

1. Record Nr.	UNINA9910416081003321
Autore	Morais Douglas H
Titolo	Key 5G Physical Layer Technologies : Enabling Mobile and Fixed Wireless Access // by Douglas H. Morais
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-51441-2
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (XIX, 284 p. 175 illus., 17 illus. in color.)
Disciplina	621.38456
Soggetti	Electrical engineering Computer engineering Internet of things Embedded computer systems Computer communication systems Communications Engineering, Networks Cyber-physical systems, IoT Computer Communication Networks
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Broadband Wireless Payload: Packet Switched Data -- Mathematical Tools for Digital Transmission Analysis -- The Wireless Access Path -- Digital Modulation: The Basic Principles -- Channel Coding and Link Adaptation -- Multi Carrier based Multiple Access Techniques -- Multiple Antenna Techniques -- Multiple Access Supporting Technologies -- 5G (NR) Overview and Physical Layer -- 5G Based Fixed Access -- Conclusion.
Sommario/riassunto	This book covers the key technologies associated with the physical transmission of data on fifth generation (5G) mobile systems. Following an overview of these technologies, a high-level description of 3GPP's mobile communications standard (5G NR) is given and it is shown how the key technologies presented earlier facilitate the transmission of control data and very high-speed user data. In the final chapter, an overview and the physical layer aspects of 5G NR enabled Fixed Wireless Access (FWA) networks is presented. This book is intended for

those practicing engineers and graduate and upper undergraduate engineering students who have an interest in 3GPP's 5G enabled mobile and or FWA networks and want to acquire, where missing, the necessary technology background in order to understand 3GPP's physical layer specifications and operation. Provides a comprehensive covering of key 3GPP 5G NR physical layer technologies, presented in a clear, tractable fashion, with sufficient mathematics to make it technically coherent; Addresses all key 5G NR technologies, including digital modulation, LDPC and Polar coding, multicarrier based multiple access techniques, and multiple antenna techniques including MIMO and beamforming; Presents an overview of 5G NR Radio Access Network (RAN) architecture and a detailed understanding of how user and control data is transported in the physical layer by the application of the technologies presented; Provides an overview and addresses physical layer aspects of 5G NR enabled Fixed Wireless Access networks.
