Minimum Bim 2nd Edition

The role of the chemical reactor is crucial for the industrial conversion of raw materials into products and numerous factors must be considered when selecting an appropriate and efficient chemical reactor. Chemical Reaction Engineering and Reactor Technology defines the qualitative aspects that affect the selection of an industrial chemical reactor and couples various reactor models to case-specific kinetic expressions for chemical processes. Thoroughly revised and updated, this much-anticipated Second Edition addresses the rapid academic and industrial development of chemical reaction engineering. Offering a systematic development of the chemical reaction engineering concept, this volume explores: essential stoichiometric, kinetic, and thermodynamic terms needed in the analysis of chemical reactors homogeneous and heterogeneous reactors reactor optimization aspects residence time distributions and non-ideal flow conditions in industrial reactors solutions of algebraic and ordinary differential equation systems gas- and liquid-phase diffusion coefficients and gas-film coefficients correlations for gas-liquid systems solubilities of gases in liquids guidelines for laboratory reactors and the estimation of kinetic parameters The authors pay special attention to the exact formulations and derivations of mass energy balances and their numerical solutions. Richly illustrated and containing exercises and solutions covering a number of processes, from oil refining to the development of specialty and fine chemicals, the text provides a clear understanding of chemical reactor analysis and design.

BIM wird als Chance gesehen, Bauprojekte verlässlicher fertigzustellen. Gleichzeitig werden verschiedene Herausforderungen diskutiert, die die Einführung erschweren. Bisher weniger im Fokus steht die Untersuchung der Wirtschaftlichkeit von BIM selbst. Ziel ist es daher, Aufwendungen und Nutzen von BIM bestimmbar zu machen. Im Ergebnis erhalten BIM-Anwender eine Hilfestellung, wie die Wirtschaftlichkeit einzelner BIM-Anwendungsfälle und damit in Summe von BIM bestimmt werden kann. - BIM is seen as an opportunity to complete construction projects more reliably. At the same time, various challenges are discussed that make the introduction more difficult. So far, there has been less focus on investigating the economic efficiency of BIM itself. The aim is therefore to make the expenses and benefits of BIM determinable. As a result, BIM users will receive assistance in determining the economic efficiency of individual BIM use cases and thus of BIM as a whole.

Guide to the Tuba Repertoire is the most comprehensive investigation ever undertaken into the literature and discography of any single musical instrument. Under the direction of R. Winston Morris and Daniel Perantoni, this publication represents more than 40 years of research by dozens of leading professionals throughout the world. The guide defines the current status of the tuba and documents its growth since its inception in 1835. Contributors are Ron Davis, Jeffrey Funderburk, David Graves, Skip Gray, Charles A. McAdams, R. Winston Morris, Mark A. Nelson, Timothy J. Northcut, Daniel Perantoni, Philip Sinder, Joseph Skillen, Kenyon Wilson, and Jerry A. Young.

There is a large market demand for new drugs. The existing chronic or common ailments without cures, development of new diseases with unknown causes, and the widespread existence of antibiotic-resistant pathogens, have driven this field of research further by looking at all potential sources of natural products. To date,

microbes have made a significant contribution to the health and well-being of people globally. The discoveries of useful metabolites produced by microbes have resulted in a significant proportion of pharmaceutical products in today's market. Therefore, the investigation and identification of bioactive compound(s) producing microbes is always of great interest to researchers. Actinobacteria are one of the most important and efficient groups of natural metabolite producers. Among the numerous genera, Streptomyces have been recognized as prolific producers of useful natural compounds, as they provide more than half of the naturally-occurring antibiotics isolated to-date and continue to emerge as the primary source of new bioactive compounds. Certainly, these potentials have attracted ample research interest and a wide range of biological activities have been subsequently screened by researchers with the utilization of different In vitro and In vivo model of experiments. Literature evidence has shown that a significant number of interesting compounds produced by Actinobacteria were exhibiting either strong anticancer or neuroprotective activity. The further in depth studies have then established the modulation of apoptotic pathway was involved in those observed bioactivities. These findings indirectly prove the biopharmaceutical potential possessed by Actinobacteria and at the same time substantiate the importance of diverse pharmaceutical evaluations on Actinobacteria. In fact, many novel compounds discovered from Actinobacteria with strong potential in clinical applications have been developed into new drugs by pharmaceutical companies. Together with the advancement in science and technology, it is predicted that there would be an expedition in discoveries of new bioactive compounds producing Actinobacteria from various sources, including soil and marine sources. In light of these current needs, and great interest in the scope of this research, this book seeks to contribute on the investigation of different biological active compound(s) producing actinobacteria which are exhibiting antimicrobial, antioxidant, neuroprotective, anticancer activities and similar.

