

## Elektrotechnik-Elektronik-Informationstechnik

# EEI KOLLOQUIUM

## Implementation Aspects and Application Potentials of SUDAS (Shared UE-side distributed antenna system)

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Zoom-Meeting:

<https://fau.zoom.us/j/66444704955?pwd=R20yQW9kMm8yNjIkeEdvTEJTU3VVdz09>

Diskussionsleitung: Prof. Dr.-Ing. Georg Fischer

Shared UE-side distributed antenna system (SUDAS) enables 5G enhanced mobile broadband (eMBB), seamless coverage, and ultra-reliability for users in the indoor environments. SUDAS is comprised of many low-price, low power, and flexible relay nodes that translate the spatial multiplexing from the base station to frequency multiplexing in an extremely high frequency band like mmWave.

This talk covers a general overview of the technology and its use cases in different deployment scenarios as SUDAS provides strong and uninterrupted data connections for vehicle infotainments, empowers smart factories and IoT by a high degree of reliability and delivers massive throughput gains to residential and corporate sectors. In addition, the talk provides an implementation perspective along with various hardware architectures supporting amplify-and-forward (AF), compress-and-forward (CF), and decode-and-forward relay schemes. An overview of intelligent reflecting surface (IRS) assisted SUDAS in mitigating non-line-of-sight (NLOS) problem is also addressed.