Teoria Delle Equazioni E Teoria Di Galois

The book is a primer of the theory of Ordinary Differential Equations. Each chapter is completed by a broad set of exercises; the reader will also find a set of solutions of selected exercises. The book contains many interesting examples as well (like the equations for the electric circuits, the pendulum equation, the logistic equation, the Lotka-Volterra system, and many other) which introduce the reader to some interesting aspects of the theory and its applications. The work is mainly addressed to students of Mathematics, Physics, Engineering, Statistics, Computer Sciences, with knowledge of Calculus and Linear Algebra, and contains more advanced topics for further developments, such as Laplace transform; Stability theory and existence of solutions to Boundary Value problems. A complete Solutions Manual, containing solutions to all the exercises published in the book, is available. Instructors who wish to adopt the book may request the manual by writing directly to one of the authors.

The book provides an introduction to Differential Geometry of 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 (curves in n-dimensional space are discussed in the complementary material): 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. The local theory of surfaces begins with a comparison of the

concept of parametrized (i.e., immersed) surface with the concept of regular (i.e., embedded) surface. We then develop the basic differential geometry of surfaces in R3: definitions, examples, differentiable maps and functions, tangent vectors (presented both as vectors tangent to curves in the surface and as derivations on germs of differentiable functions; we shall consistently use both approaches in the whole book) and orientation. Next we study the several notions of curvature on a surface, stressing both the geometrical meaning of the objects introduced and the algebraic/analytical methods needed to study them via the Gauss map, up to the proof of Gauss' Teorema Egregium. Then we introduce vector fields on a surface (flow, first integrals, integral curves) and geodesics (definition, basic properties, geodesic curvature, and, in the complementary material, a full proof of minimizing properties of geodesics and of the Hopf-Rinow theorem for surfaces). Then we shall present a proof of the celebrated Gauss-Bonnet theorem, both in its local and in its global form, using basic properties (fully proved in the complementary material) of triangulations of surfaces. As an application, we shall prove the Poincaré-Hopf theorem on zeroes of vector fields. Finally, the last chapter will be devoted to several important results on the global theory of surfaces, like for instance the characterization of surfaces with constant Gaussian curvature, and the orientability of compact surfaces in R3.

Teoria delle equazioni algebriche

Mathematical Finance: Theory Review and Exercises

Teorie del valore e della distribuzione

J.C. Poggendorffs biographisch-literarisches Handwörterbuch zur Geschichte der exacten Wissenschaften ...

Curves and Surfaces

The purpose of the volume is to provide a support textbook for a second lecture course on Mathematical Analysis. The contents are organised to suit, in particular, students of Engineering, Computer Science and Physics, all areas in which mathematical tools play a crucial role. The basic notions and methods concerning integral and differential calculus for multivariable functions, series of functions and ordinary differential equations are presented in a manner that elicits critical reading and prompts a hands-on approach to concrete applications. The pedagogical layout echoes the one used in the companion text Mathematical Analysis I. The book's structure has a specifically-designed modular nature, which allows for great flexibility in the preparation of a lecture course on Mathematical Analysis. The style privileges clarity in the exposition and a linear progression through the theory. The material is organised on two levels. The first, reflected in this book, allows students to grasp the essential ideas, familiarise with the corresponding key techniques and find

the proofs of the main results. The second level enables the strongly motivated reader to explore further into the subject, by studying also the material contained in the appendices. Definitions are enriched by many examples, which illustrate the properties discussed. A host of solved exercises complete the text, at least half of which guide the reader to the solution. This new edition features additional material with the aim of matching the widest range of educational choices for a second course of Mathematical Analysis.

Dieser Buchtitel ist Teil des Digitalisierungsprojekts Springer Book Archives mit Publikationen, die seit den Anfängen des Verlags von 1842 erschienen sind. Der Verlag stellt mit diesem Archiv Quellen für die historische wie auch die disziplingeschichtliche Forschung zur Verfügung, die jeweils im historischen Kontext betrachtet werden müssen. Dieser Titel erschien in der Zeit vor 1945 und wird daher in seiner zeittypischen politisch-ideologischen Ausrichtung vom Verlag nicht beworben.