This volume constitutes the refereed proceedings of the 18th International Conference on Software Process Improvement and Capability Determination, SPICE 2018, held in Tessaloniki, Greece, in October 2018. The 26 full papers presented were carefully reviewed and selected from 40 submissions. The papers are organized in the following topical sections: SPI systematic literature reviews; SPI and assessment; SPI methods and reference models; SPI education and management issues; SPI knowledge and change processes; SPI compliance and configuration; SPI and agile; industry short papers.

Building Information Modeling (BIM), or the process of generating and managing digital information about physical representations of constructions, has been effectively adopted and benefited numerous civil engineering projects across the globe, particularly in developed countries. BIM Development and Trends in Developing Countries addresses the philosophies and practices for improved application of BIM in developing countries. Two case studies are presented in this reference: one from Malaysia and another representing Sri Lanka. Readers are given an introduction and background of the Malaysian and Sri Lankan construction industry and a critical review of BIM's philosophies, development and applications in different stages of a construction project. The authors present their recommendations on the way forward for BIM practices articulated from the two perspectives, namely, academia and industrial BIM practice. The case studies in this book highlight the role of adequate BIM software techniques and the importance of governmental support in facing building challenges

at the moment. . BIM Development and Trends in Developing Countries provides readers useful insights on the evolution of BIM practice in emerging countries and is a unique report on two specific scenarios in BIM development. Engineers, architects, urban planners and policy makers around the globe seeking to understand practical BIM implementation and trends will find this reference invaluable.

With 25 new chapters, Brain Injury Medicine: Principles and Practice, 2nd Edition is a clear and comprehensive guide to all aspects of the management of traumatic brain injury.

This essential handbook gives concise explanations of the myriad activities which encompasses shipping. The book covers documentation, types of ships and cargoes, organisations, freight charges and surcharges, contract forms and clauses, with all the relevant terms contained in logical sections, making it possible to see the terms in context. The second edition seeks to explain the history and progress of the European Commission's approach to competition in the liner and tramp trades. It also looks at security measures introduced since September 2001. By incorporating the book "Freight Charges", the book looks in particular at liner freight charges and surcharges in more depth.

Building Information Modelling (BIM) in Design, Construction, and Operations contains the proceedings of the first in a planned series of conferences dealing with design coordination, construction, maintenance, operation and decommissioning. The book gives details of how BIM tools and techniques have fundamentally altered the manner in which modern construction teams operate, the processes through which designs are evolved, and the relationships between conceptual, detail, construction and life cycle stages. The papers contributed by experts from industry, practice and academia, debate key topics, develop innovative solutions, and predict future trends. The interdisciplinary nature of the contents and the collaborative practices discussed, so important within the built environment, will appeal to those engaged in design, surveying, visualisation, infrastructure, real estate, construction law, insurance, and facilities management. Topics covered include: BIM in design coordination; BIM in construction operations, BIM in building operation and maintenance; BIM and sustainability; BIM and collaborative working and practices; BIM health and safety and BIM-facilities management integration, among others.

