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Principles of Structure, Fifth Edition Principles of Structural Design Structural Design from First Principles Principles of Structural Design Principles of Structural Design Principles of Structure Structural Analysis Principles of Structural Stability Principles of Structures General Chemistry Principles and Structures of FPGAs Basic Principles of Concrete Structures Principles of Social Structure Structural Design from First Principles Principles of Structural Stability Theory Principles of Nucleic Acid Structure Stability of Structures Inorganic Chemistry Principles of Reinforced Concrete Principles of Protein Structure Design Principles of Ships and Marine Structures Exploring Protein Structure: Principles and Practice Anti-Tooke Principles of Nucleic Acid Structure Crystal Structure Analysis Space Structures Principles of Structural Geology Principles and Practice of Structural Equation Modeling, Fourth Edition Principles of Data Structures Using C and C++ Principles of Reinforced Concrete Design Structural Principles in EU External Relations Law Principles of Structural Linguistics Prediction of Protein Structure and the Principles of Protein Conformation Construction Materials for Interior Design Sociocultural Systems Joining of Polymer-Metal Hybrid Structures Marine Structural Design Perception, Cognition, and Development Principles of Nuclear Structure and Function Basic Principles of Analysis and Design of an RCC Framed Structures

Basic Principles of Analysis and Design of an RCC Framed Structures Jun 27 2019

*Principles and Practice of Structural Equation Modeling, Fourth Edition Jul 09 2020 New to This Edition *Extensively revised to cover important new topics: Pearl' s graphing theory and SCM, causal inference frameworks, conditional process modeling, path models for longitudinal data, item response theory, and more. *Chapters on best practices in all stages of SEM, measurement invariance in confirmatory factor analysis, and significance testing issues and bootstrapping. *Expanded coverage of psychometrics. *Additional computer tools: online files for all detailed examples, previously provided in EQS, LISREL, and Mplus, are now also given in Amos, Stata, and R (lavaan). *Reorganized to cover the specification, identification, and analysis of observed variable models separately from latent variable models. Pedagogical Features *Exercises with answers, plus end-of-chapter annotated lists of further reading. *Real examplesof troublesome data, demonstrating how to handle typical problems in analyses.*

Sociocultural Systems Dec 02 2019 Macrosociology--the study of large-scale social structures andthe fundamental principles of social organization--was the styleof sociology practiced by the founders of the discipline. Today, thesocial theories of Karl Marx, Max Weber, Émile Durkheim, and HerbertSpencer (among others) are commonly studied as part of the history ofthe field, but, although the macrosociological approach that thesethinkers advocated is still employed, it no longer dominates thediscipline. Instead, sociologists typically adopt a narrower focus,specializing in areas such as social psychology, medicine, religion, orthe study of social stratification. Examining the bigger picture is atask often left to public intellectuals. Sociocultural Systems aims to reinstate macrosciology asthe heart of the discipline by demonstrating that both classical andcontemporary macrosociologists stand upon common ground. Focusing onthe broad issues that concerned the founders, Elwell addressesquestions such as: Historically, what factors accounted for the origin,survival, and evolution of sociocultural systems? Why were somesocieties more technologically advanced than others? What is the originof capitalism? What factors determine the allocation of goods andservices within and among societies? What effects do changes ingovernment and economic institutions have on communities? Elwell argues that, as evolution does for biology, themacrosociological paradigm offers an analytical strategy that can beused both to guide and prioritize research in all of the myriadspecialties within sociology and to lay forth an orderly body ofknowledge for students. Clearly articulating important sociologicalprinciples, Sociocultural Systems provides a criticalunderstanding of social institutions and issues, while also furnishinga framework for possible solutions to the perennial social crises thatare part and parcel of the development of human societies.

