Numerical Analysis S A Mollah For

Thank you very much for downloading **Numerical Analysis S A Mollah For**.Maybe you have knowledge that, people have see numerous time for their favorite books as soon as this Numerical Analysis S A Mollah For, but end stirring in harmful downloads.

Rather than enjoying a good ebook following a cup of coffee in the afternoon, otherwise they juggled behind some harmful virus inside their computer. **Numerical Analysis S A Mollah For** is available in our digital library an online entry to it is set as public fittingly you can download it instantly. Our digital library saves in merged countries, allowing you to acquire the most less latency epoch to download any of our books as soon as this one. Merely said, the Numerical Analysis S A Mollah For is universally compatible taking into account any devices to read.

Elementary Numerical Analysis (3Rd Ed.) Atkinson 2009-07 Offering a clear, precise, and accessible presentation, complete with MATLAB programs, this new Third Edition of Elementary Numerical Analysis gives students the support they need to master basic numerical analysis and scientific computing. Now updated and revised, this significant revision features reorganized and rewritten content, as well as some new additional examples and problems.The text introduces core areas of numerical analysis and scientific

computing along with basic themes of numerical analysis such as the approximation of problems by simpler methods, the construction of algorithms, iteration methods, error analysis, stability, asymptotic error formulas, and the effects of machine arithmetic.· Taylor Polynomials · Error and Computer Arithmetic · Rootfinding · Interpolation and Approximation · Numerical Integration and Differentiation · Solution of Systems of Linear Equations · Numerical Linear Algebra: Advanced Topics · Ordinary Differential Equations · Finite Difference Method for PDEs

Computational Intelligence in Pattern Recognition Asit Kumar Das 2020-02-19 This book features high-quality research papers presented at the 2nd International Conference on Computational Intelligence in Pattern Recognition (CIPR 2020), held at the Institute of Engineering and Management, Kolkata, West Bengal, India, on 4–5 January 2020. It includes practical development experiences in various areas of data analysis and pattern recognition, focusing on soft computing technologies, clustering and classification algorithms, rough set and fuzzy set theory, evolutionary computations, neural science and neural network systems, image processing, combinatorial pattern matching, social network analysis, audio and video data analysis, data mining in dynamic environments, bioinformatics, hybrid computing, big data analytics and deep learning. It also provides innovative solutions to the challenges in these areas and discusses recent developments.

One-Dimensional Microwave Photonic Crystals D.A. Usanov 2019-05-13 Explores theoretical and experimental studies of the properties of one-dimensional photonic crystals. The authors also consider the possibilities of controlling the characteristics of microwave photonic crystals with the help of electric and magnetic fields and provide examples of new fields of application of microwave photonic crystals. They review measurements of the parameters of layered

structures containing nanometer-sized semiconductor and metal layers and explore microwave-compatible loads. Written for specialists and scientists working in the fields of radiophysics, microwave solid-state electronics, and microwave photonics. Key selling features: Presents studies of theoretical and experimental properties of one-dimensional photonic crystals Analyzes microwave photonic crystals based on flat transmission lines. Explores the use of electric and magnetic fields to control crystal characteristics. Reviews applications of photonic crystals in semiconductors. Examines one-dimensional microwave photonic crystals based on rectangular wave guides.

Numerical Analysis L. Ridgway Scott 2011-04-18 Computational science is fundamentally changing how technological questions are addressed. The design of aircraft, automobiles, and even racing sailboats is now done by computational simulation. The mathematical foundation of this new approach is numerical analysis, which studies algorithms for computing expressions defined with real numbers. Emphasizing the theory behind the computation, this book provides a rigorous and self-contained introduction to numerical analysis and presents the advanced mathematics that underpin industrial software, including complete details that are missing from most textbooks. Using an inquiry-based learning approach, Numerical Analysis is written in a narrative style, provides historical background, and includes many of the proofs and technical details in exercises. Students will be able to go beyond an elementary understanding of numerical simulation and develop deep insights into the foundations of the subject. They will no longer have to accept the mathematical gaps that exist in current textbooks. For example, both necessary and sufficient conditions for convergence of basic iterative methods are covered, and proofs are given in full generality, not just based on special cases. The book is accessible to undergraduate

mathematics majors as well as computational scientists wanting to learn the foundations of the subject. Presents the mathematical foundations of numerical analysis Explains the mathematical details behind simulation software Introduces many advanced concepts in modern analysis Self-contained and mathematically rigorous Contains problems and solutions in each chapter Excellent follow-up course to Principles of Mathematical Analysis by Rudin

