

CENPA Postdoctoral Research Associate on the Muon g-2 Experiment

The University of Washington Center for Experimental Nuclear Physics and Astrophysics (CENPA) has an immediate opening for postdoctoral work on the Muon g-2 experiment, a high-precision test of the completeness of the Standard Model.

The experimental measurement of the muon anomalous magnetic moment carried out at BNL differs from Standard Model theory by more than 3 standard deviations, an intriguing, but not yet confirmed, suggestion of new physics. The new Muon g-2 experiment at Fermi National Accelerator Laboratory will measure a fundamental quantity with unprecedented 140 ppb precision with experimental challenges ranging over a broad physics spectrum. The collaboration goal aims to reduce the uncertainty by a factor of 4 and thus either confirm or refute the deviation. Our relatively large UW group has major hardware and software roles in the experiment. We built the electromagnetic calorimeters and their electronics, a variety of beam monitoring detectors, and much of the magnetic field measuring equipment and their electronics. We developed one of the main analysis protocols, the online data quality monitoring tools, and designed several of the systematic studies. The experiment is in data-taking mode, which implies a dual focus on operations and data collection, in parallel to offline analysis and systematics studies. We will be maintaining and improving on these contributions going forward as data taking will continue for several years.

With high-quality data being acquired, we seek a postdoctoral Research Associate with excellent data-analysis skills who can take on a leading role in the analysis and publication of the physics results. The new Research Associate will also be expected to participate in some of the operational activities at Fermilab, where there are opportunities to engage in a wide variety of hardware or online software activities. This requires that our understanding of beam dynamics, state-of-the-art detector technology, and precision magnetometry advances to the required level. We are seeking an individual who is passionate about learning and contributing to this high-profile campaign.

We welcome highly motivated applicants having received a Ph.D. or foreign equivalent in atomic, nuclear, or particle physics or astronomy within the last 3 years, or who are expecting a Ph.D. before starting the position.

Applications should be submitted at <http://apply.interfolio.com/64417> and include a cover letter, curriculum vitae, and three letters of reference. Applications received by August 1, 2019, will receive full consideration. Inquiries should be directed to Professor David Hertzog at hertzog@uw.edu.

The University of Washington and the International Union, Automobile, Aerospace and Agricultural Implement Workers of America, Local 4121 (UAW 4121) currently are negotiating their first collective bargaining agreement for Postdoctoral Scholars. Employees in this title are represented by UAW 4121 and will be subject to the applicable collective bargaining agreement, unless agreed exclusion criteria apply. For more information and updates on the bargaining process, please visit <https://hr.uw.edu/labor/unions/uaw/postdoc-negotiation-updates>.

University of Washington is an affirmative action and equal opportunity employer. All qualified applicants will receive consideration for employment without regard to race, color, creed, religion, national origin, sex, sexual orientation, marital status, pregnancy, genetic information, gender identity or expression, age, disability, or protected veteran status.