

Job ID: HEPHY167GL121

The Institute of High Energy Physics ([HEPHY](#)) of the Austrian Academy of Sciences ([ÖAW](#)), Austria's leading non-university research and science institution, performs a rich experimental particle physics program and is participating in accelerator- and non-accelerator-based experiments. The institute has a major involvement in the CMS experiment at CERN and in the Belle II experiment at KEK. An experimental group works on direct Dark Matter detection with the CRESST and COSINUS experiments at LNGS. A theory group completes the research profile of the institute. HEPHY has leading roles in detector development, online selection systems, software and physics analysis in the experiments mentioned above. Members of the institute are regularly entrusted with high-level positions in management or supervisory bodies of large international collaborations. Scientists from HEPHY are actively engaged in teaching at the Technische Universität Wien und University of Vienna.

Currently HEPHY invites applications for a

## GROUP LEADER POSITION (F\*M)

(full-time / 40h per week, tenure-track)

The application of machine learning techniques is gaining momentum in all areas of particle physics and will be essential for the success of upcoming programs at KEK, the high-luminosity LHC, and beyond. The institute seeks an outstanding scientist to lead a newly-formed machine-learning group that should bundle and coordinate the institute's activities in the field, support the experimental program, establish a coherent research program, and interact with national and international partners.

### Your tasks:

- Development of a high-quality / high-visibility research profile in AI in line with HEPHY's particle physics program
- Management of the group
- Development of AI solutions in close collaboration with the institute's experimental groups, in particular the CMS group
- Collaboration with other AI related research institutes in Austria
- Outstanding publication activity

### Your profile:

#### *Required qualifications*

- PhD in physics or computer science
- Excellent research record
- Long-standing experience in experimental or theoretical high energy physics and large-scale data analysis
- Experience in and detailed knowledge of state-of-the art machine learning techniques
- Leadership qualities
- Ability to work in large international collaborations, including readiness to travel to major particle physics laboratories and conferences
- Excellent software programming skills
- Excellent knowledge of English

*Other qualifications (considered as an asset)*

- Experience with AI applications in several of the following fields: simulation, reconstruction, (online) selection, analysis, detector operations & monitoring, (re-)interpretation, model building
- Experience in the use of GPUs and/or FPGAs
- Knowledge of German
- Familiarity with statistical analysis of experimental data

**Our offer:**

- Work in Austria's largest center for experimental and theoretical particle physics, with motivated teams of physicists covering a wide range of expertise from detector design and construction to theoretical physics;
- Strong international connections linked to large experimental collaborations and particle physics laboratories;
- Possibility to lead a group and to shape the institute's research profile in the area of artificial intelligence at a time of rapid development and preparation of future core programs of particle physics;
- A tenure-track position, for an initial period of 6 years, with an annual gross salary of € 61.160, - according to the salary scheme of the Austrian Science Fund (FWF);
- The position will be located in Vienna.

Our offer aims at communicative personalities with a confidence appearance who understand how to portray complex connections clear and understandably and find joy in self-reliant work.

Please send your application including

- all relevant documents, certificates/references,
- a CV,
- two recommendation letters,
- a two-page research plan
- a list of publications, including a short description of the 5 most important publications and their impact on progressing the scientific field of experimental or theoretical high energy physics and large-scale data analysis,
- an overview of received third party funding and important prizes,
- and a track record of experience in management, teaching and supervision and a concept for the scientific, structural and financial establishment of the group

via e-mail to [office-hephy@oeaw.ac.at](mailto:office-hephy@oeaw.ac.at) (mentioning Job ID: HEPHY167GL121) **not later than January, 31 2022.**

For further Information please contact Wolfgang Adam ([Wolfgang.Adam@oeaw.ac.at](mailto:Wolfgang.Adam@oeaw.ac.at)) or Jochen Schieck ([Jochen.Schieck@oeaw.ac.at](mailto:Jochen.Schieck@oeaw.ac.at)).

*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.*