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Develop high-performance hydraulic and pneumatic power systems Design, operate, and maintain fluid and pneumatic power equipment using the expert information contained in this authoritative volume. Fluid Power Engineering presents a comprehensive approach to hydraulic systems engineering with a solid grounding in hydrodynamic theory. The book explains how to create accurate mathematical

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models, select and assemble components, and integrate powerful servo valves and actuators. You will also learn how to build low-loss transmission lines, analyze system performance, and optimize efficiency. Work with hydraulic fluids, pumps, gauges, and cylinders Design transmission lines using the lumped parameter model Minimize power losses due to friction, leakage, and line resistance Construct and operate accumulators, pressure switches, and filters Develop mathematical models of electrohydraulic servosystems Convert hydraulic power into mechanical energy using actuators

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Precisely control load displacement using HSAs and control valves Apply fluid systems techniques to pneumatic power systems

A concise book for candidates appearing for Mechanical Engineering Exams.

The Finite Element Method in Engineering, Fifth Edition, provides a complete introduction to finite element methods with applications to solid mechanics, fluid mechanics, and heat transfer.

Written by bestselling author S.S. Rao, this book provides students with a thorough grounding of the mathematical principles for setting up finite element

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solutions in civil, mechanical, and aerospace engineering applications. The new edition of this textbook includes examples using modern computer tools such as MatLab, Ansys, Nastran, and Abaqus. This book discusses a wide range of topics, including discretization of the domain; interpolation models; higher order and isoparametric elements; derivation of element matrices and vectors; assembly of element matrices and vectors and derivation of system equations; numerical solution of finite element equations; basic equations of fluid mechanics; inviscid and irrotational flows; solution of

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quasi-harmonic equations; and solutions of Helmholtz and Reynolds equations. New to this edition are examples and applications in Matlab, Ansys, and Abaqus; structured problem solving approach in all worked examples; and new discussions throughout, including the direct method of deriving finite element equations, use of strong and weak form formulations, complete treatment of dynamic analysis, and detailed analysis of heat transfer problems. All figures are revised and redrawn for clarity. This book will benefit professional engineers, practicing engineers learning finite

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element methods, and students in mechanical, structural, civil, and aerospace engineering. Examples and applications in Matlab, Ansys, and Abaqus Structured problem solving approach in all worked examples New discussions throughout, including the direct method of deriving finite element equations, use of strong and weak form formulations, complete treatment of dynamic analysis, and detailed analysis of heat transfer problems More examples and exercises All figures revised and redrawn for clarity

Design and Build .NET Applications Using

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Component-Oriented Programming

Big Data

Sensors and Actuators

Heat & Mass Transfer 2E

A consumer perspective

This book contains the proceedings of a conference held at the Manchester Business School on 15-16 July 1996. It covers the topics of fundamental materials studies and the design and fabrication of prototype devices, and represents a cross section of the UK activity in sensors and actuators.

This textbook provides students with an essential

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introduction to the theoretical underpinnings and practicalities of managing the marketing of events. In order to market events effectively, it is vital to consider marketing of events from the organiser's perspective and to link it to that of the consumers attending events. As such, this is the first book on the topic which reflects the unique characteristics of marketing in the Events industry by exploring both sides of the marketing coin – the supply and the demand – in the specific context of events. The book takes the reader from core marketing mix principles to exploring the event marketing landscape to

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consumer experience and involvement with event marketing and finally strategies and tactics employed to manage the marketing activities related to events. The use of technology, importance of sponsorship and PR are also considered. International case studies are integrated throughout to show practical realities of marketing and managing events and a range of useful learning aids are incorporated to aid navigation throughout the book, spur critical thinking and further students' knowledge. This accessible and comprehensive account of Events Marketing and Management is essential reading for all students

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and future managers.

This third edition of Basic Electrical Engineering provides a lucid exposition of the principles of electrical engineering. The book provides an exhaustive coverage of topics such as network theory and analysis, magnetic circuits and energy conversion, ac and dc machines, basic analogue instruments, and power systems. The book also gives an introduction to illumination concepts.

