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OPTICAL FIBER COMMUNICATIONS

The fourth edition of this popular text and reference book presents the fundamental principles for understanding and applying optical fiber technology to sophisticated modern telecommunication systems. Optical-fiber-based telecommunication networks ha.

OPTICAL FIBER COMMUNICATIONS

McGraw-Hill Higher Education *The third edition of this popular text and reference book presents the fundamental principles for understanding and applying optical fiber technology to sophisticated modern telecommunication systems. Optical-fiber-based telecommunication networks have become a major information-transmission-system, with high capacity links encircling the globe in both terrestrial and undersea installations. Numerous passive and active optical devices within these links perform complex transmission and networking functions in the optical domain, such as signal amplification, restoration, routing, and switching. Along with the need to understand the functions of these devices comes the necessity to measure both component and network performance, and to model and stimulate the complex behavior of reliable high-capacity networks.*

OPTICAL FIBRE COMMUNICATION

OPTICAL FIBER COMMUNICATIONS

PRINCIPLES AND PRACTICE

Pearson Education *This text succeeds in giving a practical introduction to the fundamentals, problems and techniques of the design and utilisation of optical fiber systems. This edition retains all core features, while incorporating recent improvements and developments in the field.*

OPTICAL FIBER COMMUNICATIONS: PRINCIPLES AND PRACTICE

Pearson Education India

FIBER OPTIC COMMUNICATIONS

Springer Nature *This book highlights the fundamental principles of optical fiber technology required for understanding modern high-capacity lightwave telecom networks. Such networks have become an indispensable part of society with applications ranging from simple web browsing to critical healthcare diagnosis and cloud computing. Since users expect these services to always be available, careful engineering is required in all technologies ranging from component development to network operations. To achieve this understanding, this book first presents a comprehensive treatment of various optical fiber structures and diverse photonic components used in optical fiber networks. Following this discussion are the fundamental design principles of digital and analog optical fiber transmission links. The concluding chapters present the architectures and performance characteristics of optical networks.*

OPTICAL FIBER COMMUNICATION

GCS PUBLISHERS *OPTICAL FIBER COMMUNICATIONbook was written by Dr. M.Satyanarayana, Dr. V.N.Lakshmana Kumar, Dr. P. Ujjvala Kanthi Prabha*

FIBER-OPTIC COMMUNICATION SYSTEMS

*The Institute of Optics, University of Rochester * ".readers searching for a wide ranging and up-date view of fibre optic communication systems would do well to purchase this book."--International Journal of Electrical Engineering Education (on the Second Edition) * This comprehensive, up-to-date account of fiber-optic communication focuses on the physics and technology behind fiber-optic communication systems while covering both the systems and components aspects * Provides extensive details on the WDM technology and system design issues that have developed since the last edition.*

OPTICAL FIBER COMMUNICATIONS SYSTEMS

THEORY AND PRACTICE WITH MATLAB® AND SIMULINK® MODELS

CRC Press *Carefully structured to provide practical knowledge on fundamental issues, Optical Fiber Communications Systems: Theory and Practice with MATLAB® and Simulink® Models explores advanced modulation and transmission techniques of lightwave communication systems. With coverage ranging from fundamental to modern aspects, the text presents optical communication techniques and applications, employing single mode optical fibers as the transmission medium. With MATLAB and Simulink models that illustrate methods, it supplies a deeper understanding of future development of optical systems and networks. The book begins with an overview of the development of optical fiber communications technology over the last three decades of the 20th century. It describes the optical transmitters for direct and external modulation technique and discusses the detection of optical signals under direct coherent and incoherent reception. The author also covers lumped Er:doped and distributed Roman optical amplifiers with extensive models for the amplification of signals and structuring the amplifiers on the Simulink platform. He outlines a design strategy for optically amplified transmission systems coupled with MATLAB Simulink models, including dispersion and attenuation budget methodology and simulation techniques. The book concludes with coverage of advanced modulation formats for long haul optical fiber transmission systems with accompanied Simulink models. Although many books have been written on this topic over the last two decades, most of them present only the theory and practice of devices and subsystems of the optical fiber communications systems in the fields, but do not illustrate any computer models to represent the true practical aspects of engineering practice. This book fills the need for a text that emphasizes practical computing models that shed light on the behavior and dynamics of the devices.*

