Schiller Research Group, Clemson University
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CLEMSON
COMPUTATIONAL
MATERIALS SCIENCE

Postdoctoral Research Associate

Multiscale modeling and simulation of self-assembling nanofluids

The Schiller Research Group at Clemson University invites applications for a postdoctoral research associate position in multiscale modeling and simulation of complex multiphase fluids and soft interface-dominated materials. The postdoc will develop and utilize large-scale simulations and data-centric approaches for designing self-assembling nanofluids from particle-stabilized emulsions and amphiphilic fluids. The simulations will leverage Clemson University's Palmetto cluster, a TOP500 supercomputing system. The postdoc will be part of a growing team that collaborates with experimental and clinical research groups on discovery and design of advanced materials for energy, environmental, and health applications.

Candidates must have a Ph.D. in Physics, Materials Science, Computer Science, Applied Mathematics or a related field. The postdoc is expected to contribute to scientific software packages (e.g., LAMMPS, LB3D, ESPResSo) and therefore strong computational/programming skills and experience in scientific computing are essential.

The ideal candidate

- has extensive experience in large-scale lattice Boltzmann simulations, coarse-grained molecular dynamics and/or Monte Carlo methods;
- has excellent programming and data analysis skills;
- has a background in soft matter and multiphase flows and knowledge in phase behavior and transport phenomena;
- excels in computational thinking and connecting physical principles and numerical algorithms;
- is enthusiastic about working in a multidisciplinary, collaborative environment;
- has excellent interpersonal and communication skills (written and spoken English) and the ability to work in a diverse environment;
- must be able to obtain visa/work authorization.

The position is funded in part by the National Science Foundation for a period of two years. Initial appointment will be for one year with future extensions contingent on performance. Review of candidates will begin December 7, 2020 and will continue until the position is filled. Prospective candidates should prepare **a single PDF document** including (1) cover letter detailing motivation, research experience, and research interests, (2) curriculum vitae including list of publications, (3) one representative example describing prior programming/code development work (no more than two pages), (4) names and email addresses of three references. The materials can be submitted electronically at https://clemson.app.box.com/f/bcf98c5c32e940018a4fed1e09f3ed9e or sent by email to Dr. Ulf Schiller (he/him) at uschill@clemson.edu. We care about diversity in the Schiller Research Group and strive for equal participation in STEM and HPC. We encourage applications from groups that are underrepresented in the sciences.