Prof. Eckhard Grass

Faculty of Mathematics and Natural Sciences
Department of Computer Science
Wireless Broadband Communication Systems



Expertise

Research at the chair of Wireless Broadband Communication systems within the computer engineering group focuses on communication systems for ultra-high data rates. Professor Eckhard Grass and his research group develop and investigate systems operating at ultra-high frequencies and research techniques and methods to improve the efficiency and reliability of wireless communication. The main reserach and developement focus is physical layers (PHY) and MAC layers.

Scientific Services

- Complete toolchain for modelling, simulation, design and test of communication systems
- Software Defined Radio (SDR) modules
- Various FPGA platforms and toolchains for FPGA design
- Modules for mm-wave communications
- Measurement equipment such as oscillosocopes, spectrum analyzers, arbitrary waveform generators

Testimonials

- Development of a system for high-speed wireless communication with simultaneous distance measurement for a renowned automotive supplier
- mm-wave communication system with integrated positioning of mobile nodes for augmented reality applications for German industrial equipment supplier
- Joint development of a system for secure wireless communication for industry 4.0 together German industry partners
- mm-wave connections for 5G transport networks with European industry partners

Topics / Trends

Freight & Passenger Traffic
Internet of Things
Communication(s) Systems
Peer-to-peer Communication
Robotics & Artificial Intelligence

Scientific Institution

Innovations for High Performance Microelectronics/ Leibniz-Institut für innovative Mikroelektronik

Industries

Information & Communication Technology
Aerospace
Mobility & Logistics

Humboldt-Innovation GmbH
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