Allgemeines Repertorium der Literatur
im Verein mit anderen Mathematikern
Solving Numerical PDEs: Problems, Applications, Exercises
Teoria delle equazioni opusculo
Biographisch-literarisches Handwörterbuch zur Geschichte der exakten Wissenschaften enthaltend Nachweisungen über Lebensverhaltnisse und Leistungen von Mathematikern ...

eine Assistentenstelle bei GERHARD HARIG am bereits 1906 gegründeten Karl-Sudhoff-Institut für Geschichte der Medizin und Naturwissenschaften in Leipzig, die er anderen Angeboten (z. B. beim Flugzeugbau) vorzog. Nach dem Tode von Professor HARIG bekam HANS WUSSING 1967 (als einziger habilitierter Wissenschaftshistoriker in der DDR) eine Dozentur für Geschichte der Mathematik und der Naturwissenschaften und wurde zum kommissarischen Direktor des Sudhoff-Instituts eingesetzt. Ein Jahr später wurde er zum a. o. Professor für Geschichte der Mathematik und der Naturwissenschaften berufen, 1970 erfolgte die Ernennung zum ordent lichen Professor. Von 1977 bis 1982 war er Direktor des Sudhoff-Instituts und ist seit 1982 Leiter der Abteilung für Geschichte der Mathematik und der Naturwissenschaften. Die Reihe von WUSSINGs Publikationen ist lang. Eine Liste seiner Veröffentlichungen bis 1985 findet sich in der Zeitschrift NTM, Bd. 24 (1987), S. 1-5. Es ist hier nicht der Ort, all seine Arbeiten im einzelnen zu würdigen. Erwähnt seien nur die wichtigsten

Buchpublikationen: 1962 erschien bei B. G. Teubner Leipzig die Mathematik in der Antike. WUSSING verfaßte Biographien von COPERNICUS, GAUSS, NEWTON und ADAM RIES. Auch seine neueste Publikation hat mit dem bekannten deutschen Rechenmeister zu tun: Die Goß von ADAM RIES konnte er trotz schwie rigster Umstände zusammen mit WOLFGANG KAUNZNER noch rechtzeitig im Jubiläumsjahr 1992 herausgeben. WUSSING ist auch ein erfolgreicher Hochschullehrer.

Series 3 includes the section "Rezensionen".

Biographisch-literarisches Handwörterbuch der exakten Naturwissenschaften

Programma dell'I. R. Ginnasio-liceale di Brescia pubblicato alla fine dell'anno scolastico ...

Zeitschrift für Geschichte der mathematischen Wissenschaften

Storia della teoria delle equazioni algebriche

Biographisch-literarisches Handwörterbuch zur Geschichte der exacten Wissenschaften

The book collects over 120 exercises on different subjects of Mathematical Finance, including Option Pricing, Risk Theory, and Interest Rate Models. Many of the exercises are solved, while others are only proposed. Every chapter contains an introductory section illustrating the main theoretical results necessary to solve the exercises. The book is intended as an exercise textbook to accompany graduate courses in mathematical finance offered at many universities as part of degree programs in Applied and Industrial Mathematics, Mathematical Engineering, and Quantitative Finance.

In questo libro sono presentati i seguenti argomenti: polinomi simmetrici, funzioni simmetriche, relazioni simmetriche e moduli di Cauchy gruppo di Galois e teoria di Galois delle equazioni equazioni binomie e teorema fondamentale problema inverso di Galois e teorema di Ruffini-Abel risoluzioni di equazioni di secondo, terzo, quarto grado e monodromia

Real Algebraic Geometry

Bd. 1-2

Allgemeines Repertorium der Literatur für die Jahre 1791 bis 1795

Amphora

Teoria di Galois

This book provides an introduction to the analysis of discrete dynamical systems. The content is presented by an unitary approach that blends the perspective of mathematical modeling together with the ones of several discipline as Mathematical Analysis, Linear Algebra, Numerical Analysis, Systems Theory and Probability. After a preliminary discussion of several models, the main tools for the study of linear and non-linear scalar dynamical systems are presented, paying particular attention to the stability analysis. Linear difference equations are studied in detail and an elementary introduction of Z and Discrete Fourier

Transform is presented. A whole chapter is devoted to the study of bifurcations and chaotic dynamics. One-step vector-valued dynamical systems are the subject of three chapters, where the reader can find the applications to positive systems, Markov chains, networks and search engines. The book is addressed mainly to students in Mathematics, Engineering, Physics, Chemistry, Biology and Economics. The exposition is self-contained: some appendices present prerequisites, algorithms and suggestions for computer simulations. The analysis of several examples is enriched by the proposition of many related exercises of increasing difficulty; in the last chapter the detailed solution is given for most of them.

Gewidmet von Schülern und Freunden

A textbook on Ordinary Differential Equations

Algebra for Symbolic Computation

Spectral Theory and Quantum Mechanics

Allgemeines Repertorium der Literatur für die Jahre 1785 bis [1800]

Jahrbuch über die Fortschritte der Mathematik

This book stems from the long standing teaching experience of the authors in the courses on Numerical Methods in Engineering and Numerical Methods for Partial Differential Equations given to undergraduate and graduate students of Politecnico di Milano (Italy), EPFL Lausanne (Switzerland), University of Bergamo (Italy) and Emory University (Atlanta, USA). It aims at introducing students to the numerical approximation of Partial Differential Equations (PDEs). One of the difficulties of this subject is to identify the right trade-off between theoretical concepts and their actual use in practice. With this collection of examples and exercises we try to address this issue by illustrating "academic" examples which focus on basic concepts of Numerical Analysis as well as problems derived from practical application which the student is encouraged to formalize in terms of PDEs, analyze and solve. The latter examples are derived from the experience of the authors in research project developed in collaboration with scientists of different fields (biology, medicine, etc.) and industry. We wanted this book to be useful both to readers more interested in the theoretical aspects and those more concerned with the numerical implementation.

