

## **Postdoctoral position in Condensed Matter Computational Physics**

A postdoctoral position in condensed matter theory is available in the group of Dr. Mark Jarrell at the Louisiana State University (LSU), Department of Physics and the Center for Computation and Technology (CCT). Applications are invited for this position with areas of interest including the theory and simulation of:

- Strongly Disordered electron systems
- Disordered Strongly interacting electron materials

### **Position Description**

The successful candidate will develop theory and numerics to study the role of strong disorder in quantum energy materials. This involves performing state-of-the-art materials modeling (using DFT down folding) and numerical simulation of disorder effects (using many-body techniques), and disseminating the conclusions in scientific publications and talks.

### **Position Requirements**

- PhD in theoretical condensed matter physics or related field
- A good understanding of the science of quantum materials such as strongly correlated materials
- Has strong numerical background (experienced with high performance computing) and experience in condensed matter/many-body physics.
- Effective written and oral communication skills
- Self-motivated and able to work both independently and as part of an interdisciplinary team.

### **Preferred Knowledge, Skills and Abilities:**

- Experience in numerical simulations of strongly disordered or strongly-interacting electron systems, including, but not limited to, photovoltaics, dilute magnetic semiconductors and other disordered and correlated electron systems.
- Familiar with DFT downfolding technique for effective Hamiltonians

- Experience with code development using FORTRAN