1. Record Nr. UNINA9910644262903321 Autore Yuan Jeffrey W (Jeffrey Weijie) Titolo Receiver design for high spectral efficiency communication systems in beyond 5G / / Weijie Yuan, Nan Wu, Jingming Kuang Pubbl/distr/stampa Singapore:,: Springer,, [2023] ©2023 **ISBN** 981-19-8090-X Edizione [1st ed. 2023.] Descrizione fisica 1 online resource (xv, 150 pages): illustrations (some color) Disciplina 623.73 Soggetti Microwave receivers Mobile communication systems - Technological innovations Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references. Introduction of High Spectral Efficiency Communication Systems --Nota di contenuto Receiver Design for FTN Signaling over Frequency Selective Channels --Receiver Design for FTN Signaling over Doubly Selective Channels --Uplink NOMA Multiuser Detector -- Downlink NOMA Multiuser Detector -- How to Achieve a Higher Spectral Efficiency -- Confusions and the Road Ahead. Sommario/riassunto This book focuses on the receiver design issue in high spectral efficiency communication systems, which is one of the main research directions in beyond 5G and 6G era. In particular, this book studies two technologies to improve the spectral efficiency, i.e., FTN signaling which transmits more data information in the same time period and NOMA scheme which supports more users with the same resource elements. Different commonly used channel propagation conditions are considered, and advanced signal processing algorithms have been developed for designing receivers, which is suitable for low-complexity receiver design in engineering practice. Moreover, this book discusses

possible solutions to further increase spectral efficiency and propose practical receivers in such scenarios. It benefits researchers, engineers,

and students in the fields of wireless communications and signal

processing.