## Arnab Mukherjee

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Scientist D

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## Personal Information

Date of Birth : 25 March 1986

Sex : Male

Marital Status : Married

Nationality : Indian

## Scientific Information

Total Number of Published Paper in Peer-review journals: 19

Total citation of published papers including Ph.D. thesis: 457

H-index: 12 and i10index: 12 (google scholar)

## Education

Ph.D. (2017), National Institute of Oceanography, CSIR, India and Goa University, Goa, India. Thesis title: *Intraseasonal variability of currents along east coast of India.*

M.Sc. (2008) Physics, Indian Institute of Technology (IIT), Delhi, India.

B.Sc. (2006) Physics Hons., Katwa College, Burdwan University, West Bengal (WB), India.

10+2 (2003), Katwa Bharati Bhavan, WB Board of Higher Secondary, WB, India.

10 (2001), Katwa Bharati Bhavan, WB Board of Secondary, WB, India.

## Research Area

- Global Sea-Ice modeling
- Global ocean circulations
- Observed variability and dynamics of the polar ocean
- Deep sea variability and climate change
- Coastal Dynamics

## Job Experiences

- Scientiist 'D' (12 December 2019 – Till date) at Arctic Ocean - Atmospheric Interaction Group, National Centre for Polar and Ocean Research (NCPOR), Ministry of Earth Sciences (MoES), Government of India.
- Project Scientist 'C' (23 January 2019 – 11 December, 2019) at Modeling and Data Assimilation Group (MDG), Indian National Centre for Ocean Information Services (INCOIS), Ministry of Earth Sciences, Government of India.
- Project Scientist 'B' (November, 2014–22 January, 2019) at Modeling and Data Assimilation Group (MDG), Indian National Centre for Ocean Information Services (INCOIS), Ministry of Earth Sciences, Government of India.
- Junior and Senior Research Fellow (November, 2009–October 2014) at Physical Oceanography Division (POD), National Institute of Oceanography (NIO), CSIR, Goa, India.
- Project assistant (August 2008–October 2009) at Computational Neuroscience Division, National Brain Research Center (NBRC), DBT, Gurgaon, India.

## Academic students

### 0.0.1 PhD student

• Mr. Supriyo Ghosh, (Joined January 2022)

### 0.0.2 Summer/winter internship

• Ms. Oishi Chakraborty, M.Sc student from University of Hyderabad, India, (May–July 2021)..

• Mr. Ravi Teja, M.Sc student from University of Hyderabad, India, (May–July 2021)..

• Mr. Nandakishore, M.Sc student from Kerala University of Fisheries and Ocean Studies, Kochi, India, (May–June 2019)..

• Mr. Ranjan Sahu, M.Sc student from University of Hyderabad, India, (May–July 2019)..

• Mr. Supriyo Ghosh, M.Sc student from University of Hyderabad, India, (May–July 2019).

• Ms. Arpita Panda, Int. M.Sc student from University of Hyderabad, India, (May–July 2018)

• Mr. Bijit Kalita, M.Sc student from University of Hyderabad, India, (May–July 2017).

### 0.0.3 Master dissertation

• Ms. Priyanka Ghosh, M.Sc student from University of Calcutta, India, (January–May 2021).

• Ms. Anjali Kumari, M.Sc student from University of Calcutta, India, (January–May 2021).

• Mr. Supriyo Ghosh, M.Sc student from University of Hyderabad, India, (January–May 2020).

• Mr. Bijit Kalita, M.Sc student from University of Hyderabad, India, (January–May 2018).

## List of Publications

### 0.0.4 Accepted/published

[19] • V. Jain, D. Shankar, P. N. Vinayachandran, **A. Mukherjee**, P. Amol. Role of ocean dynamics in the evolution of mixed-layer temperature in the Bay of Bengal during the summer monsoon.***Ocean Modelling*,168, 101895, 2021.** https://doi.org/10.1016/j.ocemod.2021.101895.

