RESEARCH FOUNDATION CUNY

Careers at RFCUNY
Job Openings

Job Title	Computational Science PostDoc - Structural Biology
PVN ID	RC-2207-004964
Category	Research
Location	CUNY-ADVANCED SCIENCE RESEARCH CENTER
Department	Structural Biology
Status	Full Time
Salary	Depends on qualifications
Hour(s) a Week	35
Closing Date	Sep 21, 2022 (Or Until Filled)

General Description

The CUNY ASRC Structural Biology Initiative seeks applications from individuals with experience in software development and NMR (Nuclear Magnetic Resonance) spectroscopy, computational biology, computer science, biology or chemistry to serve as postdoctoral fellows in computational science. Several positions are available and the job description and level is dependent on the skills, experience and career goals of the candidates.

The Computational Scientists will be involved in several specific NMR related projects that are funded by three NIH grants. All projects will involve the production of state-of-the-art software projects that will be used by an international audience of scientists.

The first project is part of the Center for Molecular Dynamics by NMR (an NIH P41 National Center) located at the New York Structural Biology Center (http://comdnmr.nysbc.org). The focus of CoMD/NMR is technical development and application of NMR spin relaxation and associated methods for characterizing protein and nucleic acid conformational dynamics in biological processes including ligand recognition, allostery, catalysis, and folding.

The second project is part of the Center of HIV RNA Studies (CRNA), an NIH P50 HIV Structural Biology Center (https://sites.google.com/a/umich.edu/the-center-for-hiv-rna-studies/). The CRNA consists of an integrated team of NMR spectroscopists, X-ray crystallographers, Cryo-EM microscopists, cell and computational biologists, chemists, and virologists located at multiple universities and dedicated to advancing understanding of the structures and molecular processes during HIV-1 replication that involve RNA.

The third project involves the development of an integrated software environment for NMR data analysis. This component is funded by an R01 grant (NMRFx: An Integrated software suite for macromolecular NMR analysis, https://nmrfx.org) and involves software development for NMR processing, visualization and analysis, and structure calculation using torsion angle molecular dynamics.

Position is available immediately.

Application Information

Please submit application materials in PDF format and include both a resume and a cover letter describing your interest and summarizing your qualifications for the position.

Other Duties

Other duties may include:

- Developing new algorithms for data analysis
- Working with experimental NMR scientists and their data
- Publishing articles describing the research and developed software
- Training users in use of the developed software
- Presenting at workshops and meetings.

Qualifications

Minimum Qualifications (depending on position)

- A PhD from an accredited institution in Chemistry/Biochemistry/Computational Biology/Computer Science.
- Software development experience in Java (or C++) and Python
- Experience using standard software engineering tools including source code control (such as Git), integrated development environments (such as NetBeans), project management tools (such as Maven) and test suites (such as Junit).

Preferred Qualifications

- Coursework and/or experience in NMR spectroscopy (especially in NMR relaxation analysis) or structural biology
- Course work or experience in numerical methods such as linear algebra, signal processing or optimization.
- Course work or experience in deep learning.
- Experience with GPU programming