

Elektrotechnik-Elektronik-Informationstechnik

EEI KOLLOQUIUM

Challenges in Integrated Sensor and Emitter Systems in Modern Applications

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Efficient and intelligent integrated chips have gained more and more importance in the market over the years. Wireless and autarkic systems are able to fulfill numerous needs, from tracking goods automatically inside factories to detecting environmental conditions in smart homes or even assist the human body in the case of medical impairment. However, also completely different applications arise, as the requirements for sensor and actuator systems are changing in the context of autonomous driving and intelligent lighting solutions, where energy consumption might be of less importance, but the environmental conditions become much harsher.

This talk examines different systems and their challenges during the design process, not only regarding energy and area consumption but also the specific requirements that come with the application. Moreover, architectural and technological methods are shown, that can help to overcome these problems.