Principles of Reinforced Concrete Design May 07 2020 Encouraging creative uses of reinforced concrete, Principles of Reinforced Concrete Design draws a clear distinction between fundamentals and professional consensus. This text presents a mixture of fundamentals along with practical methods. It provides the fundamental concepts required for designing reinforced concrete (RC) structures, emphasizing principles based on mechanics, experience, and experimentation, while encouraging practitioners to consult their local building codes. The book presents design choices that fall in line with the boundaries defined by professional consensus (building codes), and provides reference material outlining the design criteria contained in building codes. It includes applications for both building and bridge structural design, and it is applicable worldwide, as it is not dependent upon any particular codes. Contains concise coverage that can be taught in one semester Underscores the fundamental principles of behavior Provides students with an understanding of the principles upon which codes are based Assists in navigating the labyrinth of ever-changing codes Fosters an inherent understanding of design The text also provides a brief history of reinforced concrete. While the initial attraction for using reinforced concrete in building construction has been attributed to its fire resistance, its increase in popularity was also due to the creativity of engineers who kept extending its limits of application. Along with height achievement, reinforced concrete gained momentum by providing convenience, plasticity, and low-cost economic appeal. Principles of Reinforced Concrete Design provides undergraduate students with the fundamentals of mechanics and direct observation, as well as the concepts required to design reinforced concrete (RC) structures, and applies to both building and bridge structural design.

Principles and Structures of FPGAs Dec 26 2021 This comprehensive textbook on the field programmable gate array (FPGA) covers its history, fundamental knowledge, architectures, device technologies, computer-aided design technologies, design tools, examples of application, and future trends. Programmable logic devices represented by FPGAs have been rapidly developed in recent years and have become key electronic devices used in most IT products. This book provides both complete introductions suitable for students and beginners, and high-level techniques useful for engineers and researchers in this field. Differently developed from usual integrated circuits, the FPGA has unique structures, design methodologies, and application techniques. Allowing programming by users, the device can dramatically reduce the rising cost of development in advanced semiconductor chips. The FPGA is now driving the most advanced semiconductor processes and is an all-in-one platform combining memory, CPUs, and various peripheral interfaces. This book introduces the FPGA from various aspects for readers of different levels. Novice learners can acquire a fundamental knowledge of the FPGA, including its history, from Chapter 1; the first half of Chapter 2; and Chapter 4. Professionals who are already familiar with the device will gain a deeper understanding of the structures and design methodologies from Chapters 3 and 5. Chapters 6–8 also provide advanced techniques and cutting-edge applications and trends useful for professionals. Although the first parts are mainly suitable for students, the advanced sections of the book will be valuable for professionals in

acquiring an in-depth understanding of the FPGA to maximize the performance of the device.

*Principles of Nuclear Structure and Function Jul 29 2019 The nucleus guides the life processes of the cell by directing cellular reproduction, differentiation during development, and metabolism. The study of the structure and function of the nucleus along with its genetic material serves as the foundation for the science of genetics. Principles of Nuclear Structure and Function provides a comprehensive overview of the cell nucleus by illustrating the connection between function and the architecture of the nucleus. Richly illustrated throughout, each chapter includes an overview, detailed examples, summary points, references, and callout boxes highlighting methods and cutting-edge technology. The appendix provides a useful list of related Web sites. Some of the subjects reviewed within Principles of Nuclear Structure and Function include: * Nuclear structure, replication, damage, and repair * Regulation of gene expression * The cell cycle * Meiosis and recombination This timely volume presents functional studies within their proper structural context and is an informative profile of the cell and molecular biology in nuclei and chromatin. For those studying cell biology, along with molecular and cell biologists, geneticists, and reproductive biologists, Principles of Nuclear Structure and Function is a definitive resource. Visit www.wiley.com/cook for supplementary information, including additional Web resources, downloadable figures, and discussion questions.*

Principles of Structural Design Jul 01 2022 Many important advances in designing modern structures have occurred over the last several years. Structural engineers need an authoritative source of information that thoroughly and concisely covers the foundational principles of the field. Comprising chapters selected from the second edition of the best-selling Handbook of Structural Engineering,

