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Formwork for Concrete Structures - Garold (Gary) Oberlender 2010-09-06
The definitive guide to formwork design, materials, and methods--fully updated Formwork for Concrete Structures, Fourth Edition, provides current information on designing and building formwork and temporary structures during the construction process. Developed with

the latest structural design recommendations by the National Design Specification (NDS 2005), the book covers recent advances in materials, money- and energy-saving strategies, safety guidelines, OSHA regulations, and dimensional tolerances. Up-to-date sample problems illustrate practical applications for calculating loads and stresses. This comprehensive manual

also includes new summary tables and equations and a directory of suppliers. Formwork for Concrete Structures, Fourth Edition, covers: Economy of formwork Pressure of concrete on formwork Properties of form material Form design Shores and scaffolding Failures of formwork Forms for footings, walls, and columns Forms for beams and floor slabs Patented forms for concrete floor systems Forms for thin-shell roof slabs Forms for architectural concrete Slipforms Forms for concrete bridge decks Flying deck forms

Joint ACICEB symposium concrete design US and European practices - FIB - International Federation for Structural Concrete 1976-08-01 Proceedings of the symposium cosponsored by the American Concrete Institute, the Comité Euro International du Béton, the Prestressed Concrete Institute, and the Fédération Internationale de la Précontrainte.

ACI 370R-14 Report for the Design of Concrete Structures for Blast Effects - American Concrete

Institute 2014

ACI Advanced Monitoring and Troubleshooting - Sadiq Memon 2020-05-30

ACI Advanced Monitoring and Troubleshooting provides a solid conceptual foundation and in-depth technical knowledge for monitoring and troubleshooting virtually any problem encountered during testing, deployment, or operation of Cisco Application Centric Infrastructure (ACI) infrastructure. Authored by leading ACI support experts at Cisco, it covers all you'll need to keep your ACI deployment working optimally. Coverage includes: Core ACI concepts and components, including Nexus 9000 Series platforms, APIC controllers, and protocols In-depth insight into ACI's policy model ACI fabric design options: single and multiple data centers, stretched vs. multiple fabrics, and multi-pod/multi-site Automation, orchestration, and the cloud in ACI environments ACI topology and hardware/software specifications End host and

network connectivity VMM integration Network management configuration, including SNMP, AAA, and SPAN Monitoring ACI fabrics and health Getting immediate results through the NX-OS command line interface Troubleshooting use cases: fabric discovery, APIC, management access, contracts, external connectivity, leaf/spine connectivity, end-host connectivity, VMM problems, ACI multi-pod/multi-site problems, and more

Minimum Design Loads for Buildings and Other Structures - American Society of Civil Engineers 2013

Third Printing, incorporating errata, Supplement 1, and expanded commentary, 2013.

Concrete Structures - Mehdi Setareh
2016-08-13

This revised, fully updated second edition covers the analysis, design, and construction of reinforced concrete structures from a real-world perspective. It examines different reinforced concrete elements such as slabs, beams,

columns, foundations, basement and retaining walls and pre-stressed concrete incorporating the most up-to-date edition of the American Concrete Institute Code (ACI 318-14) requirements for the design of concrete structures. It includes a chapter on metric system in reinforced concrete design and construction. A new chapter on the design of formworks has been added which is of great value to students in the construction engineering programs along with practicing engineers and architects. This second edition also includes a new appendix with color images illustrating various concrete construction practices, and well-designed buildings. The ACI 318-14 constitutes the most extensive reorganization of the code in the past 40 years. References to the various sections of the ACI 318-14 are provided throughout the book to facilitate its use by students and professionals. Aimed at architecture, building construction, and undergraduate engineering students, the scope

of concepts in this volume emphasize simplified and practical methods in the analysis and design of reinforced concrete. This is distinct from advanced, graduate engineering texts, where treatment of the subject centers around the theoretical and mathematical aspects of design. As in the first edition, this book adopts a step-by-step approach to solving analysis and design problems in reinforced concrete. Using a highly graphical and interactive approach in its use of detailed images and self-experimentation exercises, "Concrete Structures, Second Edition," is tailored to the most practical questions and fundamental concepts of design of structures in reinforced concrete. The text stands as an ideal learning resource for civil engineering, building construction, and architecture students as well as a valuable reference for concrete structural design professionals in practice.

