

Radar, RFID and Wireless Sensor Systems - (RWS)

Lecture + Tutorial 4 SWS SS2020

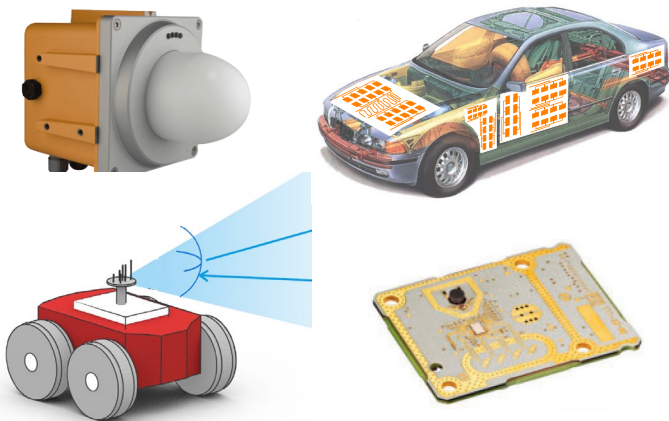
Prof. Dr.-Ing. Martin Vossiek
Dr.-Ing. Christian Carlowitz

Lecture: Tuesday 08:15 - 09:45; SR 05.222, Cauerstr. 9

Tutorial: Monday 16:15 - 17:45; CIP 0.157-115, Cauerstr. 7/9

Start of lectures Tuesday 21.4.20, no tutorial on Monday 20.4.20

Because of the coronavirus pandemic, all lectures and tutorials will be held via digital / online material. As soon as we are allowed, we will return to normal face-to-face teaching.



Radar, RFID and wireless sensor and wireless locating systems are essential for automotive advanced driver-assistance systems (ADAS), autonomous driving and flying, robotics, industrial automation, logistics and novel human machine interfaces. Further key areas include medical electronics, building technology and cyber-physical systems. The course RWS is an introduction into functional principles, building blocks, hardware and signal processing concepts and applications of modern radar,

RFID, wireless sensor and real time locating systems. Covered applications include automotive radar, road and air traffic control systems, as well as robotics, industrial automation and medical technology.

This course is held in English. Except for the lecture language RWS is an identical replacement of the former course "Drahtlose Sensoren, Radar- und RFID-Systeme – DSR".

Table of Contents

1. Introduction to wireless systems and radar
- 2- Continuous wave radar
3. Impulse radar
4. Radar applications
5. Radio frequency identification (RFID) and transponder systems
6. Wireless positioning