**Opportunity Title:** DOE Fusion Energy Sciences Postdoctoral Research Program
**Opportunity Reference Code:** DOE-FES-2020

**Organization** U.S. Department of Energy (DOE)

**Reference Code** DOE-FES-2020

**Application Deadline** 12/16/2019 4:00:00 PM Eastern Time Zone

**Description**

**Application Deadline: December 16, 2019 4:00 PM EST**

**Recommendation(s) Deadline: December 30, 2019 4:00 PM EST**

Do you have a passion for fusion energy and basic plasma 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 a recent or future doctoral degree recipient interested in conducting research supporting the mission of the U.S. Department of Energy's (DOE), Office of Science, Fusion Energy Sciences research and development programs.

The Office of Fusion Energy Sciences (FES) has two goals: (1) expand the understanding of matter at very high temperatures and densities, and (2) build the knowledge needed to develop a fusion energy source. FES is the largest federal government supporter of research related to developing a fusion energy source.

**What will I be doing?**

As a postdoctoral researcher in the FES Postdoctoral Research Program, you will conduct your proposed research related to the FES mission utilizing the expertise, resources, and capabilities available at your hosting facility. You will acquire experience and training in areas related to fusion energy and basic plasma science, have access to advanced equipment and facilities, increase your marketability in fusion energy disciplines, gain access to top scientists and gain insight into research and career opportunities through your experience. You will have the opportunity to collaborate with and learn from experts researching and experimenting with fusion energy.

Research in this program must be directed toward addressing problems at the forefront of plasma science, specifically in the areas of (1) Transients, (2) Plasma-Materials Interactions, (3) Integrated Simulations for Magnetic Fusion Energy Science, (4) Plasma Science Frontiers, or (5) Transformative Enabling Capabilities. For additional information on these areas, visit https://www.orau.gov/doe-fes-postdoc/applicants/about-fes.html.

**Where will I be located?**

You are responsible for finding a hosting facility and securing a mentor, so you will be embedded in a facility whose research aligns with your research goals and who can provide the resources you need for your research. Your mentor may also be a resource for your next career step. For more information on hosting facilities, visit https://www.orau.gov/doe-fes-postdoc/applicants/host-sites.html.

**Who do we want?**

- Applicants that have recently received or are currently pursuing a doctoral degree (received prior to the desired start date) and interested in conducting research in an area of interest to FES, specifically in the areas of (1) Transients, (2) Plasma-Materials Interactions, (3) Integrated Simulations for Magnetic Fusion Energy Science, (4) Plasma Science Frontiers, or (5) Transformative Enabling Capabilities
- Applicants who are highly motivated and willing to independently seek and secure a hosting facility and mentor to host them for the duration of the program appointment
- Preference is given to applicants who request a research facility other than the one where their doctoral degree was obtained

**Apply Today!**

We will need a completed application, copy of your academic records, a resume, a research plan including your proposed hosting facility and potential mentor, one letter of support from your potential mentor, and two recommendation forms. See below for detailed application requirements. In addition to the submitted application and supplemental materials, selection of participants is based on science and engineering background and compatibility of research interests with FES research programs.

**The benefits:**

You will receive an annual stipend of $71,000 plus limited reimbursement for health insurance costs. The program will also provide a one-time $3,000 relocation allowance (if eligible). You will also receive a $4,000 travel allowance per year. Travel allowance can be used to support travel to FES-related conferences (domestic or foreign). Appointment periods are for up to two years. The initial appointment period is for one year. Extension of the appointment for the second year will be subject to satisfactory progress toward completion of the project assignments and availability of funds. An International Collaboration Supplement is also available(optional). See International Collaboration Supplement section for more information.

**Nature of the Appointment**

Participants will not enter into an employee/employer relationship with ORISE, ORAU, DOE, or any other office of agency. Instead, participants will be affiliated with ORISE for the administration of the appointment through the ORISE Appointment Letter and Terms of Appointment.

