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ENGINEERING MECHANICS. Basic Mechanical Engineering [Laxmi Publications](#) **Advances in Lightweight Materials and Structures Select Proceedings of ICALMS 2020** [Springer Nature](#) This book presents select proceedings of the International Conference on Advanced Lightweight Materials and Structures (ICALMS) 2020, and discusses the triad of processing, structure, and various properties of lightweight materials. It provides a well-balanced insight into materials science and mechanics of both synthetic and natural composites. The book includes topics such as nano composites for lightweight structures, impact and failure of structures, biomechanics and biomedical engineering, nanotechnology and micro-engineering, tool design and manufacture for producing lightweight components, joining techniques for lightweight structures for similar and dissimilar materials, design for manufacturing, reliability and safety, robotics, automation and control, fatigue and fracture mechanics, and friction stir welding in lightweight sandwich structures. The book also discusses latest research in composite materials and their applications in the field of aerospace, construction, wind energy, automotive, electronics and so on. Given the range of topics covered, this book can be a useful resource for beginners, researchers and professionals interested in the wide ranging applications of lightweight structures. **Kinematics of Machinery** [Technical Publications](#) Kinematics of Machinery is the branch of engineering science which deals with the study of relative motion between the various parts of a machine and the forces which act on them. It gives information about the basic concepts and layout of linkages in the assembly of a system or a machine. The subject provides information about the principles in analysing the assembly with respect to the displacement, velocity and acceleration at any point in a link of a mechanism. This book gives technique to find velocity and acceleration of different mechanisms by graphical and analytical methods. It also includes the basic concepts of toothed gearing and kinematics of gear trains and the effect of friction in motion transmission and in machine components. My hope is that this book, through its careful explanations of concepts, practical examples and figures bridges the gap between knowledge and proper application of that knowledge. **Proceedings of International Conference on Computational Intelligence and Data Engineering ICCIDE 2017** [Springer](#) The book presents high quality research work in cutting edge technologies and most-happening areas of computational intelligence and data engineering. It contains selected papers presented at International Conference on Computational Intelligence and Data Engineering (ICCIDE 2017). The conference was conceived as a forum for presenting and exchanging ideas and results of the researchers from academia and industry onto a common platform and help them develop a comprehensive understanding of the challenges of technological advancements from different viewpoints. This book will help in fostering a healthy and vibrant relationship between academia and industry. The topics of the conference include, but are not limited to collective intelligence, intelligent transportation systems, fuzzy systems, Bayesian network, ant colony optimization, data privacy and security, data mining, data warehousing, big data analytics, cloud computing, natural language processing, swarm intelligence, and speech processing. **Proceedings of 2nd International Conference on Intelligent Computing and Applications ICICA 2015** [Springer](#) Second International Conference on Intelligent Computing and Applications was the annual research conference aimed to bring together researchers around the world to exchange research results and address open issues in all aspects of Intelligent Computing and Applications. The main objective of the second edition of the conference for the scientists, scholars, engineers and students from the academia and the industry is to present ongoing research activities and hence to foster research relations between the Universities and the Industry. The theme of the conference unified the picture of contemporary intelligent computing techniques as an integral concept that highlights the trends in computational intelligence and bridges theoretical research concepts with applications. The conference covered vital issues ranging from intelligent computing, soft computing, and communication to machine learning, industrial automation, process technology and robotics. This conference also provided variety of opportunities for the delegates to exchange ideas, applications and experiences, to establish research relations and to find global partners for future collaboration. **Embedded System Applications** [Springer Science & Business Media](#) Embedded systems encompass a variety of hardware and software components which perform specific functions in host systems, for example, satellites, washing machines, hand-held telephones and automobiles. Embedded systems have become increasingly digital with a non-digital periphery (analog power) and therefore, both hardware and software codesign are relevant. The vast majority of computers manufactured are used in such systems. They are called 'embedded' to distinguish them from standard mainframes, workstations, and PCs. Although the design of embedded systems has been used in industrial practice for decades, the

