
Engineering Science N2 April 2013 Memo

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Gulf Professional Publishing

Digital War offers a comprehensive overview of the impact of digital technologies upon the military, the media, the global public and the concept of 'warfare' itself. This introductory textbook explores the range of uses of digital technology in contemporary warfare and conflict. The book begins with the 1991 Gulf War, which showcased post-Vietnam technological developments and established a new model of close military and media management. It explores how this model was reapplied in Kosovo (1999), Afghanistan (2001) and Iraq (2003), and how, with the Web 2.0 revolution, this informational control broke down. New digital technologies allowed anyone to be an informational producer leading to the emergence of a new mode of 'participative war', as seen in Gaza, Iraq and Syria. The book examines major political events

of recent times, such as 9/11 and the War on Terror and its aftermath. It also considers how technological developments such as unmanned drones and cyberwar have impacted upon global conflict and explores emerging technologies such as soldier-systems, exo-skeletons, robotics and artificial intelligence and their possible future impact. This book will be of much interest to students of war and media, security studies, political communication, new media, diplomacy and IR in general.

Re-engineering Manufacturing for Sustainability John Wiley & Sons

We want to be healthy. We want to be lean. And we want to lose that annoying fat around our bellies! We can achieve ALL of these goals with The Lose Your Belly Diet. Based on exciting new research about the dramatic benefits of vibrant gut health and

a diverse gut microbiome, this plan nurtures your gut while helping you burn off excess weight and harmful belly fat. This plan is built around a very clear, research-based concept: Eating food that nourishes and protects the microbes in your gut paves the way for weight loss, a slimmer middle, and better overall health. It's not just about weight loss. Having great gut health is linked to good health throughout your body. Scientists in this rapidly growing field are finding connections between gut microbes and the immune system, weight loss, gastrointestinal health, , allergies, asthma, and even cancer. With every study that's published, scientists become more convinced that having a healthy gut leads to having a healthy body. We're accustomed to thinking of bacteria as bad—and some are—but most of the bacteria and microbes in our guts do amazing things, like working with our immune system to fight disease and helping our bodies digest food. Not only can't we live without them, but as their numbers and diversity increase, so too does our health. In this book, we look at all of the ways you can improve your own gut health, starting with the food you eat. My diet recommendations, meal plans, and recipes will help feed and protect your gut microbes. And we look at the many other steps you can take to support your beneficial bacteria, from avoiding unnecessary antibiotics to changing the way you think about dirt and germs. Even the choices you make about how you bring your children into the world can have an

impact on your family's microbiomes. In The Lose Your Belly Diet, we'll cover all the bases, giving you everything you need to know to make dramatic changes in your GI health, your weight, your belly fat, and your overall health.

Top Vol 28-N2-3 Elsevier

Today's leading organizations recognize the importance of research and development (R&D) to maintain and grow market share. If companies want to survive into the future, they must accelerate their R&D-to-market cycles or find themselves behind the competition. Project Management for Research and Development: Guiding Innovation for Positive R
Silk Biomaterials for Tissue Engineering and Regenerative

Medicine CRC Press

This book examines a range of subjects with a specific focus on architectural and technological advancements. Architecture is the constant innovation in designing for high efficiency in the performance of buildings, in terms of planning, construction and energy, while maintaining creativity in its form. Moreover, the field of architecture goes hand in hand with that of technology. Nowadays, engineering technology has to cope with the rapid industrialization and urbanization seen in most

countries. Furthermore, creative design and construction practices are challenging tasks to the architects and engineers to meet the ever-growing demands of society. Therefore, this book on "Advances in Engineering Science and Architectural Design" is provided to cover a wide range of topics in architecture, engineering, and technology.

Proceedings of the International Symposium on Research of Arts, Design and Humanities (ISRADH 2014) Springer Nature

The five-volume set LNCS 9786-9790 constitutes the refereed proceedings of the 16th International Conference on Computational Science and Its Applications, ICCSA 2016, held in Beijing, China, in July 2016. The 239 revised full papers

and 14 short papers presented at 33 workshops were carefully reviewed and selected from 849 submissions. They are organized in five thematic tracks: computational methods, algorithms and scientific applications; high performance computing and networks; geometric modeling, graphics and visualization; advanced and emerging applications; and information systems and technologies.