Code Requirements for Nuclear Safety-related Concrete Structures (ACI 349-13)

and Commentary : an ACI Standards - 2014

Reinforced Concrete Structural Reliability - Ph.D, Mohamed Abdallah El-Reedy 2012-12-15
Structural engineers must focus on a structure's continued safety throughout its service life. Reinforced Concrete Structural Reliability covers the methods that enable engineers to keep structures reliable during all project phases, and presents a practical exploration of up-to-date techniques for predicting the lifetime of a structure. The book a

Building Code Requirements for Structural Concrete (ACI 318M-08) and Commentary - American Concrete Institute 2008

Design and Construction of LNG Storage Tanks - Josef Rötzer 2019-11-11

Worldwide, the use of natural gas as a primary energy source will remain vital for decades to come. This applies to industrialized, emerging countries and developing countries. Owing to

the low level of impurities, natural gas is considered to be a climate-friendly fossil fuel because of the low CO₂ emissions, but is at the same time an affordable source of energy. In order to enable transport over long distances and oceans (and hence create an economic and political alternative to pipelines) , the gas is liquefied, which is accompanied by a considerable reduction in volume, and then transported by ship. Thus, at international ports, many LNG tanks are required for temporary storage and further use. The trend towards smaller liquefaction and regasification plants with associated storage tanks for marine fuel applications has attracted new players in this market who often do not yet have the necessary experience and technical expertise. It is not sufficient to refer to all existing technical standards when defining consistent state-of-the-art specifications and requirements. The switch to European standardisation has made it necessary to revise and adapt existing national

codes to match European standards. Technical committees at national and international level have begun their work of updating and completing the EN 14620 series. In the USA, too, the corresponding regulations are also being updated. The revision of American Concrete Institute standard ACI 376 Requirements for Design and Construction of Concrete Structures for the Containment of Refrigerated Liquefied Gases, first published in 2011, will be completed in the spring of 2019, and the final version, published in autumn 2019. This book provides an overview of the state of the art in the design and construction of liquefied natural gas (LNG) tanks. Since the topic is very extensive and complex, an introduction to all aspects is provided, e.g. requirements and design for operating conditions, thermal design, hydrostatic and pneumatic tests, soil surveys and permissible settlement, modelling of and calculations for the concrete structure, and the actions due to fire,

explosion and impact. Dynamic analysis and the theory of sloshing liquid are also presented.

Failure, Distress and Repair of Concrete Structures - N Delatte 2009-10-26

Understanding and recognising failure mechanisms in concrete is a fundamental prerequisite to determining the type of repair, or whether a repair is feasible. This title provides a review of concrete deterioration and damage, as well as looking at the problem of defects in concrete. It also discusses condition assessment and repair techniques. Part one discusses failure mechanisms in concrete and covers topics such as causes and mechanisms of deterioration in reinforced concrete, types of damage in concrete structures, types and causes of cracking and condition assessment of concrete structures. Part two reviews the repair of concrete structures with coverage of themes such as standards and guidelines for repairing concrete structures, methods of crack repair, repair materials, bonded concrete overlays, repairing

and retrofitting concrete structures with fiber-reinforced polymers, patching deteriorated concrete structures and durability of repaired concrete. With its distinguished editor and international team of contributors, Failure and repair of concrete structures is a standard reference for civil engineers, architects and anyone working in the construction sector, as well as those concerned with ensuring the safety of concrete structures. Provides a review of concrete deterioration and damage Discusses condition assessment and repair techniques, standards and guidelines

Guide to Mass Concrete - ACI Committee 207 2006

Design of Slabs-on-ground - ACI Committee 360 2006

Duncan and Prasse's Veterinary Laboratory Medicine - Kenneth S. Latimer 2011-11-16
Now in full color throughout, Duncan and

Prasse's Veterinary Laboratory Medicine: Clinical Pathology, Fifth Edition offers a comprehensive overview of hematology, hemostasis, clinical chemistry, urinalysis, cytology, and reference intervals in a highly accessible outline format. With information on all major domestic species, the text is designed for the reader to quickly find answers to clinical questions. Taking a problem-solving approach to the interpretation of laboratory data, this book includes clinical cases to illustrate the concepts of laboratory data interpretation, with tables and key words to aid readers in locating and applying information. The fifth edition has been fully revised to reflect the latest knowledge, diagnostic methods, and practices in veterinary laboratory medicine. A companion website provides the images in PowerPoint and references linked to PubMed at www.wiley.com/go/latimer. Duncan and Prasse's Veterinary Laboratory Medicine is an excellent quick reference for practicing veterinarians,

veterinary students, clinical interns and residents, and pathology residents.