systematic design of such systems has only recently gained increased attention. Advances in microelectronics have made possible applications that would have been impossible without an embedded system design. Embedded System Applications describes the latest techniques for embedded system design in a variety of applications. This also includes some of the latest software tools for embedded system design. Applications of embedded system design in avionics, satellites, radio astronomy, space and control systems are illustrated in separate chapters. Finally, the book contains chapters related to industrial best-practice in embedded system design. Embedded System Applications will be of interest to researchers and designers working in the design of embedded systems for industrial applications. **Basic Mechanical Engineering** [New Age International](#) **The Book Provides A Glimpse Of The Fascinating Field Of Mechanical Engineering To The Entrants To Engineering Colleges. It Gives An Insight Into The Major Areas Of Mechanical Engineering, Like Power Production, Energy Alternatives, Production Alternatives And The Latest Computer Controlled Machine Tools. The Book Is Made Interesting With Numerous Sketches And Schematics - A Definite Advantage In Understanding The Subject.** **Engineering Practices Lab Manual - 5Th E** [Vikas Publishing House](#) **Engineering Practices Lab Manual covers all the basic engineering lab practices in the Civil, Mechanical, Electrical and Electronics areas. The manual details the various tools to be used and exercises to be practiced in the application of engineering practices in each field.** **Self-Healing Polymers From Principles to Applications** [John Wiley & Sons](#) **Self-healing is a well-known phenomenon in nature: a broken bone merges after some time and if skin is damaged, the wound will stop bleeding and heals again. This concept can be mimicked in order to create polymeric materials with the ability to regenerate after they have suffered degradation or wear. Already realized applications are used in aerospace engineering, and current research in this fascinating field shows how different self-healing mechanisms proven successful by nature can be adapted to produce even more versatile materials. The book combines the knowledge of an international panel of experts in the field and provides the reader with chemical and physical concepts for self-healing polymers, including aspects of biomimetic processes of healing in nature. It shows how to design self-healing polymers and explains the dynamics in these systems. Different self-healing concepts such as encapsulated systems and supramolecular systems are detailed. Chapters on analysis and friction detection in self-healing polymers and on applications round off the book.** **Healthcare Paradigms in the Internet of Things Ecosystem** [Academic Press](#) **Health Care Paradigms in the Internet of Things Ecosystem brings all IoT-enabled health care related technologies into a single platform so that undergraduate and postgraduate students, researchers, academicians and industry leaders can easily understand IoT-based healthcare systems. The book uses data and network engineering and intelligent decision support system-by-design principles to design a reliable IoT-enabled health care ecosystem and to implement cyber-physical pervasive infrastructure solutions. It takes the reader on a journey that begins with understanding the healthcare monitoring paradigm in IoT-enabled technologies and how it can be applied in various aspects. In addition, the book walks readers through real-time challenges and presents a guide on how to build a safe infrastructure for IoT-based health care. It also helps researchers and practitioners understand the e-health care architecture through IoT and the state-of-the-art in IoT countermeasures. Readers will find this to be a comprehensive discussion on functional frameworks for IoT-based healthcare systems, intelligent medicine, RFID technology, HMI, Cognitive Interpretation, Brain-Computer Interface, Remote Health Monitoring systems, wearable sensors, WBAN, and security and privacy issues in IoT-based health care monitoring systems. Presents the complete functional framework workflow in IoT-enabled healthcare technologies Explains concepts of location-aware protocols and decisive mobility in IoT healthcare Provides complete coverage of intelligent data processing and wearable sensor technologies in IoT-enabled healthcare Explores the Human Machine Interface and its implications in patient-care