1. Record Nr. UNINA9910483623303321 Autore You Xiaohu Titolo Distributed MIMO and cell-free mobile communication / / Xiaohu You. Dongming Wang, Jiangzhou Wang Pubbl/distr/stampa Singapore:,: Springer Beijing:,: Science Press,, [2021] ©2021 **ISBN** 981-15-9845-2 Edizione [1st ed. 2021.] Descrizione fisica 1 online resource (XIII, 220 p. 108 illus., 95 illus. in color.) Disciplina 621.38456 Mobile communication systems - Computer programs Soggetti MIMO systems - Computer programs Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Includes bibliographical references. Nota di bibliografia Nota di contenuto Fundamentals of Distributed MIMO and Cell-free Mobile Communications -- Analysis of the Channel Capacity of Distributed MIMO -- Massive Distributed MIMO and Cell-free Systems Under Pilot Contamination -- Cell Edge Effect and Its Elimination with a Cell-free System -- Transmit Power Allocation and Energy Efficiency Optimization of Distributed MIMO -- Caching Optimization in Distributed MIMO Systems -- Low-complexity Transmission Technologies for D-MIMO -- Massive Distributed MIMO and Cell-free Network-assisted Full Duplex -- Proof of Concept and Validation: Implementation Based on a Cloud Architecture. Sommario/riassunto Distributed MIMO and cell-free mobile communication are emerging technologies of wireless communication. This book introduces the fundamental theory, key technology and the prototype system of distributed MIMO and cellular free mobile communication system. including the unified system model, capacity and spectral efficiency analysis under imperfect channel information, cell edge effect, optimal power allocation and energy efficiency optimization, cache optimization, low complexity wireless transmission technology and new

network assisted full duplex technology. In addition, the

implementation of distributed MIMO based on cloud architecture is

introduced in detail, and software and hardware implementation and test results are also given in detail. This book will benefit senior undergraduates, postgraduates, scholars and engineers who are engaged in wireless mobile communication research. It can also be used as a reference book for postgraduates and researchers in the field of electronic and information engineering.