J S Katre For Communication Engineering

There are eight chapters, useful appendix and solved question papers in the book. Basic digital communication, line codes and sampling methods are presented at the beginning. Digital pulse modulation techniques such as PCM, DPCM, DM, ADM are presented. Continuous wave digital modulation methods such as BPSK, DPSK, QPSK, QAM, BFSK and OOK are presented with mathematical analysis of modulators and receivers. Issues related to baseband transmission such as ISI, Nyquist pulse shaping criterian, optimum reception, matched filter and eye patterns are also discussed. Concepts of information theory such as discrete memoryless channels, mutual information, shannon's theorems on source coding are also presented. Coding using linear block codes, cyclic codes and convolutional coding is also discussed. Secured communication using spread spectrum modulation is also discussed in detail. Fluid mechanics is the study of how fluids behave and interact under various forces and in various applied situations, whether in liquid or gas state or both. The author of Advanced Fluid Mechanics compiles pertinent information that are introduced in the more advanced classes at the senior level and at the graduate level. "Advanced Fluid Mechanics courses typically cover a variety of topics involving fluids in various multiple states (phases), with both elastic and non-elastic qualities, and flowing in complex ways. This new text will integrate both the simple stages of fluid mechanics

("Fundamentals) with those involving more complex parameters, including Inviscid Flow in multi-dimensions, Viscous Flow and Turbulence, and a succinct introduction to Computational Fluid Dynamics. It will offer exceptional pedagogy, for both classroom use and self-instruction, including many worked-out examples, end-of-chapter problems, and actual computer programs that can be used to reinforce theory with real-world applications. Professional engineers as well as Physicists and Chemists working in the analysis of fluid behavior in complex systems will find the contents of this book useful. All manufacturing companies involved in any sort of systems that encompass fluids and fluid flow analysis (e.g., heat exchangers, air conditioning and refrigeration, chemical processes, etc.) or energy generation (steam boilers, turbines and internal combustion engines, jet propulsion systems, etc.), or fluid systems and fluid power (e.g., hydraulics, piping systems, and so on)will reap the benefits of this text. Offers detailed derivation of fundamental equations for better comprehension of more advanced mathematical analysis Provides groundwork for more advanced topics on boundary layer analysis, unsteady flow, turbulent modeling, and computational fluid dynamics Includes worked-out examples and end-of-chapter problems as well as a companion web site with sample computational programs and Solutions Manual this book includes different aspects of verbal and non verbal communication for honing these skills in the students. The theoretical and practical treatment given to developing listening, speaking, reading and writing skills has been presented in the most simple

way, which the learners will be able to appreciate and assimilate with ease. The reading sections have been enriched by some of the greatest short stories, essays and poems from the vast ocean of english literature. They are importal pieces and continue to haunt generations.Such delicious and delectable gems cannot but spellbind us. The sheer joy of communicating with the great masters is ineffable. They both instruct and entertain. Above all, they will elevate mind and spirit. the other essential elements such as essentials for effective communication and grammar at have been explained with facility and felicity.

Earthquake Resistant Design and Risk Reduction, 2nd edition is based upon global research and development work over the last 50 years or more, and follows the author's series of three books Earthquake Resistant Design, 1st and 2nd editions (1977 and 1987), and Earthquake Risk Reduction (2003). Many advances have been made since the 2003 edition of Earthquake Risk Reduction, and there is every sign that this rate of progress will continue apace in the years to come. Compiled from the author's wide design and research experience in earthquake engineering and engineering seismology, this key text provides an excellent treatment of the complex multidisciplinary process of earthquake resistant design and risk reduction. New topics include the creation of low-damage structures and the spatial distribution of ground shaking near large fault ruptures. Sections on guidance for developing countries, response of buildings to differential settlement in liquefaction, performance-based and

