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Calculus and Its Applications Calculus & Its Applications, Global Edition Calculus with Applications Research in Computer Science and Its Applications Physics in Medical Diagnosis Computer Hardware Description Languages and Their Applications Pkg Intermediate Microeconomics+Econapps + Infotrac A First Course in Differential Equations with Modeling Applications Good Thinking Silica Glass and Its Application Differential Equations and Their Applications Analytic Trigonometry with Applications Avicenna's Medicine Advanced Calculus Elements of Structural Optimization Elementary Linear Algebra Calculus and Its Applications Data Assimilation: Methods, Algorithms, and Applications Deep Learning Mathematical Applications for the Management, Life, and Social Sciences Rewriting Logic and Its Applications Stochastic Processes and Their Applications Calculus And Its Applications, Global Edition 11th International Conference on Theory and Application of Soft Computing, Computing with Words and Perceptions and Artificial Intelligence - ICSCCW-2021 11th International Conference on Practical Applications of Computational Biology & Bioinformatics Computational Optimal Transport Applications of Fluid Dynamics Data-Driven Science and Engineering Communicating in Groups: Applications and Skills Designing Data-Intensive Applications Air Pollution Modelling and Its Application I Biochar Application Concepts of Biology Holy Bible (NIV) Atomic Layer Deposition Applications 11 Computer Vision, Imaging and Computer Graphics Theory and Applications Research in Computer Science and Its Applications Modules and Monographs in Undergraduate Mathematics and Its Applications Project: Horelick, B. Kinetics of single reactant reactions Semiconductor Wafer Bonding 11: Science, Technology, and Applications - In Honor of Ulrich Gösele Exercise Physiology

Semiconductor Wafer Bonding 11: Science, Technology, and Applications - In Honor of Ulrich Gösele Jul 26 2020 Semiconductor wafer bonding continues to evolve as a crucial technology extending new integration schemes and disseminating new product architectures in such diverse areas as high quality silicon-on-insulator (SOI) materials for electronic applications, Si-Ge strained layers, Germanium-on-Insulator (GeOI), 3D device integration, Si on quartz or glass for thin film displays, compound semiconductor-on-Si heterostructures and Micro-Electro-Mechanical Systems.

Computer Vision, Imaging and Computer Graphics Theory and Applications Oct 28 2020 This book constitutes thoroughly revised and selected papers from the 10th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications, VISIGRAPP 2015, held in Berlin, Germany, in March 2015. VISIGRAPP comprises GRAPP, International Conference on Computer Graphics Theory and Applications; IVAPP, International Conference on Information Visualization Theory and Applications; and VISAPP, International Conference on Computer Vision Theory and Applications. The 23 thoroughly revised and extended papers presented in this volume were carefully reviewed and selected from 529 submissions. The book also contains one invited talk in full-paper length. The regular papers were organized in topical sections named: computer graphics theory and applications; information visualization theory and applications; and computer vision theory and applications.

Differential Equations and Their Applications Dec 23 2022 For the past several years the Division of Applied Mathematics at Brown University has been teaching an extremely popular sophomore level differential equations course. The immense success of this course is due primarily to two factors. First, and foremost, the material is presented in a manner which is rigorous enough for our mathematics and applied mathematics majors, but yet intuitive and practical enough for our engineering, biology, economics, physics and geology majors. Secondly, numerous case histories are given of how researchers have used differential equations to solve real life problems. This book is the outgrowth of this course. It is a rigorous treatment of differential equations and their applications, and can be understood by anyone who has had a two semester course in Calculus. It contains all the material usually covered in a one or two semester course in differential equations. In addition, it possesses the following unique features which distinguish it from other textbooks on differential equations.

