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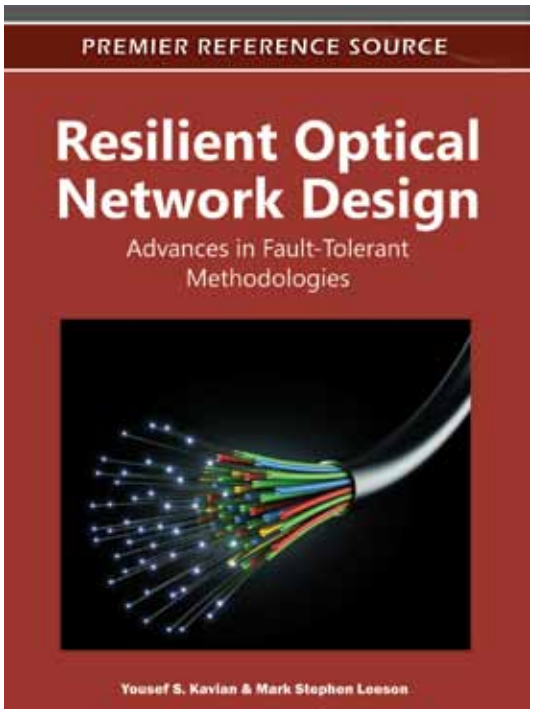
Resilient Optical Network Design: Advances in Fault-Tolerant Methodologies



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and Mark S. Leeson (University of Warwick, UK)

Dense wavelength division multiplexing (DWDM) optical networks are prone to failure, which can potentially lead to a catastrophic loss of data and revenue. Given this, one of the most important optical network design issues is survivability or the ability of a network to provide continuous service at an acceptable level in the presence of different failure scenarios.

Resilient Optical Network Design: Advances in Fault-Tolerant Methodologies is a collection of the latest contributions to the area of survivability in optical networks. Each chapter focuses on theoretical and practical aspects of network survivability methodologies applied to real world scenarios, making this a useful reference for research and development engineers, graduate students studying optical networks, and senior undergraduate students with a background in algorithms and networking.

Topics Covered:

- Capacity Allocation in Survivable Networks
- Fault Management in Survivable Networks
- Fault-Tolerant Networks
- Multiple Failures Survivability
- P-Cycle Survivability Architectures
- Protection Survivability Architectures
- Restoration Survivability Architectures
- Robust Survivable Networks
- Survivability in Optical Networks
- Traffic Grooming in Survivable Networks

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

Yousef S. Kavian received the B.Sc. (Hons) degree in Electronic Engineering from the Shahid Beheshti University, Tehran, Iran, in 2001, the M.Sc. degree in Control Engineering from the Amkabir University, Tehran, Iran, in 2003, and the Ph.D. degree in Electronic Engineering from the Iran University of Science and Technology, Tehran, Iran, in 2007. After one year appointment at Shahid Beheshti University, in 2008, he joined the Shahid Chamran University as an Assistant Professor. He worked as a postdoctoral research fellow at Esslingen University and IAER, Germany, in 2010. His research interests include digital circuits and systems design, optical, and wireless networking. Dr Kavian has over 50 technical publications including journal, conference papers, and book chapters in these fields. He is a senior industrial engineer and trainer with more than 10 years industrial experiences.

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Tapolcai János (Budapest University of Technology and Economics, Hungary)

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