

Seminar über Microwave Physics and Atmospheric Physics

Referent/in: Dr. Alireza Kazemipour, Federal Institute of Metrology (METAS), Bern

Titel: Material Measurements and Parameter Extraction, Error Analysis and Uncertainties

Material parameter extraction methods are based on scattering parameters, reflection and transmission (or one of them), that often suffer from instability or complicated iterative process. Measurement setups and calibration process have to be designed and optimized to obtain the scattering parameters on the material (DUT) surface. Calculation of uncertainty propagation and sensitivity coefficients will help to consolidate the reliability of the final results.

We try to simplify classic algorithms to extract the material parameters and then to calculate the sensitivity coefficients. Therefore, it can be explained why the same set of initial S-parameters could give different results when permittivity and permeability are extracted. The metrology software METAS VNA-Tools® will be introduced as well, which computes uncertainties of the measured S-parameters with various post-processing features including material parameter extraction with associated uncertainties.

Zeit: Freitag, 13.03.2020, 10:15 Uhr

Ort: **Hörsaal A97**, Gebäude Exakte Wissenschaften, Sidlerstrasse 5, Bern, Schweiz