Structural Design from First Principles Sep 22 2021 This enlightening textbook for undergraduates on civil engineering degree courses explains structural design from its mechanical principles, showing the speed and simplicity of effective design from first principles. This text presents good approximate solutions to complex design problems, such as "Wembley-Arch" type structures, the design of thin-walled structures, and long-span box girder bridges. Other more code-based textbooks concentrate on relatively simple member design, and avoid some of the most interesting design problems because code compliant solutions are complex. Yet these problems can be addressed by relatively manageable techniques. The methods outlined here enable quick, early stage, "ball-park" design solutions to be considered, and are also useful for checking finite element analysis solutions to complex problems. The conventions used in the book are in accordance with the Eurocodes, especially where they provide convenient solutions that can be easily understood by students. Many of the topics, such as composite beam design, are straight applications of Eurocodes, but with the underlying theory fully explained. The techniques are illustrated through a series of worked examples which develop in complexity, with the more advanced questions forming extended exam type questions. A comprehensive range of fully worked tutorial questions are provided at the end of each section for students to practice in preparation for closed book exams.

Space Structures Sep 10 2020

Prediction of Protein Structure and the Principles of Protein Conformation Feb 02 2020 The prediction of the conformation of proteins has developed from an intellectual exercise into a serious practical endeavor that has great promise to yield new stable enzymes, products of pharmacological significance, and catalysts of great potential. With the application of predic tion gaining momentum in various fields, such as enzymology and immunology, it was deemed time that a volume be published to make available a thorough evaluation of present methods, for researchers in this field to expound fully the virtues of various algorithms, to open the field to a wider audience, and to offer the scientific public an opportunity to examine carefully its successes and failures. In this manner the practitioners of the art could better evaluate the tools and the output so that their expectations and applications could be more realistic. The editor has assembled chapters by many of the main contributors to this area and simultaneously placed their programs at three national resources so that they are readily available to those who wish to apply them to their personal interests. These algorithms, written by their originators, when utilized on pes or larger computers, can instantaneously take a primary amino acid sequence and produce a two-or three-dimensional artistic image that gives satisfaction to one's esthetic sensibilities and food for thought concerning the structure and function of proteins. It is in this spirit that this volume was envisaged.

Structural Design from First Principles Sep 03 2022 This enlightening textbook for undergraduates on civil engineering degree courses explains structural design from its mechanical principles, showing the speed and simplicity of effective design from first principles. This text presents good approximate solutions to complex design problems, such as "Wembley-Arch" type structures, the design of thin-walled structures, and long-span box girder bridges. Other more code-based textbooks concentrate on relatively simple member design, and avoid some of the most interesting design problems because code compliant solutions are complex. Yet these problems can be addressed by relatively manageable techniques. The methods outlined here enable quick, early stage, "ball-park" design solutions to be considered, and are also useful for checking finite element analysis solutions to complex problems. The conventions used in the book are in accordance with the Eurocodes, especially where they provide convenient solutions that can be easily understood by students. Many of the topics, such as composite beam design, are straight applications of Eurocodes, but with the underlying theory fully explained. The techniques are illustrated through a series of worked examples which develop in complexity, with the more advanced questions forming extended exam type questions. A comprehensive range of fully worked tutorial questions are provided at the end of each section for students to practice in preparation for closed book exams.

