



## CHAIR OF ELECTROMAGNETIC COMPATIBILITY

### MT Setup and optimisation of a test system for power quality analysis #PRAC #PQ

**Background and problem:** The percentage of nonlinear equipment, which considerably influences the power quality in distribution networks, is continuously increasing. In critical cases the devices cause unwanted operating states in the network. With the help of measurements, the influence of such devices can be recorded and evaluated.

A PC-based measurement system allows not only the correct recording, digitalization and storage but also an automated analysis as well as presentation and documentation of the measurement results.

**Task:** Within the scope of this work a test system is to be built up, which allows the analysis of defined power quality parameters of different devices. The separate tasks within the measurement cycles are controlled by a measurement program. The computer controls the communication within the measurement system. The functionality is to be shown via test measurements and to be documented in detail.

**Previous Knowledge:** MATLAB, fundamentals of measurement technology

**Imparted Knowledge:** Power quality analysis, communication of measurement systems, detailed knowledge of MATLAB

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