

## Optical Fiber Communications John Senior Solution Manual

"This new title covers basic topics such as transmitters, fibers, amplifiers and receivers and 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 solitons, 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"--

Optical Networking Best Practices Handbook presents optical networking in a very comprehensive way for nonengineers needing to understand the fundamentals of fiber, high-capacity, high-speed equipment and networks, and upcoming carrier services. The book provides a practical understanding of fiber optics as a physical medium, sorting out single-mode versus multi-mode and the crucial concept of Dense Wave-Division Multiplexing.

CD-ROM contains: a software package for designing fiber-optic communication systems called "OptiSystem Lite" and a set of problems for each chapter.

Discover the basic telecommunications systems principles in an accessible learn-by-doing format. Communication Systems Principles Using MATLAB covers a variety of systems principles in telecommunications in an accessible format without the need to master a large body of theory. The text puts the focus on topics such as radio and wireless modulation, reception and transmission in wired networks and fiber optic communications. The book also explores packet networks and TCP/IP as well as digital source and channel coding, and the fundamentals of data encryption. Since MATLAB® is widely used by telecommunications engineers, it was chosen as the vehicle to demonstrate many of the basic ideas, with code examples presented in every chapter. The text addresses digital communications with coverage of packet-switched networks. Many fundamental concepts such as routing via shortest-path are introduced with simple and concrete examples. The treatment of advanced telecommunications topics extends to OFDM for wireless modulation, public-key exchange algorithms for data encryption. Throughout the book, the author puts the emphasis on understanding rather than memorization. The text also: Includes many useful take-home skills that can be honed while studying each aspect of telecommunications Offers a code and experimentation approach with many real-world examples provided Gives information on the underlying theory in order to better understand conceptual developments Suggests a valuable learn-by-doing approach to the topic Written for students of telecommunications engineering. Communication Systems Principles Using MATLAB® is the hands-on resource for mastering the basic concepts of telecommunications in a learn-by-doing format.

Fiber Optic Designs and Applications

The Iridium Story

Principles, Techniques and Applications

Studyguide for Optical Fiber Communications

OPTICAL FIBER COMMUNICATION

Broadband Circuits for Optical Fiber Communication

OPTICAL FIBER COMMUNICATION book was written by Dr. M.Satyanarayana, Dr. V.N.Lakshmana Kumar, Dr. P. Ujjvala Kanthi Prabha

THE TELECOMMUNICATIONS HANDBOOK THE TELECOMMUNICATIONS

HANDBOOK ENGINEERING GUIDELINES FOR FIXED, MOBILE AND SATELLITE

SYSTEMS Taking a practical approach, The Telecommunications Handbook examines the principles and details of all the major and modern telecommunications systems currently available to industry and to end-users. It gives essential information about

usage, architectures, functioning, planning, construction, measurements and optimization. The structure of the book is modular, giving both overall descriptions of the architectures and functionality of typical use cases, as well as deeper and practical guidelines for telecom professionals. The focus of the book is on current and future networks, and the most up-to-date functionalities of each network are described in sufficient detail for deployment purposes. The contents include an introduction to each technology, its evolution path, feasibility and utilization, solution and network architecture, and technical functioning of the systems (signaling, coding, different modes for channel delivery and security of core and radio system). The planning of the core and radio networks (system-specific field test measurement guidelines, hands-on network planning advices and suggestions for parameter adjustments) and future systems are also described. With contributions from specialists in both industry and academia, the book bridges the gap between communications in the academic context and the practical knowledge and skills needed to work in the telecommunications industry.

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 Raman 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.