Data Structures Using C Reema Thareja 2014-07-11 This second edition of Data Structures Using C has been developed to provide a comprehensive and consistent coverage of both the abstract concepts of data structures as well as the implementation of these concepts using C language. It begins with a thorough overview of the concepts of C programming followed by introduction of different data structures and methods to analyse the complexity of different algorithms. It then connects these concepts and applies them to the study of various data structures such as arrays, strings, linked lists, stacks, queues, trees, heaps, and graphs. The book utilizes a systematic approach wherein the design of each of the data structures is followed by algorithms of different operations that can be performed on them, and the analysis of these algorithms in terms of their running times. Each chapter includes a variety of end-chapter exercises in the form of MCQs with answers, review questions, and programming exercises to help readers testtheir knowledge.

A Course in Abstract Algebra, 5th Edition Khanna V.K. & Bhamri S.K 2016 Designed for undergraduate and postgraduate students of mathematics, the book can also be used by those preparing for various competitive examinations. The text starts with a brief introduction to results from Set theory and Number theory. It then goes on to cover Groups, Rings, Fields and Linear Algebra. The topics under groups include subgroups, finitely generated abelian groups, group actions, solvable and nilpotent groups. The

course in ring theory covers ideals, embedding of rings, Euclidean domains, PIDs, UFDs, polynomial rings, Noetherian (Artinian) rings. Topics of field include algebraic extensions, splitting fields, normal extensions, separable extensions, algebraically closed fields, Galois extensions, and construction by ruler and compass. The portion on linear algebra deals with vector spaces, linear transformations, Eigen spaces, diagonalizable operators, inner product spaces, dual spaces, operators on inner product spaces etc. The theory has been strongly supported by numerous examples and worked-out problems. There is also plenty of scope for the readers to try and solve problems on their own.New in this Edition• A full section on operators in inner product spaces.• Complete survey of finite groups of order up to 15 and Wedderburn theorem on finite division rings.• Addition of around one hundred new worked-out problems and examples.• Alternate and simpler proofs of some results.• A new section on quick recall of various useful results at the end of the book to facilitate the reader to get instant answers to tricky questions.

Immunology and Immunotechnology Ashim K. Chakravarty 2005-12 Immunology and Immuntechnology provides the reader with a clear understanding of the fundamentals of immunology. Aimed at students of biotechnology, it covers the latest technologies and techniques for diagnosis, new vaccines, etc. and would be useful for both undergraduate and postgradate courses.

Nonnegative Matrix and Tensor Factorizations Andrzej Cichocki 2009-07-10 This book provides a broad survey of models and efficient algorithms for Nonnegative Matrix Factorization (NMF). This includes NMF's various extensions and modifications, especially Nonnegative Tensor Factorizations (NTF) and Nonnegative Tucker Decompositions (NTD). NMF/NTF and their extensions are increasingly used as tools in signal and image processing, and data analysis, having garnered interest due to

their capability to provide new insights and relevant information about the complex latent relationships in experimental data sets. It is suggested that NMF can provide meaningful components with physical interpretations; for example, in bioinformatics, NMF and its extensions have been successfully applied to gene expression, sequence analysis, the functional characterization of genes, clustering and text mining. As such, the authors focus on the algorithms that are most useful in practice, looking at the fastest, most robust, and suitable for large-scale models. Key features: Acts as a single source reference guide to NMF, collating information that is widely dispersed in current literature, including the authors' own recently developed techniques in the subject area. Uses generalized cost functions such as Bregman, Alpha and Beta divergences, to present practical implementations of several types of robust algorithms, in particular Multiplicative, Alternating Least Squares, Projected Gradient and Quasi Newton algorithms. Provides a comparative analysis of the different methods in order to identify approximation error and complexity. Includes pseudo codes and optimized MATLAB source codes for almost all algorithms presented in the book. The increasing interest in nonnegative matrix and tensor factorizations, as well as decompositions and sparse representation of data, will ensure that this book is essential reading for engineers, scientists, researchers, industry practitioners and graduate students across signal and image processing; neuroscience; data mining and data analysis; computer science; bioinformatics; speech processing; biomedical engineering; and multimedia.