Introduction to Petroleum Seismology, second edition (SEG Investigations in Geophysics Series No. 12) provides the theoretical and practical foundation for tackling present and future challenges of petroleum seismology especially those related to seismic survey designs, seismic data acquisition, seismic and EM modeling, seismic imaging, microseismicity, and reservoir characterization and monitoring. All of the chapters from the first edition have been improved and/or expanded. In addition, twelve new chapters have been added. These new chapters expand topics which were only alluded to in the first edition: sparsity representation, sparsity and nonlinear optimization, near-simultaneous multiple-shooting acquisition and processing, nonuniform wavefield sampling, automated modeling, elastic-electromagnetic mathematical equivalences, and microseismicity in the context of hydraulic fracturing. Another major modification in this edition is that each chapter contains analytical problems as well as computational problems. These problems include MatLab codes, which may help readers improve their understanding of and intuition about these materials. The comprehensiveness of this book makes it a suitable text for undergraduate and graduate courses that target geophysicists and engineers as well as a guide and reference work for researchers and professionals in academia and in the petroleum industry.

This book describes the framework of the next generation of Business Information Services Library, BiSL®. BiSL Next is a public domain standard for business information management with guiding principles, good practices and practical templates. It offers guidance for digitally engaged business leaders and

those who collaborate with them, with the ultimate goal to improve business performance through better use of information and technology. Twelve elements - four drivers, four domains and four perspectives - are the basis of the guidance in BiSL Next. Target audience of this book are business managers, business information managers, business analysts, CIO's and IT managers, as well as consultants in this field.While describing the twelve elements, the book offers them insight in the best way to manage, execute and profit from business information management in their enterprise. The book is also the official literature for the BiSL® Next Foundation exam.

Untersuchungen zur Wirtschaftlichkeit von Building Information Modeling (BIM) in der Planungs- und Realisierungsphase von BauprojektenKIT Scientific Publishing This book is intended as a reference book for advanced graduate students and research engineers in block-in-matrix rocks (bimrocks) or soil and rock mixtures (SRMs) or rock and soil aggregate (RSA). Bimrocks are complex formations characterized by competent rock inclusions floating in a weaker matrix. Typical types of bimrocks include a series of mixed geological or engineering masses such as mélanges, fault rocks, coarse pyroclastic rocks, breccias, sheared serpentines, and waste dump mixture. Bimrock is especially different from the general soil and rock material, and the detection of the damage and fracture is still wide open to innovative research. Globally, there is a widespread interest in investigating the geomechanical behaviors of bimrocks, such as deformation and strength characteristics, damage and fracture evolution, and stability prediction of bimrock construction. However, the meso-structural factors control the whole mechanical properties of bimrocks; the source of the macroscopic deformation phenomenon is the meso-structural changes. Therefore, evaluation of the mesoscopic physical and mechanical properties, together with advanced testing technique, is an attractive research topic in rock mechanics. As a result, comprehensive macroscopic and mesoscopic experimental investigations should be conducted to reveal the damage and fracturing mechanical behaviors of bimrocks. The readers of this work can gain new insights into the meso-structural changes of bimrocks subjected to different stress paths. This book is expected to improve the understanding of the mesoscopic damage and fracturing mechanisms of bimrocks, and can be helpful to predict the stability of rock structures where rock mass is subjected to complex loading conditions.

Analysis and Design of Heating, Ventilating, and Air-Conditioning Systems, Second Edition, provides a thorough and modern overview of HVAC for commercial and industrial buildings, emphasizing energy efficiency. This text combines coverage of heating and air conditioning systems design with detailed information on the latest controls technologies. It also addresses the art of HVAC design along with carefully explained scientific and technical content, reflecting the extensive experience of the authors. Modern HVAC topics are addressed, including sustainability, IAQ, water treatment and risk management, vibration and noise mitigation, and maintainability from a practical point of view.

