EXPERT GROUP HIGH-FREQUENCY ENGINEERING AND RADIO COMMUNICATIONS

Event: Vorstellung, Kooperation und Antragsfindung

FTZ Eilenburger Straße 13, 04317 Leipzig
Konferenzraum Startbahn 13, 02.07.2026

Block	Vortrags-Nr.	Start	Ende	Vortragsthema	Vortragender
Eröffnung		09:30	09:40	Eröffnung	Prof. Dr. René Sallier Moritz John, IHK zu Leipzig
1	1	09:40	10:00	Dienstgüteprädiktion für Mobilfunknetze	Prof. Dr. Michael Einhaus
	2	10:00	10:20	HF-Messungen mit Drohnen – aktueller Stand und zukünftige Herausforderungen	Prof. Dr. habil Robert Geise
	3	10:20	10:40	Praktische Implementierung und Analyse eines voll integrierten FMCW Radars	M.Sc. Nils Hollmach, tecVenture
Pause		**15 min**			
2	4	10:55	11:15	Energieeintrag in Medien in HF-Anwendungen	Prof. Dr. René Sallier
	5	11:15	11:35	Strukturen- und Materialeigenschaften für HF-Anwendungen	M.Sc. Jens Voigt
	6	11:35	11:55	Einsatzbereiche einer Vollabsorberhalle und mehr	M.Eng. Cartsen Rabe, EMV Zentrum Leipzig, FTZ Leipzig e.V.
Pause		**60 min**			
3	7	12:55	13:15	LEO-Satellitenkommunikation an der HTWK	Prof. Dr. habil Marco Krondorf
	8	13:15	3.35	Sichere Eingebettete Systeme	Prof. Dr. Jörn Hoffmann
	9	13:35	13:55	Unternehmensvorstellung	Frank Güttler, bitaggregat GmbH
Pause		**30 min**			
Diskussion		14:25	16:00	"Forschung und Kooperation“, Weiteres	Yvonne Hahn

EXPERT GROUP HIGH-FREQUENCY ENGINEERING AND RADIO COMMUNICATIONS

Contacts

Contact rene.sallier@htwk-leipzig.de
Phone +49 341 3076 1184

ARTME - Applied Radio Technology and Microwave Engineering
Prof. Dr. René Sallier and M. Sc. Jens Voigt
- High-frequency Circuit and Electronics Design
- Material Properties in High-frequency Applications
- Frequency-selective Structures, Antennas and Surfaces

NEMS & AeroXess
Prof. Dr. habil. Robert Geise
- Antenna Design
- RF-Measurements
- Radar Applications
- Navigation Systems
- UAV-based Measurements
- Electromagnetic Simulations

Senior Consultant Research Transfer
Prof. Dr. Detlef Schlayer
- EMC
- Electrical Engineering
- Electromagnetic Fields

RadioLab
Prof. Dr. Michael Einhaus
- Simulation for Mobile Radio Networks
- Planning and Optimization for MRN
- Propagation and QoS Measurements
- Modeling and Digital Twins for MRN
- Industry and Campus Networks

Secure Systems Lab
Prof. Dr. Jörn Hoffmann
- Secure Chip Design
- Security for Embedded Systems
- Secure Communication Architectures
- Security of Real-time Operating Systems

COM-Lab
Prof. Dr. habil Marco Krondorf
- Modulation and Coding
- FPGA Implementations
- Satellite Communications
- Baseband Signal Processing
- Spread Spectrum Systems, OFDM
- Monte-Carlo System Simulations

EXPERT GROUP HIGH-FREQUENCY ENGINEERING AND RADIO COMMUNICATIONS

Our Labs

ARTME

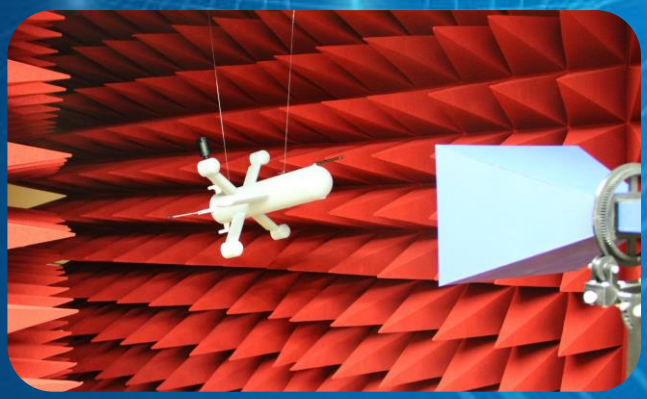
Applied Radio Technology and Microwave Engineering

