

An Excellent Addition to Your Library!

Released: October 2014

Optical Transmission and Networks for Next Generation Internet Traffic Highways

Research Essentials

Optical Transmission and Networks for Next Generation Internet Traffic Highways

Fouad Mohammed Abbou and Hiew Chee Choong



Part of the Research Essentials Collection

Fouad Mohammed Abbou (Al Akhawayn University, Morocco) and Hiew Chee Choong (Kasatria, Malaysia)

Data services, especially those involving multimedia applications, can often be bandwidth intensive and accessed simultaneously by a large number of users. As such, efforts are being made to replace conventional network infrastructure, based on copper lines and coaxial cables, with fiber optic networks for improved performance.

Optical Transmission and Networks for Next Generation Internet Traffic Highways provides a broader perspective of the parameters involved in the transmission of optical signals using optical soliton systems, OCDM-WDM, SCM-WDM and OTDM-WDM. This timely publication is ideal for use by technical managers, graduate students, engineers and technicians involved in the fiber-optics industry, and scientists working in the field of optical communications.

Topics Covered:

- Amplified Spontaneous Emission (ASE)
- Cross-Phase Modulation (XPM)
- Group Velocity Dispersion
- Optical Transmission Systems
- Performance Estimation
- Self-Phase Modulation (SPM)
- Wavelength-Division Multiplexing (WDM)

ISBN: 978146665750; © 2015; 322 pp.

Print: US \$195.00 | Perpetual: US \$295.00 | Print + Perpetual: US \$390.00

Market: This premier publication is essential for all academic and research library reference collections. It is a crucial tool for academicians, researchers, and practitioners. Ideal for classroom use.

Abbou Fouad Mohammed received his “Ingenieur” Degree in Electrical Engineering from Delft University of Technology, The Netherlands in 1995. He obtained his PhD degree from the Faculty of Engineering, Multimedia University (MMU), Malaysia in 2001. From April 1997 to April 2001, he was working with the Faculty of Engineering at MMU, Malaysia. In 2001, he joined Alcatel-Lucent as Multimedia Advisor and MMU as a Professor to support teaching and research activities in the area of photonics and telecommunication networks. In November 2008, he joined Al-Madinah International University (MEDIU) as Vice President for Research and Development and Dean of Post-graduate Studies. His research interests include optical transmission systems, optical networks, security in all-optical networks, and grid integration of renewable energy systems. He has authored/co-authored more than 90 papers in international journals and conferences. Dr. Fouad is a member of the Institution of Engineers, The Netherlands, Member of IEEE and IET, and he is currently a Full Professor in the School of Science and Engineering at Al-Akhawayn University, Morocco.



www.igi-global.com

Publishing Academic Excellence
at the Pace of Technology Since 1988

Section 1:

Chapter 1
Optical Transport Network:

Chapter 2
Optical Transport Network:

Section 2:

Chapter 3
Optical Soliton Transmission System

Chapter 4
A Detailed Analysis of Cross-Phase Modulation Effects on OOK and DPSK Optical WDM Transmission Systems

Chapter 5
SCM-WDM PONs in Presence of XPM and GVD

Chapter 6
Phase Encoded Optical Code Division Multiplexing Access System

Section 3:

Chapter 7
OTDM-WDM:

Chapter 8
OTDM-WDM:

Chapter 9
OTDM-WDM System Components Modeling

Section 4:

Chapter 10
Performance Analysis Models

Chapter 11
Optimization of Parameters for Optimal Performance

Chapter 12
Modified DP-Q and MGF BER

Section 5:

Chapter 13
Comparison of RZ-OOK and RZ-DPSK Optimal Performance

Chapter 14
Impact of a Post-OTDM-Demux Optical Filter

Chapter 15
Network Performance Analysis with Nonlinear Effects

Order Your Copy Today!

Name: _____

Organization: _____

Address: _____

City, State, Zip: _____

Country: _____

Tel: _____

Fax: _____

E-mail: _____

☐ Enclosed is check payable to IGI Global in
US Dollars, drawn on a US-based bank

☐ Credit Card ☐ Mastercard ☐ Visa ☐ Am. Express

3 or 4 Digit Security Code: _____

Name on Card: _____

Account #: _____

Expiration Date: _____