Design Principles of Ships and Marine Structures Feb 13 2021 The Definitive Reference for Designers and Design Students A solid grasp of the fundamentals of materials, along with a thorough understanding of load and design techniques, provides the components needed to complete a marine platform design. Design Principles of Ships and Marine Structures details every facet of ship design and design integration, and highlights the design aspects that must be put together to create an integrated whole product. This book discusses naval architecture and marine engineering applications and principles relevant to the design of various systems, examines advanced numerical techniques that can be applied to maritime design procedure at the concept design stage, and offers a comprehensive approach to the subject of ship design. Covers the Entire Sphere of Marine Design The book begins with an introduction to marine design and the marine environment, describing many of the marine products that are used for transportation, defense and the exploitation of marine resources. It also discusses stability issues relevant to ship design, as well as hydrodynamic aspects of resistance, propulsion, sea keeping and maneuvering, and their effects on design. In addition to covering the various systems and sub-systems that go into making a complex product to be used in maritime environment, the author explains engineering economics and its application in ship design, and provides examples wherever necessary. Written by an author with more than 35 years of teaching experience, this book: Describes various design methodologies such as sequential design process with the application of concurrent engineering and set based design factors in the use of computer-aided design techniques Highlights the shape design methodology of ship forms and layout design principles Considers design aspects relative to safety and risk assessment Introduces the design for production aspects in marine product development Discusses design principles for sustainability Explains the principles of numerical optimization for decision-making Design Principles of Ships and Marine Structures focuses on ship design efficiency, safety, sustainability, production, and management, and appeals to students and design professionals in the field of shipping, shipbuilding and offshore engineering.

Principles of Reinforced Concrete Apr 17 2021 Principle of Reinforced Concrete introduces the main properties of structural concrete and its mechanical behavior under various conditions as well as all aspects of the combined function of reinforcement and concrete. Based on the experimental investigation, the variation regularity of mechanical behavior, working mechanism, and calculation method are presented for the

structural member under various internal forces. After examining the basic principle and analysis method of reinforced concrete, the book covers some extreme circumstances, including fatigue load, earthquake, explosion, high temperature (fire accident), and durability damage, and the special responses and analysis methods of its member under these conditions. This work is valuable as a textbook for post-graduates, and can be used as a reference for university teachers and under-graduates in the structural engineering field. It is also useful for structural engineers engaged in scientific research, design, or construction. Focuses on the principles of reinforced concrete, providing professional and academic readers with a single volume reference Experimental data enables readers to make full use of the theory presented The mechanical behavior of both concrete and reinforcement materials, plus the combined function of both are covered, enabling readers to understand the behaviors of reinforced concrete structures and their members Covers behavior of the materials and members under normal and extreme conditions

Principles of Protein Structure Mar 17 2021 New textbooks at all levels of chemistry appear with great regularity. Some fields like basic biochemistry, organic reaction mechanisms, and chemical thermodynamics are well represented by many excellent texts, and new or revised editions are published sufficiently often to keep up with progress in research. However, some areas of chemistry, especially many of those taught at the graduate level, suffer from a real lack of up-to-date textbooks. The most serious needs occur in fields that are rapidly changing. Textbooks in these subjects usually have to be written by scientists actually involved in the research which is advancing the field. It is not often easy to persuade such individuals to set time aside to help spread the knowledge they have accumulated. Our goal, in this series, is to pinpoint areas of chemistry where recent progress has outpaced what is covered in any available textbooks, and then seek out and persuade experts in these fields to produce relatively concise but instructive introductions to their fields. These should serve the needs of one semester or one quarter graduate courses in chemistry and biochemistry. In some cases the availability of texts in active research areas should help stimulate the creation of new courses.

Construction Materials for Interior Design Jan 03 2020 The first handbook for interior designers on the properties of material used in constructing and finishing buildings: stone, marble, wood, brick, tile, concrete, plaster and drywall, glass, paint, plastics, wallcoverings, flooring, and carpets.

Perception, Cognition, and Development Aug 29 2019 This volume is based on a conference held at Dartmouth College's Minary Conference Center in Holdemess, New Hampshire, June 4 -7 , 1981. The conference brought together a number of investigators whose separate lines of inquiry bear in significant ways on the relationships among perception, cognition, and development. The purpose was to consider interactions among these basic processes not only as a critical facet of the research programs of the participants but also as a central conceptual problem for current theoretical psychology. First published in 1983. Routledge is an imprint of Taylor & Francis, an informa company.