Project Management for Research and Development CRC Press

The parties of the United Nations Framework Convention on Climate Change (UNFCCC) attained the Paris Agreement to tackle climate change and to strengthen the actions required for a sustainable transition towards an environmentally friendly future. This transition will involve holistic approaches and multifaceted societal shifts, requiring answers and collaboration between private, public, and academic sectors. This book gathers together contributions which study the transition towards a more sustainable future,

involving and identifying the development and implications of more sustainable alternatives, in collaboration with all relevant stakeholders (e.g. communities, firms, policy makers, researchers, etc.), to achieve this transition. The approaches proposed are all concerned with a common perspective: imaging our globe with a greener picture, built upon a transversal sustainable revolution to clean up the Earth.

Numerical Mathematics and Advanced Applications - ENUMATH 2013 IGI Global

The Enhanced Oil Recovery Series delivers a multivolume approach that addresses the latest research on various types of EOR. The second volume in the series, Gas Injection Methods, helps engineers focus on the latest developments in one of the fastest growing areas. Different techniques are described in addition to the latest technology such as data mining and unconventional reservoirs.

Supported field case studies are included to show a bridge between research and practical application, making it useful for both academics and practicing engineers. Structured to start with an introduction on various gas types and different gas injection methods, screening criteria for choosing gas injection method, and environmental issues during gas injection methods, the editors then advance on to more complex content, guiding the engineer into newer topics involving CO₂ such as injection in tight oil reservoirs, shale oil reservoirs, carbonated water, data mining, and formation damage. Supported by a full spectrum of contributors, this book gives petroleum engineers and researchers the latest research developments and field applications to drive innovation for the future. Helps readers understand the latest research and practical

applications specific to foam flooding and gas injection Provides readers with the latest technology, including nanoparticle-stabilized foam for mobility control and carbon storage in shale oil reservoirs Teaches users about additional methods such as data mining applications and economic and environmental considerations

Developments in Strategic Ceramic Materials
CRC Press

Images play a key role for scholarly work in many ways – they facilitate communication and support understanding or make research results look more appealing. At the same time powerful image-editing programs have profoundly changed how image manipulations are perceived today. This book explores how scholars from different domains conceive image manipulation. The study is based on research

carried out at the Interdisciplinary Laboratory Image Knowledge Gestaltung at Humboldt University Berlin. Informants from the field of biology, computer science, art history and design explain how they differentiate between appropriate and inappropriate image manipulation. Furthermore these experts report on whether guidelines or practical logics shape their work with images.

Bulletin of Electrical Engineering and Informatics
Ghost Mountain Books

Two large international conferences on Advances in Engineering Sciences were held in Hong Kong, March 12 – 14, 2014, under the International MultiConference of Engineers and Computer Scientists (IMECS 2014), and in London, UK, 2 – 4 July, 2014, under the World Congress on Engineering 2014 (WCE 2014) respectively. This volume contains 37 revised and extended research articles written by prominent researchers

participating in the conferences. Topics covered include engineering mathematics, computer science, electrical engineering, manufacturing engineering, industrial engineering, and industrial applications. The book offers tremendous state-of-the-art advances in engineering sciences and also serves as an excellent reference work for researchers and graduate students working with/on engineering sciences. Contents: Switching Boundaries for Flexible Management of Natural Resource Investment under Uncertainty (T Tarnopolskaya, W Chen and C Bao) Using Exotic Option Prices as Control Variates in Monte Carlo Pricing Under a Local-Stochastic Volatility Model (Geoffrey Lee, Zili Zhu and Yu Tian) Multi-period Dynamic Portfolio Optimization through Least Squares Learning (C Bao, Z Zhu, N Langren é and G Lee) On General Solution of Incompressible and Isotropic Newtonian Fluid Equations (A A Maknickas) On the Inversion of Vandermonde Matrix via Partial Fraction Decomposition (Yiu