Designing Data-Intensive Applications May 04 2021 Data is at the center of many challenges in system design today. Difficult issues need to be figured out, such as scalability, consistency, reliability, efficiency, and maintainability. In addition, we have an overwhelming variety of tools, including relational databases, NoSQL datastores, stream or batch processors, and message brokers. What are the right choices for your application? How do you make sense of all these buzzwords? In this practical and comprehensive guide, author Martin Kleppmann helps you navigate this diverse landscape by examining the pros and cons of various technologies for processing and storing data. Software keeps changing, but the fundamental principles remain the same. With this book, software engineers and architects will learn how to apply those ideas in practice, and how to make full use of data in modern applications. Peer under the hood of the systems you already use, and learn how to use and operate them more effectively Make informed decisions by identifying the strengths and weaknesses of different tools Navigate the trade-offs around consistency, scalability, fault tolerance, and complexity Understand the distributed systems research upon which modern databases are built Peek behind the scenes of major online services, and learn from their architectures

Exercise Physiology Jun 24 2020 Especially for exercise science and physical education students, this text provides a solid foundation in theory illuminated by application and performance models to increase understanding and to help students apply what they've learned in the classroom and beyond.

Calculus & Its Applications, Global Edition Oct 01 2023 Calculus & Its Applications builds intuition with key concepts of calculus before the analytical material. For example, the authors explain the derivative geometrically before they present limits, and they introduce the definite integral intuitively via the notion of net change before they discuss Riemann sums. The strategic organisation of topics makes it easy to adjust the level of theoretical material covered. The significant applications introduced early in the course serve to motivate students and make the mathematics more accessible. Another unique aspect of the text is its intuitive use of differential equations to model a variety of phenomena in Chapter 5, which addresses applications of exponential and logarithmic functions. The full text downloaded to your computer With eBooks you can: search for key concepts, words and phrases make highlights and notes as you study share your notes with friends eBooks are downloaded to your computer and accessible either offline through the Bookshelf (available as a free download), available online and also via the iPad and Android apps. Upon purchase, you'll gain instant access to this eBook. Time limit The eBooks products do not have an expiry date. You will continue to access your digital ebook products whilst you have your Bookshelf installed.

Calculus and Its Applications Nov 02 2023

Data Assimilation: Methods, Algorithms, and Applications May 16 2022 Data assimilation is an approach that combines observations and model output, with the objective of improving the latter. This book places data assimilation into the broader context of inverse problems and the theory, methods, and algorithms that are used for their solution. It provides a framework for, and insight into, the inverse problem nature of data assimilation, emphasizing ?why? and not just ?how.? Methods and diagnostics are emphasized, enabling readers to readily apply them to their own field of study. Readers will find a comprehensive guide that is accessible to nonexperts; numerous examples and diverse applications from a broad range of domains, including geophysics and geophysical flows, environmental acoustics, medical imaging, mechanical and biomedical engineering, economics and finance, and traffic control and urban planning; and the latest methods for advanced data assimilation, combining variational and statistical approaches.

Research in Computer Science and Its Applications Sep 27 2020 This book constitutes the refereed post-conference proceedings of the 11th EAI International Conference on Research in Computer science and its Applications, CNRIA 2021, held in June 2021. Due to COVID-19 pandemic the

conference was held virtually. The 11 full papers presented were selected from 24 submissions and issue different problems in underserved and unserved areas. The papers are arranged in 3 tracks: data science and artificial intelligence; telecom and artificial intelligence; IoT and ICT applications.

Air Pollution Modelling and Its Application I Apr 02 2021

Biochar Application Mar 02 2021 *Biochar Application: Essential Soil Microbial Ecology* outlines the cutting-edge research on the interactions of complex microbial populations and their functional, structural, and compositional dynamics, as well as the microbial ecology of biochar application to soil, the use of different phyto-chemical analyses, possibilities for future research, and recommendations for climate change policy. Biochar, or charcoal produced from plant matter and applied to soil, has become increasingly recognized as having the potential to address multiple contemporary concerns, such as agricultural productivity and contaminated ecosystem amelioration, primarily by removing carbon dioxide from the atmosphere and improving soil functions. *Biochar Application* is the first reference to offer a complete assessment of the various impacts of biochar on soil and ecosystems, and includes chapters analyzing all aspects of biochar technology and application to soil, from ecogenomic analyses and application ratios to nutrient cycling and next generation sequencing. Written by a team of international authors with interdisciplinary knowledge of biochar, this reference will provide a platform where collaborating teams can find a common resource to establish outcomes and identify future research needs throughout the world. Includes multiple tables and figures per chapter to aid in analysis and understanding Includes a comprehensive table of the methods used within the contents, ecosystems, contaminants, future research, and application opportunities explored in the book Includes knowledge gaps and directions of future research to stimulate further discussion in the field and in climate change policy Outlines the latest research on the interactions of complex microbial populations and their functional, structural, and compositional dynamics Offers an assessment of the impacts of biochar on soil and ecosystems

