***Visualizing and analyzing 3D AFM force data to investigate solution structure at solid-liquid interfaces***

**Accomplished tasks**:

* Designing basic GUI for processing 3D AFM data
* Loading .h5 data into GUI
* Correcting sample tilt in both “x” and “y” directions
* Binning/linearizing ZSNSR data and processing PHASE data accordingly
* Slicing and visualizing selected “xz” and “xy” planes
* Creating data animation
* Exporting processed data as .h5 files

**Target tasks:**

* Loading metadata from experimental measurement, and exporting it with .h5 file
* Turning on/off tilt correction in the “x” direction
* Performing processing in terms of DRIVE data instead of ZSNSR data
* Correcting for tip deflection to obtain “true” tip position
* Processing AMP data in the same method as the PHASE data
* Extracting and plotting selected 1D force data from 3D data set
* Creating data slices along selected directions, while averaging adjacent slices