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Sommario/riassunto

Wireless Communications Systems Design provides the basic knowledge and methodology for wireless communications design, focusing primarily on a broadband wireless communication system based on OFDM/OFDMA as it is widely used in the modern wireless communication system. In Part I, the overall wireless communication theories are introduced, a mathematical model is defined, and several physical layer techniques for mitigating wireless channel impairments are explained. In Part II, each wireless communication block is designed. This part deals with turbo codes, LDPC codes, OFDM, MIMO, channel estimation, equalization, and synchronization. In Part III, wireless communications systems design is introduced from radio planning to system integration. The author discusses design methodology and implementation techniques and covers SoC design for the 4G communication system. It is an essential read for graduate students majoring in wireless communications or electrical engineering and systems designers in the industry. * Addresses wireless communication system design, providing a step-by-step guide for

whole system design (including numerous examples, case studies and end of the chapter problems) * Divided into three parts: Wireless Communications Theory (Part I), Wireless Communications Blocks Design (Part II), and Wireless Communications Systems Design (Part III)
* Written by an expert with extensive experience in system design (standards, research, and development).