Reinforced Concrete - James Grierson MacGregor 1997

Based on the 1995 edition of the American Concrete Institute Building Code, this text explains the theory and practice of reinforced concrete design in a systematic and clear fashion, with an abundance of step-by-step worked examples, illustrations, and photographs. The focus is on preparing students to make the many judgment decisions required in reinforced concrete design, and reflects the author's experience as both a teacher of reinforced concrete design and as a member of various code committees. This edition provides new, revised and expanded coverage of the following topics: core testing and durability; shrinkage and creep; bases the maximum steel ratio and the value of the factor on Appendix B of ACI318-95; composite concrete beams; strut-and-tie models; dapped ends and T-beam

flanges. It also expands the discussion of STMs and adds new examples in SI units.

Deploying ACI - Frank Dagenhardt 2018-02-28

Use ACI fabrics to drive unprecedented value from your data center environment With the Cisco Application Centric Infrastructure (ACI) software-defined networking platform, you can achieve dramatic improvements in data center performance, redundancy, security, visibility, efficiency, and agility. In *Deploying ACI*, three leading Cisco experts introduce this breakthrough platform, and walk network professionals through all facets of design, deployment, and operation. The authors demonstrate how ACI changes data center networking, security, and management; and offer multiple field-proven configurations. *Deploying ACI* is organized to follow the key decision points associated with implementing data center network fabrics. After a practical introduction to ACI concepts and design, the authors show how to bring your fabric online,

integrate virtualization and external connections, and efficiently manage your ACI network. You'll master new techniques for improving visibility, control, and availability; managing multitenancy; and seamlessly inserting service devices into application data flows. The authors conclude with expert advice for troubleshooting and automation, helping you deliver data center services with unprecedented efficiency. Understand the problems ACI solves, and how it solves them Design your ACI fabric, build it, and interface with devices to bring it to life Integrate virtualization technologies with your ACI fabric Perform networking within an ACI fabric (and understand how ACI changes data center networking) Connect external networks and devices at Layer 2/Layer 3 levels Coherently manage unified ACI networks with tenants and application policies Migrate to granular policies based on applications and their functions Establish multitenancy, and evolve networking, security,

and services to support it Integrate L4-7 services: device types, design scenarios, and implementation Use multisite designs to meet rigorous requirements for redundancy and business continuity Troubleshoot and monitor ACI fabrics Improve operational efficiency through automation and programmability

Orthogeriatrics - Paolo Falaschi 2020

This new open access edition supported by the Fragility Fracture Network aims at giving the widest possible dissemination on fragility fracture (especially hip fracture) management and notably in countries where this expertise is sorely needed. It has been extensively revised and updated by the experts of this network to provide a unique and reliable content in one single volume. Throughout the book, attention is given to the difficult question of how to provide best practice in countries where the discipline of geriatric medicine is not well established and resources for secondary prevention are scarce. The revised and updated chapters on the

epidemiology of hip fractures, osteoporosis, sarcopenia, surgery, anaesthesia, medical management of frailty, peri-operative complications, rehabilitation and nursing are supplemented by six new chapters. These include an overview of the multidisciplinary approach to fragility fractures and new contributions on pre-hospital care, treatment in the emergency room, falls prevention, nutrition and systems for audit. The reader will have an exhaustive overview and will gain essential, practical knowledge on how best to manage fractures in elderly patients and how to develop clinical systems that do so reliably.

Foundation Design - N. S. V. Kameswara Rao
2010-12-30

In *Foundation Design: Theory and Practice*, Professor N. S. V. Kameswara Rao covers the key aspects of the subject, including principles of testing, interpretation, analysis, soil-structure interaction modeling, construction guidelines, and applications to rational design. Rao presents

a wide array of numerical methods used in analyses so that readers can employ and adapt them on their own. Throughout the book the emphasis is on practical application, training readers in actual design procedures using the latest codes and standards in use throughout the world. Presents updated design procedures in light of revised codes and standards, covering: American Concrete Institute (ACI) codes Eurocode 7 Other British Standard-based codes including Indian codes Provides background materials for easy understanding of the topics, such as: Code provisions for reinforced concrete Pile design and construction Machine foundations and construction practices Tests for obtaining the design parameters Features subjects not covered in other foundation design texts: Soil-structure interaction approaches using analytical, numerical, and finite element methods Analysis and design of circular and annular foundations Analysis and design of piles and groups subjected to general loads and

