Postdoctoral Scholar - ATLAS and Artificial Intelligence

The Department of Physics at the University of Washington invites applications for a postdoctoral scholar position beginning in the Summer of 2023.

The successful candidate will work on the ATLAS experiment at the Large Hadron Collider (LHC) with Professor Shih-Chieh Hsu, collaborating with:

- ATLAS (https://atlas.cern/about)
- A3D3, an NSF institute (Accelerated Artificial Intelligence Algorithms for Data-Driven Discovery, https://a3d3.ai)
- The UW Elementary Particle Experiment (EPE) group

In addition, they will have the option to be based at CERN and contribute to the FASER experiment.

The position is a full-time, 24-month (two-year) appointment, which may be extended upon successful performance, subject to funding and mutual agreement. The Postdoctoral Scholar title is limited to five years, including postdoctoral experience(s) at UW and other institutions.

The base salary range for this position is $5459–$6000 per month, commensurate with experience and qualifications or as mandated by a U.S. Department of Labor prevailing wage determination.

The UW EPE group consists of five professors, five postdocs, and four graduate students working on the ATLAS experiment at the LHC. Our physics interests focus on electroweak symmetry breaking and searches for physics beyond the standard model, especially in the dark matter and dark Higgs sectors.

Our analyses use Artificial Intelligence (AI), and we are looking to further our investment in AI. We are a founding member of A3D3, for which we developed HLS4ML (High Level Synthesis for Machine Learning, https://github.com/fastmachinelearning/hls4ml) for low latency AI inference applications with FPGAs and ML-As-A-Service framework for high throughput computing with GPUs.

The successful candidate will spend 50% of their time working with ATLAS and A3D3 on pursuing physics in Run 3 and AI acceleration for the Phase 2 Upgrade. The other 50% will be spent tackling the next generation of AI applications for High Energy Physics (HEP), particularly uncertainty-aware ones. This will include the creation of an

ecosystem that facilitates community access to datasets, benchmarks, and existing algorithms backed by large-scale computing.

Postdoctoral Scholars are represented by UAW 4121 and are subject to the collective bargaining agreement, unless agreed exclusion criteria apply. For more information, please visit the University of Washington Labor Relations website (https://hr.uw.edu/labor/academic-and-student-unions/uaw-postdocs/uaw-postdoc-contract).

Qualifications

The successful applicant should have a Ph.D., or foreign equivalent, by date of appointment and be interested in contributing to both the physics and AI application program. Experience with the C++ programming language is recommended, and experience with AI is an advantage.

Application Instructions

Applications should be submitted at apply.interfolio.com/121202 and consist of a CV, a short research statement, a statement describing the applicant's experience and commitment to diversity, equity and inclusion, and three letters of recommendation. Applications received by April 15, 2023, will receive full consideration. Please contact Prof. Shih-Chieh Hsu (schsu@uw.edu) with any questions.

Equal Employment Opportunity Statement

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.

Benefits Information

A summary of benefits associated with this title/rank can be found at https://hr.uw.edu/benefits/benefits-orientation/benefit-summary-pdfs/. Appointees solely employed and paid directly by a non-UW entity are not UW employees and are not eligible for UW or Washington State employee benefits.

Commitment to Diversity

The University of Washington is committed to building diversity among its faculty, librarian, staff, and student communities, and articulates that commitment in the UW Diversity Blueprint (http://www.washington.edu/diversity/diversity-blueprint/). Additionally, the University's Faculty Code recognizes faculty efforts in research, teaching and/or service that address diversity and equal opportunity as important contributions to a faculty member's academic profile and responsibilities (https://www.washington.edu/admin/rules/policies/FCG/FCCH24.html#2432).

Privacy Notice

Review the University of Washington Privacy Notice for Demographic Data of Job Applicants and University Personnel to learn how your demographic data are protected, when the data may be used, and your rights.

Disability Services

To request disability accommodation in the application process, contact the Disability Services Office at 206-543-6450 or dso@uw.edu.

COVID-19 Vaccine Requirements and Information

Under University of Washington (UW) Policy, University-compensated personnel must be fully vaccinated against COVID-19 and provide proof thereof, or receive a UW-approved medical or religious exemption. This requirement will be a condition of any offer associated with this recruitment. For more information, please visit https://www.washington.edu/coronavirus/vaccination-requirement/.