

Basic Topology Armstrong Solutions

Basic Topology Symmetry, Broken Symmetry, and Topology in Modern Physics Analysis and Topology in Nonlinear Differential Equations [Homotopy Analysis Method in Nonlinear Differential Equations](#) IUTAM Symposium on Laminar-Turbulent Transition and Finite Amplitude Solutions Topology Introduction to Topology Topology of Surfaces [Springer Handbook of Geographic Information](#) Lecture Notes On General Topology Topologies and Uniformities [International Review of Cytology](#) [Topology](#) Understanding Topology How to Find Out in Mathematics [Pathways to Solutions, Fixed Points, and Equilibria](#) Nonlinear Elliptic Equations and Nonassociative Algebras Topics in Critical Point Theory Morse Theoretic Aspects of P-Laplacian Type Operators Topology of Metric Spaces Geometry, Topology and Physics Nonlinear Programming Groups and Symmetry Computational Topology [Functional Analysis](#) Topology [Topology and Groupoids](#) Nanobrain Encyclopedia of GIS [Cumulated Index Medicus](#) Cape Cod Feedback Systems [The Mathematics of Diffusion](#) [Network Security: Perspectives And Challenges](#) [Trends in Mathematical Physics Research](#) Divine Omniscience and Human Free Will Reconfigurable Computing: Architectures, Tools and Applications Social Movements and Organization Theory Category Theory in Context General Topology

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Symmetry, Broken Symmetry, and Topology in Modern Physics Sep 26 2022 A pedagogical introduction to the modern applications of groups, algebras, and topology for undergraduate and graduate students in physics.

[Trends in Mathematical Physics Research](#) Nov 23 2019 Physics and mathematics have always been closely intertwined, with developments in one field frequently inspiring the other. Currently, there are many unsolved problems in physics which will likely require new innovations in mathematical physics. Mathematical physics is concerned with problems in statistical mechanics, atomic and molecular physics, quantum field theory, and, in general, with the mathematical foundations of theoretical physics. This includes such subjects as scattering theory for n bodies, quantum mechanics (both non-relativistic and relativistic), atomic and molecular physics, the existence and properties of the phases of model ferromagnets, the stability of matter, the theory of symmetry and symmetry breaking in quantum field theory (both in general and in concrete models), and mathematical developments in functional analysis and algebra to which such subjects lead. This book presents leading-edge research in this fast-moving field.

Lecture Notes On General Topology Jan 18 2022 This book is intended as a one-semester course in general topology, a.k.a. point-set topology, for undergraduate students as well as first-year graduate students. Such a course is considered a prerequisite for further studying analysis, geometry, manifolds, and certainly, for a career of mathematical research. Researchers may find it helpful especially from the comprehensive indices. General topology resembles a language in modern mathematics. Because of this, the book is with a concentration on basic concepts in general topology, and the presentation is of a brief style, both concise and precise. Though it is hard to determine exactly which concepts therein are basic and which are not, the author makes efforts in the selection according to personal experience on the occurrence frequency of notions in advanced mathematics, and to related books that have received admirable reviews. This book also contains exercises for each chapter with selected solutions. Interrelationships among concepts are taken into account frequently. Twelve particular topological spaces are repeatedly exploited, which serve as examples to learn new concepts based on the old ones.

Category Theory in Context Jul 20 2019 Introduction to concepts of category theory \square categories, functors, natural transformations, the Yoneda lemma, limits and colimits, adjunctions, monads \square revisits a broad range of mathematical examples from the categorical perspective. 2016 edition.

Feedback Systems Feb 25 2020 The essential introduction to the principles and applications of feedback systems now fully revised and expanded This textbook covers the mathematics needed to model, analyze, and design feedback systems. Now more user-friendly than ever, this revised and expanded edition of Feedback Systems is a one-volume resource for students and researchers in mathematics and engineering. It has applications across a range of disciplines that utilize feedback in physical, biological, information, and economic systems. Karl Åström and Richard Murray use techniques from physics, computer science, and operations research to introduce control-oriented modeling. They begin with state space tools for analysis and design, including stability of solutions, Lyapunov functions, reachability, state feedback observability, and estimators. The matrix exponential plays a central role in the analysis of linear control systems, allowing a concise development of many of the key concepts for this class of models. Åström and Murray then develop and explain tools in the frequency domain, including transfer functions, Nyquist analysis, PID control, frequency domain design, and robustness. Features a new chapter on design principles and tools, illustrating the types of problems that can be solved using feedback Includes a new chapter on fundamental limits and new material on the Routh-Hurwitz criterion and root locus plots Provides exercises at the end of every chapter Comes with an electronic solutions manual An ideal textbook for undergraduate and graduate students Indispensable for researchers seeking a self-contained resource on control theory

