

## **Postdoctoral Researcher Position-Computational Studies of Nanoparticle Protein Interactions**

A Postdoctoral Research Associate position is available from August 15 2019 for two years. The selected candidate will work at Winston-Salem State University (WSSU) in Year 1, and at Howard University (HU) in Year 2 (if contract is renewed with mutual agreement). This collaborative project is to understand the interactions between nanoparticles and proteins to develop state-of-the-art detection devices of surface-enhanced Raman scattering (SERS) using both simulations and experiments.

### Required qualifications:

- A candidate is expected to have a Ph.D. in Physics, Chemistry, Materials Science/Engineering, or a related discipline by the start date.
- The candidate must have good writing and presentation skills in English.
- The successful candidate will have good programming skills in one (or more) of the following: C/C++, Fortran and Python, as well as data analysis experiences.
- The ability to work well with a team and to train a diverse population of undergraduate students.
- Though the project is rooted in computation and theoretical development, the candidate is expected to interact with experimentalists who are Co-PIs on the two-campus project.
- The candidate may be required to travel between WSSU and HU in the project duration.

### Desired qualifications:

- Experience in at least one of the following areas: electronic structure simulations (DFT and beyond), molecular dynamics, Monte Carlo simulations, and force field development.
- Experience in QM/MM and time-dependent DFT or continuum modeling.
- Experience with high-performance computing.
- Candidates may also be involved in experiments, such as nanoparticle synthesis, SERS experimental design and Raman characterization. Experience in SERS experiments is a plus.

Interested candidates should submit a cover letter, CV and 2 letters of reference to [nanoparticle18@gmail.com](mailto:nanoparticle18@gmail.com). The official job announcement will be posted soon at <https://jobs.wssu.edu>. Application review begins on March 15, 2019. The position will remain open until filled.

Winston-Salem State University is a bold, vibrant and diverse academic community that fosters the creative thinking, analytical problem-solving, and depth of character graduates need to transform themselves and their world. Founded in 1892, WSSU enjoys a distinguished reputation as a historically black constituent institution of the University of North Carolina. Winston-Salem State University is dedicated to providing equal opportunity in employment based on merit, and without discrimination based on race, color, creed, religion, gender, national origin, age, disability or veteran status.