OeAW - Discovering the future

As a central non-university institution for science and research, the **Austrian Academy of Sciences - OeAW** has the task of "**promoting science in every respect**". Founded in 1847 as a learned society, it now has over 760 members and around 1,800 employees dedicated to innovative basic research, interdisciplinary knowledge exchange and the dissemination of new insights. The OeAW initiates and maintains partnerships worldwide and represents Austria in international scientific organizations; it cooperates with numerous institutions in the scientific field in order to actively **shape the research landscape**.

Postdoc (f/m/x) - Working on AI Applications for Rare Event Searches with Cryogenic Detectors

Job ID: MBI082PD126

The Marietta Blau Institute for Particle Physics (MBI) of the Austrian Academy of Sciences (OeAW) is seeking applications for a position as

Postdoc (f/m/x) - Working on AI Applications for Rare Event Searches with Cryogenic Detectors

40hrs/ week

for a period of two years

We are looking for a highly motivated postdoctoral researcher to play a key role in further advancing these experiments using new AI technologies. The successful candidate will contribute to the development and optimization of cryogenic detector systems and apply AI methods to analyze the data collected by these systems, addressing key physics questions related to dark matter and neutrino interactions. This position offers the opportunity to collaborate with world-class researchers and contribute to international efforts in understanding the fundamental nature of the universe.

Qualifications

The Experimental Particle Physics Group, a joint working group of the Institute of Atomic and Subatomic Physics at the Technische Universität Wien and the Marietta Blau Institute for Particle Physics (MBI) of the Austrian Academy of Sciences, is actively involved in cutting-edge research within the NUCLEUS, COSINUS, and CRESST experiments. These experiments focus on rare-event searches, including coherent elastic neutrino-nucleus scattering and direct dark matter detection, using advanced cryogenic detectors. The MBI hosts a research group dedicated to Machine Learning in Particle Physics.

Qualifications:

- PhD in Particle Physics, Astroparticle Physics, or a closely related field.
- Strong background in artificial intelligence, machine learning, and data science.
- Experience with cryogenic detectors or low-temperature experimental systems is highly desirable.
- Proficiency in programming languages such as Python or C++.
- Familiarity with deep learning frameworks (e.g., TensorFlow, PyTorch) and advanced data analysis tools.
- Excellent problem-solving skills and the ability to work effectively in interdisciplinary teams.
- Strong communication skills and a proven track record of scientific publications.

Preferred Qualifications

- Experience with dark matter or neutrino physics experiments.
- Knowledge of hardware integration and real-time control systems.
- Familiarity with high-performance computing and parallel processing techniques.
- Proven track-record of project- and stake holder management in an international scientific environment

Our Offer

- A stimulating and collaborative research environment with access to state-of-the-art facilities and resources.
- Close collaboration with the MBI research group “Machine Learning for Particle Physics”.
- Opportunities to work on internationally recognized experiments such as CRESST, COSINUS, and NUCLEUS.
- Competitive salary and benefits package, with a monthly gross salary of € 5.011,96, in accordance with the collective agreement of the Austrian Academy of Sciences.
- Support for professional development, including conference travel, training opportunities, and access to cutting-edge technologies.
- The chance to contribute to transformative research in dark matter and neutrino physics, addressing some of the most fundamental questions in science.
- Flexible working arrangements, with the option for one home office day per week
- A welcoming community with diverse social and cultural activities
- Office location in the city centre of Vienna - consistently ranked as one of the most liveable cities in the world https://www.eiu.com/n/campaigns/global-liveability-index-2024/

Interested candidates should submit the following documents:

1. A cover letter detailing their research interests, relevant experience, and motivation for applying.
2. A curriculum vitae, including a list of publications.

3. Arrange for two letters of recommendation to be sent directly to mbi-office@oeaw.ac.at

Applications should be sent by August 30th, 2026, at the latest. However, applications received later containing all necessary documents will be considered until the position is filled.

APPLY NOW

The Austrian Academy of Sciences (OeAW) pursues a non-discriminatory employment policy and values equal opportunities, as well as diversity. Individuals from underrepresented groups are particularly encouraged to apply.

Contact

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