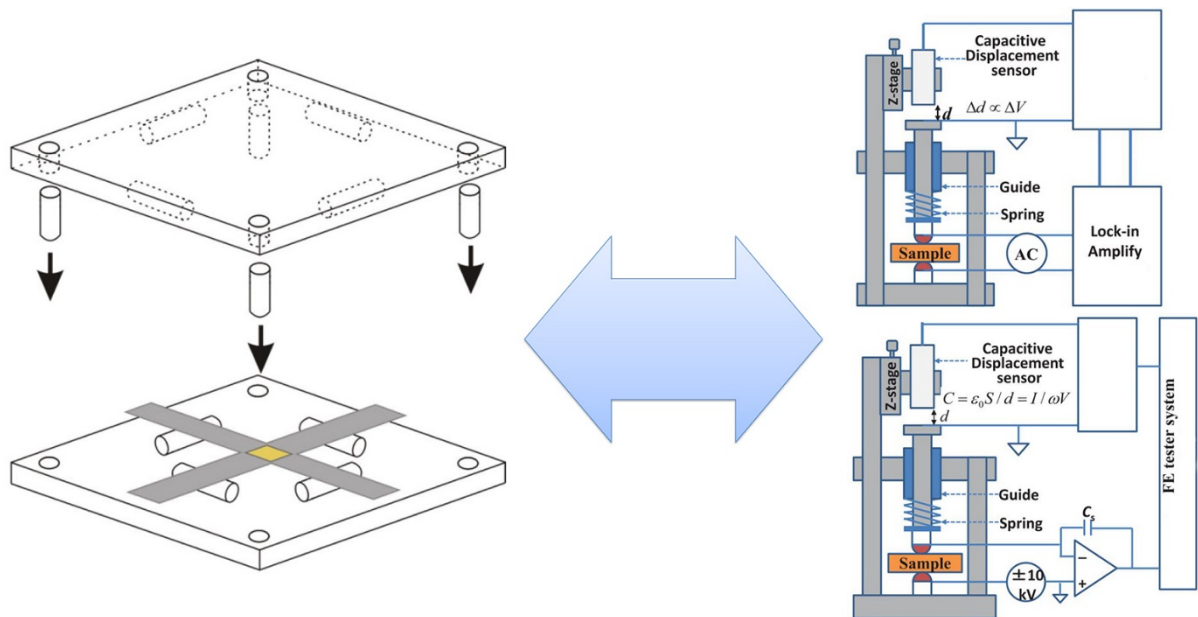


Student research project (**Studienarbeit**) or master thesis (**Masterarbeit**)

**Topic: Investigation and development of testing machine for thin piezoelectric composites**



Thin piezoelectric composites, consisting of piezo-ceramic particles dispersed in an epoxy matrix, are the alternative to bulk piezo-ceramic. Such composites are able to surpass pure ceramics in sensing capabilities, are less brittle and can be part of the structure itself because of possibility to form them as very thin layers. However, piezoelectric composites must be tested and characterized in their thin configuration and this task requires a new testing method to be developed, capable to test thin piezoelectric composites without breaking them.

### Tasks of the project:

- Investigation and comparison of current testing methods for thin piezoelectric composites
- Development of the method to test thin piezoelectric composites
- Development of testing machine (design, construction, electronics or programming task can be taken by another student)

### Additional info:

- The part of experimental work will take place at DLR Braunschweig
- There is a possibility to continue with a master thesis on the same topic (if started as a student research project)
- Project language: English

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