

**Postdoctoral Research Associate
in Experimental Plasma Physics
(Located at General Atomics, San Diego, CA)**

**Fusion Energy Division
Energy and Engineering Sciences Directorate
Oak Ridge National Laboratory
Oak Ridge, Tennessee**

ORNL09-108-FED

Project Description:

The Fusion Energy Division at the Oak Ridge National Laboratory (ORNL) seeks applications for a Postdoctoral Scientist in the area of 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 plasma transport and boundary physics, as part of the ORNL collaboration on the DIII-D tokamak at General Atomics in San Diego, California. Employer will assist with relocation costs. Competitive postdoctoral salary depending on qualifications.

Major Duties and Responsibilities

The successful candidate will be involved in conceptualizing, leading, and performing experimental research and development in the area of soft x-ray imaging of the edge plasma magnetic topology during the application of Resonant Magnetic Perturbations (RMP) for edge localized mode (ELM) suppression in DIII-D. The selected candidate will be responsible for interaction with division staff and the many external collaborators that work with the ORNL research group. The candidate will be expected to work independently, test and implement the x-ray diagnostic measurements for edge plasma characterization, compare data with existing theoretical models, fully document work in technical reports and publications, effectively interface with project sponsors, and participate in the identification and development of research proposals. The work assignment will be at the DIII-D tokamak in San Diego, California.

Qualifications:

The successful candidate must have completed a Ph.D in Plasma Physics or a closely related field. The applicant is expected to have experience in boundary physics plasma characterization. We are especially interested in applicants with experience in imaging diagnostics, calibration of diagnostic systems, electronic instrumentation, and development of software for data acquisition and analysis. The candidate should also be familiar with plasma transport mechanisms in fusion devices and have experience with transport modeling. The ability to interact with theorists and to plan and interpret experiments in light of theoretical models is a major consideration. Excellent verbal, presentation, and writing

skills are required to enable effective interaction and communication with technical peers, program managers, collaborators, and sponsors.

Applicants cannot have received the most recent degree more than five years prior to the date of application.

Technical Questions:

Donald L. Hillis

Oak Ridge National Laboratory, Fusion Energy Division

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How to Apply:

Qualified applicants must apply online at https://www2.ornl.gov/ORNL_POST/. All applicants will need to register before they can begin the online application. For complete instructions, on how to apply, please see the instructions at <http://www.ornl.gov/orise/edu/ornl/ornl-pdpm/application.htm>. When applying for this position, please reference the position title and number.

This appointment is offered through the ORNL Postgraduate Research Participation Program and is administered by the Oak Ridge Institute for Science and Education (ORISE). The position is open to citizens or legal permanent residents of the US without regard to race, color, age, religion, sex, national origin, physical or mental disability, or status as a Vietnam-era veteran or disabled veteran.