COLLABORATIVE PROJECT
GUJARAT UNIVERSITY & SAC-ISRO

On

Development of algorithms for carbon and nitrogen-based productivity in Bay of Bengal and Arabian Sea and their role on biogeochemistry

(Oceansat-3 Program - 2023-2026)

Rules for the Selection of Research Fellow/Junior Research Fellow

1. Two Project fellow/Research Fellow positions are from the date of the appointment to end of project with fixed remuneration of Rs. 15,000/- per month. But incase of any irregularities or indiscipline found then you will be terminated at any point of the time.
2. The candidate should have M. Sc. with Chemistry/Environmental science or M. Sc. with Geoinformatics (But must have project related work experience with minimum B+/55% (at university/External exam) from reputed University#.

   [Note : Students who appeared in April - 2023 for Exam and whose results are not declared they can apply but they must get B+/55%, if not then that fellow will be terminated. This is only for M. Sc. Chemistry]
3. The candidate should have basic knowledge of water analysis, water sampling, various analytical instruments, knowledge of computer, data analysis, remote sensing etc... and more related to the project.
4. The candidate has to go for collecting the water samples deep into various areas of the Arabian Sea as well as ship cruises trips as planned by the SAC-ISRO for the sample collection and analysis requirements for the project.
5. The candidate has to travel for the collection of samples, do the analysis work at Lab, data analysis, remote sensing data analysis and other project related work including the administrative, purchase and accounting etc…
6. #As per the number of applications the selection process will be finalized by the PI/Co-PI Team of the project based on applications securitization and

shortlisted candidates will be informed for the online/offline MCQ based test. Then after whoever qualified students will be called for personal interview. After personal interview the only the selected candidate will be informed.

7. All Selection rights are reserved with the PI/Co-PI and Team of the project.
8. *The duration of the project is April 2023 to March 2026, but in any condition if project is in between closed or early completion as per the proposed plan then PI/Co-PI/Funding agency/Gujarat University can end the tenure before the duration mentioned. The Project fellow/Research Fellow will not get remuneration and will not take any legal or judicial action against the PI/Co-PI/Funding agency SAC-ISRO/Gujarat University.
9. The position of Project fellow/Research Fellow is only temporary post with fixed remuneration of Rs. 15,000/- per month, so the candidate never claims for the job at the Gujarat University and / or SAC-ISRO.
10. The candidate must give undertaking for non-discloser of information/non-discloser agreement (NDA) of the results/work done/ or any secret related to project work or SAC-ISRO. If done so then legal action will be taken as per the norms of SAC-ISRO/Government of INDIA as well as Gujarat University.
11. The candidate has to follow all instructions given by PI/Co-PI/Funding agency, SAC-ISRO/Gujarat University, follow protocol and maintain discipline during the tenure of the project. If any such thing is found then the Project fellow/Research Fellow will be terminated with immediate effect.
12. The candidate will never claim the property rights on the output the work done.
13. Without permission of the PI/Co-PI/Funding agency, SAC-ISRO/Gujarat University the candidate is not allow to publish/present any carried out work throughout the project.
14. In case of any situation the PI/Co-PI/Funding agency, SAC-ISRO/Gujarat University decision is the final.
15. Before joining your all required original documents will be verified, if you fail to produce then you will be disqualified.
16. For application only online application will be accepted via the Link - https://forms.gle/UBtnD2PEg7tZYqHn6

For any query, please write a brief note/message on

Email ID : hgursac2021@gmail.com

Brief Information about the project

Study area

The study area will be of Northeast Arabian Sea and seasonal analysis will be done. In the northeast Arabian sea, October to May months will be more favorable in concern of weather conditions. The seasonal analysis will be done by regularly planned field trips using coastal vessels and ship cruises in different types of water in Arabian Sea.

Data requirements

- Geophysical parameters and other levels of satellite data
  Normalized water leaving radiance (Lwn), Remote sensing reflectance (Rrs), Chlorophyll, Sea Surface Temperature (SST), Salinity, Wind speed, Diffuse attenuation coefficient (Kd), Photosynthetic active radiation (PAR), etc.
- Satellite data: Oceansat-3, Oceansats-1/2, Scatsat, other Indian and International missions
- In-situ observations from various campaigns and buoys
- Chemical analysis/parameter to be studied of samples such as Pigments, Suspended matter, Transparency, pH, Salinity, wind speed, Dissolved Oxygen, and nutrients (nitrate, ammonia, phosphate, and silicates), Nutrients, estimation of 13C and 14N, carbon components (TOC and nitrogen components (PON and TON) etc.
- Model analysis/forecast datasets

Methodology

1. Samples will be collected from the various depths of the ocean.
2. Study of chemical and bio-physical parameters of collected samples.

I. Sampling of 13^C and 15^N will be done on-site and will be analyzed as per the literature survey with standard protocol by IOCCG, JGOFS, etc.

II. The Samples will be analyzed with the help of an Elemental analyzer and Isotope Ratio Mass Spectrometer and TOC analyzer. Spectrophotometer, fluorometer and HPLC will be used. Radiometer will be operated to obtain water leaving radiance and remote sensing reflectance.

III. Based on the results the data will be fed to satellite data to get information via imaging study.

Expected results

Primary productivity and new production images and atlases.

The study will bring out the DOC, TOC, CDOM, DON/PON and TN maps and atlases.

OCM 3 data-based and SSTM data-based carbon and nitrogen components products.

Technical papers and reports.

Modelled outputs and methods would be used to generate operational products.