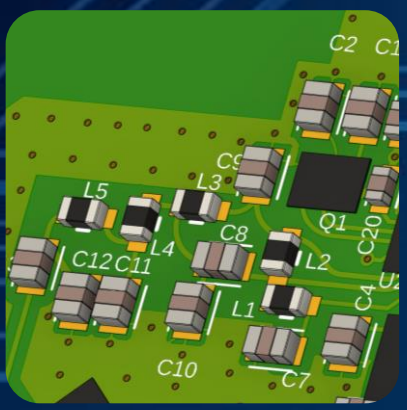
Equipment

- Signal and spectrum analyzers and vector signal generators from 100 kHz to 30 GHz
- network analyzers from 5 kHz to 6 GHz, high-power
- RF amplifiers from 13.5 MHz and, at lower power levels, up to 20 GHz
- measurement setups for determining dielectric properties
- measurement antennas from the shortwave range up to 20 GHz

Semi-Anechoic Chamber - 300 MHz to 40 GHz

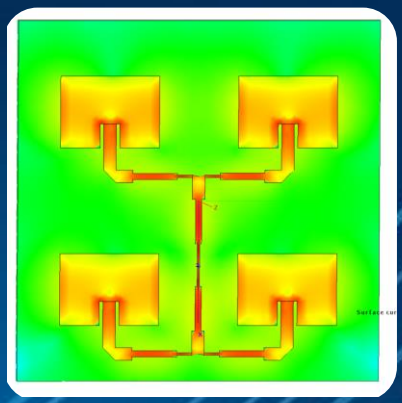
- TX / RX of system components within objects
- Material properties under EM waves
- Measurement of RF-resonant and selective structures

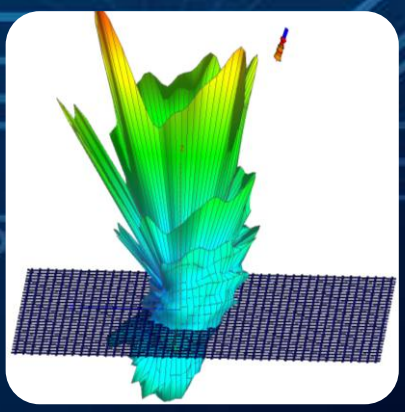




Circuit and PCB Design

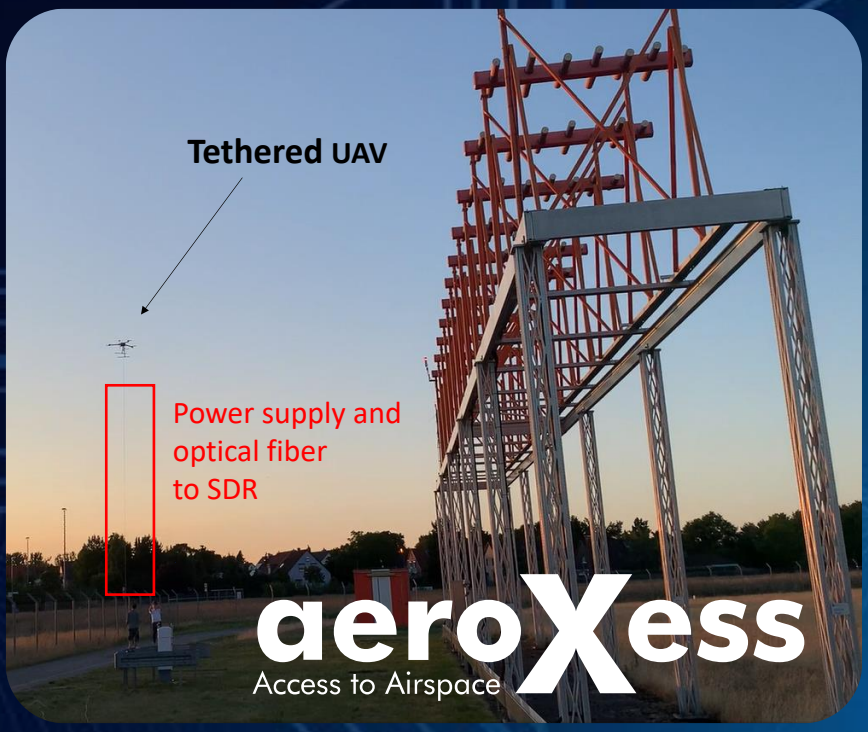
- High-frequency PCB design (up to the double-digit GHz range)
- High-speed digital design (Autodesk Fusion Electronics)
- RF simulation & development (Altair FEKO, MATLAB)



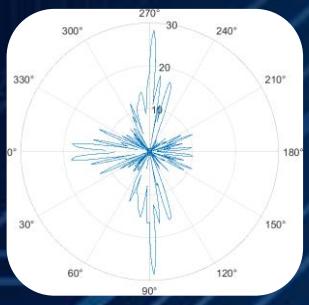


EXPERT GROUP HIGH-FREQUENCY ENGINEERING AND RADIO COMMUNICATIONS

Our Labs



With our **AeroXess** laboratory we perform UAV based high frequency measurement applications.
In particular, near field measurements of large antenna, e.g. navigation systems at airports can be performed in-situ. Low-frequency antennas, too large for nowadays anechoic chambers can also be characterized.



