

Expansion and automation of impedance analysis

✓ Bachelor- / Studien- / Masterarbeit

Piezoceramic materials are widely characterized using impedance analysis, which measures impedance over frequency, allowing to determine piezoceramic quality and other important characteristic values. This method must be expanded and automated to increase characterization speed of piezoceramics.

Tasks:

- Collection of parameters measured with impedance analysis
- Determination of suitable cable connecting methods
- Analysis of parameters and their influence on piezoceramic characterization
- Automation of the measurement process using programming languages

Nature of the study: Experimental work, programming, high frequency dynamics

You will learn: signal analysis and evaluation, piezoelectric parameters, smart materials, use of various measurement devices, programming.

Additional information:

- You select language of the work, either German or English
- Multiple works on same topic possible (e.g. Studienarbeit + Masterarbeit)

