

<<光码分多址通信网络理论与应用>>

图书基本信息

书名：<<光码分多址通信网络理论与应用>>

13位ISBN编号：9787302173281

10位ISBN编号：7302173281

出版时间：2008-6

出版时间：清华大学出版社

作者：殷洪玺，（英）理查德 著

页数：382

字数：560000

版权说明：本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问：<http://www.tushu007.com>

## <<光码分多址通信网络理论与应用>>

### 内容概要

Optical code division multiple access (OCDMA) communication network technology will play an important role in future optical networks, such as optical access and metropolitan area networks. OCDMA technology can also be applied to implement optical signal multiplexing and label switching on backbone networks. Optical Code Division Multiple Access Communication Networks - Theory and Applications introduces the code theory of OCDMA, the methods and technologies of OCDMA encoding and decoding, the theory and methods of analyzing OCDMA systems with various receiver models and realizing multiple-class services with different bit rates and QoS. In addition, OCDMA network architectures, protocols and applications are discussed in detail. The up-to-date theoretical and experimental results on OCDMA systems and networks are also reported. A large number of encoding/decoding examples and many analysis and simulation results of code and system performances are given. It is a valuable text and/or reference book for postgraduates majoring in telecommunication and photonics to obtain a well-knit theoretical foundation and for engineers in R&D and management of optical communications. Dr. Yin is an Associate Professor of the School of Electronics Engineering and Computer Science at Peking University, China, and was a Visiting Research Fellow of Optoelectronics Research Centre (ORC) at University of Southampton, UK. Dr. RichardSon is a Professor for optical communications and Deputy Director of ORC at University of Southampton, UK, and is responsible for much of the ORC's fiber related activities.

## 书籍目录

1	Introduction	1.1	Developments and Applications of Optical Fiber Communication Systems and Networks
1.1.1	Optical Fiber Communication Systems	1.1.2	Optical Fiber Communication Networks
1.2	Technology Evolution and Typical Experimental Systems of OCDMA	1.3	Technique Characteristics and System Classifications of OCDMA
1.3.1	Technique Characteristics of OCDMA	1.3.2	Classifications of OCDMA Systems
2	One-dimensional OCDMA Codes	2.1	Introduction
2.2	Constant-weight Symmetric OOCs	2.2.1	Definition of Constant-weight Symmetric OOCs
2.2.2	Cardinality of Constant-weight Symmetric OOCs	2.2.3	Constructions of Constant-weight Symmetric OOCs
2.3	Constant-weight Asymmetric Optical Orthogonal Codes	2.3.1	Definition of Constant-weight Asymmetric OOCs
2.3.2	Cardinality Upper and Lower Bounds on Constant-weight Asymmetric OOCs	2.3.3	Constructions of Constant-weight Asymmetric (n,w,2,1)-OOEs
2.4	Variable-weight Optical Orthogonal Codes	2.4.1	Definition of Variable-weight OOCs
2.4.2	Upper and Lower Bounds on Cardinality of Variable-weight OOCs	2.4.3	Constructions of Variable-weight OOCs
2.5	Prime Codes	2.5.1	Basic Prime Codes
2.5.2	Extended Prime Codes	2.5.3	Modified Prime Codes
2.6	Quadratic Congruence Codes	2.6.1	Basic Quadratic Congruence Codes
2.6.2	Extended Quadratic Congruence Codes	2.6.3	Synchronous Quadratic Congruence Codes
2.7	Bipolar Codes	2.7.1	m-Sequence
2.7.2	Gold Codes	2.7.3	Walsh-Hadamard Codes
2.7.4	Maximal-length 4-phase Codes over Galois Ring $GR(4,r)$	2.8	Summary
3	Two-Dimensional OCDMA Codes	3.1	Introduction
3.2	Multi-wavelength Optical Orthogonal Codes	3.2.1	Constructions of MWOOCs Based on Constructions of 1-D OOCs
3.2.2	2-D Constructions of MWOOCs	3.2.3	Performance Analysis of BER of MWOOCs
3.3	2-D PC/PC Codes	3.4	2-D PC/EQCC Codes
3.5	2-D OOC/PC Codes	3.6	2-D PC/OOC Codes
3.7	2-D OCFHC/OOC Codes	3.7.1	Constructions of 2-D OCFHC/OOC Codes
3.7.2	Performance of 2-D OCFHC/OOC Codes	3.8	2-D B/U OCDMA Codes
3.9	2-D B/B OCDMA Codes	3.9.1	Construction of 2-D B/B Codes
3.9.2	Cardinalities of 2-D B/B Codes	3.10	2-D Wavelength-hopping Prime Codes and Extended Wavelength-hopping Prime Codes for OCDMA
3.10.1	2-D WHPCs	3.10.2	2-D EWHPCs
3.11	Multiple-length Extended Wavelength-hopping Prime Codes for OCDMA	3.11.1	Definition of Multiple-length Constant-weight Wavelength-time Codes
3.11.2	Construction of MLWHPCs	3.11.3	Construction of MLEWHPCs
3.11.4	Cardinality of MLEWHPCs	3.11.5	Performance of MLEWHPCs
4	Optical Encoders and Decoders for OCDMA	5	Performance Analysis of OCDMA Communication Systems
6	Architectures, Protocols and Applications for OCDMA Networks		Index

版权说明

本站所提供下载的PDF图书仅提供预览和简介, 请支持正版图书。

更多资源请访问:<http://www.tushu007.com>