How to Find Out in Mathematics Aug 13 2021 How to Find Out in Mathematics: A Guide to Sources of Information, Second Revised Edition presents updated topics about probability and statistics, dictionaries and encyclopedias, computing, and mathematical education. The book discusses the modifications of the content of professional actuarial examinations; the assimilation of modern mathematics into the school curriculum; and the establishment of government departments to administer financial support for mathematical research. The text also describes the efforts to improve communication between mathematicians (i.e. the inception of the Mathematical Offprint Service and the publication of Contents of Contemporary Mathematical Journals by the American Mathematical Society). People who are studying, teaching, or applying mathematics will find the book helpful.

Morse Theoretic Aspects of P-Laplacian Type Operators Apr 09 2021 The purpose of this book is to present a Morse theoretic study of a very general class of homogeneous operators that includes the p -Laplacian as a special case. The p -Laplacian operator is a quasilinear differential operator that arises in many applications such as non-Newtonian fluid flows and turbulent filtration in porous media. Infinite dimensional Morse theory has been used extensively to study semilinear problems, but only rarely to study the p -Laplacian. The standard tools of Morse theory for computing critical groups, such as the Morse lemma, the shifting theorem, and various linking and local linking theorems based on eigenspaces, do not apply to quasilinear problems where the Euler functional is not defined on a Hilbert space or is not C^2 or where there are no eigenspaces to work with. Moreover, a complete description of the spectrum of a quasilinear operator is generally not available, and the standard sequence of eigenvalues based on the genus is not useful for obtaining nontrivial critical groups or for constructing linking sets and local linkings. However, one of the main points of this book is that the lack of a complete list of eigenvalues is not an insurmountable obstacle to applying critical point theory. Working with a new sequence of eigenvalues that uses the cohomological index, the authors systematically develop alternative tools such as nonlinear linking and local splitting theories in order to effectively apply Morse theory to quasilinear problems. They obtain nontrivial critical groups in nonlinear eigenvalue problems and use the stability and piercing properties of the cohomological index to construct new linking sets and local splittings that are readily applicable here. (SURV/161)

[Network Security: Perspectives And Challenges](#) Dec 25 2019

IUTAM Symposium on Laminar-Turbulent Transition and Finite Amplitude Solutions Jun 23 2022 An exciting new direction in hydrodynamic stability theory and the transition to turbulence is concerned with the role of disconnected states or finite amplitude solutions in the evolution of disorder in fluid flows. This volume contains refereed papers presented at the IUTAM/LMS sponsored symposium on "Non-Uniqueness of Solutions to the Navier-Stokes equations and their Connection with Laminar-Turbulent Transition" held in Bristol 2004. Theoreticians and experimentalists gathered to discuss developments in understanding both the onset and collapse of disordered motion in shear flows such as those found in pipes and channels. The central objective of the symposium was to discuss the increasing amount of experimental and numerical evidence for finite amplitude solutions to the Navier-Stokes equations and to set the work into a modern theoretical context. The participants included many of the leading authorities in the subject and this volume captures much of the flavour of the resulting stimulating and lively discussions.

Topology of Surfaces Mar 20 2022 " . . . that famous pedagogical method whereby one begins with the general and proceeds to the particular only after the student is too confused to understand even that anymore. " Michael Spivak This text was written as an antidote to topology courses such as Spivak It is meant to provide the student with an experience in geomet. ric topology. Traditionally, the only topology an undergraduate might see is point-set topology at a fairly abstract level. The next course the average student would take would be a graduate course in algebraic topology, and such courses are commonly very homological in nature, providing quick access to current research, but not developing any intuition or geometric sense. I have tried in this text to provide the undergraduate with a pragmatic introduction to the field, including a sampling from point-set, geometric, and algebraic topology, and trying not to include anything that the student cannot immediately experience. The exercises are to be considered as an integral part of the

text and, ideally, should be addressed when they are met, rather than at the end of a block of material. Many of them are quite easy and are intended to give the student practice working with the definitions and digesting the current topic before proceeding. The appendix provides a brief survey of the group theory needed.