displacement-based design and the architectural aspects of earthquake resistant design are heavily revised. This book: Outlines individual national weaknesses that contribute to earthquake risk to people and property Calculates the seismic response of soils and structures, using the structural continuum "Subsoil – Substructure – Superstructure – Non–structure" Evaluates the effectiveness of given design and construction procedures for reducing casualties and financial losses Provides guidance on the key issue of choice of structural form Presents earthquake resistant design methods for the main four structural materials – steel, concrete, reinforced masonry and timber – as well as for services equipment, plant and non-structural architectural components Contains a chapter devoted to problems involved in improving (retrofitting) the existing built environment This book is an invaluable reference and guiding tool to practising civil and structural engineers and architects, researchers and postgraduate students in earthquake engineering and engineering seismology, local governments and risk management officials.
Communication / Pulse Modulation Block schematic of Communication System, Base Band Signals and their bandwidth requirements, RF Bands, Types and Communication Channels (Transmission Lines, Parallel Wires, Co-axial Cables, Waveguides and Optical Fiber). Necessity of Modulation, Types of Modulation : AM, FM, PM and Pulse Modulation.Block schematic of PAM, PWM, PPM. Multiplexing : TDM, FDM.Amplitude Modulation Mathematical treatment and expression for AM, Frequency Spectrum,

Modulation Index, Power Relation as applied to Sinusoidal Signals, Representation of AM wave, Mathematical treatment as applied to general signals in Communication, Generation of AM using non-linear property.Types of AM TransmittersDSB-FC, DSB-SC, SSB, ISB & VSB, their generation methods and Comparison in terms of Bandwidth and Transmission Power requirements & Complexity (Block diagram treatment only)Angle ModulationMathematical analysis of FM and PM using Sinusoidal Signals, Frequency spectrum, Mathematical treatment as applied to general non-sinusoidal Signals, Modulation index, Bandwidth requirements (all three relations). Narrowband and Wideband FM, Comparison of FM and PM, Direct and Indirect methods of FM generation, Need for Pre-emphasis, Comparison of AM and FM.AM & FM Receivers Block diagram of AM and FM receivers, Superheterodyne Receiver, Performance characteristics : Sensitivity, Selectivity, Fidelity, Image Frequency Rejection, IFRR, Tracking, De-emphasis, Mixers.AM DetectionEnvelope detection, Synchronous detection, Practical diode detection, AGC. SSB and DSB detection methods.FM DetectionPhase discriminatior and Ratio Detector, Mathematical analysis of FM Detection.Noise Sources of Noise, Types of Noise, White Noise, SNR, Noise Figure, Noise Temperature, Friis formula for Noise Figure, Noise Bandwidth, Performance of AM (DSB, SSB & VSB) and FM in presence of Noise : Mathematical treatmentRadiation and Propagation Concept of Radiation, Basic Antenna System (Dipole), Antenna parameters, Yagi Antenna. Mechanism of Propagation : Ground

Wave, Sky Wave, Space Wave, Duct, Tropospheric Scatter and Extraterrestrial Propagation. Concept of Fading and diversity reception.

This book features selected papers presented at the 2nd International Conference on Advanced Computing Technologies and Applications, held at SVKM's Dwarkadas J. Sanghvi College of Engineering, Mumbai, India, from 28 to 29 February 2020. Covering recent advances in next-generation computing, the book focuses on recent developments in intelligent computing, such as linguistic computing, statistical computing, data computing and ambient applications.

Wireless communication is one of the fastest growing fields in the engineering world today. Rapid growth in the domain of wireless communication systems, services and application has drastically changed the way we live, work and communicate. Wireless communication offers a broad and dynamic technological field, which has stimulated incredible excitements and technological advancements over last few decades. The expectations from wireless communication technology are increasing every day. This is placing enormous challenges to wireless system designers. Moreover, this has created an ever increasing demand for conceptually strong and well versed communication engineers who understand the wireless technology and its future possibilities. In recent years, significant progress in wireless communication system design has taken place, which will continue in future. Especially for last two decades, the research contributions in wireless communication system design have resulted in several new concepts and