systems in IoT healthcare Explores security and privacy issues and challenges related to data-intensive technologies in healthcare-based Internet of Things** **Textbook of Environmental Studies for Undergraduate Courses** [Universities Press](#) **The Importance Of Environmental Studies Cannot Be Disputed Since The Need For Sustainable Development Is A Key To The Future Of Mankind. Recognising This, The Honourable Supreme Court Of India Directed The Ugc To Introduce A Basic Course On Environmental Education For Undergraduate Courses In All Disciplines, To Be Implemented By Every University In The Country. Accordingly, The Ugc Constituted An Expert Committee To Formulate A Six-Month Core Module Syllabus For Environmental Studies. This Textbook Is The Outcome Of The Ugc S Efforts And Has Been Prepared As Per The Syllabus. It Is Designed To Bring About An Awareness On A Variety Of Environmental Concerns. It Attempts To Create A Pro-Environmental Attitude And A Behavioural Pattern In Society That Is Based On Creating Sustainable Lifestyles And A New Ethic Towards Conservation. This Textbook Stresses On A Balanced View Of Issues That Affect Our Daily Lives. These Issues Are Related To The Conflict Between Existing `Development Strategies And The Need For `Conservation . It Not Only Makes The Student Better Informed On These Concerns, But Is Expected To Lead The Student Towards Positive Action To Improve The Environment. Based On A Multidisciplinary Approach That Brings About An Appreciation Of The Natural World And Human Impact On Its Integrity, This Textbook Seeks Practical Answers To Make Human Civilization Sustainable On The Earth S Finite Resources. Attractively Priced At Rupees One Hundred And Fifteen Only, This Textbook Covers The Syllabus As Structured By The Ugc, Divided Into 8 Units And 50 Lectures. The First 7 Units, Which Cover 45 Lectures Are Classroom Teaching-Based, And Enhance Knowledge Skills And Attitude To Environment. Unit 8 Is Based On Field Activities To Be Covered In 5 Lecture Hours And Would Provide Students With First Hand Knowledge On Various Local Environmental Issues.** **Engineering Thermodynamics A Computer Approach (SI Units Version)** [Jones & Bartlett Learning](#) **Intended as a textbook for "applied" or engineering thermodynamics, or as a reference for practicing engineers, the book uses extensive in-text, solved examples and computer simulations to cover the basic properties of thermodynamics. Pure substances, the first and second laws, gases, psychrometrics, the vapor, gas and refrigeration cycles, heat transfer, compressible flow, chemical reactions, fuels, and more are presented in detail and**

enhanced with practical applications. This version presents the material using SI Units and has ample material on SI conversion, steam tables, and a Mollier diagram. A CD-ROM, included with the print version of the text, includes a fully functional version of QuickField (widely used in industry), as well as numerous demonstrations and simulations with MATLAB, and other third party software. Heat and Mass Transfer (SI Units) Polymer Matrix Composites and Technology Elsevier Given such properties as low density and high strength, polymer matrix composites have become a widely used material in the aerospace and other industries. Polymer matrix composites and technology provides a helpful overview of these materials, their processing and performance. After an introductory chapter, part one reviews the main reinforcement and matrix materials used as well as the nature of the interface between them. Part two discusses forming and molding technologies for polymer matrix composites. The final part of the book covers key aspects of performance, including tensile, compression, shear and bending properties as well as impact, fatigue and creep behaviour. Polymer matrix composites and technology provides both students and those in industry with a valuable introduction to and overview of this important class of materials. Provides a helpful overview of these materials, their processing and performance incorporating naming and classification of composite materials Reviews the main reinforcement and matrix materials used as well as the nature of the interface between them including damage mechanisms Discusses forming and molding technologies for polymer matrix composites outlining various techniques and technologies Power Plant Engineering Principles of Management S. Chand Publishing Principles of Management Advanced Thermoforming Methods, Machines and Materials, Applications and Automation John Wiley & Sons This guide gives an overview and insight into the advanced technology of thermoforming, discussing different processes and applications. It reveals the possibilities of thermoforming from forming, filling, and sealing processes, to using thermoforming technology for cost saving purposes and maximum efficiency. Its coverage addresses the simulation of formed parts as well as applications of technical parts and packaging. The reader is guided through the path of development, design, machine