Record Nr. UNINA9910869173703321 Autore Koul Shiban K Titolo Antenna Systems for Modern Wireless Devices // by Shiban K. Koul, S. Swapna, G. S. Karthikeya Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2024 Pubbl/distr/stampa **ISBN** 981-9733-69-3 Edizione [1st ed. 2024.] Descrizione fisica 1 online resource (344 pages) Collana Signals and Communication Technology, , 1860-4870 Altri autori (Persone) SwapnaS KarthikeyaG. S Disciplina 621 Soggetti **Physics** Wireless communication systems Mobile communication systems Microtechnology Microelectromechanical systems Telecommunication Signal processing Applied and Technical Physics Wireless and Mobile Communication Microsystems and MEMS Microwaves, RF Engineering and Optical Communications Signal, Speech and Image Processing Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia -- Introduction to WLAN. -- Pattern Diversity in WLAN Antennas. --Nota di contenuto Beam Scanning Antennas. -- Antenna Gain Enhancement Techniques. -- Gain Enhancement Architectures with Pattern Diversity for WLAN. --Two-port/ Three-port antennas for WLAN. -- Additively Manufactured Antennas for WLAN. -- Multi-port Antennas for WLAN. -- Wideband Antennas for WLAN. Sommario/riassunto This book presents up-to-date information about WLAN antenna designs for students, researchers, and professionals who want to design radiating systems to be deployed for practical coverage. The

book primarily focuses on pattern diversity antennas. Pattern diversity

antennas are very vital in wireless communication. High correlation between multiple signals can result in low data throughput which can be solved by using antennas with pattern diversity. Beam scanning antennas and their variants are also described in detail. Pattern diversity antenna systems with multiport feeds are also comprehensively discussed in this book. For a multiport system to maintain a reasonable link budget, equal antenna gains are preferred for the required antenna coverage. The book further describes the latest techniques to enhance and equalize the antenna gain within a compact radiating system. With increasing demand for faster connectivity with minimum path loss, the demand for high-gain antennas is rapidly increasing. Thereby a detailed discussion on gain enhancement with the latest high-gain antenna designs is requisite while describing WLAN antennas. Some antenna designs discussed in the book are based on additive manufacturing for their design and fabrication. Additive manufacturing is a much sought-after technology today that allows rapid development of antennas at an affordable cost. Many recent WLAN antennas make use of this technology to develop versatile antenna designs. Finally, the book includes a section on wideband antenna designs. Antenna designs that reduce the scanning loss are also discussed. .