

The Experimental Particle Physics group at the Johns Hopkins University invites applications for postdoctoral Fellowship positions. The William H. Miller III Department of Physics and Astronomy has opened several prestigious named Fellowship positions in any area of Physics and Astronomy:

<https://academicjobsonline.org/ajo/fellowship/22275>

Applicants are requested to list the names of faculty members whose interests most closely resemble theirs. Consideration of applications will begin on 1 November 2022 and continue until all available positions are filled. Applicants will also be considered for other appropriate postdoctoral positions in the Department.

The Experimental Particle Physics is one of the areas of focus in the Department. The effort includes the Compact Muon Solenoid (CMS) experiment at LHC, Cryogenic Underground Observatory for Rare Events (CUORE), Haloscope at Yale Sensitive to Axion Cold dark matter (HAYSTAC), fixed-target SpinQuest experiment at FNAL, as well as related R&D projects.

The CMS group has played a significant role in discovery and measurement of spin-parity and other properties of the Higgs boson, pursued searches for new beyond-the-standard-model phenomena and tests of electroweak theory, and engaged in development of phenomenological tools for LHC data analysis. There is a possibility to play a leading role in the analysis of the full Run-3 dataset, support of the CMS silicon pixel detector calibration and alignment, and engage in Phase-2 upgrade of the silicon pixel detector. The group is also involved in upgrade of the SpinQuest experiment with the target to search for dark matter.

The Speller group focuses on low-temperature searches for physics beyond the Standard Model, with a concentration on searches for dark matter and neutrinoless double-beta decay. The group's work includes analysis, software, and hardware efforts on campus. HAYSTAC is a microwave cavity experiment that employs state-of-the-art quantum sensing and microwave techniques to search for axions with masses in the range 10 to 100  $\mu\text{eV}$ . CUORE, and the upcoming upgrade CUPID, are neutrinoless double-beta decay experiments which also search for a wide array of rare events, including symmetry violations and WIMP dark matter interactions.

For further details about the application process, please refer to the AcademicJobsOnline link above.