inventions at remarkable speed. A text book is indeed required to offer familiarity with such developments and underlying concepts, to be taught in the classroom to future engineers. This is one of the motivations for writing this book. Practically no book can be up to date in this field, due to the fast ongoing research and developments. The new developments are announced almost every day. Teaching directly from the research papers in the classroom cannot build the necessary foundation. Therefore need for a textbook is unavoidable, which is integral to learning, and is an essential source to build the concept. The prime goal of this book is to cooperate in the learning process. This book is based on current research as well as classical text books in the field, and aims to provide in depth understanding on fundamental concepts, which form the basis of wireless communication and build the platform, on which current developments can be understood and future contributions can be made. This book is written in self-explanatory manner to facilitate critical thinking and to support self study. Special emphasis has been given in this book to systematically organize and present the wide domain of wireless communication technology. Extra care has been taken to present the contents and the concepts in user friendly way to enable an easy understanding. Therefore the language of this book is made to make one feel, listening to a classroom lecture. This makes learning straight forward. Sometimes, the explanation could seem to be oversimplified, this is in order to support wide spectrum of readers as well as to clarify the hazy picture. A book of this kind, which addresses a fast developing

technology, the frequent use of acronyms and abbreviations is almost inevitable. A care has been taken to spell the acronyms and abbreviations as frequently as practically suitable in the text. Besides, a list of acronyms and abbreviations has also been provided.

This book gathers papers addressing state-of-the-art research in all areas of information and communication technologies and their applications in intelligent computing, cloud storage, data mining and software analysis. It presents the outcomes of the Fourth International Conference on Information and Communication Technology for Intelligent Systems, which was held in Ahmedabad, India. Divided into two volumes, the book discusses the fundamentals of various data analysis techniques and algorithms, making it a valuable resource for researchers and practitioners alike. Wireless Communications Fundamental & Advanced ConceptsDesign Planning and ApplicationsRiver Publishers

S. Chand's Physics, designed to serve as a textbook for students pursuing their engineering degree course, B.E. in Gujarat Technical University. The book is written with the singular objective of providing the students of GTU with a distinct source material as per the syllabus. The philosophy of presentation of the material in the book is based upon decades of classroom interaction of the authors. In each chapter, the fundamental concepts pertinent to the topic are highlighted and the in-between continuity is emphasized. Throughout the book attention is given to the proper

presentation of concepts and practical applications are cited to highlight the engineering aspects. A number of problems are solved. New problems are included in order to expedite the learning process of students of all hues and to improve their academic performance. The fundamental concepts are emphasized in each chapter and the details are developed in an easy-to-follow style. Each chapter is divided into smaller parts and sub-headings are provided to make the reading a pleasant journey from one interesting topic to another important topic.

A multidisciplinary index covering the journal literature of the arts and humanities. It fully covers 1,144 of the world's leading arts and humanities journals, and it indexes individually selected, relevant items from over 6,800 major science and social science journals.

The fundamentals and implementation of digital electronics are essential to understanding the design and working of consumer/industrial electronics, communications, embedded systems, computers, security and military equipment. Devices used in applications such as these are constantly decreasing in size and employing more complex technology. It is therefore essential for engineers and students to understand the fundamentals, implementation and application principles of digital electronics, devices and integrated circuits. This is so that they can use the most appropriate and effective technique to suit their technical need. This book provides practical and comprehensive coverage of digital electronics, bringing together

information on fundamental theory, operational aspects and potential applications. With worked problems, examples, and review questions for each chapter, Digital Electronics includes: information on number systems, binary codes, digital arithmetic, logic gates and families, and Boolean algebra; an in-depth look at multiplexers, de-multiplexers, devices for arithmetic operations, flip-flops and related devices, counters and registers, and data conversion circuits; up-to-date coverage of recent application fields, such as programmable logic devices, microprocessors, microcontrollers, digital troubleshooting and digital instrumentation. A comprehensive, must-read book on digital electronics for senior undergraduate and graduate students of electrical, electronics and computer engineering, and a valuable reference book for professionals and researchers. Advanced Thermodynamics Engineering, Second Edition is designed for readers who need to understand and apply the engineering physics of thermodynamic concepts. It employs a self-teaching format that reinforces presentation of critical concepts, mathematical relationships, and equations with concrete physical examples and explanations of applications—to help readers apply principles to their own real-world problems. Less Mathematical/Theoretical Derivations—More Focus on Practical Application Because both students and professionals must grasp theory almost immediately in this ever-changing electronic era, this book—now completely in decimal outline format—uses a phenomenological

