



Contribution ID: 48

Type: **not specified**

Data Evaluation Group

Wednesday 1 January 2025 11:25 (5 minutes)

Our newly established Data Evaluation Group at research neutron source Heinz Maier-Leibnitz (FRM II) near Munich offers support for processing and evaluation of experimental data collected at selected neutron and x-ray instruments. This service is particularly focused to support infrequent or new users to facilitate data analysis to obtain meaningful results ready for publication in short time. This includes guidance to data reductions steps after the experiments, data evaluation and interpretation with use of common software packages, and support in publication writing.

Another successful activity of our group is launching series of method-based one-day educational workshops with support of instrument scientists and software providers, each workshop offering insights into a different neutron technique and the related software needed for data analysis.

With this concept, we aim for several goals such as training the new generation of neutron scientists, encouraging interdisciplinary partnerships between experienced scientists, and interactive sessions with software providers to obtain users' feedback for further software development.

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

Usage of AI and ML tools in treating experimental data from neutron and x-ray sources, electrochemical data (in research areas such as energy: Li-ion batteries, engineering materials, cultural heritage)

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

Usage of AI and ML toolkit

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

Research areas: Energy, Engineering Materials, Archeology

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

experienced in performing (and teaching) experimental data analysis for following methods: diffraction, small-angle scattering (transmission and grazing incidence), neutron depth profiling, prompt gamma activation analysis, neutron activation analysis.

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

neutron and X-ray diffraction, small-angle scattering (transmission and grazing incidence), neutron depth profiling, prompt gamma activation analysis, neutron activation analysis, reflectivity

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

We don't develop software, but use and test existing and upcoming software with our experimental data and models.

What is your field and role?

Group leader (Physicist)

Role: (a) provide support for processing and evaluation of experimental neutron (and X-ray) data. (b) test software with our experiment data, provide feedback. (c) organize method-based workshops for training.

Your ErUM - Committee is

KFN - Komitee für Forschung mit Neutronen

List of Committees:

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

Yes

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