



Student Scholarship Internship Opportunity (SSIO) Online System

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SSIO 2022 Internship Opportunity Position

Internship Information

Project title: Calibration and Validation of VIIRS Vegetation Index and Green Vegetation Fraction Products

NOAA mission goal: Integrated Across All NOAA Goals

Hypothesis or objectives: The objective for this internship is to provide validation support for VIIRS vegetation products (Vegetation Index and Green Vegetation Fraction). These data sets are produced operationally, and archived and distributed from the NOAA CLASS system. Calibration and validation of these data products is ongoing, and so far these products have been shown to be consistent with several other data sets. It is hypothesized that good consistency will also be found when comparing the vegetation products against additional data sets.

Academic status: Graduate

Estimated start - end date: June 2022 - August 2022

Duration: 3 months

Area(s) of discipline: Earth Science, Geography, Remote Sensing Technology

Internship location: College Park, MD

Duties and responsibilities:

- Investigate potential data sources for comparison to polar-orbiting satellite vegetation index and green vegetation fraction data sets.

- Obtain data required for comparison.

- Carry out statistical and time series analyses to characterize performance of VIIRS vegetation data.

- Produce report describing the VIIRS vegetation products, the reference data sets, the correspondence between them, and the resulting evaluation of the VIIRS vegetation products.

Special skills/training required: Programming experience in a high-level language such as Python or IDL.
C++ or Fortran

Linux system

Experience with remote sensing data formats such as netCDF and HDF would be helpful.

Expected outcomes: The student would learn about the process of satellite remote sensing of vegetation. The student would gain experience in working with remote sensing and ground-based sensor data sets and in applying a range of quantitative analysis methods. In addition, the student would obtain experience in oral and written communication of research results in a professional context.

Guidance and supervision: The student would meet regularly (at least weekly) with NOAA or

NOAA-affiliated PhD level researchers. Written background material would be provided before the internship began, and the student would have an opportunity to ask questions to clarify their understanding of the material. The student would be expected to provide regular reports on their research results and would receive feedback and guidance until completion of the project.

Application package: Letter of recommendation/or names of references
Resume
Unofficial transcript
Cover letter

Posted or modified date/time: Monday, September 27, 2021 - 1:19:00 PM

Internship Travel Information

Purpose (student's role): ---

Mode of transportation: ---

Date(s): ---

Destination: ---

Estimated cost: ---

Source of funding: ---

Mentors Contact Information

Name: Yunyue (Bob) Yu

Organization: National Environmental Satellite, Data, and Information Service (NESDIS)

Program office: STAR

Mailing address: Nesdis/Star/Smcd
College Park, MD 20740

Fax number: None

Phone number: 301-683-2566

Email: yunyue.yu@noaa.gov

Co-Mentor name: Corinne Carter

Co-Mentor email: corinne.carter@noaa.gov

Agency or organization: NOAA Affiliated



Admin Action

Submitted internship: **Approve**
 Disapprove

Additional comment(s):
(300 characters max)

Accepted for a minimum 3-month EPP NERTO internship. Requires: a workplan developed by CSC and NOAA mentor; substantial engagement with NOAA mentor; and, NOAA-aligned professional development. Queries are sent to: oed.epp10@noaa.gov.

Admin Initials (required):

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