and mold technology and production, as well as the latest innovations, from thermoformed bottles to fully automated assembly lines. Manufacturing Technology - I Technical Publications Manufacturing Technology - I is a branch of mechanical engineering which involves transformation of raw materials from its original state to a finished product by changing its shape and few properties in a series of steps. Not all manufacturing processes can produce a product easily, economically and with good quality. Each process is generally categorised by some advantages and limitations over the other processes. This subject gives information about the different joining methods for metals, different plastic moulding techniques and sheet metal processes. It also includes different forming techniques and casting processes. Our hope is that this book, through its careful explanations of concepts, practical examples and figures bridges the gap between knowledge and proper application of that knowledge. Fluid Mechanics Technical Publications Fluid Mechanics is the branch of physics concerned with the mechanics of fluids and forces acting on them. It includes unlimited practical applications ranging from microscopic biological systems to automobiles, airplanes and spacecraft propulsion. Fluid Mechanics is the study of fluid behavior at rest and in motion. It also gives information about devices used to measure flow rate, pressure and velocity of fluid. The book uses plain, Lucid language to explain fundamentals of this subject. The book provides logical method of explaining various complicated concepts and stepwise methods to explain the important topics. Each chapter is well supported with necessary illustrations, practical examples and solved problems. All the chapters in the book are arranged in a proper sequence that permits each topic to build upon earlier studies. All care has been taken to make readers comfortable in understanding the basic concepts of the subject. Kalpana Chawla, a Life Penguin Books India Born into a conservative family in a provincial town, in Haryana, Kalpana Chawla dreamt of the stars. Through sheer hard work, indomitable intelligence and immense faith in herself, she became the first indian woman to travel into space, and most remarkably to travel twice. A shining career was tragically cut short in the recent Columbia mishap. In this well researched biography, journalist Padmanabhan talks to people who knew her, family and friends at Karnal, and colleagues at Nasa, to produce a moving portrait of a woman whose life was unique. Fundamentals of Metal Machining and Machine Tools CRC Press In the more than 15 years since the second edition of Fundamentals of Machining and Machine Tools was published, the industry has seen many changes. Students must keep up with developments in analytical modeling of machining processes, modern cutting tool materials, and how these changes affect the economics of machining. With coverage reflecting s Textbook of Thermal Engineering Edge Computing and Computational Intelligence Paradigms for the IoT IGI Global Edge computing is focused on devices and technologies that are attached to the internet of things (IoT). Identifying IoT use across a range of industries and measuring strategic values helps identify what technologies to pursue and can avoid wasted resources on deployments with limited values. Edge Computing and Computational Intelligence Paradigms for the IoT is a critical research book that provides a complete insight on the recent advancements and integration of intelligence in IoT. This book highlights various topics such as disaster prediction, governance, and healthcare. It is an excellent resource for researchers, working professionals, academicians, policymakers, and defense companies. Dynamics of Machinery Technical Publications Dynamics of machinery is concerned with the motion of the parts of the machines and the forces acting on these parts. Dynamic loads and undesired oscillations increase with higher speed of machines. At the same time, industrial safety standards require better vibration isolation. This book covers balancing of mechanisms, torsion vibrations, vibration isolation and the dynamic behaviour of drives and machine frames as complex systems. Typical dynamic effects such as the gyroscopic effect, damping and absorption, shocks are explained using practical examples. The substantial benefit of this dynamics of machinery lies in the combination of theory and practical applications and the numerous descriptive examples based on practical data. Our hope is that this book, through its careful explanations of concepts, practical examples and figures bridges the gap between knowledge and proper application of that knowledge. Green Composites from Natural Resources