approach to problems, making advanced concepts easier to understand. After a decade teaching advanced thermodynamics, the authors infuse their own style and tailor content based on their observations as professional engineers, as well as feedback from their students. Condensing more esoteric material to focus on practical uses for this continuously evolving area of science, this book is filled with revised problems and extensive tables on thermodynamic properties and other useful information. The authors include an abundance of examples, figures, and illustrations to clarify presented ideas, and additional material and software tools are available for download. The result is a powerful, practical instructional tool that gives readers a strong conceptual foundation on which to build a solid, functional understanding of thermodynamics engineering.

Amplitude Modulation : Transmission and ReceptionPrinciples of amplitude modulation - AM envelope, Frequency spectrum and bandwidth, Modulation index and Percent modulation, AM power distribution, AM modulator circuits- low-level AM modulator, Medium power AM modulator, AM transmitters-Low-level transmitters, High level transmitters, receiver parameters, AM reception - AM receivers - TRF, Super heterodyne receiver, Double conversion AM recivers.Angle Modulation : Transmission and Reception Angle modulation - FM and PM waveforms, Phase deviation and Modulation index, Frequency deviation,

Phase and Frequency modulators and demodulators, Frequency spectrum of Angle - Modulated waves. Bandwidth requirements of Angle modulated waves, Commercial Broadcast band FM, Average power of an angle modulated wave, Frequency and Phase modulators, A direct FM transmitters, Indirect transmitters, Angle modulation Vs Amplitude modulation, FM receivers : FM demodulators, PLL FM demodulators, FM noise suppression, Frequency versus Phase modulation.Digital Transmission and Data CommunicationIntroduction, Pulse modulation, PCM - PCM sampling, Sampling rate, Signal to quantization noise rate, Companding - Analog and Digtial - Percentage error, Delta modulation, Adaptive delta modulation, Differential pusle code modulation, Pulse transmission - ISI, Eyepattern, Data communication history, Standards, Data communication circuits, Data communication codes, Error control, Hardware, Serial and Parallel interfaces, Data modems, - Asynchronous modem, Synchronous modem, Low-speed modem, Medium and High speed modem, Modem control.Digital Communication Introduction, Shannon limit for information capacity, Digital amplitude modulation, Frequency shift keying, FSK bit rate and baud, FSK transmitter, BW consideration of FSK, FSK receiver, Phase shift keying - Binary phase shift keying - QPSK, Quandrature Amplitude modulation, Bandwidth efficiency, Carrier recovery - Squaring loop, Costas loop,

DPSK.Spread Spectrum and Multiple Access Techniques Introduction, Pseudo-noise sequence, DS spread spectrum with coherent binary PSK, Processing gain, FH spread spectrum, Multiple access techniques - Wireless communication, TDMA and FDMA, Wireless communication systems, Source coding of speech for wireless communications.

Fuels and Combustion is a systematic and comprehensive work on a subject that forms an integral part of the undergraduate degree courses in chemical, mechanical, metallurgical, and aeronautical engineering. While emphasizing the fundamental principles, the book provides a balanced treatment of energy resources, processing of fuels, fundamentals of combustion, and combustion appliances. The book takes a different approach by dealing with the topics in an Indian context. The third edition of the book has a completely new introduction, layout, and design, and new statistics have been added to provide up-to-date information.