FTTX CONCEPTS AND APPLICATIONS

John Wiley & Sons *This book presents fundamental passive optical network (PON)concepts, providing you with the tools needed to understand,design, and build these new access networks. The logical sequenceof topics begins with the underlying principles and components ofoptical fiber communication technologies used in access networks.Next, the book progresses from descriptions of PON andfiber-to-the-X (FTTX) alternatives to their application tofiber-to-the-premises (FTTP) networks and, lastly, to essentialmeasurement and testing procedures for network installation andmaintenance. An Instructor's Manual presenting detailed solutions to all theproblems in the book is available from the Wiley editorialdepartment.*

OPTICAL COMMUNICATIONS ESSENTIALS

McGraw Hill Professional ** The most comprehensive introduction to optical communications available anywhere--from the author of Optical Fiber Communications, the field's leading text * Concise, illustrated module-style chapters quickly bring non-specialists up-to-speed * Extensive DWDM (Dense Wavelength Division Multiplexing) coverage * Advanced topics and limited math covered in side-bars' * Free space optical (wireless fiber optics)*

UNDERSTANDING FIBER OPTICS

For courses in Introduction to Fiber Optics and Introduction to Optical Networking in departments of Electronics Technology and Electronics Engineering Technology. Also suitable for corporate training programs. Ideal for technicians, entry-level engineers, and other nonspecialists, this best-selling practical, thorough, and accessible introduction to fiber optics reflects the expertise of an author who has followed the field for over 25 years. Using a non-theoretical/non-mathematical approach, it explains the principles of optical fibers, describes components and how they work, explores the tools and techniques used to work with them and the devices used to connect fiber network, and concludes with applications showing how fibers are used in modern communication systems. It covers both existing systems and developing technology, so students can understand present systems and new developments.

FIBER OPTICS

PRINCIPLES AND PRACTICES

CRC Press *Since the invention of the laser, our fascination with the photon has led to one of the most dynamic and rapidly growing fields of technology. New advances in fiber optic devices, components, and materials make it more important than ever to stay current. Comprising chapters drawn from the author's highly anticipated book Photonics: Principles and Practices, Fiber Optics: Principles and Practices offers a detailed and focused treatment for anyone in need of authoritative information on this critical area underlying photonics. Using a consistent approach, the author leads you step-by-step through each topic. Each skillfully crafted chapter first explores the theoretical concepts of each topic, and then demonstrates how these principles apply to real-world applications by guiding you through experimental cases illuminated with numerous illustrations. The book works systematically through fiber optic cables, advanced fiber optic cables, light attenuation in optical components, fiber optic cable types and installations, fiber optic connectors, passive fiber optic devices, wavelength division multiplexing, optical amplifiers, optical receivers, opto-mechanical switches, and optical fiber communications. It also includes important chapters in fiber optic lighting, fiber optics testing, and laboratory safety. Containing several topics presented for the first time in book form, Fiber Optics: Principles and Practices is simply the most modern, detailed, and hands-on text in the field.*

ADVANCED MANUFACTURING FOR OPTICAL FIBERS AND INTEGRATED PHOTONIC DEVICES

CRC Press *Advanced Manufacturing for Optical Fibers and Integrated Photonic Devices explores the theoretical principles and industrial practices of high-technology manufacturing. Focusing on fiber optic, semiconductor, and laser products, this book: Explains the fundamentals of standard, high-tech, rapid, and additive manufacturing workshops Examines the production lines, processes, and clean rooms needed for the manufacturing of products Discusses the high-technology manufacturing and installation of fiber optic cables, connectors, and active/passive devices Describes continuous improvement, waste reduction through 5S application, and management’s responsibilities in supporting production Covers Lean Manufacturing processes, product improvement, and workplace safety, as well as internal/external and ISO auditing Offers a step-by-step approach complete with numerous figures and tables, detailed references, and a glossary of terms Employs the international system of units (SI) throughout the text Advanced Manufacturing for Optical Fibers and Integrated Photonic Devices presents the latest manufacturing achievements and their applications in the high-tech sector. Inspired by the author’s extensive industrial experience, the book provides a comprehensive overview of contemporary manufacturing technologies.*

