

<b>Job Title</b>	Postdoctoral Fellow
<b>PVN ID</b>	YC-2410-006528
<b>Category</b>	Postdoctoral
<b>Location</b>	YORK COLLEGE
<b>Department</b>	Earth and Physical Sciences
<b>Status</b>	Full Time
<b>Annual Salary</b>	\$50,000.00 - \$60,000.00
<b>Hour(s) a Week</b>	35
<b>Closing Date</b>	Dec 28, 2024 (Or Until Filled)

## General Description

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The Experimental High Energy Physics research group at York College of The City University of New York is seeking a highly-motivated individual to become a Postdoctoral Fellow working on the Muon-to-Electron Conversion Experiment (Mu2e) at Fermilab. Mu2e will search for the charged lepton flavor violating neutrinoless coherent conversion of a muon into an electron in the field of an atomic nucleus. The successful candidate will be permanently stationed at FNAL and work closely with the PIs J. Popp and A. Edmonds. It is preferred that the successful candidate would start immediately.

The selected candidate will develop leadership skills and primarily work on one or more projects related to the tracker, pion production target improvement and its monitor, or muon stopping target monitor. The Tracker consists of 22,000 straw tube drift chambers, the Pion Production Target is a very high-power density target, and the Stopping Target Monitor (STM) measures the muon capture rate in the Muon Stopping Target.

The target monitoring systems use a variety of detector technologies (including scintillating crystal and solid state calorimetry, proportional wire chambers, and fast scintillating plastic) to monitor both primary proton and secondary muon beams. Our group is the lead institution on the Production Target Monitor and has responsibility on the STM for constructing and commissioning its collimators & shielding and for its alignment and calibration. We are also collaborating on Tracker assembly and commissioning at FNAL.

## Other Duties

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Responsibilities may include, but not limited to tracker construction, target monitoring systems development, testing, and integration, as well as software development for detector STM simulation, control, and analysis.

Mentoring and guidance of graduate and undergraduate students and have the flexibility to travel when business requires it.

## Qualifications

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We are looking for candidates with:

- A PhD (by time of appointment) in experimental high energy, nuclear, or accelerator physics, obtained within the past five years;
- Excellent verbal and written communication skills;
- Excellent C++ and/or Python skills;
- Experience in Monte Carlo simulations with Geant4 or similar toolkits;
- Experience with one or more relevant detector technologies; and
- Experience with experiment construction and/or operations.

### **Application Materials**

In addition to applying to this position, please send the following to [jpopp@york.cuny.edu](mailto:jpopp@york.cuny.edu) for full consideration:

- a current CV (including publication list);
  - at least two Letters of Recommendation, which address the applicant's research strengths and accomplishments;
  - a cover letter that explains the applicant's interest and suitability for the position; and
  - a statement of the applicant's research interests.
- Deadline: December 15, 2024