Pkg Intermediate Microeconomics+Econapps + Infotrac Apr 26 2023 *INTERMEDIATE MICROECONOMICS* offers an exceptionally clear and concise introduction to the economic study of markets, focuses on managerial and algebraic approaches, includes relevant applications and strong examples, and gives you activities that allow you to learn by doing. Your purchase includes two time-saving resources: access to InfoTrac College Edition's online university library and online study tools through Economic Applications! With Economic Applications, you'll have online access to study guides and review materials that will help you succeed in the course. And with InfoTrac College Edition, you'll save time, save money--and eliminate the trek to the library. Log in and access a library of more than 5,000 academic and popular magazines, newspapers, and journals.

Silica Glass and Its Application Jan 24 2023 In terms of chemical composition, silica glass is the simplest amorphous substance that has been commercially utilized in many fields of application in a number of industrial branches, thanks to its physico-chemical properties. The present volume gives a comprehensive overview on the latest developments in glass technology. The influence of genetic types of raw materials on the choice of melting technology is discussed. Phase transformations of quartz-silica glass and the influence of the impurities of melting furnaces and furnace material is examined. The quartz raw materials suitable for the manufacture of clear, opaque and synthetic silica glasses, various manufacturing processes, the physico-chemical properties of silica glasses and their utilization in technological practice are reviewed in detail. The book provides a wealth of detailed information on the properties and use of silica glass which will be of considerable interest to workers in the glass industry, including those in research and development, as well as to people in the fields of electronics, electrical engineering, communication technology, optics and the chemical, power engineering and metallurgical industries. It will also be a useful information supplement on the properties and applications of silica glass for students in technical schools and universities.

Mathematical Applications for the Management, Life, and Social Sciences Mar 14 2022 Reflecting Cengage Learning's commitment to offering value for students, this new hybrid edition features the instructional presentation found in the full text while delivering all of end-of-section exercises online in Enhanced WebAssign. Access to Enhanced WebAssign includes the new media-rich Cengage YouBook, giving you an interactive learning experience with the convenience of a text that is both brief and affordable. *MATHEMATICAL APPLICATIONS FOR THE MANAGEMENT, LIFE, AND SOCIAL SCIENCES*, 10th Edition, is intended for a two-semester applied calculus or combined finite mathematics and applied calculus course. The book's concept-based approach, multiple presentation methods, and interesting and relevant applications keep students who typically take the course--business, economics, life sciences, and social sciences majors--engaged in the material. This edition broadens the book's real-life context by adding a number of environmental science and economic applications. The use of modeling has been expanded, with modeling problems now clearly labeled in the examples. Also included in the Tenth Edition is a brief review of algebra to prepare students with different backgrounds for the material in later chapters.

11th International Conference on Theory and Application of Soft Computing, Computing with Words and Perceptions and Artificial Intelligence - ICSCCW-2021 Nov 09 2021 This book presents the proceedings of the 11th Conference on Theory and Applications of Soft Computing, Computing with Words and Perceptions and Artificial Intelligence, ICSCCW-2021, held in Antalya, Turkey, on August 23-24, 2021. The general scope of the book covers uncertain computation, decision making under imperfect information, neuro-fuzzy approaches, natural language processing, and other areas. The topics of the papers include theory and application of soft computing, computing with words, image processing with soft computing, intelligent control, machine learning, fuzzy logic in data mining, soft computing in business, economics, engineering, material sciences, biomedical engineering, and health care. This book is a useful guide for academics, practitioners, and graduates in fields of soft computing and computing with words. It allows for increasing of interest in development and applying of these paradigms in various real-life fields.

