

Details of job description for International Center for High Energy Physics and Applications (ICHEPA) at Lovely Professional University (LPU), Punjab 144411, India

Position: Faculty Position in Experimental High-Energy Physics (Hardware development and detector experts)

Location:

International Center for High Energy Physics and Applications (ICHEPA), Lovely Professional University, Punjab 144411, India

About ICHEPA at Lovely Professional University:

The International Center for High Energy Physics and Applications (ICHEPA) at Lovely Professional University (LPU) is a leading research center focused on advancing experimental high-energy physics and detector technologies. The center plans to collaborate with international research programs such as ALICE at CERN, CBM at FAIR, or EIC at BNL to explore innovative solutions in High Energy Nuclear and Particle Physics. Our mission is to establish a state-of-the-art high-energy physics laboratory that will drive cutting-edge research in the field.

Job Description:

ICHEPA at Lovely Professional University invites applications for a faculty position in high-energy physics, with a specific focus on hardware development and detector technology. The successful candidate will be responsible for leading the establishment of a new high-energy physics laboratory and contributing to experimental research in the following areas:

Detector Development:

Design and simulation of silicon-based detectors, scintillator-based detectors, and Resistive Plate Chambers (RPCs) for neutrino physics and other applications.

Experiment Participation:

Involvement in global research experiments such as ALICE at CERN, CBM at FAIR, or EIC at BNL.

Simulation Studies:

ALICE GEANT4 simulations in the O2 framework, MUCH detector simulations for CBM, and low-cost particle detection tests using CMOS technology, GEANT4, ROOT, C++, etc.

Research Leadership:

Developing innovative techniques for tracking and calorimetry, and leading research activities within the HEP group. Simulation expert and experience with attracting funding opportunities.

Key Responsibilities:

Lead the development of the high-energy physics laboratory at LPU.

Conduct independent research in experimental high-energy physics and hardware development.

Supervise and mentor students at both undergraduate and graduate levels as well as Ph.Ds.

Collaborate with national and international research institutions.

Attract external research funding and develop partnerships with industry stakeholders.

Teach undergraduate and graduate courses at the department of physics.

Qualifications:

Ph.D. in Physics with a focus on high-energy physics, particle detectors, or a related field.
At least three years of relevant postdoctoral or research experience in detector development or experimental high-energy physics.
Demonstrated ability to conduct independent research and lead a research group.
Strong publication record in high-impact refereed journals.
Experience in hardware development, simulation software, and practical implementation of particle detection technologies.

Additional Information:

The position is open to both Indian and foreign nationals (subject to government regulations).
Candidates from reserved categories are strongly encouraged to apply.
Applicants should arrange for at least three recommendation letters to be sent to the email address provided below.

Contact Information for Queries:

Email: ichepa@lpu.co.in

Letters of Reference: Please send to ichepa@lpu.co.in