Principles of Structural Stability Theory Aug 22 2021

Joining of Polymer-Metal Hybrid Structures Oct 31 2019 A comprehensive introduction to the concepts of joining technologies for hybrid structures This book introduces the concepts of joining technology for polymer-metal hybrid structures by addressing current and new joining methods. This is achieved by using a balanced approach focusing on the scientific features (structural, physical, chemical, and metallurgical/polymer science phenomena) and engineering properties (mechanical performance, design, applications, etc.) of the currently available and new joining processes. It covers such topics as mechanical fastening, adhesive bonding, advanced joining methods, and statistical analysis in joining technology. Joining of Polymer-Metal Hybrid Structures: Principles and Applications is structured by joining principles, in adhesion-based, mechanical fastened, and direct-assembly methods. The book discusses such recent technologies as friction riveting, friction spot joining and ultrasonic joining. This is used for applications where the original base material characteristics must remain unchanged. Additional sections cover the main principles of statistical analysis in joining technology (illustrated with examples from the field of polymer-metal joining). Joining methods discussed include mechanical fastening (bolting, screwing, riveting, hinges, and fits of polymers and composites), adhesive bonding, and other advanced joining methods (friction staking, laser welding, induction welding, etc.). Provides a combined engineering and scientific approach used to describe principles, properties, and applications of polymer-metal hybrid joints Describes the current developments in design of experiments and statistical analysis in joining technology with emphasis on joining of polymer-metal hybrid structures Covers recent innovations in joining technology of polymer-metal hybrid joints including friction riveting, friction spot joining, friction staking, and ultrasonic joining Principles illustrated by pictures, 3D-schemes, charts, and drawings using examples from the field of polymer-metal joining Joining of Polymer-Metal Hybrid Structures: Principles and Applications will appeal to chemical, polymer, materials, metallurgical, composites, mechanical, process, product, and welding engineers, scientists and students, technicians, and joining process professionals.

Inorganic Chemistry May 19 2021 This edition contains rewritten chapters throughout, with expanded coverage of symmetry and group theory and related areas such as spectroscopy and crystallography. Reorganized chapters on bonding, coordination chemistry and organometallic chemistry are also included.

Principles of Structure May 31 2022 Since its first publication in 1974, Principles of Structure has established itself at the forefront of introductory texts for students of architecture, building, and project management seeking a basic understanding of the behavior and design of building structures. It provides a simple quantitative introduction to structural engineering, while also drawing connections to real buildings that are more complex. Retaining the style and format of earlier editions, this fifth edition brings the text and examples into alignment with international practice. It also features six new buildings from around the world, illustrating the principles described in the text. The book begins with a chapter explaining forces and their effects, while other chapters cover ties and struts, loadings, graphical statics, bracings, shears and moments, stresses, deflections, and beam design. There is also an appendix with a fuller explanation of fundamentals for readers unfamiliar with the basic concepts of geometry and statics.Principles of Structure offers a unique format with right-hand pages containing text and left-hand pages containing complementary commentary including explanations and expansions of points made in the text and worked examples. This cross-referencing gives readers a range of perspectives and a deeper understanding of each topic. The simple mathematical approach and logical progression—along with the hints and suggestions, worked examples and problem sheets—give beginners straightforward access to elementary structural engineering.

Principles of Data Structures Using C and C++ Jun 07 2020 About the Book: Principles of DATA STRUCTURES using C and C++ covers all the fundamental topics to give a better understanding about the subject. The study of data structures is essential to every one who comes across with computer science. This book is written in accordance with the revised syllabus for B. Tech./B.E. (both Computer Science and Electronics branches) and MCA. students of Kerala University, MG University, Calicut University, CUSAT Cochin (deemed) University. NIT Calicut (deemed) University, Anna University, UP Technical University, Amritha Viswa (deemed) Vidyapeeth, Karunya (dee.

Principles of Social Structure Oct 24 2021

General Chemistry Jan 27 2022 The Fifth Edition retains the pedagogical strengths that made the previous editions so popular, and has been updated, reorganized, and streamlined. Changes include more accessible introductory chapters (with greater stress on the logic of the periodic table), earlier introduction of redox reactions, greater emphasis on the concept of energy, a new section on Lewis structures, earlier introduction

of the ideal gas law, and a new development of thermodynamics. Each chapter ends with review questions and problems.