movements Contains worked out examples to illustrate the analysis and design Provides several problems for practice at the end of each chapter Lecture materials for instructors available on the book's companion website Foundation Design is designed for graduate students in civil engineering and geotechnical engineering. The book is also ideal for advanced undergraduate students, contractors, builders, developers, heavy machine manufacturers, and power plant engineers. Students in mechanical engineering will find the chapter on machine foundations helpful for structural engineering applications. Companion website for instructor resources: www.wiley.com/go/rao *Structural Design for Fire Safety* - Andrew H. Buchanan 2017-01-30 *Structural Design for Fire Safety*, 2nd edition Andrew H. Buchanan, University of Canterbury, New Zealand Anthony K. Abu, University of Canterbury, New Zealand A practical and informative guide to structural fire engineering

This book presents a comprehensive overview of structural fire engineering. An update on the first edition, the book describes new developments in the past ten years, including advanced calculation methods and computer programs. Further additions include: calculation methods for membrane action in floor slabs exposed to fires; a chapter on composite steel-concrete construction; and case studies of structural collapses. The book begins with an introduction to fire safety in buildings, from fire growth and development to the devastating effects of severe fires on large building structures. Methods of calculating fire severity and fire resistance are then described in detail, together with both simple and advanced methods for assessing and designing for structural fire safety in buildings constructed from structural steel, reinforced concrete, or structural timber. Structural Design for Fire Safety, 2nd edition bridges the information gap between fire safety engineers, structural

engineers and building officials, and it will be useful for many others including architects, code writers, building designers, and firefighters. Key features: • Updated references to current research, as well as new end-of-chapter questions and worked examples. • Authors experienced in teaching, researching, and applying structural fire engineering in real buildings. • A focus on basic principles rather than specific building code requirements, for an international audience. An essential guide for structural engineers who wish to improve their understanding of buildings exposed to severe fires and an ideal textbook for introductory or advanced courses in structural fire engineering. Temporary Structure Design - Christopher Souder 2014-11-10

A comprehensive guide to temporary structures in construction projects Temporary Structure Design is the first book of its kind, presenting students and professionals with authoritative coverage of the major concepts in designing

temporary construction structures. Beginning with a review of statistics, it presents the core topics needed to fully comprehend the design of temporary structures: strength of materials; types of loads on temporary structures; scaffolding design; soil properties and soil loading; soldier beam, lagging, and tiebacks; sheet piling and strutting; pressure and forces on formwork and falsework; concrete formwork design; falsework; bracing and guying; trestles and equipment bridges; and the support of existing structures. Temporary structures during construction include scaffolding, formwork, shoring, ramps, platforms, earth-retaining structures, and other construction structures that are not part of the permanent installation. These structures are less regulated and monitored than most other parts of the construction process, even though they are often supporting tons of steel or concrete—and the safety of all workers on the site depends on these structures to perform as designed.

Unfortunately, most tragic failures occur during construction and are usually the result of improperly designed, constructed, and/or maintained temporary structures. Temporary Structure Design fills an important need in the literature by providing a trusted, comprehensive guide to designing temporary construction structures. Serves as the first book to provide a design-oriented approach to the design of temporary structures Includes coverage of the various safety considerations inherent in temporary structure design and construction Provides information on estimating cost and schedules for these specialized structures Covers formwork and falsework, as well as personnel protection, production support, environmental protection, and foundational structures If you're a student or a professional working in the field of construction or structural engineering, Temporary Structure Design is a must-have resource you'll turn to again and again.

Design of Structural Elements - Chanakya Arya 2009-05-07

This third edition of a popular textbook is a concise single-volume introduction to the design of structural elements in concrete, steel, timber, masonry, and composites. It provides design principles and guidance in line with both British Standards and Eurocodes, current as of late 2007. Topics discussed include the philosophy of design, basic structural concepts, and material properties. After an introduction and overview of structural design, the book is conveniently divided into sections based on British Standards and Eurocodes.