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Theory and Practice with MATLAB® and Simulink® Models  
Principles and Advanced Practices, Second Edition  
Optical Fibre Communications  
Principles and Practice by Senior, John

## Optical Fiber Communications Systems

### A Path Forward

“Good corporate drama . . . an enlightening narrative of how new communications infrastructures often come about.” —The Economist, “A Book of the Year 2016” In the early 1990s, Motorola developed a revolutionary satellite system called Iridium that promised to be its crowning achievement. Its constellation of 66 satellites in polar orbit was a mind-boggling technical accomplishment, surely the future of communication. The only problem was that Iridium the company was a commercial disaster. Only months after launching service, it was \$11 billion in debt, burning through \$100 million a month and crippled by baroque rate plans and agreements that forced calls through Moscow, Beijing, Fucino, Italy, and elsewhere. Bankruptcy was inevitable—the largest to that point in American history. And when no real buyers seemed to materialize, it looked like Iridium would go down as just a “science experiment.” That is, until Dan Colussy got a wild idea. Colussy, a former head of Pan-Am now retired and working on his golf game in Palm Beach, heard about Motorola’s plans to “de-orbit” the system and decided he would buy Iridium and somehow turn around one of the biggest blunders in the history of business. Impeccably researched and wonderfully told, *Eccentric Orbits* is a rollicking, unforgettable tale of technological achievement, business failure, the military-industrial complex, and one of the greatest deals of all time. “Deep reporting put forward with epic intentions . . . a story that soars and jumps and dives and digresses . . . [A] big, gutsy, exciting book.” —The Wall Street Journal, “A Top 10 Nonfiction Book of 2016” “Spellbinding . . . A tireless researcher, Bloom delivers a superlative history . . . A tour de force.” —Kirkus Reviews (starred review)

This open access book presents papers displayed in the 2nd International Conference on Energy and Sustainable Futures (ICESF 2020), co-organised by the University of Hertfordshire and the University Alliance DTA in Energy. The research included in this book covers a wide range of topics in the areas of energy and sustainability including: • ICT and control of energy; • conventional energy sources; • energy governance; • materials in energy research; • renewable energy; and • energy storage. The book offers a holistic view of topics related to energy and sustainability, making it of interest to experts in the field, from industry and academia.

Presents the technological advancements that enable high spectral-efficiency and high-capacity fiber-optic communication systems and networks This book examines key technology advances in high spectral-efficiency fiber-optic communication systems and networks, enabled by the use of coherent detection and digital signal processing (DSP). The first of this book’s 16 chapters is a detailed introduction. Chapter 2 reviews the modulation formats, while Chapter 3 focuses on detection and error correction technologies for coherent optical communication systems. Chapters 4 and 5 are devoted to Nyquist-WDM and orthogonal frequency-division multiplexing (OFDM). In chapter 6, polarization and nonlinear impairments in coherent optical communication systems are discussed. The fiber nonlinear effects in a non-dispersion-managed system are covered in chapter 7. Chapter 8 describes linear impairment equalization and Chapter 9 discusses various nonlinear mitigation techniques. Signal synchronization is covered in Chapters 10

and 11. Chapter 12 describes the main constraints put on the DSP algorithms by the hardware structure. Chapter 13 addresses the fundamental concepts and recent progress of photonic integration. Optical performance monitoring and elastic optical network technology are the subjects of Chapters 14 and 15. Finally, Chapter 16 discusses spatial-division multiplexing and MIMO processing technology, a potential solution to solve the capacity limit of single-mode fibers. • Contains basic theories and up-to-date technology advancements in each chapter • Describes how capacity-approaching coding schemes based on low-density parity check (LDPC) and spatially coupled LDPC codes can be constructed by combining iterative demodulation and decoding • Demonstrates that fiber nonlinearities can be accurately described by some analytical models, such as GN-EGN model • Presents impairment equalization and mitigation techniques Enabling Technologies for High Spectral-efficiency Coherent Optical Communication Networks is a reference for researchers, engineers, and graduate students. Xiang Zhou is a Tech Lead within Google Platform Advanced Technology. Before joining Google, he was with AT&T Labs, conducting research on various aspects of optical transmission and photonics networking technologies. Dr. Zhou is an OSA fellow and an associate editor for Optics Express. He has extensive publications in the field of optical communications. Chongjin Xie is a senior director at Ali Infrastructure Service, Alibaba Group. Before joining Alibaba Group, he was a Distinguished Member of Technical Staff at Bell Labs, Alcatel-Lucent. Dr. Xie is a fellow of OSA and senior member of IEEE. He is an associate editor of the Journal of Lightwave Technology and has served in various conference committees.