As the number and variety of communication services grow, so do the challenges of designing cost-effective networks that meet the requirements of emerging technologies in wireless, sensor, and mesh networks. Computer and Communication Networks is the first book to offer balanced coverage of all these topics using extensive case studies and examples. This essential reference

begins by providing a solid foundation in TCP/IP schemes, wireless networking, Internet applications, and network security. The author then delves into the field's analytical aspects and advanced networking protocols. Students and researchers will find up-to-date, comprehensive coverage of fundamental and advanced networking topics, including: Packet-switched networks and Internet Network protocols Links LAN Protocols Wireless Networks Transport Protocols Applications and Management Network Security Delay Analysis QoS High speed protocols Voice over IP Optical Networks Multicasting Protocols Compression of Voice and Video Sensor/Mesh Networks Network architecture books are often criticized for not offering enough practical, scenario-based information. Computer and Communication Networks provides an effective blend of theory and implementation not found in other books. Key features include: Figures and images that simplify complex topics Equations and algorithms Case studies that further explain concepts and theory Exercises and examples honed through the author's twelve years of teaching about networking Overall, readers will find a thorough design and performance evaluation that provides a foundation for developing the ability to analyze and simulate complex communication networks. This two-volume set (CCIS 1045 and CCIS 1046) constitutes the refereed proceedings of the Third International Conference on Advances in Computing

and Data Sciences, ICACDS 2019, held in Ghaziabad, India, in April 2019. The 112 full papers were carefully reviewed and selected from 621 submissions. The papers are centered around topics like advanced computing, data sciences, distributed systems organizing principles, development frameworks and environments, software verification and validation, computational complexity and cryptography, machine learning theory, database theory, probabilistic representations.

This book presents a comprehensive process for visualization of interface metaphor for software. It is helpful in designing interactive user interfaces with magical super-affordances and definitive user experiences. As per the ancient Indian Vedic literature, metaphors are always conceived out of Vastu (entities having existence in our world). The visualization process given in the book shows how metaphorization could help in innovating highly experiential user interfaces, as one can create Avastu (non entities) by combining different objects and imaginative properties together. The main highlights of this process are selection and dissection of interface metaphor, pre-facto analysis, qualitative and quantitative evaluation, mapping between user and application domain lexicons, specialized set of usability heuristics and remote usability testing. The steps of this process are integrated with the Software Development Life Cycle (SDLC). It

shows the interdependence of form and function and its seamless fusion during software engineering. User experience designers can apply this process for designing websites, online applications, personal computer software, e-learning, computer games, virtual interactive worlds, public access systems, mobile and tablet applications.

This book gathers selected papers presented at the Inventive Communication and Computational Technologies conference (ICICCT 2019), held on 29–30 April 2019 at Gnanamani College of Technology, Tamil Nadu, India. The respective contributions highlight recent research efforts and advances in a new paradigm called ISMAC (IoT in Social, Mobile, Analytics and Cloud contexts). Topics covered include the Internet of Things, Social Networks, Mobile Communications, Big Data Analytics, Bio-inspired Computing and Cloud Computing. The book is chiefly intended for academics and practitioners working to resolve practical issues in this area.

Handbook of Electrical Installation Practice covers all key aspects of industrial, commercial and domestic installations and draws on the expertise of a wide range of industrial experts. Chapters are devoted to topics such as wiring cables, mains and submains cables and distribution in buildings, as well as power supplies, transformers, switchgear, and electricity on construction sites. Standards and codes of practice, as well as safety, are also included. Since the Third Edition was published, there have been many developments in technology and standards. The revolution in electronic

microtechnology has made it possible to introduce more complex technologies in protective equipment and control systems, and these have been addressed in the new edition. Developments in lighting design continue, and extra-low voltage luminaries for display and feature illumination are now dealt with, as is the important subject of security lighting. All chapters have been amended to take account of revisions to British and other standards, following the trend to harmonised European and international standards, and they also take account of the latest edition of the Wiring Regulations. This new edition will provide an invaluable reference for consulting engineers, electrical contractors and factory plant engineers.