Big Data, Cloud and Applications Youness Tabii 2018-08-13 This book constitutes the thoroughly refereed proceedings of the Third International Conference on Big Data, Cloud and Applications, BDCA 2018, held in Kenitra, Morocco, in April 2018.The 45 revised full papers

presented in this book were carefully selected from 99 submissions with a thorough double-blind review process. They focus on the following topics: big data, cloud computing, machine learning, deep learning, data analysis, neural networks, information system and social media, image processing and applications, and natural language processing.

Numerical Analysis Richard L. Burden 2010-08-09 This well-respected text gives an introduction to the theory and application of modern numerical approximation techniques for students taking a one- or two-semester course in numerical analysis. With an accessible treatment that only requires a calculus prerequisite, Burden and Faires explain how, why, and when approximation techniques can be expected to work, and why, in some situations, they fail. A wealth of examples and exercises develop students' intuition, and demonstrate the subject's practical applications to important everyday problems in math, computing, engineering, and physical science disciplines. The first book of its kind built from the ground up to serve a diverse undergraduate audience, three decades later Burden and Faires remains the definitive introduction to a vital and practical subject. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Improving Health Service Delivery in Developing Countries David H. Peters 2009 Reliable information on how health service strategies affect the poor is in short supply. In an attempt to redress the imbalance, 'Improving Health Service Delivery in Developing Countries' presents evidence on strategies for strengthening health service delivery, based on systematic reviews of the literature, quantitative and qualitative analyses of existing data, and seven country case studies. The authors also explore how changes in coverage of different health services affect each other on the national level. Finally, the authors explain why setting

international targets for health services has been not been successful and offer an alternative approach based on a specific country's experience.The book's findings are clear and hopeful: There are many ways to improve health services. Measuring change and using information to guide decisions and inform stakeholders are critically important for successful implementation. Asking difficult questions, using information intelligently, and involving key stakeholders and institutions are central to the "learning and doing" practices that underlie successful health service delivery.

Numerical Methods For Scientific And Engineering Computation M.K. Jain 2003
Numerical Methods and Modeling for Chemical Engineers Mark E. Davis 2013-11-19 This text introduces the quantitative treatment of differential equations arising from modeling physical phenomena in chemical engineering. Coverage includes recent topics such as ODE-IVPs, emphasizing numerical methods and modeling of 1984-era commercial mathematical software.

Fortran 77 and Numerical Methods C. Xavier 1994 Fortran Is The Pioneer Computer Language Originally Designed To Suit Numerical, Scientific And Engineering Computations. In Spite Of The Birth Of Several Computer Languages, Fortran Is Still Used As A Primary Tool For Programming Numerical Computations. In This Book All The Features Of Fortran 77 Have Been Elaborately Explained With The Support Of Examples And Illustrations. Programs Have Been Designed And Developed In A Systematic Way For All The Classical Problems. All The Topics Of Numerical Methods Have Been Presented In A Simple Style And Algorithms Developed. Complete Fortran 77 Programs And More Than One Sets Of Sample Data Have Been Given For Each Method. The Content Of The Book Have Been Carefully Tailored For A Course Material Of A One Semester Course For The Computer Science, Mathematics And Physics Students.

Earth Observation Science and Applications for Risk Reduction and Enhanced Resilience in Hindu Kush Himalaya Region Birendra Bajracharya 2021-08-14 This open access book is a consolidation of lessons learnt and experiences gathered from our efforts to utilise Earth observation (EO) science and applications to address environmental challenges in the Hindu Kush Himalayan region. It includes a complete package of knowledge on service life cycles including multi-disciplinary topics and practically tested applications for the HKH. It comprises 19 chapters drawing from a decade's worth of experience gleaned over the course of our implementation of SERVIR-HKH – a joint initiative of NASA, USAID, and ICIMOD – to build capacity on using EO and geospatial technology for effective decision making in the region. The book highlights SERVIR's approaches to the design and delivery of information services – in agriculture and food security; land cover and land use change, and ecosystems; water resources and hydro-climatic disasters; and weather and climate services. It also touches upon multidisciplinary topics such as service planning; gender integration; user engagement; capacity building; communication; and monitoring, evaluation, and learning. We hope that this book will be a good reference document for professionals and practitioners working in remote sensing, geographic information systems, regional and spatial sciences, climate change, ecosystems, and environmental analysis. Furthermore, we are hopeful that policymakers, academics, and other informed audiences working in sustainable development and evaluation – beyond the wider SERVIR network and well as within it – will greatly benefit from what we share here on our applications, case studies, and documentation across cross-cutting topics.