Machine Design: An Integrated Approach, 2/E
Elements of Mechanical Engineering
Manufacturing Process

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Electronic Devices And Circuits

Mechanical Vibration

Preface Adhesion is a phenomenon architects and civil engineers are not very familiar with. In other disciplines knowledge about surface properties and the background of bonding energies is also far from satisfactory; nevertheless there are many important applications in concrete engineering, where adhesion is necessary for success and durability. These include: - coating and painting - repair of concrete surfaces - bonding of fresh to old

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concrete - crack injection - glueing of precast elements - glueing of steel to concrete, etc. In 1981 RILEM established the technical committee 52-RAC 'Resin Adherence to Concrete'. The main aims of the committee's work were - to collect research results and practical experiences - to initiate and coordinate research programs - to develop, on a scientific base, test methods for field and for laboratory purposes. One of the results of the committee's work is a state-of-the-art report, which will be presented orally as a General Report at the International Symposium ISAP '86, and will be printed either in the RILEM

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journal Materials and Structures or separately. Several test recommendations have been elaborated and will be prepared as drafts for the participants of ISAP '86. These are: - direct tensile test - pull-off test - direct shear test - slant shear test - four-point bending test - dynamic loading test - thermal compatibility test (two versions) - injectibility test.

Building on the success of 'Modelling, Analysis, and Control of Dynamic Systems', 2nd edition, William Palm's new book offers a concise introduction to vibrations theory and applications. Design problems give readers the

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opportunity to apply what they've learned. Case studies illustrate practical engineering applications.

Revised extensively ad updated with several new topics, this book discusses the principles and applications of "Heat and Mass Tansfer". It is written with extensive pedagogy, clear explanations adn examples throughout to elucidate the concepts and facilitate problem solving.

A HEAT TRANSFER TEXTBOOK

***Hydraulics And Fluid Mechanics Including
Hydraulics Machines***

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Basic Mechanical Engineering

Selection and Operation

Electronic Control Systems in Mechanical Engineering

This book is a comprehensive, practical guide and reference to today's mechanical conveyor systems. It covers all types of mechanical conveyors, providing in-depth information on their design, function and applications. More than 180 photographs and schematics illustrate details of design and system layout. An introductory chapter provides an understanding of the characteristics of various types of bulk solids, including their conveyability and the

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types of conveying systems most effective for each. Following chapters examine each of five major categories of conveying systems, with practical details on their design, operation and applications. The final chapter presents basic information on motors and drives for conveying systems, as well as related equipment such as speed reduction systems and conveyor brakes. The emphasis throughout the text is on practical engineering and operating information, with a minimum of theory. The presentation is systematic and organized for easy reference. A very detailed index enables the quick location of needed information. This guide and reference will be useful to all engineers and other

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personnel involved in the continuous movement of bulk solids. It serves as both a basic introduction and a desk-top reference. The Authors Dr. Fayed is a Professor and Director of the Powder Science & Technology Group at Ryerson Polytechnic University in Toronto. He is also a licensed Consulting Engineer, a Fellow of the American Institute of Chemical Engineers and the Canadian Society of Chemical Engineering. Previously he held positions in process design and development with ICI, Davy McKee, M. W. Kellogg, and Peabody. He has lectured at numerous seminars and workshops at meetings of the American Institute of Chemical Engineers, and other organizations. He has published many papers on

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particulate technology and is the co-editor of Powder Science & Technology Handbook. Thomas Skocir in an engineer presently with ECO-TEC

The popularity of all the earlier thirteen editions of the book among the students as well as the teachers has made it possible to bring out the fourteenth edition of the book so soon. In this edition the book has been brought out in A-4 size thereby considerably enhancing the general get-up of the book. The book in this fourteenth edition is entirely in SI Units and it has been thoroughly revised in the light of the valuable suggestions received from the learned professors and the students of the various Universities. Accordingly several new articles have

