




Sankar Prasad Lahiri


DATE OF BIRTH:
18 Jul 1996


CONTACT

Nationality: Indian

Gender: Male

 Fatepur, Belhati, Nanoor-
Chandidas Road, Birbhum,
West Bengal,
731301 Bolpur, India

 asz208187@iitd.ac.in
[sankarprasadlahiri2@gmail.co
m](mailto:sankarprasadlahiri2@gmail.com)

 (+91) 9002819574
(+91) 7908028749

EDUCATION AND TRAINING

OCT 2020 – CURRENT – Hauz Khas, Delhi, India

Doctor of Philosophy

Centre for Atmospheric Sciences, Indian Institute of Technology
Delhi

Field(s) of study

◦ Air Sea Interaction

9.214 (in coursework) | <https://cas.iitd.ac.in/>

1 AUG 2018 – 30 MAY 2020 – Sector - 1, Rourkela, India

Master of Technology

National Institute of Technology Rourkela

-- Theory --

Theoretical Meteorology, Applied Atmospheric Dynamics, Physical and dynamical Oceanography, Introduction to Climate Science, Physics of Clouds, Weather and Climate modeling, Modelling oceanic processes and Applied Meteorology.

-- Laboratory subjects --

Instrumentation Laboratory, Programming Laboratory, Remote Sensing Laboratory, and numerical simulation Laboratory.

Field(s) of study

◦ Atmosphere and Ocean Sciences

9.07 | Assessment of Upwelling in North Indian Ocean | [https://
www.nitrkl.ac.in/](https://www.nitrkl.ac.in/)

AUG 2013 – MAY 2017 – Fuljhore, Durgapur, India

Bachelors of Technology

Dr. B.C. Roy Engineering College (Affiliated to West Bengal
University of Technology)

-- Theory --

Surveying, Strength of Materials, Building Material and Construction, Fluid Mechanics, Structural Analysis, Soil Mechanics, Engineering Mathematics, Design of Reinforced Cement Structure, Concrete Technology, Foundation Engineering, Highway and Transportation Engineering, Design of Steel Structure, Prestressed Concrete, Environmental Engineering, Water Resource Engineering, Environmental Pollution and Control, Physics and Chemistry.

-- Laboratory Subjects --

Surveying, Building Design and Drawing, Strength of Materials, Numerical Methods, Programming Lab, Concrete Laboratory, Quantity Surveying and Valuation, Detailing of RC and Steel Structure, CAD Laboratory

Field(s) of study

◦ Civil Engineering

8.24 | Improvement of the Bearing Capacity of Soil using Environment Friendly Materials | <http://bcrec.ac.in/>

4 JUL 2016 – 30 JUL 2016 – Sukhobristi Project Site, Newtown, Kolkata, India

Industrial Training 2

Simplex Infrastructure Limited

One of the major projects in Kolkata is the Sukhobristi housing project where the houses are delivered to poor people at a cheaper rate. The quality control of concrete blocks and the proper foundation of reinforced concrete cement is very important in such construction sites. The practical use of the Reinforced Concrete Cement and different concrete lab tests are studied and the implication at a large scale is also observed. The estimation of the reinforced columns are also calculated in order to get an overview of the budget of the project

Field(s) of study

- Construction and Estimation

<http://www.simplexinfra.com/>

28 DEC 2015 – 27 JAN 2016 – Burdwan Dental College, Burdwan, India

Industrial Training 1

Mackintosh Burn Limited

After a discussion for more than a year, the expansion of Burdwan Dental College became inevitable and the construction of a four-storied building was proposed. The extensive use of the Pile foundation to support the huge dead load was one of the main attractions for the student community. I have learned the process of constructing a pile foundation and the purpose of using multiple-legged pile foundations at different places. The estimation of the all pile foundation is also calculated as a part of the project work.

Field(s) of study

- Construction and Estimation

WORK EXPERIENCE

MAY 2019 – JUL 2019 – Ahmedabad, India

Summer Internship

Indian Academy of Sciences and Space Applications Centre, Indian Space Research Organization

Variation of Antarctic Sea Ice in five sectors has been studied using Indian satellite Scatsat -1 images. A fluid algorithm is developed in python so that it can be used to study future images from the Scatsat1 satellite.

