

FACULTY PROFILE



Dr. ABISH .B

Assistant Professor (Atmospheric Science)

Ph.D. (CUSAT)

Atmospheric Science

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Doctorate in Atmospheric Science from Cochin University of Science and Technology (2008-2011), with CSIR fellowship. During his MTech dissertation at Space Physics Laboratory, (VSSC, Trivandrum), he was entrusted to associate with the ISRO-GBP land campaign, which was a major campaign conducted at the Indo-Gangetic Plain. After gaining experience in working in several projects at Centre for Earth Science Studies (CESS, Trivandrum) and National Aerospace Laboratories (NAL, Bangalore), he got involved in the European commission funded INDO-MARECLIM project. His collaborative work with NERSC (Norway) and CMCC (Italy), highlighted the important role of recent warming of the Indian Ocean in weakening the Indian summer monsoon circulation. The major findings emanated from this research are published in reputed international journals.

He was the Principal Investigator of Dept. of Science and Technology (DST-SERB, Govt. of India) funded project that focuses on the effect of rapid warming of Indian Ocean on the recent changes in the intensity and distribution of Indian summer monsoon rainfall. The results showed that the combined effect of Indian Ocean and anthropogenic aerosols have resulted in the changes in the distribution of rainfall and is one of the major causes for the increased frequency and intensity of extreme weather events. The results emanated from his research are highly relevant for the society. He is the academic coordinator of Climate Science course and also served as the reviewer for many international journals. He has also experience in conducting international conferences and is a member of many international organizations. As an educator and researcher his immense expertise continues to advance knowledge in the field of Ocean and Atmospheric sciences.

Teaching:

- ❖ Climate Modeling
- ❖ Ocean-Atmosphere Interaction
- ❖ Weather and Climate Disasters
- ❖ Climate Risk Management

Research Areas:

- Climate Change & Extreme Weather Events
- Rapid warming of the Indian Ocean
- Regional Climate Modeling
- Indian Summer Monsoon
- Aerosol-Cloud interactions

Key Management Roles:

- European Geosciences Union, Regular Member.
- American Association for Advancement in Science, Regular Member
- American Geophysical Union, Regular Member
- Academic Coordinator, Climate Science, KUFOS
- Member, Doctoral Committee, INCOIS
- Assistant Warden, Puduvype campus
- Mentor, Student's Union, Puduvype campus

Publications:

Total Citations : 636 (Major 5 Publications are listed)

- Ratnakaran A.P and Abish B (2024). Ocean atmospheric interaction on the cyclogenesis and rapid intensification of tropical cyclone Ockhi. *Natural Hazards, Springer-Nature*. 120, 7481-7498 (Impact Factor: 3.7)
- B. Abish and K. Arun 2019. Resolving the weakening of orographic rainfall over India using a regional climate model RegCM 4.5. *Atmospheric Research*. 227, 125-139 (Impact factor: 5.5)
- B. Abish, Annalisa Cherchi, Satyaban B. Ratna, 2018. ENSO and the recent warming of the Indian Ocean. *International Journal of Climatology*.38, 203-214. Doi: 10.1002/joc.5170 (Impact factor: 3.9)
- B. Abish, P.V. Joseph and O.M. Johannessen, 2013. Weakening Trend of the Tropical Easterly Jetstream of the Boreal Summer Monsoon season 1950 - 2009, *Journal of Climate*. 26, 9408-9414 Doi: 10.1175/JCLI-D-13-00440.1. (Impact factor: 5.38)
- B. Abish, P.V. Joseph and Ola .M. Johannessen, 2015. Climate Change in Subtropical Jetstream during 1950-2009, *Advances in Atmospheric Sciences*, 32,140-148. (Invited paper in 30th anniversary special issue). Doi: 10.1007/s00376-014-4156-6. (Citations: 26) (Impact factor: 5.8)

<https://scholar.google.com/citations?authuser=1&user=-puCs8EAAAAJ>

Awards & Achievements:

- CSIR Fellow (2008-2011)
- Early Career Research Award (SERB)
- Ratnakaran A.P and B. Abish, (2022). Consequences of Ocean Warming over the Arabian Sea basin on Climate and Ocean biogeochemistry. National seminar on Reorienting the strategies towards sustainable Aquaculture and Fisheries. January 6-7,2022 (Best Paper Award)

Projects Completed as Principal Investigator:

Title: **Impact of atmospheric aerosols on the large-scale atmospheric circulations over the Indian monsoon region.**

Funding Agency: DST-SERB, Budget: Rs. 15,00,000.

Peer Review Experiences

Atmospheric Research (**ELSEVIER**)

International Journal of Climatology (**WILEY**)

Climate Dynamics (**SPRINGER**)

Advances in Space Research (**ELSEVIER**)

Indian Journal of Physics (**SPRINGER**)

Meteorology and Applied Physics (**SPRINGER**)

Natural Hazards (**SPRINGER-NATURE**)

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