

**SIMES**STANFORD INSTITUTE FOR MATERIALS & ENERGY SCIENCES
THE DIVISION OF MATERIALS SCIENCE AT SLACA joint Institute of SLAC
and Stanford University

POSTDOCTORAL FELLOWSHIP POSITION

The Stanford Institute for Materials and Energy Sciences (SIMES) invites applications for a postdoctoral fellowship in the area of *computational materials science*. This position is associated with the newly established multi-institutional center for *Non-Perturbative Studies of Functional Materials under Non-Equilibrium Conditions* (NPNEQ) which aims to enable predictive simulations of materials far from equilibrium to inform research in quantum materials and attosecond strong-field physics. The successful candidate will work as a member of the NPNEQ team on the theory, numerical implementation and validation of the next generation of real-time time-dependent density functional theory (TDDFT) methods for scalable nonequilibrium dynamics simulations on emerging exascale supercomputers.

The postdoc will be based at SIMES which is a joint institute between the SLAC National Accelerator Laboratory and Stanford University and home to a number of cutting-edge experimental and theory programs in ultrafast materials science (<http://simes.stanford.edu>). Within SIMES, the postdoc will work under the supervision of Dr. Das Pemmaraju and Prof. Aaron Lindenberg. Furthermore, as a member of the NPNEQ center the postdoc will work in close collaboration with theory and experimental teams at Stanford/SLAC National Accelerator Laboratory, Lawrence Livermore National Laboratory and Lawrence Berkeley National Laboratory.

Applicants should have a PhD or equivalent qualification in physics, mathematics, chemistry, materials science or a related discipline. Experience in quantum simulation methods such as density functional theory, time-dependent density functional theory, many-body perturbation theory, Quantum Monte Carlo or related approaches is highly desirable. This position involves a significant amount of numerical code development aimed at the next generation of exascale supercomputers. Therefore, the ideal candidate will have prior scientific programming experience combined with an enthusiasm for scalable computing on highly parallel architectures. Additionally, the candidate would have demonstrated written and verbal communication skills in an academic setting along with an ability to work both individually and in a collaborative team environment.

This is a one-year appointment starting immediately with the possibility of a further 1-2 year extension based on performance and the needs of the NPNEQ center. Interested candidates should submit an up-to-date CV and a statement of research interest to Das Pemmaraju (dasc@slac.stanford.edu) with the title "SIMES-NPNEQ Postdoctoral Fellowship".

Stanford is an equal opportunity employer, and all qualified applicants will receive consideration without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, veteran status, or any other characteristic protected by law.