A postdoctoral position in molecular modeling/computational biophysics

A postdoctoral position is available in the Chemistry Department at Georgia State University in Atlanta, GA, USA. The position will focus on building structural models of protein complexes involved in gene expression and investigating their dynamics by large-scale molecular dynamics simulations. The work involves application of advanced modeling techniques to incorporate experimental data, specifically from cryo-electron microscopy, into models of biological assemblies. Candidates will have the opportunity to learn state-of-the-art molecular modeling methods and collaborate with leading experimental groups. Significant supercomputing resources will be made available. For an additional perspective on this research, candidates are encouraged to visit our group website (**https://ivanov-group.org**). The position is supported by federal funding from the National Institutes of Health and the National Science Foundation.

Required qualifications:

- Ph.D. in computational chemistry, biophysics, computational biology or a related discipline
- A strong background (and publication record) in molecular modeling, molecular dynamics simulations, structural bioinformatics and data analysis
- Coding and scripting experience (e.g. Python or C/C++)

Desired qualifications:

- Familiarity with molecular modeling and visualization packages (e.g., NAMD, AMBER, Rosetta, PyEmma, UCSF Chimera)
- Good analytical and communication skills
- Machine learning methods, preferably in a field related to biophysics or structural biology (i.e., ML applied to simulation data analysis or to heterogeneous reconstruction from single particle EM data)
- Ability to work independently

To be considered, please send a **cover letter with a summary of research experience** and **a CV with a full list of publications** together with **names and contact details of three references** to Prof. Ivaylo Ivanov (**iivanov@gsu.edu**). After initial screening of applications, letters of reference will be requested on behalf of competitive candidates.

Initial appointment is for one year, renewable upon mutual agreement. Georgia State University is in Atlanta - a multicultural city and one of the major metropolitan areas in the USA.

Contact:
Prof. Ivaylo Ivanov
Department of Chemistry, Georgia State University
https://ivanov-group.org/
E-mail: iivanov@gsu.edu

Ph.D. student positions

Our group has two openings for prospective Ph.D. students in computational biophysics for the Fall Semester 2023. We are looking for highly motivated candidates to conduct research in molecular modeling. This research addresses critical problems in the biomedical arena, unified by the common theme of how cells accomplish faithful duplication and expression of their genetic

material. Research in our group has direct bearing on understanding the molecular basis of genetic integrity and the loss of this integrity in cancer and in degenerative diseases. Support for graduate studies includes an annual stipend (current level set by the department for incoming students is $30,000) and a tuition waiver. Support generally comes from NSF/NIH grants and/or the Chemistry Department. Interested candidates are welcome to contact Prof. Ivanov directly by email: iivanov@gsu.edu and should also apply to the GSU chemistry graduate program (http://chemistry.gsu.edu/graduate).

Qualifications:

  - B.S. in Chemistry, Biochemistry, Chemical Engineering, or related disciplines
  - Strong interest in computational chemistry and biomolecular modeling
  - Experience in molecular modeling & simulation methods
  - Knowledge in Linux, programming and shell scripting is preferred but not required