Numerical Analysis & Statistical Methods

Introduction to Real Analysis S.K. Mapa 2014-04 This text forms a bridge between courses in

calculus and real analysis. Suitable for advanced undergraduates and graduate students, it focuses on the construction of mathematical proofs. 1996 edition.

Introductory Methods of Numerical Analysis S. S. Sastry 1984-01-01

Proceedings of International Conference on Frontiers in Computing and Systems
Debotosh Bhattacharjee 2020-11-23 This book gathers outstanding research papers presented at the International Conference on Frontiers in Computing and Systems (COMSYS 2020), held on January 13–15, 2019 at Jalpaiguri Government Engineering College, West Bengal, India and jointly organized by the Department of Computer Science & Engineering and Department of Electronics & Communication Engineering. The book presents the latest research and results in various fields of machine learning, computational intelligence, VLSI, networks and systems, computational biology, and security, making it a rich source of reference material for academia and industry alike.

Computational Intelligence in Pattern Recognition Asit Kumar Das 2019-08-17 This book presents practical development experiences in different areas of data analysis and pattern recognition, focusing on soft computing technologies, clustering and classification algorithms, rough set and fuzzy set theory, evolutionary computations, neural science and neural network systems, image processing, combinatorial pattern matching, social network analysis, audio and video data analysis, data mining in dynamic environments, bioinformatics, hybrid computing, big data analytics and deep learning. It also provides innovative solutions to the challenges in these areas and discusses recent developments.

Risk Management Applications in Pharmaceutical and Biopharmaceutical Manufacturing Hamid Mollah 2013-03-18 This book contains both the theory and practice of risk management (RM) and provides the background, tools, and application of risk in pharmaceutical and

biologics manufacturing and operations. It includes case studies and specific examples of use of RM for biological and pharmaceutical product manufacture. The book also includes useful references and a bibliography for the reader who wishes to gain additional knowledge in the subject. It aids in assisting both industry and regulatory agencies to implement compliant and effective risk management approaches, and includes case studies to help with understanding.

Proceedings of International Joint Conference on Computational Intelligence Mohammad Shorif Uddin 2019-07-03 This book gathers outstanding research papers presented at the International Joint Conference on Computational Intelligence (IJCCI 2018), which was held at Daffodil International University on 14–15 December 2018. The topics covered include: collective intelligence, soft computing, optimization, cloud computing, machine learning, intelligent software, robotics, data science, data security, big data analytics, and signal and natural language processing.

Programming in Fortran 77 Noel Kantaris 1988
NUMERICAL ANALYSIS Vinay Vachharajani 2018-06-01 Description:This book is Designed to serve as a text book for the undergraduate as well as post graduate students of Mathematics, Engineering, Computer Science.COVERAGE:Concept of numbers and their accuracy, binary and decimal number system, limitations of floating point representation.Concept of error and their types, propagation of errors through process graph.Iterative methods for finding the roots of algebraic and transcendental equations with their convergence, methods to solve the set of non-linear equations, methods to obtain complex roots.Concept of matrices, the direct and iterative methods to solve a system of linear algebraic equations.Finite differences, interpolation and extrapolation methods, cubic spline, concept of curve fitting.Differentiation and integration methods.Solution of ordinary and

partial differential equations SALIENT FEATURES:Chapters include objectives, learning outcomes, multiple choice questions, exercises for practice and solutions.Programs are written in C Language for Numerical methods.Topics are explained with suitable examples.Arrangement (Logical order), clarity, detailed presentation and explanation of each topic with numerous solved and unsolved examples.Concise but lucid and student friendly presentation for derivation of formulas used in various numerical methods. Table Of Contents:Computer ArithmeticError Analysis Solution of Algebraic and Transcendental Equations Solution of System of Linear Equations and Eigen value Problems Finite Differences Interpolation Curve Fitting and Approximation Numerical Differentiation Numerical Integration Difference Equations Numerical Solution of Ordinary Differential Equations Numerical Solution of Partial Differential Equations Appendix - I Case Studies / Applications Appendix - II Synthetic Division

