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   Nota di contenuto   Introduction of High Spectral Efficiency Communication Systems and
                        Receiver Design -- Message Passing Receiver for SEFDM Signaling Over
                        Multipath Channels -- Joint Channel Estimation and Equalization for
                        Index-Modulated SEFDM Signaling -- Iterative Equalization for MFTN
                        Signaling Under Known Channels -- Joint Channel Estimation and
                        Equalization for MFTN Signaling -- Iterative Equalization for Index-
                        Modulated MFTN Signaling -- Variational Inference-Based Iterative
                        Receiver for Unified Non-Orthogonal Waveform (uNOW) -- Current
                        Achievements and The Road Ahead.

   Sommario/riassunto   This book focuses on the design of low-complexity iterative receivers
                        in high spectral efficiency communication systems, especially under
                        frequency-selective fading channels. Specifically, it combines multi-
                        carrier faster-than-Nyquist (MFTN) signaling, spectrally efficient
                        frequency division multiplexing (SEFDM), and index modulation (IM) to
                        study the hybrid message passing based low-complexity iterative
                        receivers, the frequency-domain joint channel estimation and
                        equalization (FDJCEE) algorithm, and the vector approximate message
                        passing (VAMP) based iterative equalization algorithms. These methods
                        effectively address the challenges of symbol detection and channel
                        estimation for MFTN signaling and significantly improve the spectral

efficiency and bit error rate (BER) performance. This book is of a good reference for researchers, engineers, and students in the fields of wireless communications and signal processing.