

Opportunity Title: 2021 High Performance Computing Summer Internships

Opportunity Reference Code: DOE-EERE-HPC-2021

Organization U.S. Department of Energy (DOE)

Reference Code DOE-EERE-HPC-2021

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

Application Deadline 2/1/2021 11:59:59 PM Eastern Time Zone

Description The U.S. Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy (EERE) High Performance Computing for Manufacturing (HPC4Mfg) Internship Program offers 10-week, hands-on, practical internships at DOE national laboratories.

Why Should I Apply?

As a participant in the EERE HPC4Mfg Internship Program, you will perform research-level computational activities under the guidance of a mentor who is a technical staff scientist or engineer at a federal national laboratory. You will gain a competitive edge as you apply your education, talent, and skills to research and development projects focused on high performance computing (HPC). You will also be able to establish connections with DOE scientists and subject matter experts that promote long-term relationships between yourself, researchers, and DOE.

Benefits

- **Stipend:** Undergraduate students will receive \$600 per week and graduate students will receive \$750 per week.
- **Travel:** Travel reimbursement for inbound and outbound expenses up to \$1,000 for participants who live more than fifty miles, one-way, from the assigned hosting laboratory.
- **Housing Allowance:** A housing allowance of \$150/week is provided to participants who live more than fifty miles, one-way, from their assigned hosting laboratory and are paying for housing while on site.

Appointment Details

- Appointments will be for 10 consecutive weeks during the months of May-September 2021. Factors such as class schedules, housing availability, and laboratory schedules may be taken into consideration when determining appointment start and end dates.
- An appointment involves a full-time commitment at the host laboratory with the intern in residence on-site at the specified location.
- Interns are required to have health insurance coverage during the appointment period and to provide proof of this coverage prior to the start of the appointment.




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In response to the evolving situation related to the COVID-19 pandemic, hosting sites may modify their operation schedule and access to facilities to ensure the health and safety of their entire workforce while maintaining operational effectiveness. Hence, the appointment date and location are subject to change contingent on hosting site guidelines and may result in a virtual placement.

Review and Selection Process

Completed applications will undergo an eligibility and compliance check by ORISE. Hosting sites will review applications based on educational background, experience, interests, skills, career goals, and fit for projects. Hosting laboratories will submit their recommended candidates to EERE. Final selection will be made by a federal official from EERE. EERE will notify ORISE of final selections and ORISE will notify selected candidates and hosting laboratories.

Nature of Appointment

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

Background

For half a century, America has led the world in high performance computing (HPC) thanks to sustained federal government investments in research and development and regular deployment of new systems. The strong synergy between hardware development and software and application development has been a defining strength of the U.S. approach. High Performance Computing for Manufacturing (HPC4Mfg) unites world-class computing resources and the expertise of national laboratories to deliver solutions that could revolutionize manufacturing.

The HPC4Mfg program is a partnership between the public and private sectors to facilitate the use of advanced computational techniques in the private sector with the aim of reducing national energy consumption. In the HPC4Mfg Internship Program, student projects typically involve performing advanced simulation and modeling in topic areas such as materials, computational fluid dynamics, combustion and machine learning applied to scientific computational results. More information about the HPC4Mfg program can be found at <https://hpc4mfg.llnl.gov/>. This program is sponsored by the [Advanced Manufacturing Office \(AMO\)](#) within the [U.S. Department of Energy \(DOE\)](#), [Office of Energy Efficiency and Renewable Energy \(EERE\)](#).

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Qualifications **In order to be considered, applicants must meet each of the following criteria:**

- Be a U.S. citizen.
- Be at least 18 years old by May 1, 2021.
- Meet one of the following conditions:
 - Recent graduate: Have earned an undergraduate or graduate degree in the past two years in a discipline related to high performance computing.
 - Undergraduate Student: Be enrolled as a full-time student as a junior or senior at a U.S. accredited college or university during winter/spring 2021 and be pursuing a degree in a discipline related to high performance computing.
 - Graduate Student: Be enrolled as a full-time graduate student at a U.S. accredited college or university during winter/spring 2021 and be pursuing a degree in a discipline related to high performance computing.

Eligible disciplines can be found in the list below.

A complete application consists of:

- A completed Zintellect profile
- Essay Questions - The application includes questions specific to the opportunity.
- Academic Records - For this opportunity, an unofficial transcript or copy of the student academic records printed by the applicant or by academic advisors from internal institution systems may be submitted. Academic records must include the name, logo or other identification of the academic institution, name of the student, completed coursework, and grades.
- Current Resume/Curriculum Vitae
- One (1) Recommendation - Applicants are required to provide contact information for one recommendation in order to complete the application. You are encouraged to request a recommendation from a professional who can speak to your abilities and potential for success as well as your scientific capabilities and personal characteristics. Recommendation requests must be sent through the Zintellect application system. Recommenders will be asked to complete a recommendation in Zintellect. Letters of recommendation submitted via email will not be accepted.

Recommendation must be received by Monday February 1st, 11:59 PM EST.

Submitted documents must have all social security numbers, student identification numbers, and/or dates of birth removed (blanked out, blackened out, made illegible, etc.) prior to uploading into the application system. All documents must be submitted via Zintellect. All application components **must** be received in the system in order to be considered.










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If you have questions, please send an email to hpc@orise.orau.gov. Please list the reference code [DOE-EERE-HPC-2021] for this opportunity in the subject line of your email.

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Eligibility Requirements

- **Citizenship:** U.S. Citizen Only
- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 24 months or currently pursuing.
- **Discipline(s):**
 - **Chemistry and Materials Sciences** (12 )
 - **Computer, Information, and Data Sciences** (16 )
 - **Earth and Geosciences** (21 )
 - **Engineering** (27 )
 - **Environmental and Marine Sciences** (2 )
 - **Life Health and Medical Sciences** (46 )
 - **Mathematics and Statistics** (10 )
 - **Physics** (16 )
 - **Science & Engineering-related** (1 )
- **Age:** Must be 18 years old by 5/1/2021