Kwong Man) Fractal Fourier Coefficients with Application to Identification Protocols (Nadia M G Al-Saidi, Arkan J Mohammed, Elisha A Ogada and Adil M Ahmed) Scheduling Algorithm with Inserted Idle Time for Problem $P_{prec} C_{max}$ (N S Grigoreva) Iterative Scheme for a Common Solutions of Equilibrium Problems, Variational Inequality Problems and Fixed Point Problems (Wichan Khongtham) Three-steps Iterative Method for Common Fixed Points, Variational Inclusions, and Equilibrium Problems (Yaowaluck Khongtham) Euler's Constant: A Proof of its Irrationality and Transcendence by means of Minus One Factorial (Okoh Ufuoma) Solution of Problem on Heat and Mass Transfer with Chemical Reaction over an Exponentially Accelerated Infinite Vertical Plate (A Ahmed, M N Sarki and M Ahmad) Improving Human Resource Security of a Data Centre: Case Study of a Hong Kong Wines and Spirits Distribution Company (Hon Keung Yau and Alison Lai Fong Cheng) Model to Measure

University's Readiness for Establishing Spin-offs: Comparison Study (Wahyudi Sutopo, Rina Wiji Astuti, Yuniaristanto, Agus Purwanto and Muhammad Nizam) Preliminary Study of Solar Electricity using Comparative Analysis (Wahyudi Sutopo, Dwi Indah Maryanie, Agus Purwanto and Muhammad Nizam) Tactile Memory for Different Shapes: Implications for Shape Coding in Man-machine Interfaces (Annie W Y Ng and Alan H S Chan) Ergonomics Recommendations for Control Station Work with Head Rotation (Steven N H Tsang, Stefanie X Q Kang and Alan H S Chan) A Methodological Approach to Affective Design (Youngil Cho and Sukyoung Kim) Data Analysis by Diminishing Rates of Change and 1 Approximation (I C Demetriou and S S Papakonstantinou) Comparing Naïve-Bayes Network Structures over Multiple Dataset (Haruna Chiroma, Abdulsalam Ya'u Gital, Adamu I Abubakar, Sanah Abdullahi Muaz, Jaafar Z Maitama and Tutut Herawan) Route

Recommendation Method Based on Driver's Estimated Intention Considering Route Selection with Car Navigation (Keisuke Hamada, Shinsuke Nakajima, Daisuke Kitayama and Kazutoshi Sumiya) Adaption of the Inertia Weight using a Novel Sine-based Chaotic Map for Particle Swarm Optimization (Yu-Huei Cheng) Fast Characterization of Intravascular Tissue by Subspace Method using Target Tissue's Neighborhood Information (Shota Furukawa, Eiji Uchino, Shinichi Miwa and Noriaki Suetake) Swarm Intelligent Control Object's Movement Simulation in Net-centric Environment using Neural Networks (Viacheslav Abrosimov) The Concept of Project Time Management with the Fuzzy Buffers Approach (B ł aszczyk Pawe ł and B ł aszczyk Tomasz) Data Driven Methods for Adaptation of ASR Systems (Akella Amarendra Babu, Yellasiri Ramadevi and Akepogu Ananda Rao) Semantic Web Improved by Including Class Information with the TFIDF Algorithm (Jyoti Gautam and Ela

