1. Record Nr. UNINA9910465343103321

Autore Cvijetic Milorad

Titolo Advanced optical communication systems and networks / / Milorad Cvijetic, Ivan B. Djordjevic

Pubbl/distr/stampa Boston : , : Artech House, , [2013]
[Piscataqay, New Jersey] : , : IEEE Xplore, , [2012]

ISBN 1-60807-556-7

Descrizione fisica 1 online resource (823 p.)

Collana Artech House applied photonics series

Altri autori (Persone) DjordjevicIvan

Disciplina 621.3827

Soggetti Optical communications - Technological innovations
Electronic books.

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 Introduction to optical communications -- Optical components and modules -- Signal propagation in optical fibers -- Noise sources and channel impairment -- Advanced modulation schemes -- Advanced detection schemes -- Advanced coding schemes -- Advanced optical networking -- Optical channel capacity and energy efficiency -- Engineering tool box.

Sommario/riassunto This resource provides the latest details on 5th generation photonic systems that can be readily applied to projects in the field. Moreover, the book provides valuable, time-saving tools for network simulation and modeling. It includes coverage of optical signal transmission systems and networks; a wide range of critical methods and techniques, such as MIMO (multiple-input and multiple-output) by employing spatial modes in few-mode and multicore optical fiber; OFDM (orthogonal frequency-division multiplexing) utilized to enhance the spectral efficiency and to enable elastic optical networking schemes; and advanced modulation and coding schemes to approach the Shannon's channel capacity limit. There are detailed discussions on the basic principles and applications of high-speed digital signal processing, as well as description of the most relevant post-detection compensation techniques. --