Structural Principles in EU External Relations Law Apr 05 2020 The law and practice of EU external relations is governed not only by general objectives (Articles 3(5) and 21 TEU and Article 205 TFEU) and values (Article 2 TEU) but also by a set of principles found in the Treaties and developed by the Court of Justice, which structure the system, functioning and exercise of EU external competences. This book identifies a set of 'structural principles' as a legal norm-category governing EU external relations; it explores the scope, content and function of those principles that may be categorised as structural. With an ambitious scope, and a stellar line-up of experts in the field, the collection offers a truly innovative perspective on the role of law in EU external relations.

Principles of Structures Feb 25 2022 Both architectural and civil engineering students need an intrinsic grasp of structures. This book provides a highly-visual approach to structural concepts and introduces the basic principles.

Principles of Structural Design Oct 04 2022 Timber, steel, and concrete are common engineering materials used in structural design. Material choice depends upon the type of structure, availability of material, and the preference of the designer. The design practices the code requirements of each material are very different. In this updated edition, the elemental designs of individual components of each material are presented, together with theory of structures essential for the design. Numerous examples of complete structural designs have been included. A comprehensive database comprising materials properties, section properties, specifications, and design aids, has been included to make this essential reading.

Stability of Structures Jun 19 2021 The current trend of building more streamlined structures has made stability analysis a subject of extreme importance. It is mostly a safety issue because Stability loss could result in an unimaginable catastrophe. Written by two authors with a combined 80 years of professional and academic experience, the objective of Stability of Structures: Principles and Applications is to provide engineers and architects with a firm grasp of the fundamentals and principles that are essential to performing effective stability analysts. Concise and readable, this guide presents stability analysis within the context of elementary nonlinear flexural analysis, providing a strong foundation for incorporating theory into everyday practice. The first chapter introduces the buckling of columns. It begins with the linear elastic theory and proceeds to include the effects of large deformations and inelastic behavior. In Chapter 2 various approximate methods are illustrated along with the fundamentals of energy methods. The chapter concludes by introducing several special topics, some advanced, that are useful in understanding the physical resistance mechanisms and consistent and rigorous mathematical analysis. Chapters 3 and 4 cover buckling of beam-columns. Chapter 5 presents torsion in structures in some detail, which is one of the least well understood subjects in the entire spectrum of structural mechanics. Strictly speaking, torsion itself does not belong to a topic in structural stability, but needs to be covered to some extent for a better understanding of buckling accompanied with torsional behavior. Chapters 6 and 7 consider stability of framed structures in conjunction with torsional behavior of structures. Chapters 8 to 10 consider buckling of plate elements, cylindrical shells, and general shells. Although the book is primarily devoted to analysis, rudimentary design aspects are discussed. Balanced presentation for both theory and practice Well-blended contents covering elementary to advanced topics Detailed presentation of the development

Principles of Structure, Fifth Edition Nov 05 2022 Since its first publication in 1974, Principles of Structure has established itself at the forefront of introductory texts for students of architecture, building and project management seeking a basic understanding of the behavior and design of building structures. It provides a simple quantitative introduction to structural engineering, while also drawing connections to real buildings that are more complex. Retaining the style and format of earlier editions, this Fifth Edition brings the text and examples into alignment with international practice. It also features six new buildings from around the world, illustrating the principles described in the text. The book begins with a chapter explaining forces and their effects. Other chapters cover ties and struts, loadings, graphical statics, bracings, shears and moments, stresses, deflections, and beam design. There is also an appendix with a fuller explanation of fundamentals for readers unfamiliar with the basic concepts of geometry and statics. The book offers a unique format with right-hand pages containing text and left-hand pages containing complementary commentary including explanations and expansions of points made in the text and worked examples. This cross-referencing gives readers a range of perspectives and a deeper understanding of each topic. The simple mathematical approach and logical progression—along with the hints and suggestions, worked examples and problem sheets—give beginners straightforward access to elementary structural engineering.

