



Topic for Bachelor thesis

Parasitic characterization of micro speakers

(course of study: Physics / Electrical Engineering / Electronics / Mechanical Engineering)

If you have any questions about this topic, please do not hesitate to contact us:

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Content of Bachelor thesis

The Fraunhofer Project Group MESYS is working on the development of novel, silicon-based electrostatic actuators. These actuators are used to build a micro speaker whose concept was developed in the group. The first micro speakers are produced at Fraunhofer Institute IPMS in Dresden.

The subject of the thesis is the design and construction of an acoustic measuring station for the evaluation and characterization of the frequency-dependent sound pressure of such MEMS speakers. The measuring station is to be validated with standards from micro speakers.

The written composition should include a well-founded description of the measurement setup and the basics and is intended for later users of the course as a detailed description of the measurement procedure and evaluation. A high level of automation but also flexibility is desired (LabView, MatLab).

Requirements

Completed main course in Physics, Electrical Engineering / Electronics, Mechanical Engineering; specialization in acoustics is desirable, but not a requirement; interest in independent experimental work in the field of acoustics, micromechanics and modern measuring methods.