[18] • P. N. Vinayachandran, Y. Masumoto, M. J. Roberts, J. A. Huggett, I. Halo, A. Chatterjee, P. Amol, G. V. M. Gupta, A. Singh, **A. Mukherjee**, S. Prakash, L. E. Beckley, E. J. Raes, R. Hood. Reviews and syntheses: Physical and biogeochemical processes associated with upwelling in the Indian Ocean.***Biogeosciences*,18, 5967–6029, 2021.** https://doi.org/10.5194/bg-18-5967-2021.

[17] • M. Chatterjee, D. Shankar, V. Vijith, G. K. Sen, D. Sundar, G. S. Michael, P. Amol, A. Chatterjee, P. Sanyal, S. Chatterjee, A. Basu, S. Chakraborty, S. K. Mishra, K. Suprit, D. Mukherjee, **A. Mukherjee**, et. al. Variation of salinity in the Sundarbans Estuarine System during the Equinoctial Spring tidal phase of March 2011.***Journal of Earth System Science*,130–150, 2021.** https://doi.org/10.1007/s12040-021-01636-9.

[16] • P. A. Francis, A. K. Jithin, J. B. Effy, A. Chatterjee, K. Chakorborty, A. Paul, B. Balaji, S. S. C. Shenoi, P. Biswamoy, **A. Mukherjee**, et al. High-resolution Operational Ocean Forecast and Reanalysis System for the Indian Ocean.***Bulletin of American Meteorological Society*, 101 (08),1340–1356, 2020.**

https://doi.org/10.1175/BAMS-D-19-0083.1.

[15] • S. Mukhopadhyay, D. Shankar, S. G. Aparna, **A. Mukherjee**, V. Fernando, A. Kankonkar, S. Khalap, N. P. Satelkar, M. G. Gaonkar, A. P. Tari, R. R. Khedekar and S. Ghatkar. Observed variability of the East India Coastal Current on the continental slope

during 2009–2018. ***Journal of Earth System Science*, 129 (77), 2020.** https://doi.org/10.1007/s12040-020-1346-8.

[14] • P. A. Francis, A. K. Jithin, A. Chatterjee, **A. Mukherjee**, D. Shankar, P. N. Vinayachandran and S. S. V. S. Ramakrishna. Structure and Dynamics of the Undercurrents along the South-East Coast of India. ***Ocean Dynamics*, 70:387–404, 2020.**

https://doi.org/10.1007/s10236-019-01340-9.

[13]• E. B. John, P. A. Francis, S. Ramakrishna and **A. Mukherjee**. Anomalous warming of the Western Equatorial Indian Ocean in 2007: Role of Ocean Dynamics. ***Ocean Modelling* ,147:10142:1-11, 2020.** https://doi.org/10.1016/j.ocemod.2019.101542.

[12] • **A. Mukherjee**, Abhisek Chatterjee and P. A. Francis. Role of Andaman and Nicobar Islands in eddy formation along western boundary of the Bay of Bengal. ***Nature Scientific Reports* ,9, No: 10152, 2019.**

https://doi.org/10.1038/s41598-019-46542-9.

[11] • **A. Mukherjee** and B. K. Kalita. Signature of Laña in interannual variations of the East India Coastal Current during spring. ***Climate Dynamics*, 53, 551–568, 2019.**

https://doi.org/10.1007/s00382-018-4601-9.

[10] • P. Singh, A. Chatterjee, **A. Mukherjee**, M. Ravichandran and S. S. C. Shenoi. Wyrtki Jets: Role of Intraseasonal forcing. ***Journal of Earth System Science*,128:21, 2018.**

https://doi.org/10.1007/s12040-018-1042-0.

[09] • S. Mukhopadhyay, D. Shankar, S. G. Aparna and **A. Mukherjee**. Observations of the sub-inertial, near-surface East India Coastal Current. ***Continental Shelf Research*** , 148, 159–177, 2017. https://doi.org/10.1016/j.csr.2017.08.020.

[08] • **A. Mukherjee**, D. Shankar, A. Chatterjee and P. N. Vinayachandran.Numerical simulation of the observed near–surface East India Coastal Current on the continental

slope. ***Climate Dynamics*** , 50 (11–12), 3949–3980, Doi:10.1007/s00382-017-3856-x, 2017. https://doi.org/10.1007/s00382-017-3856-x.

