

## **NOTICE OF APPLICATION FOR ALIEN**

### **EMPLOYMENT CERTIFICATION**

This notice is provided because of the filing of an application for permanent alien labor certification for the following position: RESEARCH SCIENTIST

Concerned applicants for this position should report to the following University of Wyoming department responsible for placing this position: MECHANICAL ENGINEERING

Any person may provide documentary evidence bearing on the application to the attention of the Certifying Officer of the U.S. Department of Labor, Employment & Training Administration, Office of Foreign Labor Certification, Atlanta National Processing Center, Harris Tower, 233 Peachtree Street, Suite 410, Atlanta, GA 30303. Telephone: (404) 893-0101; FAX: (404) 893-4642.

The following is a statement of the job duties and requirements:

**DUTIES:** Conduct innovative research in the field of High Performance Computing (HPC) for extremely large-scale CFD and other physic-based multidisciplinary applications. As HPC continues to play an ever-larger role in today's science and engineering disciplines, a broad range of research avenues is available. The selected candidate will perform leading-edge research that will advance the state of the art in fluid dynamics computations on emerging heterogeneous HPC systems. A major responsibility of this position is to investigate, develop and demonstrate advanced multilevel solution strategies for leading-edge high fidelity simulation methods in CFD applications. Historically, multilevel methods have played a dominant role in CFD and their unique characteristics make them ideally suited for emerging HPC architectures. Novel scalable scientific algorithms are needed to enable CFD tools previously developed within this laboratory to exploit the massive computational power that is becoming available by emerging HPC systems. In particular, advanced algorithms that drastically increase the ratio of computation to communication are needed. The successful candidate will develop and implement automated scalable solvers that can be utilized in multi-solver frameworks.

**REQUIREMENTS:** PhD in mechanical engineering, computational engineering, applied mathematics or related engineering or science discipline. Proven experience in development and implementation of computational fluid dynamics (CFD) solvers. Practical knowledge of FORTRAN, C and/or C++ programming languages and UNIX operating system is required. Proven experience in parallel programming and utilizing cutting-edge high-performance computing, storage, and networking systems. Experience using modern mesh generation and visualization tools (such as Pointwise, FieldView, Tecplot). Strong communication skills are a must; be able to collaborate in a team but also think and work independently.

**WAGE OFFERED:** \$66,000

This notice has been posted in compliance with 20 CFR 656.10(d)(1)(ii). It has been posted in two conspicuous, unobstructed locations at the employer's place of business for at least 10 consecutive business days and on the University of Wyoming Human Resources website.