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been added. The answers of all the illustrative examples and the problems have been checked and corrected. Moreover, several new problems from the latest question papers of the different Universities as well as competitive examinations have been incorporated. Thus, it may be emphatically stated that the book is complete in all respects and it covers the entire syllabus in the subject for degree students in the different branches of engineering for almost all the Universities. Therefore this Single Book fulfills the entire needs of the students intending to appear at the various University Examinations and also for those intending to appear at the various competitive examination such as engineering services

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and the ICS examinations and for those preparing for AMIE examinations. OUTSTANDING FEATURES "
Twenty nine chapters covering entire subject matter of Fluid Mechanics, Hydraulics and Hydraulic Machines. " SI Units used for the entire book " More than 200 multiple choice questions with answers "
Appendix containing computer programs to solve problems of uniform and critical flows in open channels. " Ten appendixes dealing with some important topics.

'Programming .NET Components', second edition, updated to cover .NET 2.0., introduces the Microsoft .NET Framework for building components on Windows platforms. From its many lessons, tips, and

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guidelines, readers will learn how to use the .NET Framework to program reusable, maintainable, and robust components.

Events Marketing Management

EMERGING TRENDS IN MECHANICAL ENGINEERING (22652)

Mechanical Conveyors

The Finite Element Method in Engineering

Design of Machine Elements

Engineering Metrology and Measurements is a textbook designed for students of mechanical, production and allied disciplines to facilitate learning of various shop-floor measurement

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techniques and also understand the basics of mechanical measurements.

Mechanical Vibrations: Theory and Applications takes an applications-based approach at teaching students to apply previously learned engineering principles while laying a foundation for engineering design. This text provides a brief review of the principles of dynamics so that terminology and notation are consistent and applies these principles to derive mathematical models of dynamic mechanical systems. The methods of application of these principles are consistent with popular Dynamics texts. Numerous pedagogical features

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have been included in the text in order to aid the student with comprehension and retention. These include the development of three benchmark problems which are revisited in each chapter, creating a coherent chain linking all chapters in the book. Also included are learning outcomes, summaries of key concepts including important equations and formulae, fully solved examples with an emphasis on real world examples, as well as an extensive exercise set including objective-type questions. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook

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version.

Based on the popular Artech House classic, Digital Communication Systems Engineering with Software-Defined Radio, this book provides a practical approach to quickly learning the software-defined radio (SDR) concepts needed for work in the field. This up-to-date volume guides readers on how to quickly prototype wireless designs using SDR for real-world testing and experimentation. This book explores advanced wireless communication techniques such as OFDM, LTE, WLA, and hardware targeting. Readers will gain an understanding of the core concepts behind wireless hardware, such as

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the radio frequency front-end, analog-to-digital and digital-to-analog converters, as well as various processing technologies. Moreover, this volume includes chapters on timing estimation, matched filtering, frame synchronization message decoding, and source coding. The orthogonal frequency division multiplexing is explained and details about HDL code generation and deployment are provided. The book concludes with coverage of the WLAN toolbox with OFDM beacon reception and the LTE toolbox with downlink reception. Multiple case studies are provided throughout the book. Both MATLAB and Simulink source code are included to

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assist readers with their projects in the field.

Machine Design

Thermodynamics and Fluid Mechanics Division

Refrigeration And Airconditioning

Mechatronics

Advanced Heat Transfer

This third edition of what has become a modern classic presents a lively overview of Materials Science which is ideal for students of Structural Engineering. It contains chapters on the structure of engineering materials, the

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determination of mechanical properties, metals and alloys, glasses and ceramics, organic polymeric materials and composite materials. It contains a section with thought-provoking questions as well as a series of useful appendices. Tabulated data in the body of the text, and the appendices, have been selected to increase the value of Materials for engineering as a permanent source of reference to readers throughout their professional

lives. The second edition was awarded Choice's Outstanding Academic Title award in 2003. This third edition includes new information on emerging topics and updated reading lists.