This comprehensive text on control systems is designed for undergraduate students pursuing courses in electronics and communication engineering, electrical and electronics engineering, telecommunication engineering, electronics and instrumentation engineering, mechanical engineering, and biomedical engineering. Appropriate for self-study, the book will also be useful for AMIE and IETE students. Written in a student-friendly readable manner, the book explains the basic fundamentals and concepts of control systems in a clearly understandable form. It is a balanced survey of theory aimed to provide the students with an in-depth insight into system behaviour and control of continuous-time control systems. All the solved and unsolved problems in this book are classroom tested, designed to illustrate the topics in a clear and thorough way. KEY FEATURES : Includes several fully worked-out

examples to help students master the concepts involved. Provides short questions with answers at the end of each chapter to help students prepare for exams confidently. Offers fill in the blanks and objective type questions with answers at the end of each chapter to quiz students on key learning points. Gives chapter-end review questions and problems to assist students in reinforcing their knowledge.

Amplitude modulation and Angle modulation are discussed in first two chapters. AM, FM, analysis equations, modulators, detectors, transmission and reception are thoroughly presented. SSB, DSB, VSB, FDM are also discussed.? Noise theory is given in third chapter. It includes random variables, probability, random processes and correlation functions. Noise factor, noise temperature and mathematical analysis of noise is presented. Performance of modulation systems in the presence of noise is explained in fourth chapter. Figure of merit, capture effect and threshold effect are also presented. Last chapter presents information theory. Entropy information rate, discrete memoryless source, source coding, Shannon's theorems are also given in detail. Mutual information and channel capacity are also presented.

Principles of Management will serve as a textbook for the West Bengal University of Technology (WBUT) students of computer science engineering, information technology, electronics and communication engineering, electrical, electronic and mechanical engineering. All aspects of management, including financial, marketing, operations, technology and customer management as well as key areas like decision making,

leadership, planning and corporate social responsibility have been comprehensively dealt with. KEY FEATURES • Comprehensive coverage of the syllabi • Simplification of complex concepts for easy understanding • Extensive use of diagrams and figures • Includes the 2013 university question paper, along with solutions

This book constitutes the refereed proceedings of the 8th International Symposium on Reconfigurable Computing: Architectures, Tools and Applications, ARC 2012, held in Hongkong, China, in March 2012. The 35 revised papers presented, consisting of 25 full papers and 10 poster papers were carefully reviewed and selected from 44 submissions. The topics covered are applied RC design methods and tools, applied RC architectures, applied RC applications and critical issues in applied RC.

Beginning with an overview of the basic concepts of computers, the book provides an exhaustive coverage of C programming constructs. It then focuses on arrays, strings, functions, pointers, user-defined data types, and files. In addition, the book also provides a chapter on linked lists - apopular data structure - and different operations that can be performed on such lists.Students will find this book an excellent companion for self-study owing to its easy-to-understand approach with plenty of programs complete with source codes, sample outputs, and test cases.

This book discusses the role of human computer interaction (HCI) design in fostering digital literacy and promoting socio-cultural acceptance and usage of the latest ICT innovations in developing countries. The book presents techniques, theories, case studies, and methodologies in HCI design approaches that have been used to foster digital literacy, break

the socio-cultural barriers to ICT adoption, and promote the widespread usage of the latest innovations in the health, agriculture, economic, education and social sectors in developing countries. The authors provide insights on how crossing disciplines in HCI such as usability design, user centered design, user experience, anticipated user experience, technology acceptance design, persuasive design, philosophical designs, motivational design, social-cultural oriented designs, and other HCI design approaches have promoted digital literacy and stimulated socio-cultural acceptance and the usage of the latest ICT innovations. The book is relevant in academic, industry and government. Presents theoretical, practical, and socio-cultural approaches to digital literacy challenges in developing countries; Discusses recent ICT and HCI innovations used to transform the health, agriculture, economic, education and social sectors in developing countries; Provides insights on design opportunities and challenges presented in countries where digital literacy is very low and with complex socio-cultural dynamics.