Computer Hardware Description Languages and Their Applications May 28 2023

Concepts of Biology Jan 29 2021 *Concepts of Biology* is designed for the single-semester introduction to biology course for non-science majors, which for many students is their only college-level science course. As such, this course represents an important opportunity for students to develop the necessary knowledge, tools, and skills to make informed decisions as they continue with their lives. Rather than being mired down with facts and vocabulary, the typical non-science major student needs information presented in a way that is easy to read and understand. Even more importantly, the content should be meaningful. Students do much better when they understand why biology is relevant to their everyday lives. For these reasons, *Concepts of Biology* is grounded on an evolutionary basis and includes exciting features that highlight careers in the biological sciences and everyday applications of the concepts at hand. We also strive to show the interconnectedness of topics within this extremely broad discipline. In order to meet the needs of today's instructors and students, we maintain the overall organization and coverage found in most syllabi for this course. A strength of *Concepts of Biology* is that instructors can customize the book, adapting it to the approach that works best in their classroom. *Concepts of Biology* also includes an innovative art program that incorporates critical thinking and clicker questions to help students understand--and apply--key concepts.

Rewriting Logic and Its Applications Feb 10 2022 This book constitutes the thoroughly refereed post-workshop proceedings of the 11th International Workshop on Rewriting Logic and its Applications, WRLA 2016, held as a satellite event of ETAPS 2016, in Eindhoven, The Netherlands, in April 2016. The 8 revised full papers presented together with 2 invited papers and 3 abstracts were carefully reviewed and selected from 14 submissions. The papers cover several topics such as: foundations; rewriting as a logical and semantic framework; rewriting languages; verification techniques; and applications.

Research in Computer Science and Its Applications Jul 30 2023 This book constitutes the refereed post-conference proceedings of the 11th EAI International Conference on Research in Computer science and its Applications, CNRIA 2021, held in June 2021. Due to COVID-19 pandemic the conference was held virtually. The 11 full papers presented were selected from 24 submissions and issue different problems in underserved and unserved areas. The papers are arranged in 3 tracks: data science and artificial intelligence; telecom and artificial intelligence; IoT and ICT applications.

Good Thinking Feb 22 2023 These sparkling essays by a gifted thinker offer philosophical views on the roots of statistical interference. A pioneer in

the early development of computing, Irving J. Good made fundamental contributions to the theory of Bayesian inference and was a key member of the team that broke the German Enigma code during World War II. Good maintains that a grasp of probability is essential to answering both practical and philosophical questions. This compilation of his most accessible works concentrates on philosophical rather than mathematical subjects, ranging from rational decisions, randomness, and the nature of probability to operational research, artificial intelligence, cognitive psychology, and chess. These twenty-three self-contained articles represent the author's work in a variety of fields but are unified by a consistently rational approach. Five closely related sections explore Bayesian rationality; probability; corroboration, hypothesis testing, and simplicity; information and surprise; and causality and explanation. A comprehensive index, abundant references, and a bibliography refer readers to classic and modern literature. Good's thought-provoking observations and memorable examples provide scientists, mathematicians, and historians of science with a coherent view of probability and its applications.

Data-Driven Science and Engineering Jul 06 2021 A textbook covering data-science and machine learning methods for modelling and control in engineering and science, with Python and MATLAB®.

Holy Bible (NIV) Dec 31 2020 The NIV is the world's best-selling modern translation, with over 150 million copies in print since its first full publication in 1978. This highly accurate and smooth-reading version of the Bible in modern English has the largest library of printed and electronic support material of any modern translation.

Analytic Trigonometry with Applications Nov 21 2022 Barnett, Analytic Trigonometry is a text that students can actually read, understand, and apply. Concept development moves from the concrete to abstract to engage the student. Almost every concept is illustrated by an example followed by a matching problem allowing students to practice knowledge precisely when they acquire it. To gain student interest quickly, the text moves directly into trigonometric concepts and applications and reviews essential material from prerequisite courses only as needed. Extensive chapter review summaries, chapter and cumulative review exercises with answers keyed to the corresponding text sections, effective use of color comments and annotations, and prominent displays of important material all help the student master the subject. Analytic Trigonometry 11th edition includes updated applications from a range of different fields to convince all students that trigonometry is really useful. The seamless integration of Barnett, Analytical Trigonometry 11th edition with WileyPLUS, a research-based, online environment for effective teaching and learning, builds student confidence in mathematics because it takes the guesswork out of studying by providing them with a clear roadmap: what to do, how to do it, and whether they did it right. WileyPLUS sold separately from text.