Nanobrain Jun 30 2020 Making an artificial brain is not a part of artificial intelligence. It will be a revolutionary journey of mankind exploring a science where one cannot write an equation, a material will vibrate like geometric shape, and then those shapes will change to make decisions. Geometry of silence plays like a musical instrument to mimic a human brain; our thoughts, imagination, everything would be a 3D shape playing as music; composing music would be the brain's singular job. For a century, the Turing machine ruled human civilization; it was believed that irrespective of complexity all events add up linearly. This book is a thesis to explore the science of decision-making where events are 3D-geometric shapes, events grow within and above, never side by side. The book documents inventions and discoveries in neuroscience, computer science, materials science, mathematics and chemistry that explore the possibility of brain or universe as a time crystal. The philosophy of Turing, the philosophy of membrane-based neuroscience and the philosophy of linear, sequential thought process are challenged here by considering that a nested time crystal encompasses the entire conscious universe. Instead of an algorithm, the pattern of maximum free will is generated mathematically and that very pattern is encoded in materials such that its natural vibration integrates random events exactly similar to the way nature does it in every remote corner of our universe. Find how an artificial brain avoids any necessity for algorithm or programming using the pattern of free will.

International Review of Cytology Nov 16 2021 International Review of Cytology presents current advances and comprehensive reviews in cell biology-both plant and animal. Articles address structure and control of gene expression, nucleocytoplasmic interactions, control of cell development and differentiation, and cell transformation and growth. Authored by some of the foremost scientists in the field, each volume provides up-to-date information and directions for future research. How the Assembly Dynamics of the Nematode Major Sperm Protein Generate Amoeboid Cell Motility Functional Specificity of Actin Isoforms Cell Biology of Cardiac Development Role of Programmed Cell Death in Development Reversible Vacuolation of T-Tubules in Skeletal Muscle: Mechanisms and Implications for Cell Biology

Divine Omniscience and Human Free Will Oct 23 2019 This book deals with an old conundrum: if God knows what we will choose tomorrow, how can we be free to choose otherwise? If all our choices are already written, is our freedom simply an illusion? This book provides a precise analysis of this dilemma using the tools of modern metaphysics and logic of time. With a focus on three intertwined concepts - God's nature, the formal structure of time, and the metaphysics time, including the relationship between temporal entities and a timeless God - the chapters analyse various solutions to the problem of foreknowledge and freedom, revealing the advantages and drawbacks of each. Building on this analysis, the authors advance constructive solutions, showing under what conditions an entity can be omniscient in the presence of free agents, and whether an eternal entity can know the tensed futures of the world. The metaphysics of time, its topology and the semantics of future tensed sentences are shown to be invaluable topics in dealing with this issue. Combining investigations into the metaphysics of time with the discipline of temporal logic this monograph brings about important advancements in the philosophical understanding of an ancient and fascinating problem. The answer, if any, is hidden in the folds of time, in the elusive nature of this feature of reality and in the infinite branching of our lives.

Topology Sep 02 2020 Sheldon Davis' text is written for introductory courses in topology taken by advanced undergraduate and beginning graduate students. Designed to be flexible, the text is divided into two parts to accommodate different courses, course configurations, and instructor preferences. Part I of the text covers the bare essentials every student should know about topology before continuing on to study point-set or set-theoretic topology, algebraic topology, functional analysis, continuum theory, or the many other important areas in mathematics that utilize topology fundamentals. To keep the text manageable for beginning students, use of set theory in Part I is kept to an intuitive level. Part II contains a complete beginning course in general topology, or set-theoretic topology. General topology courses that assume prior background in the fundamentals can start directly with Part II and use the material in Part I for conceptual review. This text is part of the Walter Rudin Student Series in Advanced Mathematics.

Understanding Topology Sep 14 2021 "Topology can present significant challenges for undergraduate students of mathematics and the sciences. 'Understanding topology' aims to change that. The perfect introductory topology textbook, 'Understanding topology' requires only a knowledge of calculus and a general familiarity with set theory and logic. Equally approachable and rigorous, the book's clear organization, worked examples, and concise writing style support a thorough understanding of basic topological principles. Professor Shaun V. Ault's unique emphasis on fascinating applications, from chemical dynamics to determining the shape of the universe, will engage students in a way traditional topology textbooks do not"--Back cover.

General Topology Jun 18 2019 Among the best available reference introductions to general topology, this volume is appropriate for advanced undergraduate and beginning graduate students. Includes historical notes and over 340 detailed exercises. 1970 edition. Includes 27 figures.