CRC Press Global awareness of environmental issues has resulted in the emergence of economically and environmentally friendly bio-based materials free from the traditional side effects of synthetics. This book delivers an overview of the advancements made in the development of natural biorenewable resources-based materials, including processing methods and potential applications in green composites. Biorenewable polymers are a special class of natural material found in nature, such as natural fibers, wheat straw, rice husk, and saw dust. In addition to offering renewable feedstocks, natural biorenewable materials are compostable, recyclable, edible, and more energy efficient to process than plastic. **Green Composites from Natural Resources** covers various kinds of cellulosic biofibers, such as: hemp fibers jute saccharum cilliare fibers pine needles grewia optiva fibers sisal fibers eulaliopsis binata flax fibers coconut fibers eulaliopsis binata baggase fibers rice husk saw dust wood flour straw With scopes for the utilization of natural resources-based materials as potential replacements for traditional petroleum feedstocks on the rise, more scientists and researchers are exploring new composite materials based on biorenewable resources. This book provides information on more eco-friendly and sustainable alternatives to synthetic polymers and discusses the present state and growing utility of green materials from natural resources. **Environmental Science and Engineering (For Anna University)** **S. Chand Publishing** **Environmental Science & Engineering Testing of the Plastic Deformation of Metals** **Cambridge University Press** Discover a novel, self-contained approach to an important technical area, providing both theoretical background and practical details. Coverage includes mechanics and physical metallurgy, as well as study of both established and novel procedures such as indentation plastometry. Numerical simulation (FEM modelling) is explored thoroughly, and issues of scale are discussed in depth. Discusses procedures designed to explore plasticity under various conditions, and relates sample responses to deformation mechanisms, including microstructural effects. Features references throughout to industrial processing and component usage conditions, to a wide range of metallic alloys, and to effects of residual stresses, anisotropy and inhomogeneity within samples. A perfect tool for materials scientists, engineers and researchers involved in mechanical testing (of metals), and those involved in the development of novel materials and components. **Machine Learning Paradigms Advances in Deep Learning-based Technological Applications** **Springer Nature** At the dawn of the 4th Industrial Revolution, the field of Deep Learning (a sub-field of Artificial Intelligence and Machine Learning) is growing continuously and rapidly, developing both theoretically and towards applications in increasingly many and diverse other disciplines. The book at hand aims at exposing its reader to some of the most significant recent advances in deep learning-based technological applications and consists of an editorial note and an additional fifteen (15) chapters. All chapters in the book were invited from authors who work in the corresponding chapter theme and are recognized for their significant research contributions. In more detail, the chapters in the book are organized into six parts, namely (1) Deep Learning in Sensing, (2) Deep Learning in Social Media and IOT, (3) Deep Learning in the Medical Field, (4) Deep Learning in Systems Control, (5) Deep Learning in Feature Vector Processing, and (6) Evaluation of Algorithm Performance. This research book is directed towards professors, researchers, scientists, engineers and students in computer science-related disciplines. It is also directed towards readers who come from other disciplines and are interested in becoming versed in some of the most recent deep learning-based technological applications. An extensive list of bibliographic references at the end of each chapter guides the readers to probe deeper into their application areas of interest. **Insights and Innovations in Structural Engineering, Mechanics and Computation Proceedings of the Sixth International Conference on Structural Engineering, Mechanics and Computation, Cape Town, South Africa, 5-7 September 2016** **CRC Press** **Insights and Innovations in Structural Engineering, Mechanics and Computation** comprises 360 papers that were presented at the Sixth International Conference on Structural Engineering, Mechanics and Computation (SEMC 2016, Cape Town, South Africa, 5-7 September 2016). The papers reflect the broad scope of the SEMC conferences, and cover a wide range of engineering structures (buildings, bridges, towers, roofs, foundations, offshore structures, tunnels, dams, vessels, vehicles and machinery) and engineering materials (steel, aluminium, concrete, masonry, timber, glass, polymers, composites, laminates, smart materials). **Python Programming Using Problem Solving Approach** Python Programming is designed as a textbook to fulfil the requirements of the first-level course in Python programming. It is suited for undergraduate degree students of computer science engineering, information technology as well as