

PABAN KUMAR BHUYAN

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Department of Applied Mechanics, Indian
Institute of Technology Delhi, Hauz Khas,
New Delhi-110016, India.

Research Interests: Submesoscale processes driven by river plumes, Ocean Modelling, Boundary Currents, HF Radar, and application of Deep Learning in Oceanography.

EDUCATION:

July 2018 – 2020 **M.Tech in Climate Science and Technology (CGPA: 8.52/10)**

School of Earth, Ocean and Climate Sciences

Indian Institute of Technology Bhubaneswar, India.

Advisors: Dr. Sourav Sil

Thesis Title: “Characterization of East India Coastal Current from observation and model”.

July 2011 – **B.Tech in Civil Engineering (CGPA: 6.75/10)**

May 2015 *Government College of Engineering Kalahandi, Odisha, India*

RESEARCH EXPERIENCE

July 2020 – Present (As **Junior Research Fellow** at Deptt. of Applied Mechanics, IIT Delhi)

Advisors: Dr. Vamsi Krishna Chalamalla

- Working on projects entitled:

“A numerical study of submesoscale processes driven by river
plumes in the Bay of Bengal Region”

Sponsoring agencies: Science and Engineering Research Board (SERB), DST

March 2019 – January 2020

Advisors: Dr. Sourav Sil

- Partly worked on projects entitled:

Quality Control of HF Radar Surface Currents for
the investigation of sub-mesoscale Coastal Process
and its use for assimilation in the INCOIS Model.

Sponsoring agencies: Indian National Centre for Ocean Information Services (INCOIS).

Awards & Achievements

1. 2011-2015 Foundation For Excellence Scholarship.
2. 2018-2020 GATE Fellowship

Skills Acquired :

1. Good Working Knowledge in Python, Matlab, R, ROMS (AGRIF and Rutgers version).
2. Experience in CDO, Fortran, Bash Scripting, SNAP (Sentinel Application Platform), GrADS, PARCELS(Probably A Really Computationally Efficient Lagrangian Simulator), ODV(Ocean Data View), Panoply, ParaView, Ferret, Git.

FIELD Experience:

1. IIT Bhubaneswar - State Pollution Control Board Joint Program (2 days on R/V Sagar Utkal).Conducted for Observational Data collection using CTD and Current meter from Bay of Bengal(Paradeep Coast).
2. Visit to Indian Meteorological Department for launching of Radiosonde, and to study different observational instrument for rainfall, solar irradiance, temperature and humidity measurements.

Job Experience- August 2015- March 2016 (Site Engineer at LP Associates)
May 2016- October 2016 (Site Engineer at JUSCO)

Conference:

1. **Paban Kumar Bhuyan**, Samiran Mandal and Sourav Sil: Characterization of the East India Coastal Current using a Drifter, HF Radars and Altimetry during October – November 2015. “AGU Fall meeting 9 – 13 December 2019”.
<https://doi.org/10.1002/essoar.10501913.1>
 2. **Paban Kumar Bhuyan** and Sourav Sil : Inter-annual Variation of Salinity Associated with Boundary Currents in the Bay of Bengal. “International Symposium on Advances in Coastal Research with Special Reference to Indo Pacific-2019” AdCoRe IP-2019 (17-19 December 2019). <https://doi.org/10.5281/ZENODO.3813029>
 3. **Paban Kumar Bhuyan**, Samiran Mandal and Sourav Sil: Characterization of the East India Coastal Current using a Drifter, HF Radars and Altimetry. “Sixth Biennial Conference of Ocean Society of India” OSICON – 19 (12-14 December 2019).
 4. Rahul Deogharia, Samiran Mandal, **Paban Kumar Bhuyan**, and Sourav Sil: A kriging based approach to restoration of HF radar derived ocean surface currents. “Sixth Biennial Conference of Ocean Society of India” OSICON – 19 (12-14 December 2019).
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MANUSCRIPTS IN PREPARATION:

1. “Characterization of the East India Coastal Current using a Drifter, HF Radars and Altimetry during October – November 2015” will be submitted to Journal of Operational Oceanography.

Workshop Attended:

1. International Workshop on “Discovery and Use of Operational Ocean Data Products and Services”

Jointly Organised by the UNESCO/IOC IODE and INCOIS-ITCOcean
01-05 July 2019, Hyderabad, India.

2. “Use of Earth Observation data for improved Urban Environmental Monitoring”

Jointly Organised by Indian Institute of Technology Bhubaneswar and the University of Southampton.
10-11 July 2019, IIT Bhubaneswar, India.

3. “Neural Network Machine Learning Bootcamp.” Conducted by Coding Blocks.

24-25th August 2019. IIT Bhubaneswar, India.

4. “TERI – NORCE Research School on Data Science in Climate Research:

Perspectives on Climate Extremes”15-18 October 2019.

Organised by The Energy and Resources Institute (TERI) in collaboration with NORCE
Klima Research Center, Norway.

5. “CHAPNET-2019: International Workshop on Advanced Machine Learning Techniques for Climate Informatics”, 04-06 November 2019.

Organized by: Geoscience and Remote Sensing Society (GRSS, IEEE), Kolkata Chapter
In association with
Center for Soft Computing Research, Indian Statistical Institute, Kolkata, India

6. “Artificial Intelligence for Earth System Science (AI4ESS) Summer School” (Virtually)

June 22-26, 2020 Organised by: National Center for Atmospheric Research (NCAR,
Boulder, Colorado, USA).

COURSES ATTENDED:

Core Courses

- Mathematical and Statistical Methods in Earth System Science.
- Dynamics of Atmosphere and Ocean.
- Physics of Atmosphere and Ocean.
- Satellite Oceanography and Meteorology.
- Planetary and Marine Boundary Layer.
- Simulations of Atmospheric and Oceanic Processes.

Other Courses

- Advanced Dynamic Meteorology.
- Science of Climate and Climate Change.
- Tropical Meteorology.
- Earth and It’s Interior.