Bibliography Index

Permanent Magnet Synchronous Machines

Sandra Eriksson 2019-08-20 Interest in permanent magnet synchronous machines (PMSMs) is continuously increasing worldwide, especially with the increased use of renewable energy and the electrification of transports. This book contains the successful submissions of fifteen papers to a Special Issue of Energies on the subject area of "Permanent Magnet Synchronous Machines". The focus is on permanent magnet synchronous machines and the electrical systems they are connected to. The presented work represents a wide range of areas. Studies of control systems, both for permanent magnet synchronous machines and for brushless DC motors, are presented and experimentally verified. Design studies of generators for wind power, wave power and hydro power are presented. Finite element method simulations and analytical design methods are used. The presented studies represent several of the

different research fields on permanent magnet machines and electric drives.

Elements of Numerical Analysis Radhey S. Gupta 2015-05-14 This textbook provides detailed discussion on fundamental concepts and applications of numerical analysis.

Numerical Analysis for Scientists and Engineers Madhumangal Pal 2007 Develops the subject gradually by illustrating several examples for both the beginners and the advanced readers using very simple language. Classical and recently developed numerical methods are derived from mathematical and computational points of view. Numerical methods to solve ordinary and partial differential equations are also presented.

Hybrid Intelligence for Image Analysis and Understanding Siddhartha Bhattacharyya 2017-07-27 A synergy of techniques on hybrid intelligence for real-life image analysis Hybrid Intelligence for Image Analysis and Understanding brings together research on the latest results and progress in the development of hybrid intelligent techniques for faithful image analysis and understanding. As such, the focus is on the methods of computational intelligence, with an emphasis on hybrid intelligent methods applied to image analysis and understanding. The book offers a diverse range of hybrid intelligence techniques under the umbrellas of image thresholding, image segmentation, image analysis and video analysis. Key features: Provides in-depth analysis of hybrid intelligent paradigms. Divided into self-contained chapters. Provides ample case studies, illustrations and photographs of real-life examples to illustrate findings and applications of different hybrid intelligent paradigms. Offers new solutions to recent problems in computer science, specifically in the application of hybrid intelligent techniques for image analysis and understanding, using well-known contemporary algorithms. The book is essential reading for lecturers, researchers and graduate students in electrical engineering and

computer science.

Introduction To Numerical Analysis S. Baskar 2020-10-08 This book entitled "Introduction to Numerical Analysis" has been designed for Science, Engineering, Mathematics and Statistics undergraduate students as a part of their Numerical Analysis Course. A look of the contents of the book will give the reader a clear idea of the variety of numerical methods discussed and analysed. The book has been written in a very detail manner. Numerous solved and unsolved problem are given.

Nonnegative Matrix Factorization Nicolas Gillis 2020-12-18 Nonnegative matrix factorization (NMF) in its modern form has become a standard tool in the analysis of high-dimensional data sets. This book provides a comprehensive and up-to-date account of the most important aspects of the NMF problem and is the first to detail its theoretical aspects, including geometric interpretation, nonnegative rank, complexity, and uniqueness. It explains why understanding these theoretical insights is key to using this computational tool effectively and meaningfully. Nonnegative Matrix Factorization is accessible to a wide audience and is ideal for anyone interested in the workings of NMF. It discusses some new results on the nonnegative rank and the identifiability of NMF and makes available MATLAB codes for readers to run the numerical examples presented in the book. Graduate students starting to work on NMF and researchers interested in better understanding the NMF problem and how they can use it will find this book useful. It can be used in advanced undergraduate and graduate-level courses on numerical linear algebra and on advanced topics in numerical linear algebra and requires only a basic knowledge of linear algebra and optimization.

