

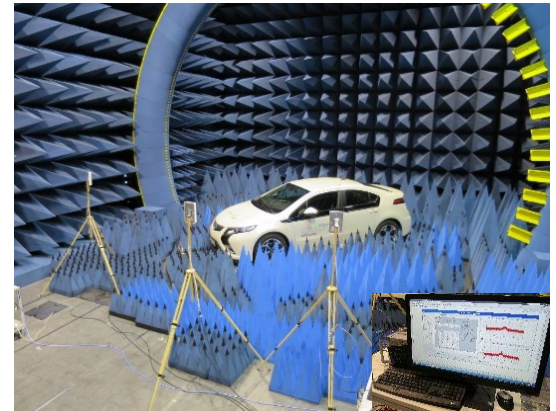
Wireless and Information Technologies

2. Measurement Systems



Radio Channel Emulation in VISTA

- Combined hardware and software-based radio channel emulation of mobile radio services (LTE, 5G, C2X) with over-the-air methods
- Emulation of ray clusters with the help of sectorized antenna arrays
- MIMO functionality
- Adjustment of Doppler shift, delay, and angular directions in terms of absolute values and spreads
- Measurement of quality relevant transmission parameters, e.g. uplink- and downlink throughput, RSRQ, RSRP, RSSI, CQI and SINR



Channel Sounder and Radio Channel Emulator

- Instrument: RUSK MIMO Channel Sounder
Manufacturer: Medav GmbH
- Specs:
- 240 MHz bandwidth
 - Up to 1 h real-time data storing
 - Fully programmable transmit signal
 - Multi band and multiple-sounder operation
 - Switched MIMO access
 - Frequency bands
2.0...2.2; 2.5...2.7; 3.4...3.6; 5.0...6.0 GHz
- Tests:
- MIMO channel sounding, BS-UE, AP-UE, D2D, including V2X;
 - Spatial-temporal characterisation,
 - High resolution multipath parameter estimation

