Advertisement for a Postdoctoral Position

We are looking for candidates for a postdoctoral researcher to work with our research team at Cornell University. Job responsibilities will involve primary research and related professional activities associated with the lab's research interests, which will include the application and development of new algorithms for understanding allostery, protein conformational change, drug development, and the analysis of crogenic-sample electron microscopy (cryo-EM) data.

Duties and responsibilities

The candidate will engage in innovative research related to the integration of machine learning, biomolecular simulation. experimental data to get new insights into the basic science of proteins and the development of new drugs to address pressing disease challenges. The positions will require becoming proficient in performing molecular dynamics simulations, designing, and applying innovative machine learning algorithms, and interfacing with experimental data. Particular areas of focus include the analysis and interpretation of cryo-EM data, the development of new drug candidates, and the use of biomolecular dynamics simulations. The associate will draft and submit multiple manuscripts for publication in top-level peer-reviewed scientific journals; present results at professional meetings, conferences, and popular seminars. Assist in training of undergraduate lab assistants and undergraduates carrying out research projects, and new or rotating graduate students. The candidate is also expected to engage in ongoing academic and intellectual life within relevant scientific programs in the Department of Chemistry and Chemical Biology and collaborate with groups members in the research laboratory.

This is a 12-month Academic appointment, which is renewable depending on funding and performance.

Qualifications

Candidate must have a Ph.D. in chemistry or a related field. Additionally, candidate must have some coding ability, as well as background in related areas of research. These include, but are not limited to:

- Molecular Simulation, particularly advanced algorithms such as enhanced sampling, Markov state modeling and related algorithms, and course-grained simulation.
- Machine Learning, particularly geometric ML, equivariant ML, transformers, and generative models.
- Computational Statistics, particularly high-dimensional data and MCMC.
- Experimental structural biology techniques particularly Cryo-EM and Cryo-ET.
- Protein structural biology and biochemistry.

Job details

Pay range is between $56,484 and $75,000 depending on experience.
Start date is flexible.

Application Instructions

Interested candidates should email Prof. Erik Thiede at eht45 [at] cornell.edu indicating their interest with their curriculum vitae and the favorite research paper that they have written attached.