Since 2006, The Insiders' Guide to Becoming a Yacht Stewardess has been a must-read guide for hopeful, young travelers and those intrigued by a career path in the super-yacht industry. Hundreds of yacht crew in the industry today used Julie's book to get started---and succeed---working aboard yachts. Entertaining and educational, this book not only covers who owns luxury yachts, where they travel, and what taking care of their eccentric owners is like, but it describes the awe-inspiring benefits of the job, the skills required, and a clear-cut roadmap for how others can do it, too. If the terrific pay and benefits that come from accompanying celebrities and dignitaries on their private journeys around the world appeals to you, consider Julie Perry your new career coach. Let her guide you to the sea of opportunity that awaits young travelers in one of the world's most adventurous and mind-boggling industries: LUXURY YACHTING.

Featuring contributions from major technology vendors, industry consortia, and government and private research establishments, the Industrial Communication Technology Handbook, Second Edition provides comprehensive and authoritative coverage of wire- and wireless-based specialized communication networks used in plant and factory automation, automotive applications, avionics, building automation, energy and power systems, train applications, and more. New to the Second Edition: 46 brand-new chapters and 21 substantially revised chapters Inclusion of the latest, most significant developments in specialized communication technologies and systems Addition of new application domains for specialized networks The Industrial Communication Technology Handbook, Second Edition supplies readers with a thorough understanding of the application-specific requirements for communication services and their supporting technologies. It is useful to a broad spectrum of professionals involved in the conception, design, development, standardization, and use of specialized communication networks as well as academic institutions engaged in engineering education and vocational training.

Although the practice of chemical engineering has broadened to encompass problems in a range of disciplines, including biology, biochemistry, and nanotechnology, one of the curriculum's foundations is built upon the subject of transport phenomena. Transport Phenomena Fundamentals, Second Edition provides a unified treatment of heat, mass, and momentum transport based on a balance equation approach. Designed for a two-term course Used in a two-term transport phenomena sequence at Rensselaer Polytechnic Institute, this text streamlines the approach to how the subject is taught. The first part of the book takes students through the balance equation in the context of diffusive transport, be it momentum, energy, mass, or charge. Each chapter adds a term to the balance equation, highlighting the effects of that addition on the physical behavior of the system and the underlying mathematical description. The second half of the book builds upon the balance equation description of diffusive transport by introducing convective transport terms, focusing on partial rather than ordinary differential equations. The Navier–Stokes and convective transport equations are derived from balance equations in both macroscopic and microscopic forms. Includes examples and problems drawn from Comsol® software The second edition of this text is now enhanced by the use of finite element methods in the form of examples and extended homework problems. A series of example modules are associated with each chapter of the text. Some of the modules are used to produce examples in the text, and some are discussed in the homework at the end of each chapter. All of the modules are located online at an accompanying website which is designed to be a living component of the course. (available on the download tab)

Construction Equipment Management for Engineers, Estimators, and Construction Managers,