Reinforced Concrete with FRP Bars - Antonio Nanni 2014-03-05

Corrosion-resistant, electromagnetic transparent and lightweight fiber-reinforced polymers (FRPs) are accepted as valid alternatives to steel in concrete reinforcement. Reinforced Concrete with FRP Bars: Mechanics and Design, a technical guide based on the authors' more than

30 years of collective experience, provides principles, algorithms, and practical examples. Well-illustrated with case studies on flexural and column-type members, the book covers internal, non-prestressed FRP reinforcement. It assumes some familiarity with reinforced concrete, and excludes prestressing and near-surface mounted reinforcement applications. The text discusses FRP materials properties, and addresses testing and quality control, durability, and serviceability. It provides a historical overview, and emphasizes the ACI technical literature along with other research worldwide. Includes an explanation of the key physical mechanical properties of FRP bars and their production methods Provides algorithms that govern design and detailing, including a new formulation for the use of FRP bars in columns Offers a justification for the development of strength reduction factors based on reliability considerations Uses a two -story building solved in Mathcad® that can become a template for

real projects This book is mainly intended for practitioners and focuses on the fundamentals of performance and design of concrete members with FRP reinforcement and reinforcement detailing. Graduate students and researchers can use it as a valuable resource. Antonio Nanni is a professor at the University of Miami and the University of Naples Federico II. Antonio De Luca and Hany Zadeh are consultant design engineers.

Foundation Design: Principles and Practices - Donald P. Coduto 2013-10-03

For undergraduate/graduate-level foundation engineering courses. Covers the subject matter thoroughly and systematically, while being easy to read. Emphasizes a thorough understanding of concepts and terms before proceeding with analysis and design, and carefully integrates the principles of foundation engineering with their application to practical design problems.

Manual for Detailing Reinforced Concrete Structures to EC2 - Jose Calavera 2011-11-09

Detailing is an essential part of the design process. This thorough reference guide for the design of reinforced concrete structures is largely based on Eurocode 2 (EC2), plus other European design standards such as Eurocode 8 (EC8), where appropriate. With its large format, double-page spread layout, this book systematically details 213 structural **Department of Defense Dictionary of Military and Associated Terms** - United States. Joint Chiefs of Staff 1994

Design of Steel Structures - Elias G. Abu-Saba 2012-12-06

This book is intended for classroom teaching in architectural and civil engineering at the graduate and undergraduate levels. Although it has been developed from lecture notes given in structural steel design, it can be useful to practicing engineers. Many of the examples presented in this book are drawn from the field of design of structures. Design of Steel

Structures can be used for one or two semesters of three hours each on the undergraduate level. For a two-semester curriculum, Chapters 1 through 8 can be used during the first semester. Heavy emphasis should be placed on Chapters 1 through 5, giving the student a brief exposure to the consideration of wind and earthquakes in the design of buildings. With the new federal requirements vis a vis wind and earthquake hazards, it is beneficial to the student to have some understanding of the underlying concepts in this field. In addition to the class lectures, the instructor should require the student to submit a term project that includes the complete structural design of a multi-story building using standard design procedures as specified by AISC Specifications. Thus, the use of the AISC Steel Construction Manual is a must in teaching this course. In the second semester, Chapters 9 through 13 should be covered. At the undergraduate level, Chapters 11 through 13 should be used on a limited basis, leaving the

student more time to concentrate on composite construction and built-up girders.

Foundation Analysis and Design - Joseph E. Bowles 1997

The revision of this best-selling text for a junior/senior course in Foundation Analysis and Design now includes an IBM computer disk containing 16 compiled programs together with the data sets used to produce the output sheets, as well as new material on sloping ground, pile and pile group analysis, and procedures for an improved analysis of lateral piles. Bearing capacity analysis has been substantially revised for footings with horizontal as well as vertical loads. Footing design for overturning now incorporates the use of the same uniform linear pressure concept used in ascertaining the bearing capacity. Increased emphasis is placed on geotextiles for retaining walls and soil nailing.

