



Optical WDM Networks: From Static to Elastic Networks

Devi Chadha

E-Book	ISBN: 978-1-119-39334-4	May 2019	\$104.99
Hardcover	ISBN: 978-1-119-39326-9	July 2019	\$130.00
O-Book	ISBN: 978-1-119-39339-9	May 2019	Available on Wiley Online Library

DESCRIPTION

Provides a comprehensive and updated account of WDM optical network systems

Optical networking has advanced considerably since 2010. A host of new technologies and applications has brought a significant change in optical networks, migrating it towards an all-optical network. This book places great emphasis on the network concepts, technology, and methodologies that will stand the test of time and also help in understanding and developing advanced optical network systems.

The first part of *Optical WDM Networks: From Static to Elastic Networks* provides a qualitative foundation for what follows—presenting an overview of optical networking, the different network architectures, basic concepts, and a high-level view of the different network structures considered in subsequent chapters. It offers a survey of enabling technologies and the hardware devices in the physical layer, followed by a more detailed picture of the network in the remaining chapters. The next sections give an in-depth study of the three basic network structures: the static broadcast networks, wavelength routed networks, and the electronic/optical logically routed networks, covering the characteristics of the optical networks in the access, metropolitan area, and long-haul reach. It discusses the networking picture; network control and management, impairment management and survivability. The last section of the book covers the upcoming technologies of flex-grid and software defined optical networking.

- Provides concise, updated, and comprehensive coverage of WDM optical networks

- Features numerous examples and exercise problems for the student to practice
- Covers, in detail, important topics, such as, access, local area, metropolitan, wide area all-optical and elastic networks
- Includes protocols, design, and analysis along with the control and management of the networks
- Offers exclusive chapters on advance topics to cover the present and future technological trends, such as, software defined optical networking and the flexible grid optical networks

Optical WDM Networks: From Static to Elastic Networks is an excellent book for under and post graduate students in electrical/communication engineering. It will also be very useful to practicing professionals in communications, networking, and optical systems.

ABOUT THE AUTHOR

DEVI CHADHA, P HD, is Professor Emeritus at IIT, Delhi in India. She has over 40 years of teaching and research experience in the areas of electromagnetics, microwaves, optical fiber communication, optical wireless communications, and photonics and switching networks. In addition, Professor Chadha is a Senior Member of IEEE, a Member of OSA, and a Fellow of IE (India).

SERIES

Wiley - IEEE

For additional product details, please visit <https://www.wiley.com/en-cl>