



Friedrich-Alexander-Universität
Department Elektrotechnik-Elektronik-
Informationstechnik

EEI-Kolloquium

Wireless Communications and Sensing Above 100 GHz for Beyond 5G

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Fifth Generation (5G) wireless systems being deployed today are leveraging high frequency millimeter wave (mmWave) bands for new massive data and low latency connectivity.

There is now growing interest in even higher frequencies above 100 GHz for both communications and sensing. These bands offer even greater bandwidths than the mmWave systems in use today, but also present formidable design challenges in the underlying circuits, radio propagation, and computational processing.

In this talk, I will present some recent research of our group to realistically assess the value of such systems. The work includes new machine learning methods for channel modeling, circuit and signal processing for low power consumption, and potential use cases for navigation, unmanned aerial vehicles, and robotics.