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Nota di contenuto	About the Special Issue Editor vii -- Preface to "Applications of Semiconductor Optical Amplifiers" ix -- Christos Vagionas, Pavlos Maniotis, Stelios Pitris, Amalia Miliou and Nikos Pleros Integrated Optical -- Content Addressable Memories (CAM) and Optical Random Access Memories (RAM) for Ultra-Fast Address -- Look-Up Operations -- Zoe V. Rizou, Kyriakos E. Zoiros and Antonios Hatziefremidis Comparison of Basic Notch Filters for -- Semiconductor Optical Amplifier Pattern Effect Mitigation -- Se ´an P. OD´ ´ uill, Pascal Landais and Liam P. Barry Estimation of the Performance Improvement of -- Pre-Amplified PAM4 Systems When Using Multi-Section Semiconductor Optical Amplifiers -- Simon Arega Gebrewold, Romain Bonjour, Romain Brenot, David Hillerkuss and Juerg Leuthold Bit- and -- Power-Loading-A Comparative Study on Maximizing the Capacity of RSOA Based Colorless DMT Transmitters -- Zoe V. Rizou and Kyriakos E. Zoiros Theoretical Analysis of Directly Modulated Reflective Semiconductor -- Optical Amplifier Performance Enhancement by Microring Resonator-Based Notch Filtering -- Nicola Calabretta, Wang Miao, Ketemaw Mekonnen and Kristif Prifti SOA Based Photonic Integrated WDM -- Cross-Connects for Optical Metro-Access Networks -- Ripalta Stabile Towards Large-Scale Fast Reprogrammable SOA-Based Photonic Integrated Switch Circuits -- Yi Lin, Aravind P. Anthur, Sean P. O´ Duill, ´ Fan Liu, Yonglin Yu and Liam P. Barry Fast Reconfigurable -- SOA-Based Wavelength Conversion of Advanced

Modulation Format Data -- Md Shakil Ahmed and Ivan Glesk
Application of Semiconductor Optical Amplifier (SOA) in Managing
Chirp of -- Optical Code Division Multiple Access (OCDMA) Code
Carriers in Temperature Affected Fibre Link.

Sommario/riassunto

Semiconductor optical amplifiers (SOAs) are considered a key enabling technology for the design and implementation of photonic circuits, subsystems, and networks. Owing to the attractive features of low power consumption, compactness, broad gain bandwidth and ability for integration with affordable cost, SOAs enjoy continuous popularity as core versatile devices within the optical communications research and industrial sector for the accomplishment of critical and indispensable tasks at fundamental and system-oriented level. Given the establishment and widespread employment of SOAs as technological platform, a Special Issue on 'Applications of Semiconductor Optical Amplifiers' was introduced and prepared to address, present, and investigate modern applications of SOAs, as well as explore and highlight trends, challenges, and perspectives for motivating efforts toward continuous exploitation of these active modules in a feasible, innovative, and global manner. This book collates the Special Issue papers reporting on significant results obtained from the cutting-edge research conducted by experts in the field. Readers will benefit by acquiring useful knowledge and opening their scientific horizons on SOA-enabled applications, such as direct signal amplification, external modulation, all-optical signal processing, all-optical memories, photonic integrated circuits, photonic switching, optical code division multiple access systems, passive optical networks, et cetera.