[07] • A. Chatterjee, D. Shankar, J. P. McCreary, P. N. Chandrasekhar and **A. Mukherjee**. Dynamics of Andaman Sea circulation and its role in connecting the equatorial Indian Ocean to the Bay of Bengal. ***Journal of Geophysical Research*** , 122, 3200–3218, doi:10.1002/2016JC012300, 2017. http://onlinelibrary.wiley.com/doi/10.1002/2016JC012300/full.

[06] • V. Jain, D. Shankar, P. N. Vinayachandran, A. Kankonkar, A. Chatterjee, P. Amol, A. M. Almeida, G. S. Michael, **A. Mukherjee**, M. Chatterjee, R. Fernandes, R. Luis, A. Kamble, A. K. Hegde, S. Chatterjee, U. Das and C. P. Neema. Evidence for the existence of Persian Gulf Water and Red Sea Water in the Bay of Bengal. ***Climate Dynamics***, 48 (9), 3207-3206, 2017. https://doi.org/10.1007/s00382-016-3259-4

[05] • **A. Mukherjee**, D. Shankar, V Fernando, P. Amol , S. G. Aparna, R. Fernandes, G. S. Michael, S. T. Khalap, N. P. Satelkar, Y. Agarvadekar, M. G. Gaonkar, A. P. Tari, A. Kankonkar and S. P. Vernekar. Observed seasonal and intraseasonal variability of the East India Coastal Current on the continental slope. ***Journal of Earth System Science***, 123 (6), 1197-1232, 2014. https://doi.org/10.1007/s12040-014-0471-7.

[04] • P. Amol, D. Shankar, V Fernando, **A. Mukherjee**, S. G. Aparna, R. Fernandes, G. S. Michael, S. T. Khalap, N. P. Satelkar, Y. Agarvadekar, M. G. Gaonkar, A. P. Tari, A. Kankonkar and S. P. Vernekar. Observed intraseasonal and seasonal variability of the West India Coastal Current on the continental slope. ***Journal of Earth System Science***, 123 (5), 1045-1074, 2014. https://doi.org/10.1007/s12040-014-0449-5

[03] • M. Chatterjee, D. Shankar, G.K. Sen, P. Sanyal, D. Sundar, G.S. Michael, A. Chatterjee, P. Amol, D. Mukherjee, K. Suprit, **A. Mukherjee**, V. Vijith, S. Chatterjee, A. Basu, M. Das, S. Chakraborti, A. Kalla, S. K. Mishra, S. Mukhopadhyay, G. Mandal, and K. Sarkar. Tidal Variations in the Sundarbans Estuarine System, India. ***Journal of***

***Earth System Science***, 122 (4), 899-933, 2013.

https://doi.org/10.1007/s12040-013-0314-y.

[02] • **A. Mukherjee**, D. Shankar, S. G. Aparna, P. Amol, V. Fernando, R. Fernandes, S. Khalap, S. Narayan, Y. Agarvadekar, M. Gaonkar, P. Tari, A. Kankonkar and S. Vernekar. Near-inertial currents off the east coast of India. ***Continental Shelf Research***, 55, 29-39, 2013. https://doi.org/10.1016/j.csr.2013.01.007.

[01] • P. Amol, D. Shankar, S. G. Aparna, S. S. C. Shenoi, V. Fernando, S. R. Shetye, **A. Mukherjee**, Y. Agarvadekar, S. Khalap, and N. P. Satelkar. Observational evidence from direct current measurements for propagation of remotely forced waves on the shelf off the west coast of India. ***Journal of Geophysical Research***, 117, C05017, 2012. https://doi.org/10.1029/2011JC007606.

#### 0.0.5 Report

[1] • **A. Mukherjee**, A. Chatterjee, V. V. S. S. Sarma and S. S. C. Shenoi. Physical Sciences of the Ocean: A report to IAPSO. ***Indian National Science Academy*** , Indian National Report for IUGG, 2015.

