1. Record Nr. UNINA9910483807303321

Autore	Geng Junping
Titolo	Omnidirectional slots antenna / / Junping Geng
Pubbl/distr/stampa	Gateway East, Singapore : , : Springer, , [2021] Â©2021
ISBN	981-15-9089-3
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (XXV, 170 p. 121 illus., 104 illus. in color.)
Disciplina	621.3824
Soggetti	Antenna radiation patterns Electromagnetic waves - Polarization Antennas (Electronics)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Basic Theory of Omnidirectional Antenna and Slot Array -- Principles of Omnidirectional CP Slot Array Antenna -- Principles of Omnidirectional Dual-CP Slot Array Antenna -- Dual CP Polarization Diversity and Space Diversity Antennas Enablaed by a Compact T-shaped Feed Structure -- Circular Truncated Cone Slot Antenna with Circular Polarized Conical Beam -- Half-space Covered Antenna for Air-ground Communication -- A Compact Reconfigurable Coaxial Slot Antenna -- The Omnidirectional/Directional Switchable Antenna based on the Curved Microstrip Antenna with Defected Ground Structure.
Sommario/riassunto	Omnidirectional antenna with high gain, low profile, vertical polarization, even CP polarization is very difficult to design, although it is from the dipole. In this book, a novel idea that the running wave in the coaxial wire is disturbed by the orthogonal slot array on the cylindrical metal shell is introduced, which radiates the CP wave in omni-direction. When feeding on two ends of the coaxial wire respectively, there will appear left hand circularly polarized (LHCP) omnidirectional radiation or right hand circularly polarized (RHCP) omnidirectional radiation. By introducing the T-shaped feed structure, the coaxial wire with slot array can conveniently produce the LHCP and RHCP radiation diversity with one end feeding. In the further, combining with the directional antenna, it will generate the pattern

diversity in the half-sphere space. The antenna of the coaxial wire with slot array can further transform into conical CP beam antenna if the coaxial wire becomes into a conical frustum. By introducing the PIN diode into the slot, the antenna of the coaxial wire with slot array can radiate the reconfigurable directional beam by switching the states of the PIN diodes. By introducing a novel switchable microwave circuit, the omnidirectional /directional pattern switchable antenna can be realized easily. This book proposes a continues method to develop the potentialities of the omnidirectional antenna. And the readers can study the method or ideas of the omnidirectional antenna, even graft the CP or diversity methods to other antennae.