Springer Handbook of Geographic Information Feb 19 2022 This handbook provides an exhaustive, one-stop reference and a state-of-the-art description of geographic information and its use. This new, substantially updated edition presents a complete and rigorous overview of the fundamentals, methods and applications of the multidisciplinary field of geographic information systems. Designed to be a useful and readable desk reference book, but also prepared in various electronic formats, this title allows fast yet comprehensive review and easy retrieval of essential reliable key information. The Springer Handbook of Geographic Information is divided into three parts. Part A, Basics and Computer Science, provides an overview on the fundamentals, including descriptions of databases and encoding of geographic information. It also covers the underlying mathematical and statistics methods and modeling. A new chapter exemplifies the emerging use and analysis of big data in a geographic context. Part B offers rigorous descriptions of gathering, processing and coding of geographic information in a standardized way to allow interoperable use in a variety of systems; from traditional methods such as geodesy and surveying to state-of-the-art remote sensing and photogrammetry; from cartography to geospatial web services. Discussions on geosemantic interoperability and security of open distributed geospatial information systems complete the comprehensive coverage. The final part describes a wide array of applications in science, industry and society at large, such as agriculture, defense, transportation, energy and utilities, health and human services. The part is enhanced by new chapters on smart cities and building information modeling, as well as a complete overview of the currently available open-source geographic information systems. Using standardized international terminology, in accordance with ISO/TC 211 and INSPIRE, this handbook facilitates collaboration between different disciplines and is a must have for practitioners and new comers in industry and academia.

Topics in Critical Point Theory May 10 2021 Provides an introduction to critical point theory and shows how it solves many difficult problems.

Topologies and Uniformities Dec 17 2021 A substantially revised edition of the UTM volume, with a view to making the book far more accessible to undergraduates. It contains a larger number of detailed explanations and exercises, together with fully worked solutions to the essential problems and a new chapter on the historical aspects.

Geometry, Topology and Physics Feb 07 2021 Differential geometry and topology have become essential tools for many theoretical physicists. In particular, they are indispensable in theoretical studies of condensed matter physics, gravity, and particle physics. Geometry, Topology and Physics, Second Edition introduces the ideas and techniques of differential geometry and topology at a level suitable for postgraduate students and researchers in these fields. The second edition of this popular and established text incorporates a number of changes designed to meet the needs of the reader and reflect the development of the subject. The book features a considerably expanded first chapter, reviewing aspects of path integral quantization and gauge theories. Chapter 2 introduces the mathematical concepts of maps, vector spaces, and topology. The following chapters focus on more elaborate concepts in geometry and topology and discuss the application of these concepts to liquid crystals, superfluid helium, general relativity, and bosonic string theory. Later chapters unify geometry and topology, exploring fiber bundles, characteristic classes, and index theorems. New to this second edition is the proof of the index theorem in terms of supersymmetric quantum mechanics. The final two chapters are devoted to the most fascinating applications of geometry and topology in contemporary physics, namely the study of anomalies in gauge field theories and the analysis of Polakov's bosonic string theory from the geometrical point of view. Geometry, Topology and Physics, Second Edition is an ideal introduction to differential geometry and topology for postgraduate students and researchers in theoretical and mathematical physics.

Social Movements and Organization Theory Aug 21 2019 Although the fields of organization theory and social movement theory have long been viewed as belonging to different worlds, recent events have intervened, reminding us that organizations are becoming more movement-like - more volatile and politicized - while movements are more likely to borrow strategies from organizations. Organization theory and social movement theory are two of the most vibrant areas within the social sciences. This collection of original essays and studies both calls for a closer connection between these fields and demonstrates the value of this interchange. Three introductory, programmatic essays by leading scholars in the two fields are followed by eight empirical studies that directly illustrate the benefits of this type of cross-pollination. The studies variously examine the processes by which movements become organized and the role of movement processes within and among organizations. The topics covered range from globalization and transnational social movement organizations to community recycling programs.

Reconfigurable Computing: Architectures, Tools and Applications Sep 21 2019 This book constitutes the refereed proceedings of the Third International Workshop on Applied Reconfigurable Computing, ARC 2007, held in Mangaratiba, Brazil, in March 2007. The 27 full papers and 10 short papers presented together with a late-comer contribution from ARC 2006 are organized in topical sections on architectures, mapping techniques and tools, arithmetic, and applications.

Topology and Groupoids Aug 01 2020 Annotation. The book is intended as a text for a two-semester course in topology and algebraic topology at the advanced undergraduate or beginning graduate level. There are over 500 exercises, 114 figures, numerous diagrams. The general direction of the book is toward homotopy theory with a geometric point of view. This book would provide more than adequate background for a standard algebraic topology course that begins with homology theory. For more information see www.bangor.ac.uk/r.brown/topgpd.html This version dated April 19, 2006, has a number of corrections made.