FIBER-OPTIC COMMUNICATIONS TECHNOLOGY

Pearson College Division *A useful source of information to anyone who works with fiber optics, this state-of-the-art guide covers the newest technological innovations in fibers, systems and networks, and provides a solid foundation in the basics with lots of examples, practical applications, graphical presentations, and solutions to problems that simulate those found in the workplace. Devotes complete chapters to optical fibers, singlemode fibers, light sources and transmitters, photodetectors and receivers, and more. Provides real data and specification sheets to help users hone their ability to read data sheets and integrate concepts - a critical skill for practicing engineers. Offers a "two-level discussion" in each chapter: a "Basics" section introduces the main ideas and principles involved in the devices covered, and "A Deeper Look" section offers a more theoretical and detailed discussion of the same material. Describes the test, measurement, and troubleshooting of fiber optics communications systems based on existing standards and commercially available equipment. Integrates many pictures of commercially available devices and equipment throughout. For professionals in the electronic technology industry.*

FIBER OPTIC COMMUNICATIONS

Pearson Education India

FIBER OPTICS

TECHNOLOGY AND APPLICATIONS

BoD – Books on Demand *The importance and necessity of communications systems have become evident during the COVID-19 pandemic. The development of new technologies that permit the best performance of these systems is paramount, and optical fibers play an important role in this area. This book examines new technological developments to improve optical fiber technology, with applications in communications systems, optoelectronics integration, and the scientific study of live microorganisms such as bacteria, viruses, fungi, and protozoa.*

FIBER OPTICS

PHYSICS AND TECHNOLOGY

Springer *This book tells you all you want to know about optical fibers: Their structure, their light-guiding mechanism, their material and manufacture, their use. It began with telephone, then came telefax and email. Today we use search engines, music downloads and internet videos, all of which require shuffling of bits and bytes by the zillions. The key to all this is the conduit: the line which is designed to carry massive amounts of data at breakneck speed. In their data carrying capacity optical fiber lines beat all other technologies (copper cable, microwave beacons, satellite links) hands down, at least in the long haul; wireless devices rely on fibers, too. Several effects tend to degrade the signal as it travels down the fiber: they are spelled out in detail. Nonlinear processes are given due consideration for a twofold reason: On the one hand they are fundamentally different from the more familiar processes in electrical cable. On the other hand, they form the basis of particularly interesting and innovative applications, provided they are understood well enough. A case in point is the use of so-called solitons, i.e. special pulses of light which have the wonderful property of being able to heal after perturbation. The book will take you from the physical basics of ray and beam optics, explain fiber structure and the functions of optical elements, and bring you to the forefront of both applications and research. The state of the art of high speed data transmission is described, and the use of fiber optic sensors in metrology is treated. The book is written in a pedagogical style so that students of both physics and electrical engineering, as well as technicians and engineers involved in optical technologies, will benefit. The new edition is largely updated and has new sections on nonlinear phenomena in fibers as well as on the latest trends in applications.*

