Opportunity Title: Postdoctoral Research Associate in Experimental Plasma Physics
Opportunity Reference Code: ORNL10-81-FED

Organization Oak Ridge National Laboratory (ORNL)

Reference Code ORNL10-81-FED

Description The Fusion Energy Division at the Oak Ridge National Laboratory (ORNL) seeks applications for a post-doctoral experimental plasma physicist. ORNL's Experimental Plasma Physics Group carries out research in nearly all areas of magnetic fusion energy development and related technology development. The program is a strong and vital component of both the U.S. fusion program and the international fusion community. The successful candidate will work with a multidisciplinary team of experimental and theoretical physicists in the area of tokamak edge plasma transport at ORNL, as well as, on various domestic and international fusion collaborations.

Major Duties and Responsibilities:
The successful candidate will be involved in conceptualizing, leading, and performing experimental research and development in the area of edge transport for the boundary and scrape-off layer in tokamaks and other toroidal confinement devices. The selected candidate will be responsible for interaction with division staff and the many external collaborators that the group works with. The candidate will be expected to work independently, lead R&D activities, develop diagnostic measurements for studying the edge and boundary plasma, compare data with existing theoretical models of plasma transport, fully document work in technical reports and publications, effectively interface with project sponsors, and participate in the identification and development of research proposals.

Technical Questions:
Questions regarding the position can be directed to Donald L. Hillis at Hillisdl@ornl.gov. Please include the requisition number and title when corresponding.

Qualifications The successful candidate must have a Ph.D in Plasma Physics or related fusion relevant area and publications in the area of edge and SOL transport in fusion devices, including familiarity with current scrape off layer transport theories and models. Initially, the successful candidate will work with a multi-disciplinary team of experimental and theoretical physicists as part of ORNL's Experimental Plasma Physics Group. We are especially interested in applicants with experience in fast ion physics, in interactions of RF heating with plasmas, in electronic instrumentation, and in developing software for data acquisition and analysis. The candidate should also be familiar with edge transport mechanisms in fusion devices and have experience with edge transport modeling. The ability to interact with theorists and to plan and interpret experiments in light of theoretical models is a major consideration. Experience with stellarator research and the importance of 3-D field effects to plasma confinement would be a plus. Excellent verbal, presentation, and writing skills are required to enable effective interaction and communication with technical peers, program managers, collaborators, and sponsors.

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Applicants cannot have received the most recent degree more than five years prior to the date of application and must complete all degree requirements before starting their appointment. Applications will be accepted until the position is filled.

Eligibility Requirements

- **Degree:** Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Physics** (16 👁)

Affirmation I certify that I have completed coursework towards a degree in science, technology, engineering, mathematics, or a related field.