Applications of Bioinformatics in Rice Research Manoj Kumar Gupta 2021-09-24 This book summarizes the advanced computational methods for mapping high-density linkages and

quantitative trait loci in the rice genome. It also discusses the tools for analyzing metabolomics, identifying complex polyploidy genomes, and decoding the extrachromosomal genome in rice. Further, the book highlights the application of CRISPR-Cas technology and methods for understanding the evolutionary development and the de novo evolution of genes in rice. Lastly, it discusses the role of artificial intelligence and machine learning in rice research and computational tools to analyze plant-pathogen co-evolution in rice crops.

Tales Of Untold THIRTEEN Mirajul Mollah Is it possible for one to experience all the aspects of life? Of course not! Sometimes, they are to be experienced through stories of some other men who face it…. 'Tales Of Untold Thirteen' is a collection of thirteen short stories of diverse taste. Inspired by almost all the real events, these stories have been knitted by the needle of the author's imagination. The book captures lives of some ordinary guys placed at extraordinary situation. The book will be an exceptional read, as it contains stories seldom shared, songs scarcely sung- until you discover them. Fresh shock will be what remains after you finish each story as they end in utter surprise. So, journey through these tales of twists and turns, rise and fall. Hope the book will not fail to keep its promise of being an amazing read…

COMPUTER PROGRAMMING IN FORTRAN 90 AND 95 V. RAJARAMAN 1997-01-01 This book introduces Computer Programming to a beginner, using Fortran 90 and its recent extension Fortran 95. While Fortran 77 has been used for many years and is currently very popular, computer scientists have been seriously concerned about good programming practice to promote development of reliable programs. Thus, the International Standards Organization set up a group to 'modernise' Fortran and introduce new features which have made languages such as Pascal and C popular. The committee took over a decade to come up with the new standard,

Fortran 90. Fortran 90 has introduced many new features in Fortran, such as recursion, pointers, user-defined data types etc., which were hitherto available only in languages such as Pascal and C. Fortran 90 is not an evolutionary change of Fortran 77 but is drastically different. Though Fortran 77 programs can be run using a Fortran 90 compiler, Fortran 90 is so different that the author felt it was not a good idea to just revise Fortran 77 and introduce Fortran 90 in some places in the book. Thus this book is entirely new and introduces Fortran 90 from basics. In 1996 some small extensions were made to Fortran 90 and has called Fortran 95. This book also discusses these features. As all new programs in Fortran will henceforth be written in Fortran 90, it is essential for students to learn this language.The methodology of presentation, however, closely follows the one used by the author in his popular book on Fortran 77. Numerical Methods Balagurusamy 1999-07-01 Analytical Dynamics Of A Particle (hons) Ganguly & Saha 1996

An Introduction to Numerical Methods and Analysis James F. Epperson 2013-06-06 Praise for the First Edition ". . . outstandingly appealing with regard to its style, contents, considerations of requirements of practice, choice of examples, and exercises." —Zentrablatt Math ". . . carefully structured with many detailed worked examples . . ." —The Mathematical Gazette ". . . an up-to-date and user-friendly account . . ." —Mathematika An Introduction to Numerical Methods and Analysis addresses the mathematics underlying approximation and scientific computing and successfully explains where approximation methods come from, why they sometimes work (or don't work), and when to use one of the many techniques that are available. Written in a style that emphasizes readability and usefulness for the numerical methods novice, the book begins with basic, elementary material and gradually builds up to more advanced topics. A selection of concepts

required for the study of computational mathematics is introduced, and simple approximations using Taylor's Theorem are also treated in some depth. The text includes exercises that run the gamut from simple hand computations, to challenging derivations and minor proofs, to programming exercises. A greater emphasis on applied exercises as well as the cause and effect associated with numerical mathematics is featured throughout the book. An Introduction to Numerical Methods and Analysis is the ideal text for students in advanced undergraduate mathematics and engineering courses who are interested in gaining an understanding of numerical methods and numerical analysis.

