Beamforming antenna

By jointly optimizing the transmission beamforming of active antenna array of the AP and the passive phase-shift beamforming of the IRSs, the objective is to minimize the total transmit ...

In this paper, we present a system-level model of a digital multibeam antenna designed for Low Earth Orbit satellite communications operating in the Ka-band. We initially develop a suitable ...

The beamforming antenna market is experiencing robust growth, driven by the increasing demand for high-speed data transmission and improved signal quality across various applications. The ...

To address the limitations of traditional reconfigurable intelligent surfaces (RIS) in spatial control capability, this paper introduces the concept of the fluid antenna system (FAS) and proposes a ...

In this paper, we propose an integrated sensing and communication (ISAC) system enabled by movable antennas (MAs), which can dynamically adjust antenna positions to enhance both ...

By utilizing movable antennas (MAs), ISCPT enhances reliability and flexibility, supporting various intelligent Internet of Things (IoT) scenarios. While joint optimization of parameters like ...

Abstract: In this paper, we investigate the near-field wideband terahertz (THz) massive multi-input multi-output (MIMO) integrated sensing and communication (ISAC) systems. Specifically, we propose an energy-efficient serial true-time ...

(1) Comparing with conventional WPT work with omni-directional antenna and 1D directional antenna, 3D directional antenna offers unprecedented orientation flexibility and superior power ...

The global market for Satellite Communication Terminal Phased Array Antennas is experiencing robust growth, driven by increasing demand for high-throughput satellite (HTS) services and ...

To implement beamforming, multiple antennas are arranged in an array and each antenna transmits the same signal but with a different phase. By adjusting the phase of each signal, signals can be combined and generate a ...

In the rapidly advancing field of telecommunications, multibeam satellite systems are essential for delivering fast and extensive connections. These systems require adaptable beamforming ...

Beamforming, beam-steering, power control, cell breathing, and many other 5G concepts that make the evaluation of a 5G antenna structure a complex process Multi-probe anechoic chamber, reverberation

chamber, and ...

For this purpose, antenna arrays are required, i.e. a group of antennas. By evaluating and comparing the signals at different receiving antennas, the angle of incidence, i.e. the angle of ...

a, b The measurement scattering patterns for dynamic beamforming when the feed horn antenna is placed at ? = 0° and - 20°, respectively. c, e The calculated magnitudes and phases of the ...

Extremely large-scale multiple-input and multiple-output (XL-MIMO) exhibit substantial spatial multiplexing capabilities owing to their high degree of freedom. As the number of antenna ...

This is realized using beamforming, which is a signal processing technique where a transmitter (receiver) with multiple antennas steers (combines) the transmitted (received) signal in (from) ...

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