Physics in Medical Diagnosis Jun 28 2023 Physics has been applied to medical diagnosis for very nearly 400 years, and has now become an essential element of medical practice. This book concentrates on the theoretical basis of the physics which supports diagnostic techniques in modern clinical practice. Arising out of over a decade of teaching a course on medical physics to third year undergraduate students, the book has been structured so that individuals with a non-physics background, such as medical students or practitioners, can also benefit.

Computational Optimal Transport Sep 07 2021 The goal of Optimal Transport (OT) is to define geometric tools that are useful to compare probability distributions. Their use dates back to 1781. Recent years have witnessed a new revolution in the spread of OT, thanks to the emergence of approximate solvers that can scale to sizes and dimensions that are relevant to data sciences. Thanks to this newfound scalability, OT is being increasingly used to unlock various problems in imaging sciences (such as color or texture processing), computer vision and graphics (for shape manipulation) or machine learning (for regression, classification and density fitting). This monograph reviews OT with a bias toward numerical methods and their applications in data sciences, and sheds lights on the theoretical properties of OT that make it particularly useful for some of these applications. Computational Optimal Transport presents an overview of the main theoretical insights that support the practical effectiveness of OT before explaining how to turn these insights into fast computational schemes. Written for readers at all levels, the authors provide descriptions of foundational theory at two-levels. Generally accessible to all readers, more advanced readers can read the specially identified more general mathematical expositions of optimal transport tailored for discrete measures. Furthermore, several chapters deal with the interplay between continuous and discrete measures, and are thus targeting a more mathematically-inclined audience. This monograph will be a valuable reference for researchers and students wishing to get a thorough understanding of Computational Optimal Transport, a mathematical gem at the interface of probability, analysis and optimization.

Calculus And Its Applications, Global Edition Dec 11 2021 For one-semester courses in applied calculus. Calculus and Its Applications, 11th Edition, remains a best-selling text because of its accessible presentation that anticipates student needs. The writing style is ideal for today's students, providing intuitive explanations that work with the carefully crafted artwork to help them visualise new calculus concepts. Additionally, the text's numerous and up-to-date applications from business, economics, life sciences, and social sciences help motivate students. Algebra diagnostic and review material is available for those who need to strengthen basic skills. Every aspect of this revision is designed to motivate and help students to more readily understand and apply the mathematics. The full text downloaded to your computer With eBooks you can: search for key concepts, words and phrases make highlights and notes as you study share your notes with friends eBooks are downloaded to your computer and accessible either offline through the Bookshelf (available as a free download), available online and also via the iPad and Android apps. Upon purchase, you'll gain instant access to this eBook. Time limit The eBooks products do not have an expiry date. You will continue to access your digital ebook products whilst you have your Bookshelf installed.

Modules and Monographs in Undergraduate Mathematics and Its Applications Project: Horelick, B. Kinetics of single reactant reactions Aug 26 2020
A First Course in Differential Equations with Modeling Applications Mar 26 2023

Calculus and Its Applications Jun 16 2022 Calculus and Its Applications has, for years, been a best-selling text for one simple reason: it anticipates, then meets the needs of today's applied calculus student. Knowing that calculus is a course in which students typically struggle--both with algebra skills and visualizing new calculus concepts--Bittinger and Ellenbogen speak to students in a way they understand, taking great pains to provide clear and careful explanations. Since most students taking this course will go on to careers in the business world, large quantities of real data, especially as they apply to business, are included as well.

Calculus with Applications Aug 31 2023 Calculus with Applications, Tenth Edition (also available in a Brief Version containing Chapters 1-9) by Lial, Greenwell, and Ritchey, is our most applied text to date, making the math relevant and accessible for students of business, life science, and social sciences. Current applications, many using real data, are incorporated in numerous forms throughout the book, preparing students for success in their professional careers. With this edition, students will find new ways to get involved with the material, such as "Your Turn" exercises and "Apply It" vignettes that encourage active participation. Note: This is the standalone book, if you want the book/access card order the ISBN below; 0321760026 / 9780321760029 Calculus with Applications plus MyMathLab with Pearson eText -- Access Card Package Package consists of: 0321431308 / 9780321431301 MyMathLab/MyStatLab -- Glue-in Access Card 0321654064 / 9780321654069 MyMathLab Inside Star Sticker 0321749006 / 9780321749000 Calculus with Applications