Soil Testing, Soil Stability and Ground Improvement - Wissem Frikha 2017-07-11

Earthwork projects are critical components in civil construction and often require detailed management techniques and unique solution methods to address failures. Being earth bound, earthwork is influenced by geomaterial properties at the onset of a project. Hence, an understanding of the in-situ soil properties is essential. Slope stability is a common problem facing earthwork construction, such as excavations and shored structures. Analytical methods for slope stability remain critical for researchers due to the mechanical complexity of the system. Striving for better earthwork project managements, the geotechnical engineering community continues to find improved testing techniques for determining sensitive properties of soil and rock, including stress-wave based, non-destructive testing methods. To minimize failure during earthwork construction, past case studies and data may reveal useful lessons and information to improve project management and minimize economic losses. This volume is part of

the proceedings of the 1st GeoMEast International Congress and Exhibition on Sustainable Civil Infrastructures, Egypt 2017. [ACI Manual of Concrete Practice](#) - American Concrete Institute 2007

[Hyperconverged Infrastructure Data Centers](#) - Sam Halabi 2019-01-18
Improve Manageability, Flexibility, Scalability, and Control with Hyperconverged Infrastructure
Hyperconverged infrastructure (HCI) combines storage, compute, and networking in one unified system, managed locally or from the cloud. With HCI, you can leverage the cloud's simplicity, flexibility, and scalability without losing control or compromising your ability to scale. In [Hyperconverged Infrastructure Data Centers](#), best-selling author Sam Halabi demystifies HCI technology, outlines its use cases, and compares solutions from a vendor-neutral perspective. He guides you through evaluation, planning, implementation, and management, helping you

decide where HCI makes sense, and how to migrate legacy data centers without disrupting production systems. The author brings together all the HCI knowledge technical professionals and IT managers need, whether their background is in storage, compute, virtualization, switching/routing, automation, or public cloud platforms. He explores leading solutions including the Cisco HyperFlex platform, VMware vSAN, Nutanix Enterprise Cloud, Cisco Application-Centric Infrastructure (ACI), VMware's NSX, the open source OpenStack and Open vSwitch (OVS) / Open Virtual Network (OVN), and Cisco CloudCenter for multicloud management. As you explore discussions of automation, policy management, and other key HCI capabilities, you'll discover powerful new opportunities to improve control, security, agility, and performance. Understand and overcome key limits of traditional data center designs Discover improvements made possible by advances in compute, bus

interconnect, virtualization, and software-defined storage Simplify rollouts, management, and integration with converged infrastructure (CI) based on the Cisco Unified Computing System (UCS) Explore HCI functionality, advanced capabilities, and benefits Evaluate key HCI applications, including DevOps, virtual desktops, ROBO, edge computing, Tier 1 enterprise applications, backup, and disaster recovery Simplify application deployment and policy setting by implementing a new model for provisioning, deployment, and management Plan, integrate, deploy, provision, manage, and optimize the Cisco HyperFlex hyperconverged infrastructure platform Assess alternatives such as VMware vSAN, Nutanix, open source OpenStack, and OVS/OVN, and compare architectural differences with HyperFlex Compare Cisco ACI (Application-Centric Infrastructure) and VMware NSX approaches to network automation, policies, and security This book is part of the Networking Technology

Series from Cisco Press, which offers networking professionals valuable information for constructing efficient networks, understanding new technologies, and building successful careers.

Design of Prestressed Concrete - Nilson
1987-04-13

Maneuver and Firepower - John B. Wilson 1998

Principles of Foundation Engineering - Braja M. Das 2018-10-03

Master the core concepts and applications of foundation analysis and design with Das/Sivakugan's best-selling PRINCIPLES OF FOUNDATION ENGINEERING, 9th Edition. Written specifically for those studying undergraduate civil engineering, this invaluable resource by renowned authors in the field of geotechnical engineering provides an ideal balance of today's most current research and practical field applications. A wealth of worked-

out examples and figures clearly illustrate the work of today's civil engineer, while timely information and insights help readers develop the critical skills needed to properly apply theories and analysis while evaluating soils and foundation design. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Design and Construction of LNG Storage Tanks - Josef Rotzer 2019-09-03

Worldwide, the use of natural gas as a primary energy source will remain indispensable for decades to come. This applies to industrialized and emerging countries as well as developing countries. Due to the low level of impurities, natural gas is considered to be a climate-friendly fossil fuel because of low CO₂ emissions, and to be at the same time an affordable source of energy. In order to enable transport over long distances as well as over oceans the gas is liquefied along with a considerable volume