** More details are provided in the project section.

Professional, scientific and technical activities / [https://www.ias.ac.in/
http://reports.ias.ac.in/report/20304/utilization-of-scatsat-1-derived-sea-ice-images-for-sector-wise-temporal-analysis-of-the-antarctic-sea-ice-area](https://www.ias.ac.in/http://reports.ias.ac.in/report/20304/utilization-of-scatsat-1-derived-sea-ice-images-for-sector-wise-temporal-analysis-of-the-antarctic-sea-ice-area)

PROJECTS

OCT 2020 – CURRENT

● **Characteristics of oceanic circulation features of the North Indian Ocean and its influence on the Indian summer monsoon**

The subsurface circulation in the north Indian Ocean (NIO) is very complex and less explored. This project aims to study the NIO circulation from surface to 1000m depth by identifying different water masses and their presence at different regions in NIO. An analytical study will also be carried out to observe the influence of the vertical stratification of the Ocean layers and the variability caused by these water masses. The importance of vertical salinity profile and stratification on the Arabian Sea Mini Warm Pool and its variability that can hamper the onset of the Indian Summer Monsoon will also be explored in the future.

AUG 2019 – JUL 2020

● **Assessment of Upwelling in North Indian Ocean and Its Influence on the Indian Summer Monsoon (1988 - 2018)**

Upwelling is a process by which subsurface nutrient-rich water reaches the surface. Any change in this upwelling process can cause a drastic change in the biological productivity in the associated region. This process also impacts the climate of the surrounding region. In this project, I have looked into the changes in the climatological upwelling in Oman and Somalia coast, and west and east coast of India by observing the trend in sea surface temperature, chlorophyll-a, and nitrate concentration. A gradient-based SST upwelling index is developed to study the evolution of upwelling during El Niño and La Niña and to investigate the decadal relationship between upwelling in Somalia and Oman coast and one of the greatest weather events in the world, the Indian Summer Monsoon.

MAY 2019 – JUL 2019

● **Utilization of ScatSat-1 derived sea ice images for sector-wise temporal analysis of the Antarctic sea ice area**

Using Scatsat-1 sea ice images, the temporal evolution of the Antarctic sea ice area is observed in five different sectors. ECMWF ERA-Interim air temperature and sea surface temperature datasets are used to understand the freezing and melting pattern and to better predict these seasonal cycles. An attempt of comparative study has been made to better monitor the extent of sea ice area in all five sectors. A python programming-based algorithm is developed in such a way that apart from the study year of 2017 and 2018 all the future Scatsat - 1 images can also be processed using the same script.

PUBLICATIONS

● **Assessment of Indian Ocean upwelling changes and its relationship with the Indian monsoon**

2021 <https://www.journals.elsevier.com/global-and-planetary-change>

Global and Planetary Change

Lahiri, S.P., & Vissa, N.K. (2021). Assessment of Indian Ocean upwelling changes and its relationship with the Indian monsoon. Global and planetary change, (under review).

● **Utilization of ScatSat-1 derived sea ice images for sector-wise temporal analysis of the Antarctic sea ice area**

2019 <http://reports.ias.ac.in/report/20304/utilization-of-scatsat-1-derived-sea-ice-images-for-sector-wise-temporal-analysis-of-the-antarctic-sea-ice-area>

Indian Academy of Sciences Report

Lahiri, S.P., & Kumar, Raj. (2019). Utilization of ScatSat-1 derived sea ice images for sector-wise temporal analysis of the Antarctic sea ice area, Indian Academy of Sciences Report

HONOURS AND AWARDS

- **24 SEP 2019**
Summer Research Fellow – Indian Academy of Sciences

SCHOLARSHIPS

- **OCT 2020 – CURRENT**
Junior Research Fellow (Indian Institute of Technology Delhi)
1 AUG 2018 – 1 JUN 2020
- **PG scholarship from MHRD (Ministry of Human Resources and Development) India.**

EXAMS

- **TOEFL**
Score 95
- **GATE**
Score 446

CONFERENCES AND SEMINARS

- **> Goa**
Seventh National Conference of the Ocean Society of India (OSICON - 21)
Inflow and Spreading of the Red Sea and Persian Gulf Water into the Arabian Sea.
<http://www.osicon21.ncpor.res.in/>

DIGITAL SKILLS

Data Analysis

Python / Matlab / Data Analysis using GrADS, Origin / NCL / R (R for Programming and Data Science)

Modelling

ROMS (Regional Ocean Modeling System) / WEATHER RESEARCH AND FORECASTING MODEL (WRF)

Remote Sensing

ArcGIS, QGIS and ERDAS IMAGINE

Designing

STAAD pro / Basics knowledge of working in AutoCAD / 3dsMax basic

Basic

Linux system programming / Microsoft Powerpoint / Microsoft Word / Linux / Microsoft Office

LANGUAGE SKILLS

MOTHER TONGUE(S): Bengali

OTHER LANGUAGE(S):

Hindi

Listening
C2

Reading
C2

**Spoken
production**
C2

**Spoken
interaction**
C2

Writing
C2

English

Listening
C2

Reading
C2

**Spoken
production**
C2

**Spoken
interaction**
C2

Writing
C2

HOBBIES AND INTERESTS

- Exploring different places
- Playing cricket
- Gathering information about world geopolitics
- Watching documentary and Listening music