Elementary Linear Algebra Jul 18 2022

Avicenna's Medicine Oct 21 2022 The first contemporary translation of the 1,000-year-old text at the foundation of modern medicine and biology • Presents the actual words of Avicenna translated directly from the original Arabic, removing the inaccuracies and errors of most translators • Explains current medical interpretations and ways to apply Avicenna's concepts today, particularly for individualized medicine • Reveals how Avicenna's understanding of the "humors" corresponds directly with the biomedical classes known today as proteins, lipids, and organic acids A millennium after his life, Avicenna remains one of the most highly regarded physicians of all time. His Canon of Medicine, also known as the Qanun, is one of the most famous and influential books in the history of medicine, forming the basis for our modern understanding of human health and disease. It focused not simply on the treatment of symptoms, but on finding the cause of illness through humoral diagnosis—a method still used in traditional Unani and Ayurvedic medicines in India. Originally written in Arabic, Avicenna's Canon was long ago translated into Latin, Persian, and

Urdu, yet many of the inaccuracies from those first translations linger in current English translations. Translated directly from the original Arabic, this volume includes detailed commentary to explain current biomedical interpretations of Avicenna's theories and ways to apply his treatments today, particularly for individualized medicine. It shows how Avicenna's understanding of the humors corresponds directly with the biomedical definition of proteins, lipids, and organic acids: the nutrient building blocks of our blood and body. With this new translation of the first volume of his monumental work, Avicenna's Canon becomes just as relevant today as it was 1,000 years ago.

11th International Conference on Practical Applications of Computational Biology & Bioinformatics Oct 09 2021 Biological and biomedical research are increasingly driven by experimental techniques that challenge our ability to analyse, process and extract meaningful knowledge from the underlying data. The impressive capabilities of next-generation sequencing technologies, together with novel and constantly evolving, distinct types of omics data technologies, have created an increasingly complex set of challenges for the growing fields of Bioinformatics and Computational Biology. The analysis of the datasets produced and their integration call for new algorithms and approaches from fields such as Databases, Statistics, Data Mining, Machine Learning, Optimization, Computer Science and Artificial Intelligence. Clearly, Biology is more and more a science of information and requires tools from the computational sciences. In the last few years, we have seen the rise of a new generation of interdisciplinary scientists with a strong background in the biological and computational sciences. In this context, the interaction of researchers from different scientific fields is, more than ever, of foremost importance in boosting the research efforts in the field and contributing to the education of a new generation of Bioinformatics scientists. The PACBB'17 conference was intended to contribute to this effort and promote this fruitful interaction, with a technical program that included 39 papers spanning many different sub-fields in Bioinformatics and Computational Biology. Further, the conference promoted the interaction of scientists from diverse research groups and with a distinct background (computer scientists, mathematicians, biologists).

Elements of Structural Optimization Aug 19 2022 The field of structural optimization is still a relatively new field undergoing rapid changes in methods and focus. Until recently there was a severe imbalance between the enormous amount of literature on the subject, and the paucity of applications to practical design problems. This imbalance is being gradually redressed now. There is still no shortage of new publications, but there are also exciting applications of the methods of structural optimizations in the automotive, aerospace, civil engineering, machine design and other engineering fields. As a result of the growing pace of applications, research into structural optimization methods is increasingly driven by real-life problems. Most engineers who design structures employ complex general-purpose software packages for structural analysis. Often they do not have any access to the source the details of program, and even more frequently they have only scant knowledge of the structural analysis algorithms used in this software packages. Therefore the major challenge faced by researchers in structural optimization is to develop methods that are suitable for use with such software packages. Another major challenge is the high computational cost associated with the analysis of many complex real-life problems. In many cases the engineer who has the task of designing a structure cannot afford to analyze it more than a handful of times.

