

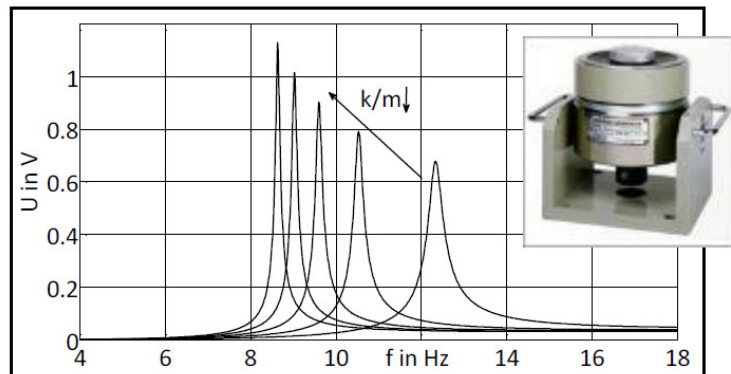


## Master Thesis

# Construction and Implementation of a Testbed for Vibration Converters

## Task

For the characterisation of kinetic energy harvesters a test setup is required which allows the emulation of Profiles. In this way it is possible to simulate the behavior of different types of motion transducers again and again. Profiles measured in field tests can be reproduced for the system design.



Target of this work is to have a completed electric and mechanic construction of a testbed including control software. Most of the parts are already existing, but are not combined yet. A shaker and a reference sensor are available. The task of the software is to sweep through vibration profiles either amplitude-fixed or acceleration fixed and to record the response of the harvester. The software should be realized in LabView.

## Requirements

- Motivation to work independently
- Knowledge about the design of electric circuits
- Electrical and mechanical knowledge
- LabView skills preferable

## Supervision

Dipl.-Ing. Christian Viehweger  
Chair of Measurement and Sensor Technologies  
Reichenhainerstraße 70, Office 283 (Weinholdbau)

☎ 0371/531-39686  
✉ christian.viehweger@etit.tu-chemnitz.de  
🌐 [www.tu-chemnitz.de/etit/messtech/mitarbeiter/viehweger.php](http://www.tu-chemnitz.de/etit/messtech/mitarbeiter/viehweger.php)