Advances in the Homotopy Analysis Method Shijun Liao 2013-11-26 Unlike other analytic techniques, the Homotopy Analysis Method (HAM) is independent of small/large physical parameters. Besides, it provides great freedom to choose equation type and solution expression of related linear high-order approximation equations. The HAM provides a simple way to guarantee the convergence of solution series. Such uniqueness differentiates the HAM from all other analytic approximation methods. In addition, the HAM can be applied to solve some challenging problems with high nonlinearity. This book, edited by the pioneer and founder of the HAM, describes the current advances of this powerful analytic approximation method for highly nonlinear problems. Coming from different countries and fields of research, the authors of each chapter are top experts in the HAM and its applications. Contents:Chance and Challenge: A Brief Review of Homotopy Analysis Method (S-J Liao)Predictor Homotopy Analysis Method (PHAM) (S Abbasbandy and E Shivanian)Spectral Homotopy Analysis Method for Nonlinear Boundary Value Problems (S Motsa and P Sibanda)Stability of Auxiliary Linear Operator and Convergence-Control Parameter (R A Van Gorder)A Convergence Condition of the

Homotopy Analysis Method (M Turkyilmazoglu)Homotopy Analysis Method for Some Boundary Layer Flows of Nanofluids (T Hayat and M Mustafa)Homotopy Analysis Method for Fractional Swift–Hohenberg Equation (S Das and K Vishal)HAM-Based Package NOPH for Periodic Oscillations of Nonlinear Dynamic Systems (Y-P Liu)HAM-Based Mathematica Package BVPh 2.0 for Nonlinear Boundary Value Problems (Y-L Zhao and S-J Liao) Readership: Graduate students and researchers in applied mathematics, physics, nonlinear mechanics, engineering and finance. Keywords:Analytic Approxiamtion Method;Nonlinear;Homotopy;Applied MathematicsKey Features:The method described in the book can overcome almost all restrictions of other analytic approximation method for nonlinear problemsThis book is the first in homotopy analysis method, covering the newest advances, contributed by many top experts in different fields

Elements of Metric Spaces Manabendra Nath Mukherjee 2010
Soft Computing and Signal Processing V. Sivakumar Reddy 2021-05-20 This book presents selected research papers on current developments in the fields of soft computing and signal processing from the Third International Conference on Soft Computing and Signal Processing (ICSCSP 2020). The book covers topics such as soft sets, rough sets, fuzzy logic, neural networks, genetic algorithms and machine learning and discusses various aspects of these topics, e.g., technological considerations, product implementation and application issues.
Gene Expression Data Analysis Pankaj Barah 2021-11-08 Development of high-throughput technologies in molecular biology during the last two decades has contributed to the production of tremendous amounts of data. Microarray and RNA sequencing are two such widely used high-throughput technologies for simultaneously monitoring the expression patterns of thousands

of genes. Data produced from such experiments are voluminous (both in dimensionality and numbers of instances) and evolving in nature. Analysis of huge amounts of data toward the identification of interesting patterns that are relevant for a given biological question requires high-performance computational infrastructure as well as efficient machine learning algorithms. Cross-communication of ideas between biologists and computer scientists remains a big challenge. Gene Expression Data Analysis: A Statistical and Machine Learning Perspective has been written with a multidisciplinary audience in mind. The book discusses gene expression data analysis from molecular biology, machine learning, and statistical perspectives. Readers will be able to acquire both theoretical and practical knowledge of methods for identifying novel patterns of high biological significance. To measure the effectiveness of such algorithms, we discuss statistical and biological performance metrics that can be used in real life or in a simulated environment. This book discusses a large number of benchmark algorithms, tools, systems, and repositories that are commonly used in analyzing gene expression data and validating results. This book will benefit students, researchers, and practitioners in biology, medicine, and computer science by enabling them to acquire in-depth knowledge in statistical and machine-learning-based methods for analyzing gene expression data. Key Features: An introduction to the Central Dogma of molecular biology and information flow in biological systems A systematic overview of the methods for generating gene expression data Background knowledge on statistical modeling and machine learning techniques Detailed methodology of analyzing gene expression data with an example case study Clustering methods for finding co-expression patterns from microarray, bulkRNA, and scRNA data A large number of practical tools, systems, and repositories that are useful for computational biologists to create, analyze, and validate

biologically relevant gene expression patterns Suitable for multidisciplinary researchers and practitioners in computer science and the biological sciences