Kumar)Urban Drainage in the Metropolitan Region of Bel é m, Brazil: An Urbanistic Study (Juliano Pamplona Ximenes Ponte and Ana J ú lia Domingues Das Neves Brand ã o)Finger Based Techniques for Nonvisual Touchscreen Text Entry (Mohammed Fakrudeen, Sufian Yousef, Mahdi H Miraz and Abdelrahman Hamza Hussein)LTE Downlink and Uplink Physical Layer (Temitope O Takpor and Francis E Idachaba)New Dielectric Modulated Graphene (DMG) FET-Based Sensor for High-performance Biomolecule Sensing Applications (Faycal Djefal, Abdelhamid Benhaya, Khalil Tamersit and Mohamed Meguellati)Modelling and Optimization of Avalanche Photodiode Electrical Parameters using Multiobjective Genetic Algorithm (Toufik Bendib, Lucio Pancheri, Faycal Djefal and Gian-Franco Dalla Betta)Experimental Study of Impact of Ship Electric Power Plant Configuration and Load Variation on Power Quality in the Ship Power Systems (Tomasz Tarasiuk, Andrzej Pilat, Mariusz Szweda, Mariusz Gorniak and Zenon Troka)Studying of Electroencephalographic Signal Changes Induced by Odor Exposure (Rita Jorge Cerqueira Pinto, Isabel Patr í cia Pinheiro Peixoto Xavier, Maria Do Ros á rio Alves Calado and S í lvio Jos é Pinto Sim õ es Mariano)DC Motor Speed Control using FGPA (Ahmed Telba)Pellistor Gas Sensor Performance: Interface Circuitry Analysis (Hauwa Talatu Abdulkarim)Extended Research on Prefilter Bandwidth Effects in Asynchronous Sequential Symbol Synchronizers based on Pulse Comparison by both Transitions at Half Bit Rate (Antonio D Reis, Jose F Rocha, Atilio S Gameiro and Jose P Carvalho)Models of Organizational Change for Modernizing Pollution Warning Services (Anca Daniela Ionita and Mariana Mocanu) Readership: Professionals, academics and graduate students in electrical & electronic engineering, computer engineering, industrial engineering and mathematics. Key Features:This volume contains revised and extended

research articles written by prominent researchers participating in the conferences. The book offers the state of art of tremendous advances in engineering sciences. The book can also serve as an excellent reference work for researchers and graduate students working with/on engineering sciences.

Keywords: Engineering Mathematics; Computer Science; Electrical Engineering; Manufacturing Engineering; Industrial Engineering; Industrial Applications

Computational Intelligence Techniques and Their Applications to Software Engineering Problems Springer

Learn How to Infuse Leadership into Your Passion for Scientific Research Leadership and Women in Statistics explores the role of statisticians as leaders, with particular attention to women statisticians as leaders. By paying special attention to women's

issues, this book provides a clear vision for the future of women as leaders in scientific and

The Lose Your Belly Diet CRC Press

Civil and environmental engineers work together to develop, build, and maintain the man-made and natural environments that make up the infrastructures and ecosystems in which we live and thrive. *Civil and Environmental Engineering: Concepts, Methodologies, Tools, and Applications* is a comprehensive multi-volume publication showcasing the best research on topics pertaining to road design, building maintenance and construction, transportation, earthquake engineering, waste and pollution management, and water resources management and engineering. Through its broad and extensive coverage on a variety of crucial concepts in the field of civil engineering, and its subfield of environmental engineering, this multi-volume work is an essential

addition to the library collections of academic and government institutions and appropriately meets the research needs of engineers, environmental specialists, researchers, and graduate-level students.

Plant Hazard Analysis and Safety

Instrumentation Systems Frontiers E-books

Title: The Vacuum Interrupter: Theory, Design, and Application

Shelving guide: Electrical Engineering
Dr. Paul Slade draws from his nearly six decades of active experience to develop this second edition of The Vacuum Interrupter: Theory, Design, and Application. This book begins by discussing the design requirements for high voltage vacuum interrupters and then the contact requirements to interrupt the vacuum arc. It then continues by describing the various applications in which the vacuum interrupter is generally utilized.