In our **NEMS** laboratory we realize antenna and propagation measurements as well as sophisticated EMC tests. Overall, we can analyze the integrity of communication and navigation systems. Lab infrastructure:

- Full anechoic chamber from 1 GHz
- High frequency measurements, spectrum analysis and vector analysis up to 20 GHz
- Outdoor and mobile equipment
- Oscilloscope up to 6 GHz
- Antennas from 30 MHz to 20 GHz
- Electromagnetic simulation software (Altair FEKO and CST Studio)
- Compute cluster for large electromagnetic simulations (> 1 TB RAM)

NEMS
LABORATORY
Navigation Electromagnetics Measurement Simulation

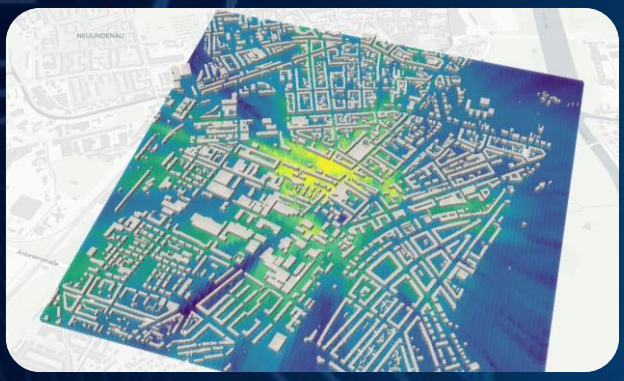
EXPERT GROUP HIGH-FREQUENCY ENGINEERING AND RADIO COMMUNICATIONS

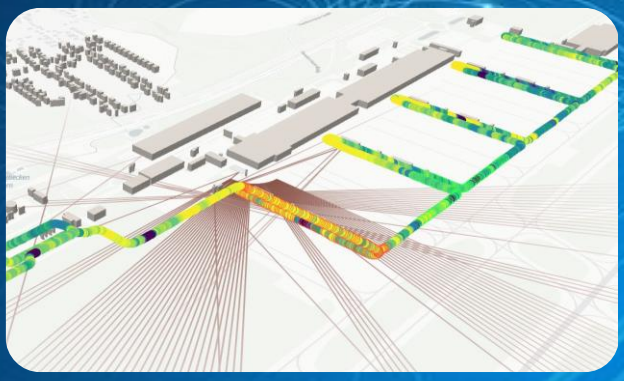
Our Labs

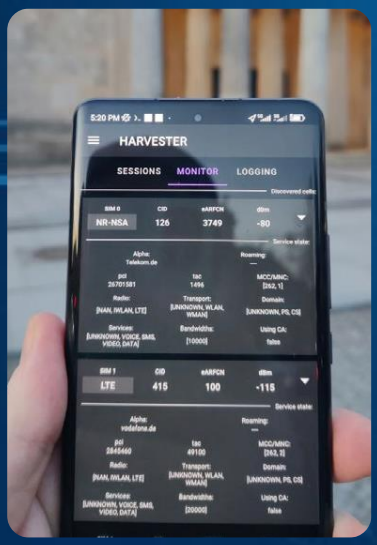
RadioLab
HTWK Leipzig

RadioLab

- Simulation and QoS Prediction for Mobile Radio Networks
- Radio Access Network Planning and Optimization
- Propagation and QoS Measurements
- Modeling and Digital Twins for Mobile Radio Networks
- Industry and Campus Networks



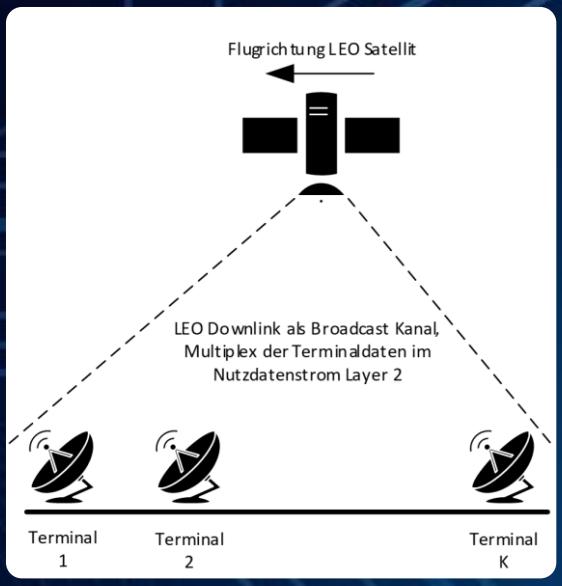




EXPERT GROUP HIGH-FREQUENCY ENGINEERING AND RADIO COMMUNICATIONS

Our Labs

ARTME



COM-Lab Satellite Communications

- Baseband signal processing and link budget calculations for LEO satellite communications
- Waveform-Design Layer 1 and Layer 2
- Software defined radio and real time signal processing using FPGA
- LEO overflight simulations
- GNSS-denied object tracking
- LDPC FEC and iterative turbo-receivers
- Phased array beam forming and DoA estimation
- Time and frequency synchronization
- MIMO-OFDM base band signal processing

Secure-System-Lab

- Secure IC-Design
- Threat Modelling
- Cryptographic ICs
- System Hardening
- Real-Time Detection
- Side-Channel Protection
- Fault Injection Protection