

Opportunity Title: IOT Sensor Development to Aid in Agricultural Frost Prediction

Opportunity Reference Code: DOE-MSIPP-20-9-LANL

Organization U.S. Department of Energy (DOE)

Reference Code DOE-MSIPP-20-9-LANL

How to Apply A complete application must include the following to be considered:

- Completion of all required fields in the application and successful application submission
- Undergraduate or graduate transcripts as appropriate
- Two recommendations

If you have questions, send an email to us at MSIPPinternships@orau.org. Please include the reference code for this opportunity in your email.

For Technical information, contact Cassandra Casperson at Casperson@lanl.gov.

Application Deadline 1/31/2020 11:59:00 PM Eastern Time Zone

Description The Minority Serving Institutions Partnership Program (MSIPP) Internships is a new program to promote the education and development of the next generation workforce in critical science, engineering, technology, and math (STEM) related disciplines that complement current and future missions of DOE national laboratories. The MSIPP Internship program is designed to provide an enhanced training environment for next generation scientists and engineers by exposing them to research challenges unique to our industry.

MSIPP Interns will be given the opportunity to complete Summer Internships aligned with ongoing U.S. Department of Energy Office of Environmental Management (DOE-EM) research under the direction of a host national laboratory. The internship will be performed at the host national laboratory, utilizing their facilities and equipment under the guidance of a research staff member.

Minority Serving Institutions are institutions of higher education enrolling populations with significant percentages of undergraduate minority students.

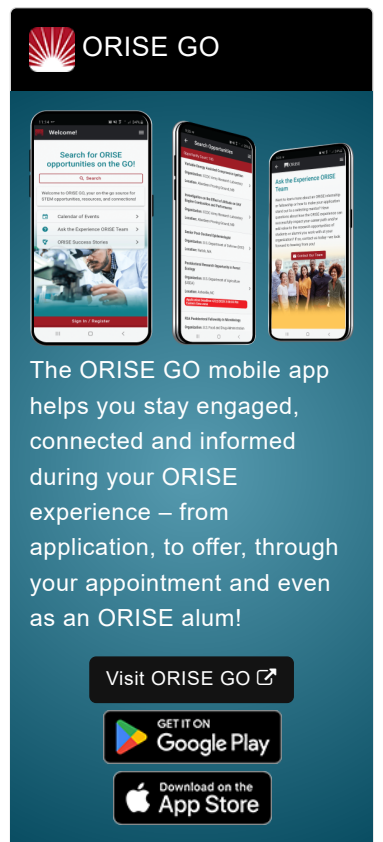
For more information about The Minority Serving Institutions Partnership Program (MSIPP) Internships, please visit [here](#).

To see all MSIPP position postings visit: <https://orise.orau.gov/msipp/>

Project Description:


Date of Appointment: May 26-July 31, 2020


This position provides hands-on experience to get acquainted with Internet-of-Things (IOT) sensor development, deployment, monitoring and data analysis to aid in frost prediction at northern New Mexico fruit orchards. The participant will be involved with instrumentation builds and set-up, data collection and analysis and participate in weekly meetings to collaborate on project planning. There is the potential to participate on small


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scientific/engineering research teams working on projects related to sensor design, data-driven models using Machine Learning (ML) and plant physiological experiments. The ability to participate in field activities will be required.

Salary: Selected candidate will be compensated by either a stipend or salary, and may include one round trip domestic travel to and from the host laboratory. Stipends and salaries will be commensurate with cost of living at the location of the host laboratory. Housing information will be provided to interns prior to arrival at the host laboratory, and will vary from lab to lab.

Qualifications Required Knowledge, Skills, Work Experience, and Education Successful candidates will:

-Experience using Microsoft Office suite (Excel, Word, Powerpoint)

Desired Knowledge, Skills, Work Experience, and Education It is desirable for the candidate to have:

It is desirable for the candidate to have:

- Coding experience in Python, R, Matlab or C
- Experience doing field work

- Eligibility Requirements**
- **Citizenship:** U.S. Citizen Only
 - **Degree:** Currently pursuing an Associate's Degree, Bachelor's Degree, Master's Degree, or Doctoral Degree.
 - **Overall GPA:** 3.00
 - **Academic Level(s):** Graduate Students or Undergraduate Students.
 - **Discipline(s):**
 - **Computer, Information, and Data Sciences** ([2](#))
 - **Earth and Geosciences** ([6](#))
 - **Engineering** ([5](#))
 - **Environmental and Marine Sciences** ([3](#))
 - **Life Health and Medical Sciences** ([10](#))

Affirmation I certify that I am at least 18 years of age, a US citizen, and currently enrolled as a student in a degree seeking undergraduate or graduate program in a STEM field at an accredited Minority Serving Institution (MSI). Click [here](#) to verify that you are enrolled at a current MSI.