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Opportunity Title: General Atomics - Radio Frequency Diagnostics for Advanced Fusion Devices
Opportunity Reference Code: GA-RFDIAGNOSTICS-2021

Organization General Atomics (GA)

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How to Apply Click on Apply Now to start your application.

Description Do you have a passion for fusion energy science research? Are you interested in interacting with outstanding scientists and engineers in fusion energy science all while gaining insight into your research and career opportunities? We are looking for postdoctoral candidates interested in conducting research supporting the mission of General Atomics. Applicants should be available to conduct research at the hosting facility.

General Atomics designs, integrates and delivers advanced diagnostic instruments and systems for magnetic and inertial fusion and other applications. You will learn and support the activities of Diagnostic Development Program. You will research the development of innovative diagnostic concepts for advanced tokamaks. You will conduct research and learn in collaboration General Atomics senior diagnostic scientific staff. You will research the development of novel measurement techniques, their implementation, calibration and troubleshooting in labs and at research facilities such as the DIII-D National Fusion Facility, the analysis of data, and be involved in writing and publication of results in scientific journals.

Applicants with knowledge of radio-frequency (RF) instrumentation are preferred.

Under the guidance and mentorship of the DIII-D National Fusion Facility scientific staff, you will learn and participate in the following areas:

- Actively participate in the formulation and development of novel diagnostic solutions and the design of specialized RF components.
- Research and understand and formalize complex RF diagnostic principles, and compute and model synthetic measurements.
- Participate in a variety of specialized tasks related to the design, installation, calibration, testing, analysis and troubleshooting of RF diagnostic systems.
- Participate in the development of new or expansion of existing systems.
- Research in a safe manner in accordance with established operating procedures and practices.
- Record, document, synthesize and report all research activities.

For more information about General Atomics, please visit http://www.ga.com/fusion-technologies

This program is administered by ORAU through its contract with General Atomics. The initial appointment is determined by General Atomics. Appointments may be extended depending on funding availability, project assignment, program rules, and availability of the participant. Appointments are contingent on the availability of funds. The participant will receive a monthly stipend commensurate with educational level and experience. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORAU. The appointment is full-time at General Atomics DIII-D National Fusion Facility in the San, Diego, California. Participants do not become employees of General Atomics, DOE, or the program administrator, and there are no employment-related benefits.

Benefits

You will receive an annual stipend of approximately $80,000 - $90,000, based on your academic level and experience. The program may also provide a one-time $3,000 relocation

allowance (if eligible). The Initial appointment period is for up to 1 year (with the possibility of an extension). Extension of the appointment for the second year will be subject to satisfactory progress toward completion of the project assignments and availability of funds.

What is the anticipated start date?

General Atomics is ready to make an appointment immediately. Exact start dates will be determined at the time of selection and in coordination with the selected candidate. Applications are reviewed and the appointment will be filled as a qualified candidate is identified.

Nature of Appointment

The participant will not enter into an employee/employer relationship with ORAU, General Atomics, or any other office or agency. Instead, the participant will be affiliated with ORAU for the administration of the appointment through the ORAU appointment letter and Terms of Appointment.

A complete application consists of:

- Zintellect Profile
- Completed application questions
- A current Resume/CV, including academic history, employment history, publications, relevant experience, awards, and certifications.
- Transcripts - For this opportunity, an unofficial transcript or copy of the student academic records provided by the applicant or by academic advisors from internal institution systems may be submitted.

All documents should be in English or include an official English translation.

Documents sent by email, postal mail, or fax will not be considered. All supporting materials must be uploaded as PDF files so the document can be searched by Zintellect's search engine. Scanned items are not optimal for search engines. PDF must not require special certificates or passwords to open. Max file size is 10MB.

If you have questions, send an email to generalatomics@orau.org

Qualifications

You must:

- Be a U.S. Citizen, Lawful Permanent Resident, or Foreign National.
- Have received a doctoral degree in experimental science or engineering with emphasis on RF sensing prior to the official start date.
- Be available to conduct research at the hosting facility.
- Have experience in the development and installation of diagnostics, and the acquisition and analysis of experimental data.
- Have knowledge of theory, principles and practices in RF (THz, microwave) generation, transmission and detection.
- Have an understanding of RF wave interactions with plasmas.
- Have familiarity with SolidWorks, CST Studio, Comsol MultiPhysics, Matlab, Python or related software packages.
- Safely, responsibly and reliably operate complex systems with training.
- Be able to confront and troubleshoot complex technical problems and participate in the development of new concepts and principles.
- Be able to understand new concepts quickly and apply them accurately throughout an evolving project environment.

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- Be able to present abstract physical concepts to a wide audience and to synthesize results.

Successful candidates will be trained in required skills and in procedures and safety on the job, and will be mentored by qualified personnel.
For additional information about the hosting facility, application components, or other program-related information, contact generalatomics@orau.org.

If you have questions, please send an email to generalatomics@orau.org.

Eligibility Requirements

- **Degree:** Doctoral Degree received within the last 60 months or currently pursuing.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Engineering** (27 👁)
  - **Physics** (16 👁)