Part 1 of this book begins with a detailed review of the vacuum breakdown process. It continues

by covering the steps necessary for the design and the manufacture of a successful vacuum interrupter. The vacuum arc is then discussed, including how it is affected as a function of current. An overview of the development and use of practical contact materials, along with their advantages and disadvantages, follows. Contact designs that are introduced to control the high current vacuum arc are also analyzed. Part 2, on application, begins with a discussion of the arc interruption process for low current and high current vacuum arcs. It examines the voltage escalation phenomenon that can occur when interrupting inductive circuits. The occurrence of contact welding for closed contacts subjected to the passage of high currents, and for contacts when closing on high currents, is explored. The general requirements for the successful manufacture and testing of

vacuum circuit breakers is then presented. The general application of vacuum interrupters to switch load currents, especially when applied to capacitor circuits, is also given. The interruption of high short circuit currents is presented along with the expected performance of the two major contact designs. Owing to the ever-increasing need for environmentally friendly circuit protection devices, the development and application of the vacuum interrupter will only increase in the future. At present the vacuum circuit breaker is the technology of choice for distribution circuits (5kV to 40.5kV). It is increasingly being applied to transmission circuits (72.5kV to 242kV). In the future, its application for protecting high voltage DC networks is assured. Audience This is a practical source book for engineers and scientists interested in studying the development and application of the vacuum interrupter Research scientists in industry and universities Graduate students beginning their study of vacuum interrupter phenomena Design engineers applying vacuum interrupters in vacuum switches, vacuum contactors, vacuum circuit breakers, and vacuum contactors It provides a unique and comprehensive review of all aspects of vacuum interrupter technology for those new to the subject and for those who wish to obtain a deeper understanding of its science and application Scientists and engineers, who are beginning their research into vacuum breakdown and aspects of the vacuum arc, will find the extensive bibliography and phenomenological descriptions to be a useful introduction

Top Vol 26-N2 Routledge
This comprehensive volume brings together

an extensive collection of systematic computer-aided tools and methods developed in recent years for CO₂ capture applications, and presents a structured and organized account of works from internationally acknowledged scientists and engineers, through: Modeling of materials and processes based on chemical and physical principles Design of materials and processes based on systematic optimization methods Utilization of advanced control and integration methods in process and plant-wide operations The tools and methods described are illustrated through case studies on materials such as solvents, adsorbents, and membranes, and on processes such as absorption / desorption, pressure and vacuum swing adsorption, membranes,

oxycombustion, solid looping, etc. Process Systems and Materials for CO₂ Capture: Modelling, Design, Control and Integration should become the essential introductory resource for researchers and industrial practitioners in the field of CO₂ capture technology who wish to explore developments in computer-aided tools and methods. In addition, it aims to introduce CO₂ capture technologies to process systems engineers working in the development of general computational tools and methods by highlighting opportunities for new developments to address the needs and challenges in CO₂ capture technologies. Digital War IAENG Transactions on Engineering Sciences The search for alternative, renewable sources

of fuel and energy from plants, algae, and waste materials has catalyzed in recent years. With the growing interest in bioenergy development and production there has been increasing demand for a broad ranging introductory text in the field. *Bioenergy: Principles and Practices* provides an invaluable introduction to the fundamentals of bioenergy feedstocks, processing, and industry. *Bioenergy* provides readers with an understanding of foundational information on 1st, 2nd, and 3rd generation biofuels. Coverage spans from feedstock production of key energy sources such as grasses, canes, and woody plants through chemical conversion processes and industrial application. Each chapter provides a thorough description of

fundamental concepts, definitions of key terms, case studies and practical examples and exercises. *Bioenergy: Principles and Practices* will be an essential resource for students, bioengineers, chemists, and industry personnel tying key concepts of bioenergy science to valuable real world application.

Computational Science and Its Applications – ICCSA 2016 World Scientific

This book gathers a selection of invited and contributed lectures from the European Conference on Numerical Mathematics and Advanced Applications (ENUMATH) held in Lausanne, Switzerland, August 26-30, 2013. It provides an overview of recent developments in numerical analysis, computational mathematics and applications from leading experts in the field. New results on finite element methods,

multiscale methods, numerical linear algebra and discretization techniques for fluid mechanics and optics are presented. As such, the book offers a valuable resource for a wide range of readers looking for a state-of-the-art overview of advanced techniques, algorithms and results in numerical mathematics and scientific computing.

