1. Record Nr. UNINA9910830245203321

Titolo	Enabling technologies for high spectral-efficiency coherent optical communication networks / / edited by Xiang Zhou, Chongjin Xie
Pubbl/distr/stampa	Hoboken, New Jersey : , : Wiley, , [2016] [Piscataqay, New Jersey] : , : IEEE Xplore, , [2016]
ISBN	1-119-07825-3 1-118-71496-2
Descrizione fisica	1 online resource (710 p.)
Collana	Wiley series in microwave and optical engineering
Disciplina	621.382/7
Soggetti	Laser communication systems Optical fiber communication
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
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Sommario/riassunto

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. Ø Contains basic theories and up-to-date technology advancements in each chapter Ø 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 Ø Demonstrates that fiber nonlinearities can be accurately described by some analytical models, such as GN-EGN model Ø 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.

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Record Nr.	UNINA9910953147103321
Titolo	Using CNS autopsy tissue in psychiatric research : a practical guide / / edited by Brian Dean, Joel E. Kleinman and Thomas M. Hyde
Pubbl/distr/stampa	Amsterdam, Netherlands, : Harwood Academic Publishers, 1999
ISBN	1-04-022210-2 0-429-27124-7 1-4822-8341-7 1-280-07237-7 0-203-30427-6 9786610072378
Edizione	[1st ed.]
Descrizione fisica	1 online resource (188 p.)
Altri autori (Persone)	DeanBrian KleinmanJoel E HydeThomas M
Disciplina	611.0188
Soggetti	Psychiatry - Research Neuropsychiatry
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Book Cover; Title; Contents; Foreword; Contributors; The Collection of Tissue at Autopsy: Practical and Ethical Issues; Psychiatric Diagnosis

After Death: The Problems of Accurate Diagnosis from Case History Review and Relative Interviews; Membrane Binding Assays: Membrane Preparation and Assay Development; The Localisation and Quantification of Molecular Changes in the Human Brain Using In Situ Radioligand Binding and Autoradiography; In Situ Hybridisation Histochemistry: Application to Human Brain Tissue; Immunohistochemistry Techniques Applicable for Use with Human Brain Tissue
The Processing and Use of Postmortem Human Brain Tissue for Electron MicroscopyIsolating Components of Human Brain: The Purification of A and the Alzheimer's Amyloid Precursor Protein; Analysis of Receptor Systems in Schizophrenia Using Tissue Obtained at Autopsy and Neuroimaging; Index

Sommario/riassunto

Essential for the laboratory, this practical manual presents a wide variety of techniques associated with the use of human CNS tissue obtained at autopsy. The book contains detailed methodologies in discrete chapters written by an expert in the specific field. It also addresses the potential for extending molecular studies in brain tissue obtained at autopsy into studies in living brain by using neuroimaging techniques. In addition, the reader is directed to suppliers of equipment and reagents that have been shown to be useful when studying human brain tissue.