

## **Visualization Programmer**

### Required Education, Training and Experience:

- BA/BS degree (advanced degree highly preferred) in engineering, mathematics, science, computer science, or related field. Alternative degree fields will be considered if accompanied by equivalent experience (depending on nature and depth of experience as it relates to current NCSA projects and technologies).
- Experience using various/multiple computational platforms, including UNIX, AIX, and/or LINUX.
- Considerable knowledge in most of the following areas: large-scale scientific visualization, parallel rendering, parallel algorithms, parallel IO, distributed computing.
- Some experience using and modifying VisIt and/or Paraview parallel visualization platforms. Typical modifications would be addition of new parallel data readers and/or new parallel visualization algorithms to these packages.
- At least 3 years parallel programming experience on high performance computers including development, optimization, porting, and/or scaling of large scale parallel visualization and data analysis application codes written in python, C, and/or C++, and utilizing communication protocols such as MPI and OpenMP.
- Due to limiting export controls over this project, residency and/or citizenship restrictions may apply.

### Preferred Experience:

- Using high-performance computers to solve large-scale science and engineering problems.
- Experience with large-scale parallel visualization application development.
- Experience in OpenGL, PovRay, and VTK visualization libraries/APIs.
- Developing codes using high-level IO libraries (HDF5, pNetCDF, etc.).
- Developing and presenting technical training material and web-based technical documentation.
- Familiarity with a variety of scientific visualization techniques including, CFD methods, GIS analysis, molecular modeling and chemistry related visualization, and geophysical simulations.
- Familiarity with information visualization techniques and methods.