OPTICAL COMMUNICATION SYSTEMS

HANDBOOK OF FIBER OPTIC DATA COMMUNICATION

Academic Press *The Handbook includes chapters on all the major industry standards, quick reference tables, helpful appendices, plus a new glossary and list of acronyms. This practical handbook can stand alone or as a companion volume to DeCusatis: Fiber Optic Data Communication: Technological Advances and Trends (February 2002, ISBN: 0-12-207892-6), which was developed in tandem with this book. * Includes emerging technologies such as Infiniband, 10 Gigabit Ethernet, and MPLS Optical Switching * Describes leading edge commercial products, including LEAF and MetroCore fibers, dense wavelength multiplexing, and Small Form Factor transceiver packages * Covers all major industry standards, often written by the same people who designed the standards themselves * Includes an expanded listing of references on the World Wide Web, plus hard-to-find references for international, homologation, and type approval requirements * Convenient tables of key optical datacom parameters and glossary with hundreds of definitions and acronyms * Industry buzzwords explained, including SAN, NAS, and MAN networking * Datacom market analysis and future projections from industry leading forecasters*

BIOPHOTONICS

CONCEPTS TO APPLICATIONS

Springer *This book introduces senior-level and postgraduate students to the principles and applications of biophotonics. It also serves as a valuable reference resource or as a short-course textbook for practicing physicians, clinicians, biomedical researchers, healthcare professionals, and biomedical engineers and technicians dealing with the design, development, and application of photonics components and instrumentation to biophotonics issues. The topics include the fundamentals of optics and photonics, the optical properties of biological tissues, light-tissue interactions, microscopy for visualizing tissue components, spectroscopy for optically analyzing the properties of tissue, and optical biomedical imaging. It also describes tools and techniques such as laser and LED optical sources, photodetectors, optical fibers, bioluminescent probes for labeling cells, optical-based biosensors, surface plasmon resonance, and lab-on-a-chip technologies. Among the applications are optical coherence tomography (OCT), optical imaging modalities, photodynamic therapy (PDT), photobiostimulation or low-level light therapy (LLLT), diverse microscopic and spectroscopic techniques, tissue characterization, laser tissue ablation, optical trapping, and optogenetics. Worked examples further explain the material and how it can be applied to practical designs, and the homework problems help test readers' understanding of the text.*

UNDERSTANDING FIBER OPTICS

Jeff Hecht *A tutorial introduction to fiber optics, which explains fundamental concepts of fiber optics, components and systems with minimal math. With more than 100,000 copies in print, Understanding Fiber Optics has been widely used in the classroom, for self study, and in corporate training since the first edition was published in 1987. This is a reprint of the 5th edition, originally published by Pearson*

Education and now available at low cost from Laser Light Press.

NONLINEAR FIBER OPTICS

Academic Press *Since the 3rd edition appeared, a fast evolution of the field has occurred. The fourth edition of this classic work provides an up-to-date account of the nonlinear phenomena occurring inside optical fibers. The contents include such important topics as self- and cross-phase modulation, stimulated Raman and Brillouin scattering, four-wave mixing, modulation instability, and optical solitons. Many new figures have been added to help illustrate the concepts discussed in the book. New to this edition are chapters on highly nonlinear fibers and and the novel nonlinear effects that have been observed in these fibers since 2000. Such a chapter should be of interest to people in the field of new wavelengths generation, which has potential application in medical diagnosis and treatments, spectroscopy, new wavelength lasers and light sources, etc. Continues to be industry bestseller providing unique source of comprehensive coverage on the subject of nonlinear fiber optics Fourth Edition is a completely up-to-date treatment of the nonlinear phenomena occurring inside optical fibers Includes 2 NEW CHAPTERS on the properties of highly nonlinear fibers and their novel nonlinear effects*

CITY OF LIGHT

THE STORY OF FIBER OPTICS

Oxford University Press on Demand *This text presents the history of the development of fibre optic technology, explaining the scientific challenges that needed to be overcome, the range of applications and future potential for this fundamental communications technology.*

FIBER OPTICS HANDBOOK: FIBER, DEVICES, AND SYSTEMS FOR OPTICAL COMMUNICATIONS

McGraw Hill Professional *Fiber optics is the hottest topic in communications and this book from the world's leading experts clearly lays out all the details of optical communications engineering * Essential technical guide and solutions kit for the super-fast, super-broad fiber systems and devices powering the fastest-growing communications infrastructure * Methods for generating above peak performance * Clear explanations and answers to tough challenges for WDM, DWDM, amplifiers, solitons, and other key technologies*