Basic Principles of Concrete Structures Nov 24 2021 Based on the latest version of designing codes both for buildings and bridges (GB50010-2010 and JTG D62-2004), this book starts from steel and concrete materials, whose properties are very important to the mechanical behavior of concrete structural members. Step by step, analysis of reinforced and prestressed concrete members under basic loading types (tension, compression, flexure, shearing and torsion) and environmental actions are introduced. The characteristic of the book that distinguishes it from other textbooks on concrete structures is that more emphasis has been laid on the basic theories of reinforced concrete and the application of the basic theories in design of new structures and analysis of existing structures. Examples and problems in each chapter are carefully designed to cover every important knowledge point. As a basic course for undergraduates majoring in civil engineering, this course is different from either the previously learnt mechanics courses or the design courses to be learnt. Compared with mechanics courses, the basic theories of reinforced concrete structures cannot be solely derived by theoretical analysis. And compared with design courses, this course emphasizes the introduction of basic theories rather than simply being a translation of design specifications. The book will focus on both the theoretical derivations and the engineering practices.

Anti-Tooke Dec 14 2020

Principles of Nucleic Acid Structure Nov 12 2020 This unique and practical resource provides the most complete and concise summary of underlying principles and approaches to studying nucleic acid structure, including discussion of x-ray crystallography, NMR, molecular modelling, and databases. Its focus is on a survey of structures especially important for biomedical research and pharmacological applications. To aid novices, Principles of Nucleic Acid Structure includes an introduction to technical lingo used to describe nucleic acid structure and conformations (roll, slide, twist, buckle, etc.). This completely updated edition features expanded coverage of the latest advances relevant to recognition of DNA and RNA by small molecules and proteins. In particular, the reader will find extensive new discussions on: RNA folding, ribosome structure and antibiotic interactions, DNA quadruplexes, DNA and RNA protein complexes, and short interfering RNA (siRNA). This handy guide ends with a complete list of resources, including relevant online databases and software. Completely updated with expanded discussion of topics such as RNA folding, ribosome structure and antibiotic interactions, DNA quadruplexes, DNA and RNA protein complexes, and short interfering RNA (siRNA) Includes a complete list of resources, including relevant online databases and software Defines technical lingo for novices

Exploring Protein Structure: Principles and Practice Jan 15 2021 This textbook introduces the basics of protein structure and logically explains how to use online software to explore the information in protein structure databases. Readers will find easily understandable, step-by step exercises and video-trainings to support them in grasping the fundamental concepts. After reading this book, readers will have the skills required to independently explore and analyze macromolecular structures, will be versed in extracting information from protein databases and

will be able to visualize protein structures using specialized software and on-line algorithms. This book is written for advanced undergraduates and PhD students wishing to use information from structural biology in their assignments and research and will be a valuable source of information for all those interested in applied and theoretical aspects of structural biology.

Principles of Nucleic Acid Structure Jul 21 2021 New textbooks at all levels of chemistry appear with great regularity. Some fields like basic biochemistry, organic reaction mechanisms, and chemical ther modynamics are well represented by many excellent texts, and new or revised editions are published sufficiently often to keep up with progress in research. However, some areas of chemistry, especially many of those taught at the grad uate level, suffer from a real lack of up-to-date textbooks. The most serious needs occur in fields that are rapidly changing. Textbooks in these subjects usually have to be written by scientists actually involved in the research which is advancing the field. It is not often easy to persuade such individuals to set time aside to help spread the knowledge they have accumulated. Our goal, in this series, is to pinpoint areas of chemistry where recent progress has outpaced what is covered in any available textbooks, and then seek out and persuade experts in these fields to produce relatively concise but instructive introductions to their fields. These should serve the needs of one semester or one quarter graduate courses in chemistry and biochemistry. In some cases the availability of texts in active research areas should help stimulate the creation of new courses. CHARLES R. CANTOR New York Preface This monograph is based on a review on polynucleotide structures written for a book series in 1976.