Never HIGHLIGHT a Book Again! Virtually all of the testable terms, concepts, persons, places, and events from the textbook are included. Cram101 Just the FACTS101 studyguides give all of the outlines, highlights, notes, and quizzes for your textbook with optional online comprehensive practice tests. Only Cram101 is Textbook Specific. Accompanys: 9780130326812 .

From Fundamentals to Advanced Topics

Optical Communication Systems

Eccentric Orbits

Fiber-Optic Communication Systems

Optical Fiber Telecommunications VB

The Telecommunications Handbook

*Scores of talented and dedicated people serve the forensic science community, performing vitally important work. However, they are often constrained by lack of adequate resources, sound policies, and national support. It is clear that change and advancements, both systematic and scientific, are needed in a number of forensic science disciplines to ensure the reliability of work, establish enforceable standards, and promote best practices with consistent application. Strengthening Forensic Science in the United States: A Path Forward provides a detailed plan for addressing these needs and suggests the creation of a new government entity, the National Institute of Forensic Science, to establish and enforce standards within the forensic science community. The benefits of improving and*

*regulating the forensic science disciplines are clear: assisting law enforcement officials, enhancing homeland security, and reducing the risk of wrongful conviction and exoneration. Strengthening Forensic Science in the United States gives a full account of what is needed to advance the forensic science disciplines, including upgrading of systems and organizational structures, better training, widespread adoption of uniform and enforceable best practices, and mandatory certification and accreditation programs. While this book provides an essential call-to-action for congress and policy makers, it also serves as a vital tool for law enforcement agencies, criminal prosecutors and attorneys, and forensic science educators.*

*Market\_Desc: Although written primarily for graduate students, the book can also be used for an undergraduate course at the senior level with an appropriate selection of topics. The potential readership is likely to consist of senior undergraduate students, graduate students enrolled in the M. S. and Ph.D. degree programs, engineers and technicians involved with the telecommunications industry, and scientists working in the fields of fiber optics and optical communications. Special Features: · The third edition of a proven best seller · The book is accompanied by a Solutions Manual · A comprehensive, up to date account of fiber-optic communication systems · Book is accompanied by CD-ROM providing applications based on text*

*About The Book: This book is intended to fulfill the requirements of a graduate-level textbook in the field of optical communications. An attempt is made to include as much recent material as possible so that students are exposed to the recent advances in this exciting field. The book can also serve as a reference text for researchers already engaged in or wishing to enter the field of optical fiber communications. The reference list at the end of each chapter is more elaborate than what is common for a typical textbook. The listing of recent research papers should be useful for researchers using this book as a reference. At the same time, students can benefit from it if they are assigned problems requiring reading of original research papers. A set of problems is included at the end of each chapter to help both teacher and student.*

*Offering many worked examples and end of chapter problems, this new edition is a comprehensive introduction to optical fiber communications and single mode fiber properties and types. It features coverage of optical fiber couples and wavelength division multiplexing devices, optical amplifiers, active integrated optic devices, and coherent transmission. For electrical and electronic engineers.*

*This book provides a comprehensive account of fiber-optic communication systems. The 3rd edition of this book is used worldwide as a textbook in many universities. This 4th edition incorporates recent advances that have occurred, in particular two new chapters. One deals with the advanced modulation formats (such as DPSK, QPSK, and QAM) that are increasingly being used for improving spectral efficiency of WDM lightwave systems. The second chapter focuses on new techniques such as all-optical*

*regeneration that are under development and likely to be used in future communication systems. All other chapters are updated, as well.*

*Case Studies*

*Components and Subsystems*

*FIBER-OPTIC COMMUNICATION SYSTEMS, 3RD ED (With CD )*

*Proceedings of 2nd ICESF 2020*

*Fiber Optic Communications*

*Optical Holography*

*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*

*This book provides a comprehensive treatment of the field of modern fiber optics, beginning with the basics of the field summarized in an introductory chapter.*

*Expert contributors then topics such as polarization effects in optical fibers; photonic crystal fibers; highly-doped optical fibers; non-linear effects; amplification and lasing in optical fibers; supercontinuum generation, Rayleigh and inelastic scattering with applications to sensing; optical fiber point sensors, and polymer optical-fiber-based sensors.*