Designed for a one-semester course in Finite Element Method, this compact and well-organized text presents FEM as a tool to find approximate solutions to differential equations. This provides the student a better perspective on the technique and its wide range of

applications. This approach reflects the current trend as the present-day applications range from structures to biomechanics to electromagnetics, unlike in conventional texts that view FEM primarily as an extension of matrix methods of structural analysis. After an introduction and a review of mathematical preliminaries, the book gives a detailed discussion on FEM as a technique for solving differential equations and variational formulation of

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FEM. This is followed by a lucid presentation of one-dimensional and two-dimensional finite elements and finite element formulation for dynamics. The book concludes with some case studies that focus on industrial problems and Appendices that include mini-project topics based on near-real-life problems. Postgraduate/Senior undergraduate students of civil, mechanical and aeronautical engineering will find this text extremely useful; it will also appeal

to the practising engineers and the teaching community.

The term design means to plan for the construction of an object or the formulation of a plan for the satisfaction of need. The term machine design deals with the design of machines, their mechanisms and elements. Design of Machine Element (DME) may be defined as the selection of material and the dimensions for each geometrical parameter so that the element satisfies

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its function and undesirable effects are kept within the allowable limit. Machine elements are basic mechanical parts and features used as the building blocks of most machines. This book provides a systematic exposition of the basic concepts and techniques involved in design of machine elements. This book covers design of important elements such as gears, bearings and belt drives. Our hope is that this book, through its careful explanations of concepts,

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practical examples and figures bridges the gap between knowledge and proper application of that knowledge.

Micro Electro Mechanical System Design

Theory of Machines

Strength Of Materials

Mechanical Vibrations: Theory and Applications

Design of Machine Elements - II

"The integration of electronic engineering, electrical engineering, computer technology and control engineering with mechanical

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engineering -- mechatronics -- now forms a crucial part in the design, manufacture and maintenance of a wide range of engineering products and processes. This book provides a clear and comprehensive introduction to the application of electronic control systems in mechanical and electrical engineering. It gives a framework of knowledge that allows engineers and technicians to develop an interdisciplinary understanding and integrated approach to engineering. This second edition has been updated and expanded to provide greater depth of coverage." -- Back cover.

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Special Features: · Simple language, point-wise descriptions in easy steps. · Chapter organization in exact agreement with sequence of syllabus. · Simple line diagrams. · Concepts supported by ample number of solved examples and illustrations. · Pedagogy in tune with examination pattern of RGTU. · Large number of Practice problems. · Model Question Papers

About The Book: This book is designed to suit the core engineering course on basic mechanical engineering offered to first year students of all engineering colleges in Madhya Pradesh. This book meets the syllabus requirements of Basic Mechanical Engineering

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and has been written for the first year students (all branches) of BE Degree course of RGPV Bhopal affiliated Engineering Institutes. A number of illustrations have been used to explain and clarify the subject matter. Numerous solved examples are presented to make understanding the content of the book easy. Objective type questions have been provided at the end of each chapter to help the students to quickly review the concepts.

Experimental Fluid Mechanics, Second Edition, discusses the fundamental concepts of fluid mechanics. The book begins with a discussion

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of the use of dimensional analysis, in particular the way in which it can be used to relate the results of model tests to flows at full scale. A chapter on wind tunnels follows; because tunnels and other test rigs with similar features are the basic test facilities of laboratory fluid mechanics, and because most of the physical and mathematical features of the subject are well illustrated by the flow in wind tunnels. Subsequent chapters discuss techniques of measurements—fluid velocity and shear stress measurements, pressure measurements, force and position measurements, and flow

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visualization; the conduct of experiments and the writing of reports; and the last chapter is a survey of specialized branches of fluid mechanics. This book is intended for students of the theory of fluid mechanics, who must also learn about the physical situations which the theory represents, and especially for those who contemplate specializing in the experimental side of the subject rather than the theoretical side.

Materials for Engineering

An Integrated Approach

Modern Engineering Physics

Programming .NET Components

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Engineering Metallurgy

The book in its present form is due to my interaction with the students for quite a long time. It had been my long-cherished desire to write a book covering most of the topics that form the syllabi of the Engineering and Science students at the degree level. Many students, although able to understand the various topics of the books, may not be able to put their knowledge to use. For this purpose a number of questions and problems are given at the end of each chapter.

