ESS View on SasView: Small Angle Scattering data analysis within the SINE2020 project

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SasView is a well-established open source, collaboratively developed software for the analysis and the modeling of small angle scattering (SAS) data. The core functionality of SasView includes the fitting of model functions, pair-distance distribution function inversion and model-independent analysis. SasView provides a large collection of form and structure factors and with the recently introduced modularization allows for easy incorporation of user-defined models.

The European Spallation Source (ESS) has during the last years taken an active role in supporting SasView with the aim of providing it for ESS users from the start of operation. To increase this effort and as part of the EU funded Horizon2020 project - SINE2020, ESS also employs two full time SasView developers. The aim of the project is to deliver inter-operable versatile, robust, reliable, maintainable and sustainable data analysis software that can be used by all the involved neutron scattering facilities (i.e. ESS, ILL, ISIS, LLB, MLZ, and PSI).

Here we present, how the SINE2020 project enables the development of new features, code refactoring, GUI re-design and optimization for faster analysis methods by use of Graphical Processing Units. We also discuss an anticipated outcome of the project, which is a better user experience and make SasView a potential tool for live analysis of SAS data.