



BUHLE POWER

# Base station three-dimensional communication





## Overview

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What is a 3D continuous-space radio channel?

The underlying channels show an evolutionary trend to 3D continuous-space radio channels that combine antennas and wireless propagation channels, in comparison to discrete local-space wireless propagation channels in previous generations.

What are the research thrusts of 3D continuous space radio channels?

Then, an in-depth investigation on the four major research thrusts of 3D continuous-space radio channels is provided: 1) channel measurements and modeling, 2) channel capacity analysis, 3) general antenna design, and 4) wireless system design.

Do multi-UAV mounted BSS have a 3D deployment problem?

This paper investigated the 3D deployment problem of multi-UAV mounted BSs for UEs with non-uniform access requirements in obstacle-laden environment. A three-step algorithm was developed to achieve full coverage of all UEs with guaranteed QoS requirements.



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### [3D deployment of UAV-mounted base stations for](#)

Dec 1, 2023 · Recently, unmanned aerial vehicles (UAVs) have been reported a lot as aerial base stations (BSs) to assist wireless communication in Internet of Things (IoT). However, most ...

### **3D Deployment of Multiple UAV-Mounted Base Stations for UAV Communications**

Aug 17, 2025 · This article investigates a communication system assisted by multiple UAV-mounted base stations (BSs), aiming to minimize the number of required UAVs and to improve ...



### [3-D Positioning and Resource Allocation for Multi-UAV ...](#)

Jan 23, 2023 · In recent years, unmanned aerial vehicle (UAV)-assisted communication systems have attracted increasing attention for supporting the seamless coverage in the beyond fifth ...

### [Modeling, Capacity Studies, Antenna and System Designs](#)

Apr 21, 2025 · Channel theory is a fundamental theory of wireless communications. The sixth generation (6G) and beyond 6G (B6G) wireless communication networks are expected to ...



### [Modern Base Station Architecture: Enabling Passive ...](#)

Jan 28, 2025 · [4] evaluates three-dimensional (3D) antenna array structures for hybrid precoder design in multi-user mmWave massive MIMO. The authors in [5] proposes a two-stage ...



### [A 3D Indoor Positioning Method of Wireless Network with Single Base](#)

Apr 14, 2022 · Severe multipath and coherence effects are the difference between signal propagation indoors and outdoors. Most existing indoor localization methods build their models ...



## Three-dimensional positioning of wireless communication base station

Oct 2, 2017 · We have studied Chan-Taylor two-dimensional positioning algorithm and propose an innovative Chan-Taylor three-dimensional positioning algorithm. And we apply it to the indoor ...



## A 3D Indoor Positioning Method of Wireless ...

Apr 14, 2022 · Severe multipath and coherence effects are the difference between signal propagation indoors and outdoors. Most existing indoor ...



## Modified Least Squares Algorithm for Three ...

Jan 23, 2024 · It is shown in Figure 1, that for a two-dimensional (2D) location system, the coordinates of an undetermined target can be determined by using three or more ...



## Three-dimensional wireless positioning method based ...

Sep 22, 2019 · Abstract: Aiming at the problem that the indoor three-dimensional positioning algorithm is complex and the accuracy is not high, this paper proposes a three-dimensional ...



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