computer applications. The book aims to introduce the students to the fundamentals of computing and the concepts of Python programming language, and enable them to apply these concepts for solving real-world problems. **Analysis & Design Of Structures Tire Forensic Investigation Analyzing Tire Failure** **Society of Automotive Engineers** Covering the many ways that a tire can fail and how to identify that failure, this book looks at the methodical, physical, visual and tactile examination of the failed tire and identifies the various failure modes for passenger car and light truck tires. **Mathematics, Statistics & Computer Science** **Trotman Education** Popular among university applicants and their advisers alike, these guides presents a wide range of information on a specific degree discipline, laid out in tabular format enabling at-a-glance course comparison. **Android Apps for Absolute Beginners Covering Android 7** **Apress** Updated to the new Android N 7.0 software development kit (SDK) release, this book takes you through the process of getting your first Android apps up and running using plain English and practical examples. If you have a great idea for an Android app, but have never programmed before, then this book is for you. It cuts through the fog of jargon and mystery that surrounds Android apps development, and gives you simple, step-by-step instructions to get you started. This book teaches Android application development in language anyone can understand, giving you the best possible start in Android development. It provides simple, step-by-step examples that make learning easy, allowing you to pick up the concepts without fuss. It offers clear code descriptions and layout so that you can get your apps running as soon as possible Although this book covers what's new in Android, it is also backwards compatible to cover some of the previous Android releases. What you'll learn: Download, install, and configure the latest software

needed for Android app development Work efficiently using an integrated development environment (IDE) Build useful, attractive applications and get them working immediately Create apps with ease using XML markup and drag-and-drop graphical layout editors Use new media and graphics to skin your app so that it has maximum appeal Create advanced apps combining XML, Java and new media content Who this book is for: If you have a great idea for an Android app, but have never programmed before, then this book is for you. You don't need to have any previous computer programming skills—as long as you have a desire to learn, and you know which end of the mouse is which, the world of Android apps development awaits! Industrial Ecology and Sustainable Engineering KEY BENEFIT The first book of its kind devoted completely to industrial ecology/green engineering, this introduction uses industrial ecology principles and cases to ground the discussion of sustainable engineering-and offers practical and reasonable approaches to design decisions. KEY TOPICS Technology and Sustainability; Industrial Ecology(IE) and Sustainable Engineering (SE) Concepts; Relevance of Biological Ecology to Technology; Metabolic Analysis; Technological Change and Evolving Risk; Social Dimensions of Industrial Ecology; Concept of Sustainability; SE; Industrial Product Development; Design for Environment and for Sustainability; Introduction to Life-Cycle Assessment; LCA Impact and Interpretation Stages; Streamlining the LCA Process; Systems Analysis; Industrial Ecosystems; Material Flow Analysis; National Material Accounts; Energy and IE; Water and IE; Urban IE; Modeling in IE; Scenarios for IE; Status of Resources; IE and SE in Developing Countries; IE and Sustainability in the Corporation/Government/Society MARKET A useful reference for professionals in environmental science, environmental policy, and engineering. Instrument Transducers An Introduction to Their Performance and Design Oxford University Press, USA Air Regulations Incorporating Air Traffic Services, Aerodromes and General Topics Aviation-related regulations are spread out in several volumes of documents published by various agencies. Pilots, Air Traffic Controllers, Flight Dispatchers and other personnel associated with flight operations have to refer to numerous ICAO, Government of India, DGCA and Airport Authority of India publications to prepare for examinations and for handling day-to-day situations. It is not easy to access and co-relate information contained in these publications. With his background as an Air Force Officer and Instructor, Indira Gandhi Rashtriya Uran Akademi, the author have attempted to compile and blend together useful information on Air regulations to make it easy to be referred by the personnel concerned. The compilation will be useful for CPL (Air Regulations), Air Traffic Controller and Flight Dispatcher examinations. The information will also be useful to personnel associated with aviation activity. Automobile Engineering-I Advancing Sustainable Safety National Road Safety Outlook 2005-2020