*Diode Lasers and Photonic Integrated Circuits, Second Edition provides a comprehensive treatment of optical communication technology, its principles and theory, treating students as well as experienced engineers to an in-depth exploration of this field. Diode lasers are still of significant importance in the areas of optical communication, storage, and sensing. Using the the same well received theoretical foundations of the first edition, the Second Edition now introduces timely updates in the technology and in focus of the book. After 15 years of development in the field, this book will offer brand new and updated material on GaN-based and quantum-dot lasers, photonic IC technology, detectors, modulators and SOAs, DVDs and storage, eye diagrams and BER concepts, and DFB lasers. Appendices will also be expanded to include quantum-dot issues and more on the relation between spontaneous emission and gain.*

*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.*

*Radio over Fiber for Wireless Communications*

*Project Management*

*Strengthening Forensic Science in the United States*

*Optical Networking Best Practices Handbook*

*Enabling Technologies for High Spectral-efficiency Coherent Optical Communication Networks*

*How to Run a Meeting*

**This text presents a unified approach to the wide range of interactions and events which may follow the impact of gas molecules with a metal surface. The scope extends from the physical interactions which lead only to energy exchanges, through physical adsorption, to a discussion of various catalytic processes. Through specific examples, students of adsorption and catalysis are shown how to conduct and interpret experiments. These examples illustrate both the close conceptual and experimental links between adsorption and catalysis, and explore the experimental techniques most often encountered. The work concludes with a detailed case study of the catalytic oxidation of carbon monoxide on palladium and platinum, an important process in the control of automobile exhaust emissions.**

**This book provides a step-by-step discussion through each topic of fiber optics. Each chapter explores theoretical concepts of principles and then applies them by using experimental cases 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 includes important chapters in fiber optic lighting, fiber optics testing, and laboratory safety.**

**A new edition of the most popular book of project management case studies, expanded to include more than 100 cases plus a "super case" on the Iridium Project Case studies are an important part of project management education and training. This Fourth Edition of Harold Kerzner's Project Management Case Studies features a number of new cases covering value measurement in project management. Also included is the well-received "super case," which covers all aspects of project management and may be used as a capstone for a course. This new edition: Contains 100-plus case studies drawn from real companies to illustrate both successful and poor implementation of project management Represents a wide range of industries, including**

**medical and pharmaceutical, aerospace, manufacturing, automotive, finance and banking, and telecommunications Covers cutting-edge areas of construction and international project management plus a "super case" on the Iridium Project, covering all aspects of project management Follows and supports preparation for the Project Management Professional (PMP®) Certification Exam Project Management Case Studies, Fourth Edition is a valuable resource for students, as well as practicing engineers and managers, and can be used on its own or with the new Eleventh Edition of Harold Kerzner's landmark reference, Project Management: A Systems Approach to Planning, Scheduling, and Controlling. (PMP and Project Management Professional are registered marks of the Project Management Institute, Inc.)**

**This 1996 book is an expanded edition of one of the best known introductions to optical holography.**

**Principles and Practice by John Senior, ISBN**

**Optical Fiber Communications**

**Fiber Optics Yellow Pages**

**Diode Lasers and Photonic Integrated Circuits**

**Enabling 6G Mobile Networks**

**Fundamentals and Applications**

This is the second edition of this book, giving an introduction to the fundamentals, problems and techniques of design and utilisation of optical fibre systems. All the chapters have been updated and many have been extended with extra sections including recent developments. In addition, three new chapters have been incorporated. Volume IVA is devoted to progress in optical component research and development. Topics include design of optical fiber for a variety of applications, plus new materials for fiber amplifiers, modulators, optical switches, light wave devices, lasers, and high bit-rate electronics. This volume is an excellent companion to Optical Fiber Telecommunications IVB: Systems and Impairments (March 2002, ISBN: 0-12-3951739). - Fourth in a respected and comprehensive series - Authoritative authors from a range of organizations - Suitable for active lightwave R&D designers, developers, purchasers, operators, students, and analysts - Lightwave components reviewed in Volume A -Lightwave systems and impairments reviewed in Volume B - Up-to-the minute coverage