Communicating in Groups: Applications and Skills Jun 04 2021 Communicating in Groups offers a concise, step-by-step introduction to the theory and practice of small group communication and teaches students to develop and apply critical thinking skills in group problem-solving situations. The book continues to synthesize current small group theory and research while presenting the material in a practical and accessible manner for students interested in the dynamics of small group communication. The eighth edition marks the first time two central chapters on communication are integrated into one chapter, capturing key principles of both verbal and non-verbal small group behavior within a new definition of communication. With the firm belief that group participation can be an uplifting, energizing experience, authors Kathy Adams and Gloria Galanes give students the tools they will need to achieve this outcome. Research and theory are presented with a focus on what is important to students—understanding their group experiences and making them effective communicators.

Stochastic Processes and Their Applications Jan 12 2022

Deep Learning Apr 14 2022 An introduction to a broad range of topics in deep learning, covering mathematical and conceptual background, deep learning techniques used in industry, and research perspectives. "Written by three experts in the field, Deep Learning is the only comprehensive book on the subject." —Elon Musk, cochair of OpenAI; cofounder and CEO of Tesla and SpaceX Deep learning is a form of machine learning that enables computers to learn from experience and understand the world in terms of a hierarchy of concepts. Because the computer gathers knowledge from experience, there is no need for a human computer operator to formally specify all the knowledge that the computer needs. The hierarchy of concepts allows the computer to learn complicated concepts by building them out of simpler ones; a graph of these hierarchies would be many layers deep. This book introduces a broad range of topics in deep learning. The text offers mathematical and conceptual background, covering relevant concepts in linear algebra, probability theory and information theory, numerical computation, and machine learning. It describes deep learning techniques used by practitioners in industry, including deep feedforward networks, regularization, optimization algorithms, convolutional networks, sequence modeling, and practical methodology; and it surveys such applications as natural language processing, speech recognition, computer vision, online recommendation systems, bioinformatics, and videogames. Finally, the book offers research perspectives, covering such theoretical topics as linear factor models, autoencoders, representation learning, structured probabilistic models, Monte Carlo methods, the partition function, approximate inference, and deep generative models. Deep Learning can be used by undergraduate or graduate students planning careers in either industry or research, and by software engineers who want to begin using deep learning in their products or platforms. A website offers supplementary material for both readers and instructors.

Atomic Layer Deposition Applications 11 Nov 29 2020

Advanced Calculus Sep 19 2022 An authorised reissue of the long out of print classic textbook, Advanced Calculus by the late Dr Lynn Loomis and Dr Shlomo Sternberg both of Harvard University has been a revered but hard to find textbook for the advanced calculus course for decades. This book is based on an honors course in advanced calculus that the authors gave in the 1960's. The foundational material, presented in the unstarred sections of Chapters 1 through 11, was normally covered, but different applications of this basic material were stressed from year to year, and the book therefore contains more material than was covered in any one year. It can accordingly be used (with omissions) as a text for a year's course in advanced calculus, or as a text for a three-semester introduction to analysis. The prerequisites are a good grounding in the calculus of one variable from a mathematically rigorous point of view, together with some acquaintance with linear algebra. The reader should be familiar with limit and continuity type arguments and have a certain amount of mathematical sophistication. As possible introductory texts, we mention Differential and Integral Calculus by R Courant, Calculus by T Apostol, Calculus by M Spivak, and Pure Mathematics by G Hardy. The reader should also have some experience with partial derivatives. In overall plan the book divides roughly into a first half which develops the calculus (principally the differential calculus) in the setting of normed vector spaces, and a second half which deals with the calculus of differentiable manifolds.

Applications of Fluid Dynamics Aug 07 2021 The book presents high-quality papers presented at 3rd International Conference on Applications of Fluid Dynamics (ICAFD 2016) organized by Department of Applied Mathematics, ISM Dhanbad, Jharkhand, India in association with Fluid Mechanics Group, University of Botswana, Botswana. The main theme of the Conference is "Sustainable Development in Africa and Asia in context of Fluid Dynamics and Modeling Approaches". The book is divided into seven sections covering all applications of fluid dynamics and their allied areas such as fluid dynamics, nanofluid, heat and mass transfer, numerical simulations and investigations of fluid dynamics, magnetohydrodynamics flow, solute transport modeling and water jet, and miscellaneous. The book is a good reference material for scientists and professionals working in the field of fluid dynamics.