Contribution ID: **27** Type: **not specified**

Data reduction and data analysis for neutron and x-ray scattering

Wednesday 1 January 2025 09:40 (5 minutes)

The Scientific Computing Group at Heinz Maier-Leibnitz Zentrum Garching develops and maintains data treatment software for neutron scattering.

Our main projects are currently:

- BornAgain, software to simulate and fit reflectometry, off-specular scattering and grazing-incidence small-angle scattering;
- Data reduction software for single-crystal diffraction, not yet operational;
- Steca, the strain and texture calculator: data reduction for materials diffraction;
- data analsyis for high-resolution spectroscopy, early planning stage.

We are interested in collaborations to improve any of the above.

And we are available to support other software projects that may be used to treat neutron data from our facility.

List of Committees:

Please describe your expertise/areas in which you would like to contribute / advise.

Diffraction, spectroscopy, data analysis, statistics, numerics, software engineering.

Do you consent to the data usage and public abstract data posting in the ErUM-Data Community Information Exchange?

Yes

In ErUM-Data, what kind of data are you dealing with?

Histograms from neutron diffraction and spectroscopy.

What is your expertise in computing and / or software development?

C++, Python, Qt, CMake, git, various documentation tools etc etc

What is your field and role?

head Scientific Computing Group

Your ErUM - Committee is

KFN - Komitee für Forschung mit Neutronen

Please describe areas in which you can contribute to “data handling”teaching.

Diffraction, spectroscopy, data analysis, statistics, numerics, software engineering.

My current most burning research question, I like to find partners for, is:

Data reduction and data analysis for neutron and x-ray scattering.

Please describe areas in which you would like to improve your knowledge / skills.

n/a

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