A comprehensive evaluation of Fi-Wi, enabling readersto design links using channel estimation and equalizationalgorithms This book provides a detailed study of radio over fiber (ROF)based wireless communication systems, otherwise called fiberwireless (Fi-Wi) systems. This is an emerging hot topic where theabundant bandwidth of optical fiber is directly combined with theflexibility and mobility of wireless networks to provide broadbandconnectivity. Its application is increasing because of thegrowing demand for broadband wireless services. In such a systemthe transmission of the radio signals over a fiber is an importanttask. This book provides substantial material on the radio overfiber part of the complete fiber-wireless system, including newresearch results on

the compensation methods. The early chapters provide fundamental knowledge required for a non-expert engineering professional as well as senior/graduate level students to learn this topic from scratch. The latter part of the book covers advanced topics useful for researchers and senior students. Therefore, this book provides a comprehensive understanding of the system for readers who will gain enough knowledge to design Fi-Wi links of their own by learning how to develop Fi-Wi channel estimation and equalization algorithms. This concept is completely novel in current literature and has been patented by the author. Readers are expected to have a basic understanding of fiber optics and wireless communications to easily follow the book and to appreciate the concepts. Basics of the Fi-Wi system and signal processing approaches are clearly explained. It covers a multidisciplinary topic and acts as a bridge between optical and wireless communication domains. In the increasingly demanding telecommunications profession, engineers are expected to have knowledge in both optical and wireless communications and expected to design combined/hybrid systems. Hence, the book is written in such a way that both optical and wireless professionals will be able to easily understand and perceive the concepts. It follows a logical process from basic principles through to advanced topics, providing a wide range of interest for researchers, practicing engineers, students, and those required to build such networks. It explains detailed system design concepts and the limitations and advantages in each configuration, appealing to design engineers, and largely avoiding system specifics. It demonstrates the author's exclusive patent, showing how to develop baseband signal processing algorithms for Fi-Wi systems, which is a key requirement for the successful deployment of Fi-Wi systems. It contains tables, numerical examples and case studies, facilitating a good quantitative understanding of the topic.

What makes for a great meeting? As a leader, how can you keep discussions on point and productive? In *How to Run a Meeting*, Antony Jay argues that too many leaders fail to plan adequately for meetings. In this bestselling article, he defines the characteristics that contribute to success, from keeping formal minutes to acknowledging junior staff first. These guidelines will help you get demonstrably better results from every meeting you run. Since 1922, *Harvard Business Review* has been a leading source of breakthrough ideas in management practice. The *Harvard Business Review Classics* series now offers you the opportunity to make these seminal pieces a part of your permanent management library. Each highly readable volume contains a groundbreaking idea that continues to shape best practices and inspire countless managers around the world.

Engineering Guidelines for Fixed, Mobile and Satellite Systems

Fiber Optics

Fiber Optics Handbook: Fiber, Devices, and Systems for Optical Communications  
Devices, Circuits, and Systems

Fiber-optic Communication Systems

Energy and Sustainable Futures

An expert guide to the new and emerging field of broadband circuits for optical fiber communication. This exciting publication makes it easy for readers to enter into and deepen their knowledge of the new and emerging field of broadband circuits for optical fiber communication. The author's selection

and organization of material have been developed, tested, and refined from his many industry courses and seminars. Five types of broadband circuits are discussed in detail: \*

- Transimpedance amplifiers
- Limiting amplifiers
- Automatic gain control (AGC) amplifiers
- Lasers drivers
- Modulator drivers

Essential background on optical fiber, photodetectors, lasers, modulators, and receiver theory is presented to help readers understand the system environment in which these broadband circuits operate. For each circuit type, the main specifications and their impact on system performance are explained and illustrated with numerical values. Next, the circuit concepts are discussed and illustrated with practical implementations. A broad range of circuits in MESFET, HFET, BJT, HBT, BiCMOS, and CMOS technologies is covered. Emphasis is on circuits for digital, continuous-mode transmission in the 2.5 to 40 Gb/s range, typically used in SONET, SDH, and Gigabit Ethernet applications. Burst-mode circuits for passive optical networks (PON) and analog circuits for hybrid fiber-coax (HFC) cable-TV applications also are discussed. Learning aids are provided throughout the text to help readers grasp and apply difficult concepts and techniques, including: \*