reduction and then transported by ship. Thus, at international ports many LNG tanks are required for temporary storage and further use. The trend towards smaller liquefaction and evaporation plants with associated storage tanks for use as marine fuel has created new entrants who often do not yet have the necessary experience and technical expertise. It is not sufficient to refer all existing technical standards when defining consistent state of the art specifications and requirements. The switch to European standardization made the revision and adaptation of existing national standards to a European standard unavoidable. Technical committees at national and international level have begun their work to update and complete the EN 14620 series. Also, the US regulations are updated. The revision of the American Concrete Institute standard ACI 376 "Requirements for Design and Construction of Concrete Structures for the Containment of Refrigerated Liquefied Gases", which was first

published in 2011, will be completed in the spring of 2019 and the final version will be published in autumn 2019. This book provides an overview of the state of the art in design and construction of liquefied natural gas (LNG) tanks. Since the topic is very extensive and complex, here an introduction to all areas is given, e. g. requirements and design for operating conditions, thermal design, liquid and gas pressure test, soil analysis and permitted settlement, modeling and calculation of the concrete structure, and the special effects from fire, explosion and impact. Furthermore, the dynamic analysis and the theory of the sloshing liquid is presented.

Advanced Concrete Technology - Zongjin Li
2011-01-11

Over the past two decades concrete has enjoyed a renewed level of research and testing, resulting in the development of many new types of concrete. Through the use of various additives, production techniques and chemical

processes, there is now a great degree of control over the properties of specific concretes for a wide range of applications. New theories, models and testing techniques have also been developed to push the envelope of concrete as a building material. There is no current textbook which brings all of these advancements together in a single volume. This book aims to bridge the gap between the traditional concrete technologies and the emerging state-of-the-art technologies which are gaining wider use.

Computational Complexity - Sanjeev Arora
2009-04-20

New and classical results in computational complexity, including interactive proofs, PCP, derandomization, and quantum computation. Ideal for graduate students.

CCNP Data Center Application Centric Infrastructure 300-620 DCACI Official Cert Guide - Ammar Ahmadi 2020-02-21

Trust the best-selling Official Cert Guide series from Cisco Press to help you learn, prepare, and

practice for exam success. They are built with the objective of providing assessment, review, and practice to help ensure you are fully prepared for your certification exam. CCNP Data Center Application Centric Infrastructure DCACI 300-620 Official Cert Guide presents you with an organized test-preparation routine using proven series elements and techniques. "Do I Know This Already?" quizzes open each chapter and enable you to decide how much time you need to spend on each section. Exam topic lists make referencing easy. Chapter-ending Exam Preparation Tasks help you drill on key concepts you must know thoroughly. * Master CCNP Data Center Application Centric Infrastructure DCACI 300-620 exam topics * Assess your knowledge with chapter-opening quizzes * Review key concepts with exam preparation tasks * Practice with realistic exam questions in the practice test software CCNP Data Center Application Centric Infrastructure DCACI 300-620 Official Cert Guide from Cisco Press enables you to succeed

on the exam the first time and is the only self-study resource approved by Cisco. Leading Cisco data center technology expert Ammar Ahmadi shares preparation hints and test-taking tips, helping you identify areas of weakness and improve both your conceptual knowledge and hands-on skills. This complete study package includes * A test-preparation routine proven to help you pass the exams * Do I Know This Already? quizzes, which enable you to decide how much time you need to spend on each section * Chapter-ending exercises, which help you drill on key concepts you must know thoroughly * The powerful Pearson Test Prep Practice Test software, with two full exams comprised of well-reviewed, exam-realistic questions, customization options, and detailed performance reports * A final preparation chapter, which guides you through tools and resources to help you craft your review and test-taking strategies * Study plan suggestions and templates to help you organize and optimize

your study time * Video mentoring from the author's Complete Video Course Well regarded for its level of detail, study plans, assessment features, and challenging review questions and exercises, this official study guide helps you master the concepts and techniques that ensure your exam success. This official study guide helps you master all the topics on the CCNP Data Center Application Centric Infrastructure DCACI 300-620 exam. It tests your knowledge of Cisco switches in ACI mode, including - ACI fabric infrastructure - ACI packet forwarding - External network connectivity - Integrations - ACI management - ACI Anywhere Companion Website: The companion website contains two full practice exams, an interactive Flash Cards application, video mentoring from the author's Complete Video Course, and much more. Includes Exclusive Offers for Up to 80% Off Video Training, Practice Tests, and more Pearson Test Prep online system requirements: Browsers: Chrome version 40 and above; Firefox

