Optical Transmission and Networks for Next Generation Internet Traffic Highways

Part of the Research Essentials Collection

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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)

**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.

*Abou 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 Postgraduate 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.
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