This book is concerned with one of the most fundamental questions of mathematics: the relationship between algebraic formulas and geometric images. At one of the first international mathematical congresses (in Paris in 1900), Hilbert stated a special case of this question in the form of his 16th problem (from his list of 23 problems left over from the nineteenth century as a legacy for the twentieth century). In spite of the simplicity and importance of this problem (including its numerous applications), it remains

unsolved to this day (although, as you will now see, many remarkable results have been discovered).

Teoria delle equazioni, etc

M-Z

Bibliotheca mathematica

Giornale di matematiche ad uso degli studenti delle università italiane

enthaltend Nachweisungen über Lebensverhältnisse und Leistungen von Mathematikern, Astronomen, Physikern, Chemikern, Mineralogen, Geologen usw. aller Völker und Zeiten. M - Z

L'algebra è nata come lo studio della risolubilità delle equazioni polinomiali e tale è essenzialmente rimasta fino a quando nel 1830 Evariste Galois - matematico geniale dalla vita breve e avventurosa - ha definitivamente risolto questo problema, ponendo allo stesso tempo le basi per la nascita dell'algebra moderna intesa come lo studio delle strutture algebriche. La Teoria di Galois classica viene oggi insegnata a vari livelli nell'ambito dei Corsi di Laurea in Matematica. Questo libro di testo è stato di conseguenza scritto per essere usato in modo flessibile. Alcune parti -come quella sulla Teoria dei Campi - possono essere utilizzate anche per corsi più avanzati di Algebra, Geometria e Teoria dei Numeri. Altri argomenti - quali ad esempio lo studio della risolubilità per radicali delle equazioni di grado basso o della costruibilità con riga e compasso delle figure piane - possono essere svolti in corsi di Matematiche Complementari per l'indirizzo didattico. Il volume contiene anche note storiche, molti esempi dettagliati ed esercizi.

This textbook presents problems and exercises at various levels of difficulty in the following areas:

Classical Methods in PDEs (diffusion, waves, transport, potential equations); Basic Functional Analysis and Distribution Theory; Variational Formulation of Elliptic Problems; and Weak Formulation for Parabolic Problems and for the Wave Equation. Thanks to the broad variety of exercises with complete solutions, it can be used in all basic and advanced PDE courses.

Allgemeines repertorium der literatur

enthaltend Nachweisungen ü ber Lebensverh ä ltnisse und Leistungen von Mathematikern, Astronomen, Physikern, Chemikern, Mineralogen, Geologen usw. aller V ö lker und Zeiten

Partial Differential Equations in Action

Complements and Exercises

Teoria delle Equazioni e Teoria di Galois

This book pursues the accurate study of the mathematical foundations of Quantum Theories. It may be considered an introductory text on linear functional analysis with a focus on Hilbert spaces. Specific attention is given to spectral theory features that are relevant in physics. Having left the physical phenomenology in the background, it is the formal and logical aspects of the theory that are privileged. Another not lesser purpose is to collect in one place a number of useful rigorous statements on the

mathematical structure of Quantum Mechanics, including some elementary, yet fundamental, results on the Algebraic Formulation of Quantum Theories. In the attempt to reach out to Master's or PhD students, both in physics and mathematics, the material is designed to be self-contained: it includes a summary of point-set topology and abstract measure theory, together with an appendix on differential geometry. The book should benefit established researchers to organise and present the profusion of advanced material disseminated in the literature. Most chapters are accompanied by exercises, many of which are solved explicitly.

This book deals with several topics in algebra useful for computer science applications and the symbolic treatment of algebraic problems, pointing out and discussing their algorithmic nature. The topics covered range from classical results such as the Euclidean algorithm, the Chinese remainder theorem, and polynomial interpolation, to p-adic expansions of rational and algebraic numbers and rational

functions, to reach the problem of the polynomial factorisation, especially via Berlekamp's method, and the discrete Fourier transform. Basic algebra concepts are revised in a form suited for implementation on a computer algebra system.

From Binomial Model to Risk Measures

Mathematical Analysis II

Lezioni sulla teoria geometrica delle equazioni e delle funzioni algebriche

J.C. Poggendorffs biographisch-literarisches handwörterbuch für mathematik, astronomie, physik, chemie und verwandte wissenschaftsgebiete ...

Nuovi principi sulla teoria generale delle funzioni di D. Varisco