

Advanced Antennas and Applications (RP 4.2.35)

Phased Arrays: Introduction and theory of phased arrays, Pattern control of linear arrays, radiating element design and mutual coupling, feed design for phased arrays (5)

Large Reflector and feed: Analysis and radiation characteristics of symmetrical paraboloidal reflector antennas; Different types of dual reflector antennas and their characteristics; Offset-reflector antennas.; corrugated horns and their radiation characteristics, multi mode horns. (3)

VHF and UHF Antennas for communication and broadcasting: Design for reliability, point-to-point links and broadcast receiving antennas, omnidirectional antennas, base station antennas for mobile phone services (5)

Microstrip Antennas: Basic configuration and advantages; Radiation patterns; Analysis and CAD; Basic characteristics; Feeding techniques (4)

Satellite and Earth Station Antennas: Space segment antennas, Earth coverage and spot coverage designs, multiple beam antennas, TT&C antennas, User segment antennas, single and multiple beam Earth Station antennas, polarization reuse (5)

Antennas for special applications : antennas for radiometry and remote sensing, microwave beacon antennas, radio telescope antennas and aperture synthesis (4)

Antenna Measurements : Basic principles, antenna radiation measurements using anechoic chamber and compact range techniques, measurements of antenna patterns, gain, and efficiency (4)