Process Systems and Materials for CO2 Capture Institute of Advanced Engineering and Science

The Ceramic Engineering and Science Proceeding has been published by The American Ceramic Society since 1980. This series contains a collection of papers dealing with issues in both traditional ceramics (i.e., glass, whitewares, refractories, and porcelain enamel) and advanced ceramics. Topics covered in the area of advanced ceramic

include bioceramics, nanomaterials, composites, solid oxide fuel cells, mechanical properties and structural design, advanced ceramic coatings, ceramic armor, porous ceramics, and more.

Gas Injection Methods R&L Education

This Green Book provides those involved in transformer procurement with comprehensive guidance on industry best practice to avoid wrong decisions. Transformers are one of the expensive components in the power system, and also contribute a large proportion of the losses. Transformers also have long lives - more than 40 years in many cases. Making the wrong decisions during the procurement process can have serious and long-lasting consequences.

Civil and Environmental Engineering: Concepts, Methodologies, Tools, and Applications Springer Nature

Computational Intelligence Techniques and

Their Applications to Software Engineering Problems focuses on computational intelligence approaches as applicable in varied areas of software engineering such as software requirement prioritization, cost estimation, reliability assessment, defect prediction, maintainability and quality prediction, size estimation, vulnerability prediction, test case selection and prioritization, and much more. The concepts of expert systems, case-based reasoning, fuzzy logic, genetic algorithms, swarm computing, and rough sets are introduced with their applications in software engineering. The field of knowledge discovery is explored using neural networks and data mining techniques by determining the underlying and hidden patterns in software data sets. Aimed at graduate students and researchers in computer science engineering, software engineering, information technology, this book: Covers various aspects of in-depth solutions of software engineering problems using computational intelligence techniques Discusses the latest evolutionary approaches to preliminary theory of different solve optimization problems under software engineering domain Covers heuristic as well as meta-heuristic algorithms designed to provide better and optimized solutions Illustrates applications including software requirement prioritization, software cost estimation, reliability assessment, software defect prediction, and more Highlights swarm intelligence-based optimization

solutions for software testing and reliability problems

Integration of Constraint Programming, Artificial Intelligence, and Operations Research Springer Science & Business Media

Silk is increasingly being used as a biomaterial for tissue engineering applications, as well as sutures, due to its unique mechanical and chemical properties. *Silk Biomaterials for Tissue Engineering and Regenerative Medicine* discusses the properties of silk that make it useful for medical purposes and its applications in this area. Part one introduces silk biomaterials, discussing their fundamentals and how they are processed, and considering different types of silk biomaterials. Part two focuses

on the properties and behavior of silk biomaterials and the implications of this for their applications in biomedicine. These chapters focus on topics including biodegradation, bio-response to silk sericin, and capillary growth behavior in porous silk films. Finally, part three discusses the applications of silk biomaterials for tissue engineering, regenerative medicine, and biomedicine, with chapters on the use of silk biomaterials for vertebral, dental, dermal, and cardiac tissue engineering. *Silk Biomaterials for Tissue Engineering and Regenerative Medicine* is an important resource for materials and tissue engineering scientists, R&D departments in industry and academia, and academics with an interest in the fields of biomaterials and tissue

engineering. Discusses the properties and applications of silk for medical purposes

Considers pharmaceutical and cosmeceutical applications

Gravity Compensation in Robotics Walter de Gruyter GmbH & Co KG

This book gathers an in-depth collection of 45 selected papers presented at the Global Conference on Global Warming 2014 in Beijing, China, covering a broad variety of topics from the main principles of thermodynamics and their role in design, analysis, and the improvements in performance of energy systems to the potential impact of global warming on human health and wellbeing. Given energy production 's role in contributing to global warming and climate change, this work provides solutions to global warming from the point of view of energy.

Incorporating multi-disciplinary expertise and approaches, it provides a platform for the analysis of new developments in the area of global warming and climate change, as well as potential energy solutions including renewable energy, energy efficiency, energy storage, hydrogen production, CO2 capture and environmental impact assessment. The research and analysis presented herein will benefit international scientists, researchers, engineers, policymakers and all others with an interest in global warming and its potential solutions.