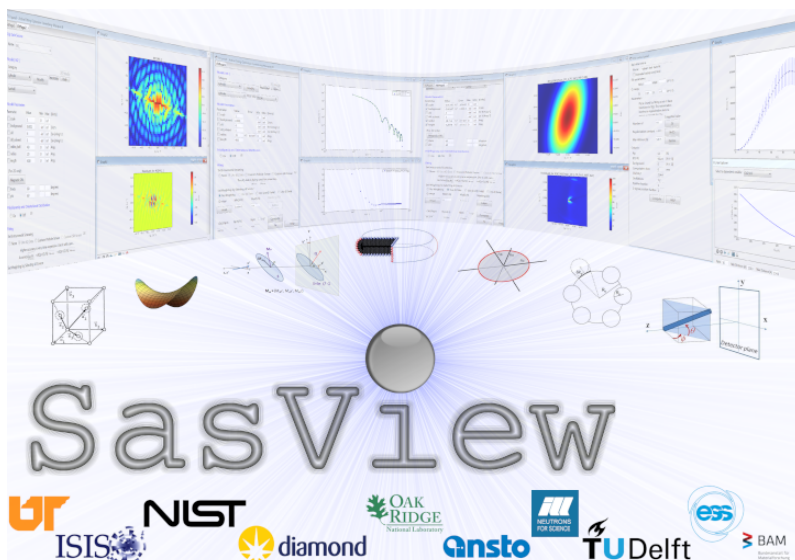


Student project at European Spallation Source Data Management and Software Centre



Projects within SasView – a toolkit for analysing Small Angle Scattering data



Supervisor	?	Code difficulty	★★★★☆
Co supervisor	Wojciech Potrzebowski (wojciech.potrzebowski@ess.eu)	Physics difficulty	★★★★☆

DESCRIPTION

Neutron scattering is an investigative technique that examines matter at a wide range (from atomic to single object scale). This process involves placing a sample in a neutron beam. By analysing the scattering patterns of these neutrons, researchers can infer the sample's properties. Instruments used in these experiments are highly specialized for various types of samples and scattering methods. The European Spallation Source, nearing completion in Lund, Sweden, houses 15 such instruments. Two instruments LOKI and SKADI are designed to perform Small Angle Neutron Scattering (SANS) experiments, which provide insight into a wide range of samples (from e.g. biological samples to magnetic materials). SANS experiment typically produces low-information content data and modeling/analysing techniques are critical for inferring useful sample information.

SasView (<https://www.sasview.org>) is an open source collaboratively developed software tool for analysing Small Angle X-ray and Neutron Scattering data. SasView team has a long tradition of running student projects at different large-scale facilities. There are multiple ways to contribute (check <https://www.sasview.org/contribute/> for details) and students with different skill sets can find a suitable project. The list of potential projects can be found at: [https://github.com/SasView/sasview/wiki/Contributor Projects](https://github.com/SasView/sasview/wiki/Contributor%20Projects).

REQUIREMENTS:

Experience with the Python programming. Basic understanding of scattering
GUI (PyQt/PySide) programming will be a plus

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