version 35 and above; Safari version 7; Internet Explorer 10, 11; Microsoft Edge; Opera. Devices: Desktop and laptop computers, tablets running on Android and iOS, smartphones with a minimum screen size of 4.7". Internet access required. Pearson Test Prep offline system requirements: Windows 10, Windows 8.1, Windows 7; Microsoft .NET Framework 4.5 Client; Pentium-class 1 GHz processor (or equivalent); 512 MB RAM; 650 MB disk space plus 50 MB for each downloaded practice exam; access to the Internet to register and download exam databases Also available from Cisco Press for CCNP Data Center DCACI study is the CCNP Data Center Application Centric Infrastructure DCACI 300-620 Official Cert Guide Premium Edition eBook and Practice Test. This digital-only certification preparation product combines an eBook with enhanced Pearson Test Prep Practice Test. This integrated learning package:

- * Allows you to focus on individual topic areas or take complete, timed exams
- * Includes direct

links from each question to detailed tutorials to help you understand the concepts behind the questions

- * Provides unique sets of exam-realistic practice questions
- * Tracks your performance and provides feedback on a module-by-module basis, laying out a complete assessment of your knowledge to help you focus your study where it is needed most

Reinforcement Learning, second edition - Richard S. Sutton 2018-11-13

The significantly expanded and updated new edition of a widely used text on reinforcement learning, one of the most active research areas in artificial intelligence. Reinforcement learning, one of the most active research areas in artificial intelligence, is a computational approach to learning whereby an agent tries to maximize the total amount of reward it receives while interacting with a complex, uncertain environment. In *Reinforcement Learning*, Richard Sutton and Andrew Barto provide a clear and simple account of the field's key ideas

and algorithms. This second edition has been significantly expanded and updated, presenting new topics and updating coverage of other topics. Like the first edition, this second edition focuses on core online learning algorithms, with the more mathematical material set off in shaded boxes. Part I covers as much of reinforcement learning as possible without going beyond the tabular case for which exact solutions can be found. Many algorithms presented in this part are new to the second edition, including UCB, Expected Sarsa, and Double Learning. Part II extends these ideas to function approximation, with new sections on such topics as artificial neural networks and the Fourier basis, and offers expanded treatment of off-policy learning and policy-gradient methods. Part III has new chapters on reinforcement learning's relationships to psychology and neuroscience, as well as an updated case-studies chapter including AlphaGo and AlphaGo Zero, Atari game playing, and IBM Watson's wagering

strategy. The final chapter discusses the future societal impacts of reinforcement learning. *Building Code Requirements for Structural Concrete (ACI 318-08) and Commentary - ACI Committee 318 2008*

The quality and testing of materials used in construction are covered by reference to the appropriate ASTM standard specifications. Welding of reinforcement is covered by reference to the appropriate AWS standard. Uses of the Code include adoption by reference in general building codes, and earlier editions have been widely used in this manner. The Code is written in a format that allows such reference without change to its language. Therefore, background details or suggestions for carrying out the requirements or intent of the Code portion cannot be included. The Commentary is provided for this purpose. Some of the considerations of the committee in developing the Code portion are discussed within the Commentary, with emphasis given to the

explanation of new or revised provisions. Much of the research data referenced in preparing the Code is cited for the user desiring to study individual questions in greater detail. Other documents that provide suggestions for carrying out the requirements of the Code are also cited.

Recycled Aggregate Concrete Structures -

Jianzhuang Xiao 2017-11-13

This book describes how, given the global challenge of a shortage of natural resources in the 21st century, the recycling of waste concrete is one of the most important means of implementing sustainable construction development strategies. Firstly, the book presents key findings on the micro- and meso-structure of recycled aggregate concrete (RAC), while the second part focuses on the mechanical properties of RAC: the strength, elastic modulus, Poisson's ratio, stress-strain curve, etc. The third

part of the book explores research on the durability of RAC: carbonization, chloride penetration, shrinkage and creep. It then presents key information on the mechanical behavior and seismic performance of RAC elements and structures: beams, columns, slabs, beam-column joints, and frames. Lastly, the book puts forward design guidelines for recycled aggregate concrete structures. Taken as a whole, the research results - based on a series of investigations the author has conducted on the mechanical properties, durability and structural performance of recycled aggregate concrete (RAC) over the past 10 years - demonstrate that, with proper design and construction, it is safe and feasible to utilize RAC structures in civil engineering applications. The book will greatly benefit researchers, postgraduates, and engineers in civil engineering with an interest in this field.