Computational Topology Nov 04 2020 Combining concepts from topology and algorithms, this book delivers what its title promises: an introduction to the field of computational topology. Starting with motivating problems in both mathematics and computer science and building up from classic topics in geometric and algebraic topology, the third part of

the text advances to persistent homology. This point of view is critically important in turning a mostly theoretical field of mathematics into one that is relevant to a multitude of disciplines in the sciences and engineering. The main approach is the discovery of topology through algorithms. The book is ideal for teaching a graduate or advanced undergraduate course in computational topology, as it develops all the background of both the mathematical and algorithmic aspects of the subject from first principles. Thus the text could serve equally well in a course taught in a mathematics department or computer science department.

Nonlinear Elliptic Equations and Nonassociative Algebras Jun 11 2021 This book presents applications of noncommutative and nonassociative algebras to constructing unusual (nonclassical and singular) solutions to fully nonlinear elliptic partial differential equations of second order. The methods described in the book are used to solve a longstanding problem of the existence of truly weak, nonsmooth viscosity solutions. Moreover, the authors provide an almost complete description of homogeneous solutions to fully nonlinear elliptic equations. It is shown that even in the very restricted setting of "Hessian equations", depending only on the eigenvalues of the Hessian, these equations admit homogeneous solutions of all orders compatible with known regularity for viscosity solutions provided the space dimension is five or larger. To the contrary, in dimension four or less the situation is completely different, and our results suggest strongly that there are no nonclassical homogeneous solutions at all in dimensions three and four. Thus this book gives a complete list of dimensions where nonclassical homogeneous solutions to fully nonlinear uniformly elliptic equations do exist; this should be compared with the situation of, say, ten years ago when the very existence of nonclassical viscosity solutions was not known.

Functional Analysis Oct 03 2020 Functional Analysis, Second Edition is an exposition of the theory of topological vector spaces, partially ordered spaces, and the development of the theory of integral operators and their representations on ideal spaces of measurable functions. Although this edition has deviated substantially from the first edition, it has still retained the overall plan, selection, and arrangement of the topics. The text is primarily devoted to the applications of functional analysis to applied analysis. However, these concepts have been extended and modernized. Some topics of functional analysis connected with applications to mathematical economics and control theory are also included in this edition. The applications of functional analysis are both wide and far-reaching as these are common language for all areas of mathematics involving the concept of continuity. Those who are in the field of mathematics, mechanics, and theoretical physics will find this book a valuable resource.

The Mathematics of Diffusion Jan 26 2020 Though it incorporates much new material, this new edition preserves the general character of the book in providing a collection of solutions of the equations of diffusion and describing how these solutions may be obtained.

Topology Oct 15 2021 A graduate-level textbook that presents basic topology from the perspective of category theory. This graduate-level textbook on topology takes a unique approach: it reintroduces basic, point-set topology from a more modern, categorical perspective. Many graduate students are familiar with the ideas of point-set topology and they are ready to learn something new about them. Teaching the subject using category theory is a contemporary branch of mathematics that provides a way to represent abstract concepts both deepens students' understanding of elementary topology and lays a solid foundation for future work in advanced topics. After presenting the basics of both category theory and topology, the book covers the universal properties of familiar constructions and three main topological properties: connectedness, Hausdorff, and compactness. It presents a fine-grained approach to convergence of sequences and filters; explores categorical limits and colimits, with examples; looks in detail at adjunctions in topology, particularly in mapping spaces; and examines additional adjunctions, presenting ideas from homotopy theory, the fundamental groupoid, and the Seifert van Kampen theorem. End-of-chapter exercises allow students to apply what they have learned. The book expertly guides students of topology through the important transition from undergraduate student with a solid background in analysis or point-set topology to graduate student preparing to work on contemporary problems in mathematics.

Analysis and Topology in Nonlinear Differential Equations Aug 25 2022 This volume is a collection of articles presented at the Workshop for Nonlinear Analysis held in João Pessoa, Brazil, in September 2012. The influence of Bernhard Ruf, to whom this volume is dedicated on the occasion of his 60th birthday, is perceptible throughout the collection by the choice of themes and techniques. The many contributors consider modern topics in the calculus of variations, topological methods and regularity analysis, together with novel applications of partial differential equations. In keeping with the tradition of the workshop, emphasis is given to elliptic operators inserted in different contexts, both theoretical and applied. Topics include semi-linear and fully nonlinear equations and systems with different nonlinearities, at sub- and supercritical exponents, with spectral interactions of Ambrosetti-Prodi type. Also treated are analytic aspects as well as applications such as diffusion problems in mathematical genetics and finance and evolution equations related to electromechanical devices.