Structural Analysis Apr 29 2022 Provides Step-by-Step Instruction Structural Analysis: Principles, Methods and Modelling outlines the fundamentals involved in analyzing engineering structures, and effectively presents the derivations used for analytical and numerical formulations. This text explains practical and relevant concepts, and lays down the foundation for a solid mathematical background that incorporates MATLAB® (no prior knowledge of MATLAB is necessary), and includes numerous worked examples. Effectively Analyze Engineering Structures Divided into four parts, the text focuses on the analysis of statically determinate structures. It evaluates basic concepts and procedures, examines the classical methods for the analysis of statically indeterminate structures, and explores the stiffness method of analysis that reinforces most computer applications and commercially available structural analysis software. In addition, it covers advanced topics that include the finite element method, structural stability, and problems involving material nonlinearity. MATLAB® files for selected worked examples are available from the book's website. Resources available from CRC Press for lecturers adopting the book include: A solutions manual for all the problems posed in the book Nearly 2000 PowerPoint presentations suitable for use in lectures for each chapter in the book Revision videos of selected lectures with added narration Figure slides Structural Analysis: Principles, Methods and Modelling exposes civil and structural engineering undergraduates to the essentials of structural analysis, and serves as a resource for students and practicing professionals in solving a range of engineering problems.

Crystal Structure Analysis Oct 12 2020 By choosing an approach that avoids undue emphasis on the mathematics involved, this book gives practical advice on topics such as growing crystals, solving and refining structures, and understanding and using the results.

Principles of Structural Stability Mar 29 2022 FirstEdition DUE TO THE necessity to save weight and materialin the design ofmodern structures and machines, stability problems have become increasingly im portant. The classicalengineering approach to this type of problem has been characterized by the tacit assumption that structures are nongyroscopic conservative systems, that is, bythegeneraladoptionofthemethodsdeveloped for this particular case. During the last decades numerous stability problems of a more complicated nature have become important, and it has therefore become necessary to correlate the various types of problems with the ap proaches to be used in their solution. The principal object ofthis little bookisthis correlation between the systems to be investigated and the methods to be used for this purpose, In other words, our main concern is the choice of a correct approach. It is evident that this idea renders it necessary to distinguish between the various types of problems or systems. At the same time the similarities and the connections between apparently quite different problems will become obvious, and it will be evident that there islittle differencebetween, say, the buckling of a column, thecritical speed of a turbine shaft, and the stability of an airplane, a control mechanism, or an electric circuit.

Principles of Structural Linguistics Mar 05 2020

Marine Structural Design Sep 30 2019 Marine Structural Design, Second Edition, is a wide-ranging, practical guide to marine structural analysis and design, describing in detail the application of modern structural engineering principles to marine and offshore structures. Organized in five parts, the book covers basic structural design principles, strength, fatigue and fracture, and reliability and risk assessment, providing all the knowledge needed for limit-state design and re-assessment of existing structures. Updates to this edition include new chapters on structural health monitoring and risk-based decision-making, arctic marine structural development, and the addition of new LNG ship topics, including composite materials and structures, uncertainty analysis, and green ship concepts. Provides the structural design principles, background theory, and know-how needed for marine and offshore structural design by analysis Covers strength, fatigue and fracture, reliability, and risk assessment together in one resource, emphasizing practical considerations and applications Updates to this edition include new chapters on structural health monitoring and risk-based decision making, and new content on arctic marine structural design

Principles of Structural Geology Aug 10 2020

Principles of Structural Design Aug 02 2022 Timber, steel, and concrete are common engineering materials used for designing and constructing structures. The choice of material depends upon the type of structures, availability of material, and the preference of designer.The design practices the code requirements of each material are very different. In this updated edition, the elemental designs of individual components of each material are presented, together with theory of structures essential for the design. Numerous examples of the designs of complete structures with respect to each material have been included. A comprehensive data base comprising materials properties, section properties, specifications, and design aids, has been provided to make this a complete book.