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Autore	Bottacchi Stefano
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Nota di contenuto	Chapter 1. Introduction to Multi-Terabit Optical Communication -- Chapter 2. Theory of Pseudo-random PAM Sequences and Power Spectra -- Chapter 3. Simulations of PAM Signals and Power Spectra -- Chapter 4. Theory of Optical Complex Modulations -- Chapter 5. Advanced Optical Complex Modulations -- Chapter 6. Impulse Response Engineering and Eye Diagram Statistical Analysis.
Sommario/riassunto	This book highlights many fundamental aspects of optical fiber transmission engineering while also focusing on current state of the art applications and working examples of digital coherent optical communications. Major engineering themes are reviewed and analyzed in this book, including spectral and time-domain characteristics of multi-level pseudo-random PAM signals, optical QAM and SSB complex modulations and impulse response engineering of linear amplifiers used in next-generation Gbaud transmission systems. This book is balanced between theoretical and numerical simulation approaches, showing numerous working examples developed in Matlab. Presents an in-depth analysis of pseudo-random multi-level signals and high-order complex modulations to support coherent terabit transmission systems; Provides a unified approach to challenging engineering issues encountered in the design of Giga-baud coherent optical transmission systems using high-order complex modulation formats; Reviews engineering themes and provides in-depth analysis, modeling and

quantitative examples and solutions of state of the art and future applications.