Introduction to Topology Apr 21 2022 This text explains nontrivial applications of metric space topology to analysis. Covers metric space, point-set topology, and algebraic topology. Includes exercises, selected answers, and 51 illustrations. 1983 edition.

Cape Cod Mar 28 2020

Groups and Symmetry Dec 05 2020 This is a gentle introduction to the vocabulary and many of the highlights of elementary group theory. Written in an informal style, the material is divided into short sections, each of which deals with an important result or a new idea. Includes more than 300 exercises and approximately 60 illustrations.

Encyclopedia of GIS May 30 2020 The Encyclopedia of GIS provides a comprehensive and authoritative guide, contributed by experts and peer-reviewed for accuracy, and alphabetically arranged for convenient access. The entries explain key software and processes used by geographers and computational scientists. Major overviews are provided for nearly 200 topics: Geoinformatics, Spatial Cognition, and Location-Based Services and more. Shorter entries define specific terms and concepts. The reference will be published as a print volume with abundant black and white art, and simultaneously as an XML online reference with hyperlinked citations, cross-references, four-color art, links to web-based maps, and other interactive features.

Pathways to Solutions, Fixed Points, and Equilibria Jul 12 2021

Cumulated Index Medicus Apr 28 2020

Topology May 22 2022 This introduction to topology provides separate, in-depth coverage of both general topology and algebraic topology. Includes many examples and figures. GENERAL TOPOLOGY. Set Theory and Logic. Topological Spaces and Continuous Functions. Connectedness and Compactness. Countability and Separation Axioms. The Tychonoff Theorem. Metrization Theorems and paracompactness. Complete Metric Spaces and Function Spaces. Baire Spaces and Dimension Theory. ALGEBRAIC TOPOLOGY. The Fundamental Group. Separation Theorems. The Seifert-van Kampen Theorem. Classification of Surfaces. Classification of Covering Spaces. Applications to Group Theory. For anyone needing a basic, thorough, introduction to general and algebraic topology and its applications.

Homotopy Analysis Method in Nonlinear Differential Equations Jul 24 2022 "Homotopy Analysis Method in Nonlinear Differential Equations" presents the latest developments and applications of the analytic approximation method for highly nonlinear problems, namely the homotopy analysis method (HAM). Unlike perturbation methods, the HAM has nothing to do with small/large physical parameters. In addition, it provides great freedom to choose the equation-type of linear sub-problems and the base functions of a solution. Above all, it provides a convenient way to guarantee the convergence of a solution. This book consists of three parts. Part I provides its basic ideas and theoretical development. Part II presents the HAM-based Mathematica package BVPh 1.0 for nonlinear boundary-value problems and its applications. Part III shows the validity of the HAM for nonlinear PDEs, such as the American put option and resonance criterion of nonlinear travelling waves. New solutions to a number of nonlinear problems are presented, illustrating the originality of the HAM. Mathematica codes are freely available online to make it easy for readers to understand and use the HAM. This book is suitable for researchers and postgraduates in applied mathematics, physics, nonlinear mechanics, finance and engineering. Dr. Shijun Liao, a distinguished professor of Shanghai Jiao Tong University, is a pioneer of the HAM.

Topology of Metric Spaces Mar 08 2021 "Topology of Metric Spaces gives a very streamlined development of a course in metric space topology emphasizing only the most useful concepts, concrete spaces and geometric ideas to encourage geometric thinking, to treat this as a preparatory ground for a general topology course, to use this course as a surrogate for real analysis and to help the students gain some perspective of modern analysis." "Eminently suitable for self-study, this book may also be used as a supplementary text for courses in general (or point-set) topology so that students will acquire a lot of concrete examples of spaces and maps."--BOOK JACKET.

Basic Topology Oct 27 2022 In this broad introduction to topology, the author searches for topological invariants of spaces, together with techniques for their calculating. Students with knowledge of real analysis, elementary group theory, and linear algebra will quickly become familiar with a wide variety of techniques and applications involving point-set, geometric, and algebraic topology. Over 139 illustrations and more than 350 problems of various difficulties help students gain a thorough understanding of the subject.

Nonlinear Programming Jan 06 2021