Revised extensively, the new edition of this text

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conforms to the syllabi of all Indian Universities in India. This text strictly focuses on the undergraduate syllabus of Design of Machine Elements I and II , offered over two semesters. Advanced Heat Transfer, Second Edition provides a comprehensive presentation of intermediate and advanced heat transfer, and a unified treatment including both single and multiphase systems. It provides a fresh perspective, with coverage of new emerging fields within heat transfer, such as solar energy and cooling of microelectronics. Conductive, radiative and convective modes of heat transfer

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are presented, as are phase change modes. Using the latest solutions methods, the text is ideal for the range of engineering majors taking a second-level heat transfer course/module, which enables them to succeed in later coursework in energy systems, combustion, and chemical reaction engineering.

Principles and Paradigms

Software-Defined Radio for Engineers

With Applications

Fluid Power Engineering

Flow in Open Channels

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For courses in Machine Design or anyone interested in understanding the theory behind Machine Design. An integrated, case-based approach to Machine Design Machine Design, 5e presents the subject matter in an up-to-date and thorough manner with a strong design emphasis. This book emphasizes failure theory and analysis as well as the synthesis and design aspects of machine elements. The book points out the commonality of the analytical approaches needed to design a wide variety of elements and emphasizes the use of

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computer-aided engineering as an approach to the design and analysis of these classes of problems.

It is challenging at best to find a resource that provides the breadth of information necessary to develop a successful micro electro mechanical system (MEMS) design. Micro Electro Mechanical System Design is that resource. It is a comprehensive, single-source guide that explains the design process by illustrating the full range of issues involved, how they are interrelated, and

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how they can be quickly and accurately addressed. The materials are presented in logical order relative to the manner a MEMS designer needs to apply them. For example, in order for a project to be completed correctly, on time, and within budget, the following diverse yet correlated issues must be attended to during the initial stages of design and development: Understanding the fabrication technologies that are available
Recognizing the relevant physics involved for micron scale devices Considering

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implementation issues applicable to computer aided design Focusing on the engineering details and the subsequent evaluation testing Maintaining an eye for detail regarding both reliability and packaging These issues are fully addressed in this book, along with questions and problems at the end of each chapter that promote review and further contemplation of each topic. In addition, the appendices offer information that complement each stage of project design and development. Effective from 2008-09 session, U.P.T.U.

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has introduced the subject of manufacturing processes for first year engineering students of all streams. This textbook covers the entire course material in a distilled form.

Engineering Metrology and Measurements

Numerical Optimization Techniques for

Engineering Design

Applied Thermodynamics

Adhesion between polymers and concrete /

Adhésion entre polymères et béton

Handbook of Mechanical Engineering

This book, written by specialists in the area of

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solid mechanics, presents the fundamentals of deformable solids in a logical and cogent manner. Illustrative cases and worked examples are added to familiarize the student with problems encountered in engineering practice. Big Data: Principles and Paradigms captures the state-of-the-art research on the architectural aspects, technologies, and applications of Big Data. The book identifies potential future directions and technologies that facilitate insight into numerous scientific, business, and consumer applications. To help realize Big Data's full potential, the book addresses numerous challenges, offering the

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conceptual and technological solutions for tackling them. These challenges include life-cycle data management, large-scale storage, flexible processing infrastructure, data modeling, scalable machine learning, data analysis algorithms, sampling techniques, and privacy and ethical issues. Covers computational platforms supporting Big Data applications Addresses key principles underlying Big Data computing Examines key developments supporting next generation Big Data platforms Explores the challenges in Big Data computing and ways to overcome them Contains expert contributors from both academia and industry

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***Bonding · Protection · Repair / Revêtement ·
Protection · Réparation
Experimental Fluid Mechanics
TEXTBOOK OF FINITE ELEMENT ANALYSIS
Basic Electrical Engineering***