

Post Doctoral Fellow - Chemical & Biomolecular
Engineering
Clemson University

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Job Title	Post Doctoral Fellow - Chemical & Biomolecular Engineering
Department	Chemical & Biomolecular Engineering
Institution	Clemson University Clemson, South Carolina
Date Posted	Jul. 12, 2019
Application Deadline	Open until filled
Position Start Date	Available immediately
Job Categories	Post-Doc
Academic Field(s)	Chemical/Petroleum Bioengineering (all Bio-related fields)
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Job Description

Clemson University: College of Engineering, Computing and Applied Sciences: Chemical & Biomolecular Engineering
Post Doctoral Fellow - Chemical & Biomolecular Engineering

Location: 30 Earle Hall

Clemson University is seeking applications for a postdoctoral research associate. The candidate will be working with Professor Sapna Sarupria in the area of molecular simulations of biomolecular systems with a focus on multi-scale modeling of protein-surface systems, and simulations of large biomolecules such as viruses, and liquid-liquid phase separation in proteins. The position is for two-years with projected start date of September 2019 or until position is filled.

About the projects/tasks:

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The three key thrust areas in biomolecular simulations are:

(i) Protein interactions with various surfaces (e.g. polymeric, mineral and graphene) under equilibrium and non-equilibrium conditions driven by applications in biosensors, nanotoxicity and for protein immobilization.

(ii) Simulations of large biomolecules especially viruses with applications in virus separation.

(iii) Understanding liquid-liquid phase separation in protein systems with relevance to cell signaling.

The postdoctoral researcher will focus on developing multiscale methods combining atomistic molecular dynamics, mesoscale modeling and optimization/machine learning approaches. The candidate will have the option of choosing one of the above thrust areas based on their interests. The projects are in close collaboration with various experimental groups and the postdoctoral researcher has the opportunity to work closely with these groups.

QUALIFICATIONS

Minimum job requirements:

- * Applicants must have earned a PhD (or equivalent) in chemical engineering, chemistry, materials science and engineering, physics, or a closely-related field.
- * Experience in computer programming using modern computing languages such as Python.
- * Experience in running large-scale simulations preferably of biomolecular systems using standard packages such as AMBER, GROMACS, LAMMPS or HOOMD.
- * Demonstrated ability to work independently and with minimum supervision.
- * Ability to adapt to new requirements for projects and be flexible enough to learn new areas of research as needed.
- * Ability to work effectively as a part of a team in a multi-disciplinary environment and interact with people with a variety of expertise.

APPLICATION INSTRUCTIONS

Applications should submit a single PDF containing the following documents: (i) a cover letter including discussion of your future goals and how this position will help you achieve those; (ii) current curriculum vitae with a short description detailing your programming experience (please discuss things such as expertise levels in different languages, which are the most complex programs you have written); (iii) three references with contact information (phone and email).

Please send the applications and any questions to saruprialabgroup@gmail.com.

PI Information: Prof. Sapna Sarupria, Associate Professor, Chemical and Biomolecular Engineering, Clemson University (ssarupr@g.clemson.edu)

[url=<http://molecularsimulations.sites.clemson.edu/>]http://molecularsimulations.sites.clemson.edu/

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[url=https://twitter.com/SarupriaS]https://twitter.com/SarupriaS

Applications received by August 10, 2019, will be given full consideration, but position will be left open until filled.

Clemson University is an AA/EEO employer and does not discriminate against any person or group on the basis of age, color, disability, gender, pregnancy, national origin, race, religion, sexual orientation, veteran status or genetic information; Clemson University is building a culturally diverse faculty and staff committed to working in a multicultural environment and encourages applications from minorities and women;

PI111880132

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact Alex Wall
Chemical & Biomolecular Engineering
Clemson University