**International Collaboration Supplement (Optional)**

Research proposals that potentially involve substantial international collaboration may request special supplemental travel funds to support costs associated with foreign travel. These funds are in addition to the stipend and stipend supplements awarded as part of the base FES postdoctoral research award (or base award). The International Collaboration Supplement only supports foreign travel costs and qualified costs associated with extended visits at a foreign institutions.

In addition to the standard conditions for the base award, the following must be met to qualify for an International Collaboration Supplement:

1. You must identify two project mentors - one from an institution in the United States and one from an institution abroad.
2. Your proposed research is specifically focused on developing a unique scientific competency or expertise.
3. For experimental research proposals:
   - You plan to spend a significant fraction of your appointment at a foreign facility in order to participate in various stages of an experimental campaign including but not limited to planning, preparation, execution, and data analysis.
   - Your proposal involves a collaborative research effort utilizing experimental data from both the foreign facility and either (i) experimental data from at least one facility located in the United States, and/or (ii) ongoing theory/simulation efforts by researchers in the United States
4. For theoretical or computational research proposals:
   - You plan to spend a significant fraction of the appointment at a foreign institution in order to collaborate closely with the proposed foreign mentor.
   - Your proposal contains a collaborative research effort involving fundamental theory and/or theoretical models developed abroad and either (i) ongoing theory/simulation efforts by researchers in the United States, and/or (ii) ongoing analysis of experimental data from fusion facilities in the United States.

Applicants who wish to be considered for International Collaboration Supplement should complete the special sections of the application, including a proposed two-year travel plan, schedule, and budget. **The incremental research enabled by the International Collaboration Supplement should be described in a separate dedicated section of the research plan so that the base research plan may still be selected even if the funds for the supplement are not provided.**

**Qualifications** **You must:**

- Be a U.S. Citizen or Lawful Permanent Resident.
- Have received a doctoral degree in an appropriate science or engineering discipline within four years of the desired start date or expect to complete degree requirements prior to the desired start date.
- Be available to conduct research at the hosting facility for up to two years.

Preferred skills include

- Experimental Plasma Physics
- Theoretical Plasma Physics
- Computational Plasma Physics
- Plasma-Material Interfacial Science

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**A complete application consists of:**

- Zintellect Profile
- Responses to Questions specific to the FES program
- Proposed Research Plan
- Letter(s) of Support from the potential research mentor(s). Mentors must be currently conducting or directing research in an area related to FES
- A current resume/CV, including academic history, employment history, relevant experiences & publications
- Transcripts - unofficial transcripts issued to the student may be submitted
- Recommendation Forms (2)
  - (1) Recommendation Form from your thesis or dissertation advisor - Recommendation form should include comments about the applicant.
  - (1) Recommendation Form from another colleague familiar with your research and relevant experiences - Recommendation form should include comments about the applicant.

**If you are applying for the International Collaboration Supplement (Optional), you must provide:**

- Additional Section in the proposed research plan that includes a proposed two-year travel plan, schedule, and budget. See International Collaboration Supplement section for more details on what is required for this section.
- Letter of Support (including contact information) from the potential research mentor at the foreign hosting facility.

For additional information about potential hosting facilities, application components, or other program-related information, visit https://www.orau.gov/doe-fes-postdoc/default.html.

All documents must 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, please send an email to Fusion@orau.org.

**Eligibility Requirements**

- **Citizenship:** LPR or U.S. Citizen
- **Degree:** Doctoral Degree.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Computer, Information, and Data Sciences** (1 👁)
  - **Earth and Geosciences** (3 👁)
  - **Engineering** (4 👁)
  - **Mathematics and Statistics** (1 👁)

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- **Physics** (16 👁)
- **Science & Engineering-related** (1 👁)

**Affirmation** I certify that I am currently pursuing or have received my doctoral degree with the last 48 months of the desired program start date.