PHOTONICS

PRINCIPLES AND PRACTICES

CRC Press *Since the invention of the laser, our fascination with the photon has led to one of the most dynamic and rapidly growing fields of technology. An explosion of new materials, devices, and applications makes it more important than ever to stay current with the latest advances. Surveying the field from fundamental concepts to state-of-the-art developments, Photonics: Principles and Practices builds a comprehensive understanding of the theoretical and practical aspects of photonics from the basics of light waves to fiber optics and lasers. Providing self-contained coverage and using a consistent approach, the author leads you step-by-step through each topic. Each skillfully crafted chapter first explores the theoretical concepts of each topic and then demonstrates how these principles apply to real-world applications by guiding you through experimental cases illuminated with numerous illustrations. Coverage is divided into six broad sections, systematically working through light, optics, waves and diffraction, optical fibers, fiber optics testing, and laboratory safety. A complete glossary, useful appendices, and a thorough list of references round out the presentation. The text also includes a 16-page insert containing 28 full-color illustrations. Containing several topics presented for the first time in book form, Photonics: Principles and Practices is simply the most modern, comprehensive, and hands-on text in the field.*

WDM TECHNOLOGIES: ACTIVE OPTICAL COMPONENTS

Elsevier *WDM Technologies: Active Optical Components is an excellent resource for engineers and researchers engaged in all aspects of fiber optics communication, such as, optoelectronics, equipment/system design, and manufacturing. The book is also a resource for graduate students and scholars interested in these rapidly growing fields. Provides the reader with insight and understanding for key active optical components frequently being / to be used in the optical communication systems, essential building blocks of today's/next generation fiber optic networks Allows engineers working in optical communication area, (from system to component) to understand the principle and mechanics of each key component they deal with for optical system design Covers different laser diodes as transmitter and pumping sources, different modulators, and different photodetectors*

UNDERSTANDING OPTICAL COMMUNICATIONS

Prentice Hall *2014A-8 The complete, up-to-date technical overview of optical communications. Fibre in the WAN, MAN, local loop, campus and LAN. Up-to-the-minute coverage of Wavelength Division Multiplexing. Previews today's advanced research--tomorrow's practical applications. Over the past 15 years, optical fibre's low cost, accuracy and enormous capacity has revolutionized wide area communications--making possible the Internet as we know it. Now a second fibre revolution is underway. Advanced technologies such as Wavelength Division Multiplexing (WDM) are adding even more capacity, and fibre is increasingly the media of choice in MANs, campuses, buildings, LANs--soon, even homes. If you need to understand the state-of-the-art in optical communications, Understanding Optical Communications is the most complete, up-to-date technical overview available. Fundamental principles and components of optical communications. Optical communications systems, interfaces and engineering challenges. FDDI, Ethernet on Fibre, ESCON, Fibre Channel, SONET/SDH and ATM. WDM: sparse and dense approaches, photonic networking, WDM for LANs and WDM standards. Fibre in the local loop, integration with HFC networks and passive optical networks. Understanding Optical Communications reviews key technical issues facing engineers as they extend fibre into new applications and markets. It presents an up-to-the-minute status report on WDM for LANs and MANs, including a rare glimpse at IBM's latest experimental systems. It points to the advanced research most likely to bear fruit: dark and spatial solitons, advanced fibres, plastic technologies, optical CDMA, TDM and packet-networks and more. Whether you're building optical systems or planning for them, this is the briefing you've been looking for.*

