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Nota di contenuto	Chapter 1. Concepts and fundamental theories of optical fiber dispersions -- Chapter 2. Single mode optical fiber dispersions and physics phenomenon involved -- Chapter 3. Study of optical fiber dispersion and measuring methods -- Chapter 4. Design and development of algorithm for auto-measurement voltage and temporal parameters of microwave signal -- Chapter 5. Device characterizations and chromatic dispersion measurement in optical fibers -- Chapter 6. Optical fiber dispersions and future contributions on electro-optic modulator system optimizations.
Sommario/riassunto	This book demonstrates the implementation of an automated measuring system for very efficient measurement of chromatic dispersion, which uses a modulation phase shift method over long haul of optical single mode fiber. The authors show how a new scheme for measuring chromatic dispersion is adopted in conjunction with a

tunable laser (TLS), providing the optical power at required wavelength and digital oscilloscope (DOOSC) for measuring the phase difference between microwave signals from transmitter and microwave signals at the receiver. This is a novel approach for real-time chromatic dispersion in optical systems such as optical fibers. The setup used is very simple, accurate and cost effective, compared to other methods such as direct measurement, differential mode delay, polarization mode dispersion measurement and phase delay method. Describes algorithms for characterization and controlling optical apparatus; Introduces a new automated characterization system for electro-optic modulators with application of driving microwaves; Describes a new algorithm for automated dispersion measurement for different length of fibers; Provides system analysis to show the effects of critical parameters, such as dimensions on dispersion.

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