The aim of this book is to provide a selection of representative MCQs together with a detailed explanation of each answer covering the topic in depth. Each chapter has been written by experienced Urological surgeons who have already been successful in passing the examination. In addition to the FRCS(Urol) examination MCQs form the basis of equivalent postgraduate Urological examinations internationally and the scope of this book will be an invaluable addition to individuals sitting the FEBU and similar exams in the USA, Australia and Asian countries. Established consultants may also find the text useful as a 'refresher' in areas outside their subspecialist interest.

Computer and Communication Networks, Second Edition, explains the modern technologies of

networking and communications, preparing you to analyze and simulate complex networks, and to design cost-effective networks for emerging requirements. Offering uniquely balanced coverage of basic and advanced topics, it teaches through case studies, realistic examples and exercises, and intuitive illustrations. Nader F. Mir establishes a solid foundation in basic networking concepts; TCP/IP schemes; wireless and LTE networks; Internet applications, such as Web and e-mail; and network security. Then, he delves into both network analysis and advanced networking protocols, VoIP, cloud-based multimedia networking, SDN, and virtualized networks. In this new edition, Mir provides updated, practical, scenario-based information that many networking books lack, offering a uniquely effective blend of theory and implementation. Drawing on extensive field experience, he presents many contemporary applications and covers key topics that other texts overlook, including P2P and voice/video networking, SDN, information-centric networking, and modern router/switch design. Students, researchers, and networking professionals will find up-to-date, thorough coverage of Packet switching Internet protocols (including IPv6) Networking devices Links and link interfaces LANs, WANs, and Internetworking Multicast routing, and protocols Wide area wireless networks and LTE Transport and end-to-end protocols Network applications and management Network security Network queues and delay analysis Advanced router/switch architecture QoS and scheduling Tunneling, VPNs, and MPLS All-optical networks, WDM, and GMPLS Cloud computing and network virtualization Software defined networking (SDN) VoIP signaling Media exchange and voice/video compression Distributed/cloud-based multimedia networks Mobile ad hoc networks Wireless sensor networks Key features include More than three hundred fifty figures that simplify complex topics Numerous algorithms that summarize key networking

protocols and equations Up-to-date case studies illuminating concepts and theory Approximately four hundred exercises and examples honed over Mir's twenty years of teaching networking

Although institutions of higher education have recognized the need for preparing their graduates for a digitalized, global workplace, these efforts have been sporadic, individualized, and varied from discipline to discipline. Nevertheless, over the past 10 years, trends such as "double classrooms," "inverted classrooms," and "collaborative online international learning" (COIL) have gained traction at universities across the globe. With the emergence of the COVID-19 pandemic in 2020, efforts to engage students in the use of digital tools and virtual collaborative teamwork increased tenfold. Creative and innovative virtual learning environments (VLEs) have emerged, and instructors have used them to connect with their students much more frequently. The holistic nature of virtual learning, its impact on employability, and the development of global citizenry have become prime areas of research amongst the digital education landscape. Now more than ever, it is essential to look at virtual learning environments and how they can be used to prepare students and employees for the opportunities and challenges of a global, digital workplace. Developments in Virtual Learning Environments and the Global Workplace provides readers with a rationale and tool kit for facilitating virtual learning in a wide variety of contexts in response to the opportunities and challenges presented by the digital global workplace. This book covers virtual learning practices, the value of virtual learning for professionals and employers, and the best practices in online learning in different settings. Additionally, the chapters dive into the future perspectives and trends within virtual learning environments and the creation/evaluation of

virtual learning strategies. These insights range from diverse countries, education levels, industry sectors, and academic disciplines, making this book a comprehensive research tool. This book will greatly benefit e-learning and instructional designers, university senior managers, university staff responsible for mobility and exchange, researchers, professionals responsible for organizational development and further education, human resource directors, global company executives, managers, practitioners, stakeholders, academicians, and students looking for information on how virtual learning environments are preparing students for the global workplace.

This is the second of a two-volume set that constitutes the refereed proceedings of the Second International Conference on Usability and Internationalization, UIHCII 2007, held in Beijing, China in July 2007. The papers of this second volume cover global and local user interfaces and are organized in topical sections on designing global and local products and services, as well as enhancing and personalizing the user experience.

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