Second Edition has been extensively rewritten to not only bring it up to date with the state of current practice, but also to serve as a textbook for university courses in construction engineering and management. The authors advanced the previous edition's practical, hands-on approach and added material on the future of construction equipment fleet management, which they believe will require a new technology-based skillset to maximize the cost-effectiveness of construction equipment operations. As such, the book covers the latest construction equipment technologies. Features: Examines emergent technologies in the field, including automated machine guidance systems, intelligent compaction operations, and equipment-related civil integrated management tools. Provides information on how to reduce an equipment fleet's environmental impact, decreasing greenhouse gas emissions through enhanced equipment management and optimization practices. Discusses estimating equipment ownership, operating costs, economic life and optimal replacement timing. Demonstrates how to maximize profit by determining the optimum equipment mix and estimating productivity. Illustrates the use of production-based linear scheduling and stochastic simulations to maximize project cost and schedule certainty. This new edition will serve as an essential textbook for students as well as a valuable reference for a wide range of professionals within the construction, architecture, and engineering industries.
A sleeker, more comprehensive approach to construction projects BIM and Construction Management, Second Edition is a complete integration guide, featuring practical advice, project tested methods and workflows, and tutorials for implementing Building Information Modeling and technology in construction. Updated to align with the latest software editions from Autodesk, Trimble and Bentley, this book provides a common sense approach to leveraging BIM to provide significant value throughout a project's life cycle. This book outlines a results-focused approach which shows you how to incorporate BIM and other technologies into all phases of construction management, such as: Project planning: Set up the BIM project to succeed right from the start by using the right contracts, the right processes and the right technology Marketing: How to exceed customer expectations and market your brand of BIM to win. Pre-construction: Take a practical approach to engineer out risks in your project by using the model early to virtually build and analyze your project, prior to physical construction. Construction: Leverage the model throughout construction to build safer and with better quality. Field work: Learn how mobile technologies have disrupted the way we work in the field to optimize efficiencies and access information faster. Closeout: Deliver a better product to your customer that goes beyond the physical structure and better prepares them for future operations. Additionally, the book provides a look at technology trends in construction and a thoughtful perspective into potential use cases going forward. BIM and Construction Management, Second Edition builds on what has changed in the construction landscape and highlights a new way of delivering BIM-enabled projects. Aligning to industry trends such as Lean, integrated delivery methods, mobile platforms and cloud-based collaboration this book illustrates how using BIM and technology efficiently can create value.
The second edition of the Encyclopedia of Housing has been updated to reflect the significant changes in the market that make the landscape of the industry so different today, and includes articles from a fresh set of scholars who have contributed to the field over the past twelve years.
Learn the slang words, modern phrases, and curses they definitely never taught you in Russian class with this super-handy and hilariously improper English-Russian phrasebook. You already know enough Russian to get by, but you want to be able to tell those inside jokes, greet your friends in a laid-back manner, and casually pick someone up at a bar. From "what's up?" to "Wanna go home with me?" Dirty Russian will teach you how to speak like you're a regular on the streets of Moscow. But you'll

also discover material that goes beyond a traditional phrasebook, including: Hilarious insults Provocative facts Explicit swear words Themed Russian cocktails And more! Next time you're traveling to Russia, pick up this book, drop the textbook formality, and get dirty!

The authoritative industry guide on good practice for planning and scheduling in construction This handbook acts as a guide to good practice, a text to accompany learning and a reference document for those needing information on background, best practice, and methods for practical application. A Handbook for Construction Planning & Scheduling presents the key issues of planning and programming in scheduling in a clear, concise and practical way. The book divides into four main sections: Planning and Scheduling within the Construction Context; Planning and Scheduling Techniques and Practices; Planning and Scheduling Methods; Delay and Forensic Analysis. The authors include both basic concepts and updates on current topics demanding close attention from the construction industry, including planning for sustainability, waste, health and safety and Building Information Modelling (BIM). The book is especially useful for early career practitioners - engineers, quantity surveyors, construction managers, project managers - who may already have a basic grounding in civil engineering, building and general construction but lack extensive planning and scheduling experience. Students will find the website helpful with worked examples of the methods and calculations for typical construction projects plus other directed learning material. This authoritative industry guide on good practice for planning and scheduling in construction is written in a direct, informative style with a clear presentation enabling easy access of the relevant information with a companion website providing additional resources and learning support material. the authoritative industry guide on construction planning and scheduling direct informative writing style and clear presentation enables easy access of the relevant information companion website provides additional learning material.

The most comprehensive, up-to-date construction project management system Fully revised for the latest technologies and standards, Total Construction Project Management, Second Edition provides a proven framework for completing construction jobs as specified, on schedule, and within budget. You'll learn how to plan, organize, and control each stage of a project—from initiation to close-out. This updated edition integrates important new trends, such as technological interoperability, seamless electronic information exchange, Building Information Modeling (BIM), and sustainable building practices. Real-world case studies and customizable sample construction documents are included in this practical guide. Inside, you'll find field-tested methods for: Preparing project bids and proposals Negotiating contracts Project planning and initiation Scheduling construction Estimating, budgeting and cost control Project organization and control Construction project execution Integrating the latest technologies, including BIM and electronic information exchange Green building and sustainable construction Construction safety and health Project communications Managing human factors