

# Junior Specialist- Fermilab

Job #JPF05077

PHYSICS / LETTERS AND SCIENCE: MATH/PHY SCI / UC Davis

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## APPLICATION WINDOW

**Open date:** July 21st, 2022

**Next review date:** Thursday, Jul 28, 2022 at 11:59pm (Pacific Time) Apply by this date to ensure full consideration by the committee.

**Final date:** Thursday, Aug 4, 2022 at 11:59pm (Pacific Time) Applications will continue to be accepted until this date, but those received after the review date will only be considered if the position has not yet been filled.

## POSITION DESCRIPTION

This position will be at the Fermi National Accelerator Laboratory (Fermilab), working on the Mu2e Experiment.

The Junior Specialist will be working under the supervision of Professor Eric Prebys and their appointment will be full time.

The individual working on this project will be expected to perform the following duties:

### Major Responsibilities and Designated Areas of Expertise

#### I. Research in Specialized Areas (85%)

The Specialist will work in support of the development of “slow beam extraction” to the Mu2e Experiment. This project involves using sextupole magnets to drive an instability in the beam circulating in Fermilab’s “Delivery Ring” (DR) storage ring, such that beam can be extracted over approximately 40 ms, rather than all at once. The success of this project is crucial to the physics goals of the experiment. The specific part of the project that the Specialist will focus on is the construction and commissioning of the “electrostatic septum”, which produces a large electric field as the first step of extracting the unstable beam; however, the Specialist will be expected to become familiar with all aspects of the project, in order to contribute assistance where it is most needed. The results of this work will be presented at appropriate accelerator physics conferences and will almost certainly lead to one or more publications with the Specialist as co-author.

#### II. Professional Competence and Activity (10%)

This experience represents a unique and valuable opportunity for the Specialist to expand the depth and breadth of their knowledge of accelerator physics. To this end, it is planned to

have the Specialist attend the two-week (virtual) US Particle Accelerator School (USPAS) in January, 2023.

**III. University and Public Service (5%)**

5% The candidate will document progress and communicate the experience to other people working on the experiment, both from UC Davis and elsewhere.

## QUALIFICATIONS

### **Basic qualifications** (required at time of application)

A bachelor's degree in Physics, Applied Physics, or Engineering plus at least one year of research experience in a physics or engineering laboratory are required.

### **Additional qualifications** (required at time of start)

A basic knowledge of digital and analog electronics, including familiarity with standard bench equipment, including oscilloscopes and function generators.

### **Preferred qualifications**

Experience with high power (> 5 kW) and high voltage (> 2 kV) systems. Practical experience with accelerators and related technology, including vacuum systems.

## APPLICATION REQUIREMENTS

### **Document requirements**

- Curriculum Vitae - Your most recently updated C.V.
- Cover Letter
- Statement of Research (Optional)
- Statement of Teaching (Optional)
- Statement of Contributions to Diversity, Equity, and Inclusion -Contributions to diversity, equity, and inclusion documented in the application file will be used to evaluate applicants. Visit <https://academicaffairs.ucdavis.edu/faculty-equity-and-inclusion> for guidelines about writing a statement and why one is requested.

### **Reference requirements**

- 2-3 required (contact information only)

**Apply link:** <https://recruit.ucdavis.edu/JPF05077>

**Help contact:** [krobbe@ucdavis.edu](mailto:krobbe@ucdavis.edu)

## CAMPUS INFORMATION

UC Davis is a smoke and tobacco-free campus (<http://breathefree.ucdavis.edu/>).

We are an Affirmative Action/Equal Opportunity employer, and particularly encourage applications from members of historically underrepresented racial/ethnic groups, women, individuals' with disabilities, veterans, LGBTQ community members, and others who demonstrate the ability to help us achieve our

vision of a diverse and inclusive community. For the complete University of California nondiscrimination and affirmative action policy see: <http://policy.ucop.edu/doc/4000376/NondiscrimAffirmAct>

Under Federal law, the University of California may employ only individuals who are legally able to work in the United States as established by providing documents as specified in the Immigration Reform and Control Act of 1986. Certain UC Davis positions funded by federal contracts or sub-contracts require the selected candidate to pass an E-Verify check. More information is available at: <http://www.uscis.gov/e-verify>

The University of California, Davis (UC Davis) is committed to inclusive excellence by advancing equity, diversity and inclusion in all that we do. UC Davis celebrates the multi-cultural diversity of its community by creating a welcoming and inclusive environment demonstrated through a variety of resources and programs available to academics, staff, and students. Diversity, equity, inclusion, and belonging are core values of UC Davis that are embedded within our [Principles of Community](#) and are tied with how to best serve our student population. Our excellence in research, teaching, and service can best be fully realized by members of our academic community who share our commitment to these values, which are included in our [Diversity and Inclusion Strategic Vision](#), our strategic plan: [“To Boldly Go,”](#) our Principles of Community, the [Office of Academic Affairs’ Mission Statement](#), and the [UC Board of Regents Policy 4400: Policy on University of California Diversity Statement](#). UC Davis is making important progress towards our goal of achieving federal designation as a [Hispanic Serving Institution and an Asian American, Native American, and Pacific Islander-Serving Institution](#). The Office of Diversity, Equity, and Inclusion offers a plethora of resources on their website, and the [Office of Health Equity, Diversity, and Inclusion \(HEDI\)](#) has outlined similar goals in their Anti-Racism and DEI Action Plan.” There are a plethora of links available on the [About Us](#) webpage where you can learn more about our Administration, Diversity and Inclusion, Rankings, Locations, Native American Land Acknowledgement, Sustainability, Visiting UC Davis, UC Davis Health, and Campus Safety.

The university is consistently ranked among the top institutions in the world for campus sustainability practices by the [UI Green Metric World University Rankings](#). UC Davis is focused on achieving net-zero greenhouse gas emissions and repeatedly shown its [commitment to preserving a healthy and sustainable environment for generations to come](#).

As a condition of employment, you will be required to comply with the [University of California SARS-CoV-2 \(COVID-19\) Vaccination Program Policy](#). All Covered Individuals under the policy must provide proof of Full Vaccination or, if applicable, submit a request for Exception (based on Medical Exemption, Disability, and/or Religious Objection) or Deferral (based on pregnancy) no later than the applicable deadline. New University of California employees should refer to Appendix F, Section II.C. of the policy for applicable deadlines. (Capitalized terms in this paragraph are defined in the policy.) Federal, state, or local public health directives may impose additional requirements.

## JOB LOCATION

Batavia, Illinois