Contribution ID: **82** Type: **not specified**

Modeling of Scanning X-ray Microscopy using a MEMS-activated scanning mirror

In X-ray Scanning Microscopy techniques, the sample is conventionally scanned through the X-ray beam. However, for very fast measurements and sample systems contained in heavy in-situ environments, this approach is limited by the mechanics of the scanning stage.

It is therefore desirable to develop a microscope that scans the X-ray beam over a stationary sample. One problem in such a system is that X-ray mirrors introduce distortions of the wavefront, changing with the reflection angle of the mirror. This results in changes of the beam shape during the scanning motion. This is particularly relevant in coherent scanning microscopy (ptychography).

The student will work with first experimental data to retrieve the shape error of the mirror and produce a forward model of the imaging process using a scanning mirror.

Group

FS-PETRA-BO

Project Category

A4. Development of experimental techniques

Special Qualifications

DESY Site

Hamburg

Primary author: SEYRICH, Martin (FS-PETRA-BO (Beamline Optics Simulation))

Presenter: SEYRICH, Martin (FS-PETRA-BO (Beamline Optics Simulation))