

PhD Fellowships in Simulations of Materials at Extreme Conditions

Looking for an exciting and challenging research opportunity at the science frontiers? Join our dynamic research group that explores the behavior of materials under extreme conditions using advanced theory, simulations, and experiments!

We are seeking highly motivated and talented graduate students to join our research group, focused on investigating the behavior of materials under extreme temperatures and pressures. We explore the non-equilibrium processes that occur in exoplanet interiors, inertial confinement fusion implosions, and dynamic compression of condensed matter. To achieve our goals, we use a range of simulation techniques, including quantum molecular dynamics and machine-learning molecular dynamics simulations on exascale supercomputers.

The successful candidate will have the opportunity to work on cutting-edge research projects, and collaborate with leading researchers in the field while contributing to experimental and computational campaigns at national and international user facilities by providing simulation guidance to discovery science experiments. More information about current research projects can be found at: <http://msl.cas.usf.edu/>

We are committed to fostering an inclusive and collaborative team environment that promotes creativity, imagination, and technical leadership skills. As a graduate student in our group, you will be trained to proficiently use cutting-edge research tools and receive dedicated mentorship to support your professional growth.

The ideal candidate should have a BSc or MSc degree in materials science, physics, chemistry or related field and strong interest in developing and applying advanced atomic-scale simulation methods to solving fundamental science problems. Proficiency in programming and experience with materials simulations (quantum and classical molecular dynamics) and high performance computing is highly desirable but not essential.

If you are excited to work on groundbreaking research, we encourage you to apply for this PhD position. Don't miss this opportunity to join our dynamic and innovative team!

To apply for a position, send a one-page statement describing your prior academic and research experience and a curriculum vitae to Prof. Ivan Oleynik oleynik@usf.edu. The openings are available on continuous basis, starting in summer 2023 or later.