- Chapter summaries that highlight the key points
- Problem-and-answer sections to help readers apply their new knowledge
- Research directions that point to exciting new technological breakthroughs on the horizon
- Product examples that show the performance of actual broadband circuits
- Appendices that cover eye diagrams, differential circuits, S parameters, transistors, and technologies
- A bibliography that leads readers to more complete and in-depth treatment of specialized topics

This is a superior learning tool for upper-level undergraduates and graduate-level students in circuit design and optical fiber communication. Unlike other texts that concentrate on analog circuits in general or mostly on optics, this text provides balanced coverage of electronic, optic, and system issues. Professionals in the fiber optic industry will find it an excellent reference, incorporating the latest technology and discoveries in the industry.

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 Fiber Telecommunications V (A&B) is the fifth in a series that has chronicled the progress in the research and development of lightwave communications since the early 1970s. Written by active authorities from academia and industry, this edition not only brings a fresh look to many essential topics but also focuses on network management and services. Using high bandwidth in a cost-effective manner for the development of customer applications is a central theme. This book is ideal for R&D engineers and managers, optical systems implementers, university researchers and students, network operators, and the investment community. Volume (A) is devoted to components and subsystems, including: semiconductor lasers, modulators, photodetectors, integrated photonic circuits, photonic crystals, specialty fibers, polarization-mode dispersion, electronic signal processing, MEMS, nonlinear optical signal processing, and quantum information technologies. Volume (B) is devoted to systems and networks, including: advanced modulation formats, coherent systems, time-multiplexed systems, performance monitoring, reconfigurable add-drop multiplexers, Ethernet technologies, broadband access and services, metro networks, long-haul transmission, optical switching, microwave photonics, computer interconnections, and simulation tools.

Biographical Sketches

Ivan Kaminow retired from Bell Labs in 1996 after a 42-year career. He conducted seminal studies on electrooptic modulators and materials, Raman scattering in ferroelectrics, integrated optics, semiconductor lasers (DBR, ridge-waveguide InGaAsP and multi-frequency), birefringent optical fibers, and WDM networks. Later, he led research on WDM components (EDFAs, AWGs and fiber Fabry-Perot Filters), and on WDM local and wide area networks. He is a member of the National Academy of Engineering and a recipient of the IEEE/OSA John Tyndall, OSA Charles Townes and IEEE/LEOS Quantum Electronics Awards. Since 2004, he has been Adjunct Professor of Electrical Engineering at the University of California, Berkeley.

Tingye Li retired from AT&T in 1998 after a 41-year career at Bell Labs and AT&T Labs. His seminal work on laser resonator modes is considered a classic. Since the late 1960s, He and his groups have conducted pioneering studies on lightwave technologies and systems. He led the work on amplified WDM transmission systems and championed their deployment for upgrading network capacity. He is a member of the National Academy of Engineering and a foreign member of

the Chinese Academy of Engineering. He is a recipient of the IEEE David Sarnoff Award, IEEE/OSA John Tyndall Award, OSA Ives Medal/Quinn Endowment, AT&T Science and Technology Medal, and IEEE Photonics Award. Alan Willner has worked at AT&T Bell Labs and Bellcore, and he is Professor of Electrical Engineering at the University of Southern California. He received the NSF Presidential Faculty Fellows Award from the White House, Packard Foundation Fellowship, NSF National Young Investigator Award, Fulbright Foundation Senior Scholar, IEEE LEOS Distinguished Lecturer, and USC University-Wide Award for Excellence in Teaching. He is a Fellow of IEEE and OSA, and he has been President of the IEEE LEOS, Editor-in-Chief of the IEEE/OSA J. of Lightwave Technology, Editor-in-Chief of Optics Letters, Co-Chair of the OSA Science & Engineering Council, and General Co-Chair of the Conference on Lasers and Electro-Optics.

Coherent Optical Fiber Communications

Advanced Fiber Optics

Principles and Practice

Optical Fiber Telecommunications VA

Systems and Networks

Outlines and Highlights for Optical Fiber Communications