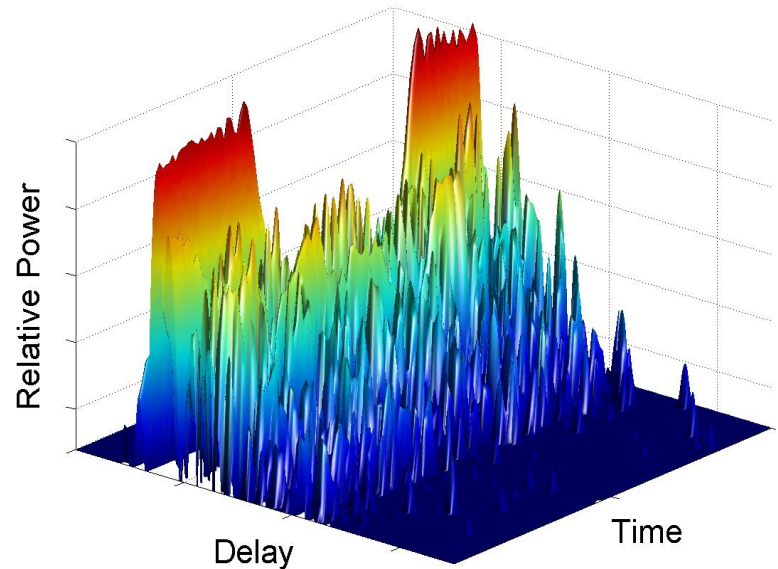


60 GHZ CHANNEL CHARACTERIZATION

Wireless Communication and Networks

60 GHz Channel Measurements and Modeling

- Real-time wideband MIMO measurements: 3 GHz bandwidth, indoor and outdoor, time-variant channels
- Indoor measurements with ultra-high temporal resolution < 50 ps
- On-site data validation and pre-evaluation
- Data processing and customized, comprehensive analysis
- Stochastic channel modeling



Time-variant 60 GHz indoor channel.

60 GHZ CHANNEL CHARACTERIZATION

RF Characterization of Materials

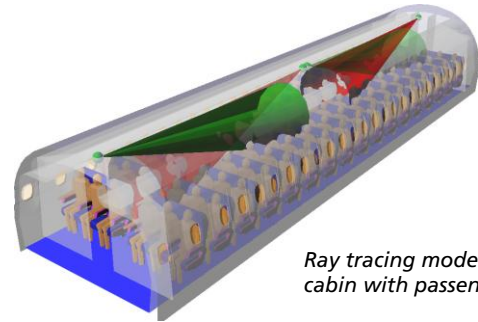
- Ultra-wide bandwidth reflection and transmission measurements: free space and resonator methods
- Measurement data processing and estimation of electrical material properties
- Model derivation and parameterization for homogeneous, inhomogeneous, multi-layered and composite materials



Resonator setup for material characterization.

Ray Tracing Investigations

- Scenario modeling with scalable granularity up to ultra-fine resolution
- Investigation-specific simulations including numerous reflections and transmissions
- Coverage prediction for indoor and outdoor scenarios
- Wideband channel analysis and model derivation



Ray tracing model of aircraft cabin with passengers.