[2] • J. P. McCreary , D. Shankar, A. Chatterjee and **A. Mukherjee**. Basic ocean processes, as illustrated in solutions to the LCS model. ***CSIR–National Institute of Oceanography (NIO)***, 2010.

### Oral/poster presentation

• Oral presentation at **IIOSC conference** online, 14-18 March, 2022.

• Oral presentation at **WCSSP annual meeting** via online, 07-11 March, 2022.

• Poster presentation at **WCSSP annual meeting** via online, 01-04 February, 2021.

• Poster presentation at **Mesoscale eddy workshop** at Portland, USA, 17–18 February, 2018.

• Poster presentation at International conference on "**Ocean Sciences Meeting**" at Portland, USA, 11-16 February, 2018.

• Poster presentation at International Symposium on "**Dynamics of the Indian Ocean: Perspective and Retrospective**" at Goa, December 2015.

• Oral presentation at **"International PORSEC workshop"**, Kochi, November 2011.

• Oral presentation at **"International workshop on Monsoon Variability"**, IISC Bangalore during 17-19 August, 2011.

### Reviewer

• Journal of Geophysical Research (Oceans), Americans Geophysical Union (AGU)..

• Progress in Oceanography, Elsvier publications..

• Continental Shelf Research (CSR), Elsevier publications.

• Earth system and environmental science, Elsevier publications.

• Ocean Modelling, Elsevier publications.

• Journal of Earth System Sciences, Springer publications..

### Workshop/school Attained

• Participated in an international workshop on **"Ocean Mesoscale Eddy Interactions with the Atmosphere"**, 17-18 February, 2018 at Portland, USA.

• Participated in an international summer school on **"New Frontiers in Operational Oceanography"**, 2-13 October, 2017 at Mallorca, Spain. This summer school was organized by GODAE Ocean View (GOV).

• Participated in an international summer school on **"Fundamentals of Ocean Climate Modelling at Global and Regional Scales"** during 5-14 August, 2013 at INCOIS,

Hyderabad. This summer school was organized by ICTP (International centre for theoretical physics) and INCOIS (Indian National Centre for ocean information services)

• Summer school on **"Dynamics of the North Indian Ocean"**. NIO, Goa, June-July 2010.

## Honors and Awards

• Qualified Joint Admission Test for **M.Sc (JAM) at IIT in Physics** (2006) with all India Rank 153.

• Qualified National Eligibility Test **(NET)** for lectureship in Physics during December, 2007.

• Awarded for **exemplary services** to CSIR -National Institute of Oceanography (NIO) for the year 2010.

## International travel grant

• Received full funding for attending international summer school on "**Fundamentals of Ocean Climate Modelling at Global and Regional Scales**] during 5-14 August, 2013 at INCOIS, Hyderabad from ICTP, Italy.

• Received partial funding ($AU 1,000) for attending ROMS **Asia-Pacific international workshop** at Hobart, Australia 2016.

• Received full funding for attending international school on "**New Frontiers in Operational Oceanography**] by GODAE Ocean View at Mallorca, Spain (2-13 October, 2017).

• Received partial travel grant ($USD 500) for attending **Ocean Science meeting** during 11 - 16 February, 2018 at Portland, USA.

• Received partial travel grant ($USD 507) for attending **Mesoscale Eddy Workshop** during 17 - 18 February, 2018 at Portland, USA.

## Teaching Experience

• Worked as a faculty at IMD (Indian Meteorological Department) on the topic "Physical Oceanography and Ocean-Atmosphere interaction" for Meteorologist Gr. II (Direct requited Class-I officer) officers.

• Worked as a faculty at International Training Centre for Operational Oceanography (ITCOocean), INCOIS, Hyderabad.

## Sea and Field Experiences

• CTCZ programme (08 July–08 August, 2012) on **ORV Sagar Kanya** to the north-central Bay of Bengal.
• Monsoon experiment (17 December 2016–03 January, 2017) on **ORV Sagar Nidhi** to the north-central Bay of Bengal.
Updated on April 1, 2022