OPTICAL COMMUNICATIONS SYSTEMS

BoD – Books on Demand *Optical communications systems are very important for all types of telecommunications and networks. They consists of a transmitter that encodes a message into an optical signal, a channel that carries the signal to its destination, and a receiver that reproduces the message from the received optical signal.This book presents up to date results on communication systems, along with the explanations of their relevance, from leading researchers in this field. Its chapters cover general concepts of optical and wireless optical communication systems, optical amplifiers and networks, optical multiplexing and demultiplexing for optical communication systems, and network traffic engineering. Recently, wavelength conversion and other enhanced signal processing functions are also considered in depth for optical communications systems. The researcher has also concentrated on wavelength conversion, switching, demultiplexing in the time domain and other enhanced functions for optical communications systems. This book is targeted at research, development and design engineers from the teams in manufacturing industry; academia and telecommunications service operators/ providers.*

FIRST INTERNATIONAL CONFERENCE ON OPTICAL COMMUNICATIONS AND NETWORKS (ICOCN 2002)

SHANGRI-LA HOTEL, SINGAPORE, 11-14 NOVEMBER 2002

World Scientific *Optical communications networks are becoming increasingly important as there is demand for high capacity links. Dense wavelength division multiplexing (DWDM) is widely deployed at the core networks to accommodate high capacity transport systems. Optical components such as optical amplifiers, tunable filters, transceivers, termination devices and add-drop multiplexers are becoming more reliable and affordable. Access and metropolitan area networks are increasingly built with optical technologies to overcome the electronic bottleneck at network edges. New components and subsystems for very high speed optical networks offer new design options.The proceedings of the First International Conference on Optical Communications and Networks present high quality recent research results in the areas of optical communications, network components, architectures, protocols, planning, design, management and operation.*

OPTICAL COMMUNICATIONS AND NETWORKS

(WITH CD-ROM)

World Scientific *Optical communications networks are becoming increasingly important as there is demand for high capacity links. Dense wavelength division multiplexing (DWDM) is widely deployed at the core networks to accommodate high capacity transport systems. Optical components such as optical amplifiers, tunable filters, transceivers, termination devices and add-drop multiplexers are becoming more reliable and affordable. Access and metropolitan area networks are increasingly built with optical technologies to overcome the electronic bottleneck at network edges. New components and subsystems for very high speed optical networks offer new design options. The proceedings of the First International Conference on Optical Communications and Networks present high quality recent research results in the areas of optical communications, network components, architectures, protocols, planning, design, management and operation. Contents:Optical Networking IChromatic DispersionOptical Networking IIWDM Devices INetwork ArchitectureFibers and Fiber-Based DevicesOptical SwitchingWDM Devices IINetwork Management and OptimizationFiber GratingsOptical Transmission ILasers and Amplifiers IOptical Networking IIIOptical Signal ProcessingNetwork Protection and RestorationWDM Devices IIIOptical Networking IVMEMS ApplicationsOptical Transmission IILasers*

and Amplifiers II Readership: Graduate students, academics and researchers in networking, computer engineering, electrical & electronic engineering and innovation/technology/knowledge/information management. Keywords:Optical Switching and Networking;Optical Transmission Technology;Optical Passive Components;Optical Active Components

PRINCIPLES OF MODERN COMMUNICATION SYSTEMS

Cambridge University Press *An accessible, yet mathematically rigorous, one-semester textbook, engaging students through use of problems, examples, and applications.*

COHERENT OPTICAL FIBER COMMUNICATIONS

Springer Science & Business Media

MICROWAVE DEVICES AND CIRCUITS

Pearson Education India

OPTICAL FIBRE COMMUNICATIONS

DEVICES, CIRCUITS, AND SYSTEMS

John Wiley & Sons

FIBER OPTIC COMMUNICATIONS

FUNDAMENTALS AND APPLICATIONS

John Wiley & Sons *"This new title covers basic topics such as transmitters, fibers, amplifiers and receivers and details new developments such as nonlinear fiber-optic systems and nonlinear phase noise. Starting with a review of electromagnetics and optics, including Faraday's law and Maxwell's equation, it then moves on to provide information on optical fiber transmissions, laser oscillations, wave particle density and semiconductor laser diodes. This is followed up with chapters covering optical sources, optical modulators, optical receivers, including coherent receivers, and optical amplifiers. The final part of the book discusses performance analysis, channel multiplexing techniques, nonlinear effects and digital signal processing respectively"--*

