

Cornell University Chemistry and Chemical Biology

January 25, 2023

The Northeastern Collaborative Access Team (NE-CAT), located at the Advanced Photon Source at the Argonne National Laboratory in suburban Chicago, is seeking applicants for a Staff Scientist position at the Research Associate and Sr. Research Associate levels. Primary responsibilities will be to provide training and support to users of NE-CAT's two state-of-the-art X-ray beamlines, provide crystallographic expertise to ensure the highest quality data and structures, and contribute to the continued development of beamline software tools. The prospective applicant will collaborate with other NE-CAT team members to enhance and extend the capabilities of the NE-CAT beamlines – ideally contributing to the continued development of software tools that improve the user experience at NE-CAT and will be expected to take initiative and contribute to the team effort in an inclusive and respectful environment. To be considered for the Senior Research Associate level, a candidate should have significant experience managing synchrotron beamlines as well as advanced experimental and programming capabilities.

Duties and Responsibilities:

- Provide user training and support, both onsite and via remote conferencing. This involves work nights and weekends, approximately nine months of the year, when the APS has run cycles and is open for data acquisition. During these months, the staff scientist will rotate assignments with other staff members to provide support 24 hours a day, seven days a week.
- Use existing crystallographic software: CCP4, PHENIX, XDS, etc. to assist users in data collection, processing, and structure solution. Test and develop modifications as necessary. This requires familiarity with Linux and programming.
- Test and debug new beamline hardware and software. Evaluate beamline performance to produce optimum data.
- Use knowledge of synchrotron beamline optics and experiment-specific methods to develop data collection and structure determination procedures for current projects and new techniques including microcrystals, room temperature data collection, and serial crystallography.
- Contribute to the continued development of remote data collection and real time data analysis software for the beamline data acquisition systems.
- Collect data on macromolecular crystals for structure solution, model building, and refinement.

- Participate in cooperative research in which the scientist's expertise is combined with that of members of the NE-CAT user community to improve the processes of protein purification, crystallization, and determination of macromolecular structures.
- Publish results and help prepare presentations and documentation to disseminate information about advances to the macromolecular crystallography community.

Related Duties:

- Provide advice and consultation to users and technical support staff.
- Assist in preparation of research grant proposals and annual reports.
- Attend and participate in seminars and scientific meetings.
- Recommend equipment and supplies necessary to further research associated with the mission of the facility.
- Collaborate with team members who develop user safety procedures, calibration procedures, data collection procedures, and both on-line and standard documentation.
- Assist technical staff with beamline hardware troubleshooting and maintenance as needed.

Qualifications:

- Doctorate in Biochemistry, Structural Biology, Biophysics, Chemistry, or related field.
- At least three years doctoral or post-doctoral experience involving macromolecular crystallography. Record of publications of research in the scientific literature.
- Fluency in the English language, written and oral.
- Experience operating and managing synchrotron beamlines.

For more information about NE-CAT, please see our website: <u>https://necat.chem.cornell.edu</u>

This is a 12-month benefits eligible full-time (100%FTE) appointment term which is renewable depending on funding and performance.

Salary: commensurate with experience

Start: March 1, 2023

Interested candidates should submit the following to: <u>https://academicjobsonline.org/ajo/jobs/24196</u>

- Cover letter
- Curriculum Vitae
- Contact information of three references
- Copies of relevant publications

Applications will be reviewed as they are received and will be accepted until the position is filled. Please direct questions to Frank Murphy, NE-CAT Associate Director (<u>fvm3@cornell.edu</u>).

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