Laudal, O.: 454-080
**Geometry of Time-Spaces:
 Non-Commutative Algebraic Geometry,
 Applied to Quantum Theory**

This is a monograph about non-commutative algebraic geometry, and its application to physics.

The main mathematical inputs are the non-commutative deformation theory, moduli theory of representations of associative algebras, a new non-commutative theory of phase spaces, and its canonical Dirac derivation. The book starts with a new definition of time, relative to which the set of mathematical velocities form a compact set, implying special and general relativity.

With this model in mind, a general Quantum Theory is developed and shown to fit with the classical theory. In particular the "toy"-model used as example, contains, as part of the structure, the classical gauge groups $u(1)$, $su(2)$ and $su(3)$, and therefore also the theory of spin and quarks, etc.

Mar. 2011 156 pp.
 9789814343343 8,500.

World Scientific Series on Nonlinear Science Series, B:

Elhadj, Z. /Sprott, J. (eds.): 454-248
**Frontiers in the Study of
 Chaotic Dynamical Systems with Open Problems**

This collection of review articles is devoted to new developments in the study of chaotic dynamical systems with some open problems and challenges.

The papers, written by many of the leading experts in the field, cover both the experimental and theoretical aspects of the subject.

This edited volume presents a variety of fascinating topics of current interest and problems arising in the study of both discrete and continuous time chaotic dynamical systems.

Exciting new techniques stemming from the area of nonlinear dynamical systems theory are currently being developed to meet these challenges.

Mar. 2011 250 pp.
 9789814340694 12,250.

World Scientific Series on Nonlinear Science Series, A:

Alonso-Sanz, R.: Discrete Systems with Memory 譯者張麗 No. 232
 Mar. 2011 450 pp. 9789814343633 16,000.

World Scientific Pub.

*Princeton Mathematical Series,***Vol. **: Farb, B. /Margalit, D.:**

454-151

A Primer on Mapping Class Groups

The book begins by explaining the main group-theoretical properties of $\text{Mod}(S)$, from finite generation by Dehn twists and low-dimensional homology to the Dehn-Nielsen-Baer theorem.

Along the way, central objects and tools are introduced, such as the Birman exact sequence, the complex of curves, the braid group, the symplectic representation, and the Torelli group.

The book then introduces Teichmüller space and its geometry, and uses the action of $\text{Mod}(S)$ on it to prove the Nielsen-Thurston classification of surface homeomorphisms.

Topics include the topology of the moduli space of Riemann surfaces, the connection with surface bundles, pseudo-Anosov theory, and Thurston's approach to the classification.

June 2011

400 pp.

9780691147949

5,970.

*Porter Lectures***Simon, B.:**

454-126

**Szego's Theorem and Its Descendants:
Spectral Theory for L^2 Perturbations of
Orthogonal Polynomials**

This book presents a comprehensive overview of the sum rule approach to spectral analysis of orthogonal polynomials, which derives from Gabor Szego's classic 1915 theorem and its 1920 extension.

Barry Simon emphasizes necessary and sufficient conditions, and provides mathematical background that until now has been available only in journals.

Topics include background from the theory of meromorphic functions on hyperelliptic surfaces and the study of covering maps of the Riemann sphere with a finite number of slits removed.

This allows for the first book-length treatment of orthogonal polynomials for measures supported on a finite number of intervals on the real line.

Dec. 2010

720 pp.

9780691147048

10,110.

*Mathematical Notes,***Fathi, A. /Laudenbach, F. /Poncaru, V.:**

454-152

Thurston's Work on Surfaces

(Translated by Djun Kim & Dan Margalit)

Based on material of Thurston presented at a seminar in Orsay from 1976 to 1977, it covers topics such as the space of measured foliations on a surface, the Thurston compactification of Teichmüller space, the Nielsen-Thurston classification of surface homeomorphisms, and dynamical properties of pseudo-Anosov diffeomorphisms.

Thurston never published the complete proofs, so this text is the only resource for many aspects of the theory. Thurston was awarded the prestigious Fields Medal in 1982 as well as many other prizes and honors, and is widely regarded to be one of the major mathematical figures of our time.

Today, his important and influential work on surface homeomorphisms is enjoying continued interest in areas ranging from the Poincaré conjecture to topological dynamics and low-dimensional topology.

Aug. 2011

320 pp.

9780691147352

5,050.

Princeton University