

Smart Antennas

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- History of antennas
- General antenna theory : basic antenna concepts, fundamental antenna parameters, auxiliary potential functions and fundamental theorems
- Antenna types : dipole antennas, infinitesimal dipole, generality about most common antenna types, loop antennas, travelling wave antennas, frequency independent antennas, horn antennas, reflector antennas, planar and printed antennas
- Antenna arrays and smart antennas: linear and bidimensional arrays, uniform and non-uniform arrays, phased arrays, beam steering, mechanisms and devices to control the phase distribution
- Smart antenna systems : switched-beam systems, adaptive array systems, spatial diversity multiple access, overview of Direction of Arrival techniques (DOA)