ADVANCED OPTICAL METHODS FOR BRAIN IMAGING

Springer *This book highlights the rapidly developing field of advanced optical methods for structural and functional brain imaging. As is known, the brain is the most poorly understood organ of a living body. It is indeed the most complex structure in the known universe and, thus, mapping of the brain has become one of the most exciting frontlines of contemporary research. Starting from the fundamentals of the brain, neurons and synapses, this book presents a streamlined and focused coverage of the core principles, theoretical and experimental approaches, and state-of-the-art applications of most of the currently used imaging methods in brain research. It presents contributions from international leaders on different photonics-based brain imaging modalities and techniques. Included are comprehensive descriptions of many of the technology driven spectacular advances made over the past few years that have allowed novel insights of the structural and functional details of neurons. The book is targeted at researchers, engineers and scientists who are working in the field of brain imaging, neuroscience and connectomics. Although this book is not intended to serve as a textbook, it will appeal to undergraduate students engaged in the specialization of brain imaging.*

OPTICAL FIBER COMMUNICATIONS

FIBER FABRICATION

Elsevier *Optical Fiber Communications, Volume 1: Fiber Fabrication focuses on the science, engineering, and application of information transmission through optical fibers. This book discusses the materials and processes for fiber fabrication, fiber theory, design, and measurement, as well as passive components, cabling, active devices, systems, and applications. Organized into five chapters, this volume starts with an overview of the modified chemical vapor deposition (MCVD), the outside vapor deposition (OVD), and the vapor-phase axial deposition (VAD) processes. This text then explores the*

important development with respect to the drawing of glass fibers, particularly those that serve as optical waveguides in telecommunications applications. Other chapters discuss the progress in fiber strength from short-length research fibers to large quantities that give confidence in the manufacturability of high-strength, long-length fibers. The final chapter discusses the advances in the technologies of optical-fiber manufacture. This book is a valuable resource for process engineers, technicians, scientists, and optical fiber manufacturers.

DIGITAL TELEPHONY, 3RD ED

John Wiley & Sons *Market_Desc: · Hardware and Software Engineers in telecommunications· Senior or Graduate Students in Electrical Engineering, Computer Engineering, and Computer Science Special Features: · An up-to-date revision of a best-selling title, with an emphasis on system-level design considerations and the reasons digital technology has supplanted analog technology in telephone networks worldwide· From the reviews of the Second Edition: The book stresses how systems operate and the rationale behind their design, rather than presenting rigorous analytical formulations& (Readers) will find...the practicality and breadth essential to mastering the concepts of modern communications systems. ---Telecommunication Journal· Written by a well-known expert in the field· Correlates classical communications theory and the implementation of communications equipment and systems About The Book: This is an up-to-date revision of a best-selling title, with an emphasis on system-level design considerations and the reasons digital technology has supplanted analog technology in telephone networks worldwide. The book correlates classical communications theory and the implementation of communications equipment and systems.*

FUNDAMENTALS OF OPTICAL FIBER COMMUNICATIONS

Elsevier *Fundamentals of Optical Fiber Communication, Second Edition is a seven-chapter tutorial text that considers fiber optic technology as applied to communications systems. This book is based on lectures presented at an annual short course entitled "Fiber Optic Communication Systems" at the University of California at Santa Barbara. The first chapter provides an overview of the ideal optical fiber waveguide, its information carrying capacity, degree of imperfection, and propagation of perturbed waveguide leading to intermodal coupling of power. The next chapters describe the basic optical fiber cable configuration, the coupling components for optical fiber waveguides, and the electroluminescent sources for fiber systems. These topics are followed by discussions of the features and application of photodiodes, the development of a physical model for photodetection, circuit models for various detector types, and a statistical or noise model for optical receiver performance prediction. The concluding chapters describe the theory and practice of receiver and transmitter design, as well as the design considerations for multiterminal networks. This book will be of value to communications engineers, designers, and researchers.*