

Helsinki Institute of Physics (HIP, www.hip.fi) is a joint research institute between five universities – University of Helsinki, Aalto University, University of Jyväskylä, Lappeenranta Technical University, and Tampere University of Technology – which operates under the auspices of University of Helsinki. HIP has a national mandate to practice and promote basic research at international accelerator centers, to facilitate applied research and development, and to participate in graduate education in physics. HIP coordinates Finnish research at CERN and at FAIR GmbH. The CMS research programme of Helsinki Institute of Physics is responsible for the Finnish participation in the CMS experiment at CERN.

Helsinki Institute of Physics invites applications for three

POSTDOCTORAL RESEARCHERS

in the HIP CMS research programme (http://www.hip.fi/?page_id=188). The positions are fixed term, 1+2 years (after the first year, the renewal of the contract for two years is based upon satisfactory job performance) with an immediate opening of the position. The positions are opened in the HIP CMS experiment project (one position) and in the HIP CMS upgrade project (two positions). The salary will be based on the University of Helsinki teaching and research personnel demand level 5. In addition, part of the salary will be based on the personal performance.

The HIP CMS experiment project (<http://research.hip.fi/hwp/cmsexp/>) participates in the analysis of the data from the CMS experiment and the development of analysis tools and software. Our physics focus areas are Higgs searches, jet physics including top quark mass in the context of the Academy of Finland “Top quarks and gluons” project, and machine learning in high-energy physics. Our experimental responsibilities include tracker alignment, jet energy corrections and L1 trigger activities. The hired postdoctoral researcher is expected to contribute to these research topics. Experience in research areas the project is involved in is a merit.

The HIP CMS Upgrade project (<http://research.hip.fi/hwp/cmsupg/>) is responsible of the Finnish contribution to the CMS detector upgrade. The R&D activities in the project are focusing on the development of new radiation-hard semiconductor sensors for tracking and timing applications. In addition, the group develops multispectral imaging detectors within the framework of Academy of Finland RADDESS program. The experimental responsibilities in CMS include shifts at CMS P5 and maintenance and operation tasks related to the Tracker detector. The hired postdoctoral researchers are expected to contribute to these research topics and to the experimental responsibilities in CMS. Experience in semiconductor sensor technologies and/or readout electronics and data acquisition is a merit.

Applicants with a Ph.D. in experimental particle physics, particle astrophysics, applied physics or other relevant fields like semiconductor physics can be considered. Qualified candidates should provide a motivation letter, curriculum vitae, list of publications with the five most important publications highlighted and 2–3 letters of reference. The mentioned documents (compiled into a single pdf-file) should be sent to the address: recruitment-cms@hip.fi. However, the reference letters can also be provided separately using the same address.

Inquires may be addressed to Panja Luukka (Panja.Luukka@helsinki.fi) (CMS Upgrade) and Mikko Voutilainen (Mikko.Voutilainen@helsinki.fi) (CMS Experiment). Application materials received by January 31, 2018 will be assured full consideration. Review of applications will begin immediately and will continue until appointments are made.