

Post-Doc position 'polarBATS' – Development of polarized neutron spectroscopy on IN16B

The **cold neutron backscattering spectrometer IN16B** at the Institut Max von Laue – Paul Langevin (ILL) serves its international user community with excellent, world leading experimental opportunities for high-resolution neutron spectroscopy, offering a classical crystal backscattering monochromator mode and the inverted Time-of-Flight option BATS.

We aim to expand its capabilities with **polarization analysis** that will ultimately enable to separate coherent and incoherent scattering in routine user experiments. This development is supported by the **ErUM-Pro grant 'polarBATS'** (2025-2028) by the German Federal Ministry of Research, Technology and Space (BMFTR), allocated to the University of Tübingen, Germany (Group of Prof. Dr. Frank Schreiber).

To drive this project, we are looking for a **postdoctoral researcher** who will

- work in close collaboration with the IN16B team at the ILL and the Schreiber Group at the University of Tübingen;
- perform ray-tracing simulations of IN16B for the design of neutron spin polarizer and analyzer components (McStas);
- interface with the ILL design office, neutron optics group and engineering teams for implementation of necessary instrument modifications;
- devise, plan and perform first demonstration experiments with polarization analysis.

Your qualifications:

- PhD degree in natural sciences
- Strong interest and proficiency in instrumentation and computation (ray tracing simulations)
- Experience with neutron scattering experiments
- Previous work with polarized neutron scattering would be a plus
- Ability to work independently in an international, multilingual environment, with sound knowledge and communication skills in English

This **three-year position** is affiliated with the Schreiber Group at the University of Tübingen, Germany. The appointed candidate will be posted to work in Grenoble (France) at the ILL for the duration of the project.

This position will remain open for applications until a suitable candidate has been selected.

For more information, questions, and to send your application, please contact:

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With funding from the:



Federal Ministry
of Research, Technology
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