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Nota di contenuto	3G Mobile Communications -- Wideband CDMA -- Multicode CDMA -- Advanced Tracking Loop -- CDMA Overlay -- Adaptive Filtering in CDMA Overlay -- Open-loop Power Control in CDMA Overlay -- Closed-loop Power Control -- Uplink Multicarrier DS/SFH-CDMA -- Downlink Multicarrier DS/SFH-CDMA -- Wireless Frequency Hopping -- A Novel FHMA Receiver -- 4G Mobile Communications.
Sommario/riassunto	The broadband wireless communications field is growing at an explosive rate, stimulated by a host of important emerging applications ranging from 3G, 4G and wireless LAN. Wideband CDMA and CDMA2000 will be used for 3G. OFDM+CDMA might be a good choice for 4G, CDMA overlay will possibly be used for new-generation broadband wireless LAN. For system planners and designers, the projections of rapidly escalating demand for such wireless services present major challenges and meeting these challenges will require sustained technical innovation on many fronts. The text of this book has been developed through years of research by the author and his graduate students at the University of Hong Kong. The aim of this book is to provide a R&D perspective on the field of broadband wireless communications by describing the recent research developments in this area and also by identifying key directions in which further research is

needed. As a background, I presume that the reader has a thorough understanding of digital communications and spread spectrum/CDMA. The book is arranged into 13 chapters. In chapter 1, some key specifications of 3G WCDMA are described and discussed. These techniques include channel coding, rate matching, modulation and spreading, power control, cell search, transmit diversity, soft-handoff, and so on. In Chapter 2, the coherent RAKE reception of Wideband CDMA signals with complex spreading is considered. A dedicated pilot channel, which is separate from data channels, is used for the purpose of channel estimation.
