

Dr. Musaid P P

Full name : Musaid Padinhare Peediyekkal

✉ musaid.pp@tropmet.res.in
✉ musaidpp@gmail.com

🌐 official website
🌐 personal website

in musaidpp
R^{sc} Musaid P P



Education

2021 – 2024 **Ph.D Physics** (Faculty of Science & Humanities)

Thesis: *Asian Summer Monsoon Anticyclone:*

Pathway of surface pollutants to the stratosphere.

Atmospheric Observations and Modelling Laboratory, Dept.of Physics and Nanotech., SRM Institute of Science and Technology, Kattankulathur, India.

[Click here](#)

to read my THESIS online

2018 – 2020 **M.Sc. Atmospheric Science** Central University of Rajasthan, Ajmer, India.

Thesis: *Understanding thunderstorm frequency in India and a study on 2019 pre-monsoon severe weather events over Jamshedpur using WRF model.*

2014 – 2017 **B.Sc. Physics** Mahatma Gandhi University, Kottayam, India.

minor: *Mathematics and Statistics.*

Research Publications

Journal Articles

- 1 **P. P. Musaid**, V. Valsala, S. Halder, and Y. K. Tiwari, "Quantifying the annual atmospheric co2 burden from biomass burning and its transport time to monitoring sites.," *Science of the Total Environment*, vol. 1011,-, 2026. [DOI: https://doi.org/10.1016/j.scitotenv.2025.181202](https://doi.org/10.1016/j.scitotenv.2025.181202)
- 2 **P. P. Musaid**, S. K. Mehta, S. Tegtmeier, M. Fujiwara, S. S. Das, and S. Das, "Characteristics of convection and advection associated with the asian summer monsoon anticyclone.," *Climate Dynamics*, vol. 62(9), 8929-8945, 2024. [DOI: https://doi.org/10.1007/s00382-024-07371-3](https://doi.org/10.1007/s00382-024-07371-3)
- 3 **P. P. Musaid** et al., "Identification of the asian summer monsoon anticyclone based on tropical easterly and subtropical westerly jets during active and break phases.," *International Journal of Climatology*, vol. 44(12), 4260-4285, 2024. [DOI: https://doi.org/10.1002/joc.8580](https://doi.org/10.1002/joc.8580)
- 4 P. Pooja, S. K. Mehta, S. P. Kakkanattu, K. B. Betsy, C. J. Seetha, and **P. P. Musaid**, "Characteristics of the tropical tropopause over chennai (13.0° n, 80.06° e) in the northeast monsoon region. pure appl. geophys.," *Pure and applied geophysics*, vol. 181, 2243-2264, 2024. [DOI: https://doi.org/10.1007/s00024-024-03519-8](https://doi.org/10.1007/s00024-024-03519-8)
- 5 K. B. Betsy et al., "Roles of tropical cyclones with varying intensities in the re-distribution of aerosols," *Atmospheric Pollution Research*, vol. 15(2), 101990, 18/11/2023. [DOI: https://doi.org/10.1016/j.apr.2023.101990](https://doi.org/10.1016/j.apr.2023.101990)
- 6 C. J. Seetha, S. K. Mehta, S. P. Kakkanattu, P. Purushotham, K. B. Betsy, and **P. P. Musaid**, "Characteristics of the atmospheric boundary layer during transient conditions of the indian summer monsoon," *Theoretical and Applied Climatology*, vol. 152,661-684, 2023. [DOI: https://doi.org/10.1007/s00704-023-04578-y](https://doi.org/10.1007/s00704-023-04578-y)
- 7 **P. P. Musaid**, M. G. Manoj, S. K. Panda, S. Das, and K. Mohanakumar, "Dynamical influence of west pacific typhoons on the 2018 historic flood of kerala as revealed by the weather research and forecasting (wrf) model," *Climate Dynamics*, vol. 61,1663-1681, 2023. [DOI: http://dx.doi.org/10.1007/s00382-022-06648-9](http://dx.doi.org/10.1007/s00382-022-06648-9)
- 8 S. P. Kakkanattu, S. K. Mehta, P. Purushotham, K. B. Betsy, C. J. Seetha, and **P. P. Musaid**, "Continuous monitoring of the atmospheric boundary layer (abl) height from micro pulse lidar over a tropical coastal station, kattankulathur (12.82° n, 80.04° e)," *Meteorology and Atmospheric Physics*, vol. 135(2), 2022. [DOI: https://doi.org/10.1007/s00703-022-00938-x](https://doi.org/10.1007/s00703-022-00938-x)

Employment History

- 2024 –  **Project Scientist II**, Indian Institute of Tropical Meteorology, Pune, India.
- 2020 – 2021  **Research Associate**, Technoculture Research, VV Biotech, Bengaluru, India.

Skills

- Qualifications  CSIR-UGC NET.
- Languages  English proficiency: Upper Intermediate (DET overall score 125).
 Fluent in Hindi, Malayalam (read, write, speak), Arabic (read, write).
- Modelling  NIES-TM, WRF, WRF Chem, Flexpart, Hysplit
- Coding or Operators  Python, BASH, MATLAB, $\text{\LaTeX}$, CDO, QGIS.
- Visualization  GrADS, NCL, Matplotlib.

List of conferences and workshops

- November 2025  **International Symposium on Tropical Meteorology (INTROMET 2025)**, IITM Pune.
- July 2024  **Committee on Space Research (COSPAR 2024) 45th Scientific assembly**, Bexco, Busan, South Korea.
- June 2024  **INTERNATIONAL WORKSHOP ON Stratosphere-Troposphere Interactions and Prediction of Monsoon weather EXTremes (STIPMEX)**, IITM, Pune.
- February 2024  **National Space Science Symposium (NSSS 2024)**, Goa University, Goa.
- September 2023  **2nd International Conference on Asian Summer Monsoon Anticyclone (ASMA 2023)**, SRM Institute of Science and Technology (SRM IST).
- March 2023  **QBO workshop**, Oxford, UK.
 **National Workshop on Boundary Layer Exchange Processes and Climate Change (NoBLExClim-2023)**, SRM IST.
- January 2023  **SERB school on Forecasting and early-warning. Of extreme events and disasters**, CoEDMM IIT Roorkee.
- October 2022  **7th Stratosphere-troposphere Processes And their Role in Climate (SPARC) General Assembly**, ECMWF, Reading, UK.
- March 2022  **Dr. Paarivendhar Research Colloquium (DPRC) – 2022**, SRM IST.
- February 2022  **21st National Space Science Symposium (NSSS2022)**, IISER Kolkata.
- November 2021  **International Symposium on Tropical Meteorology (INTROMET-2021)**, Cochin University of Science and Technology (CUSAT).
- August 2021  **Asia Oceania Geosciences Society (AOGS) 2021 18th annual meeting**, Singapore.
- December 2020  **International Conference on Meteorology and Climate Science 2020 (ICMCS)**, Department of Meteorology, University of Dhaka.
- March 2020  **International Workshop on Asian Precipitation Experiment (Asia-PEX)/South Asia (SA)**, Central University of Rajasthan.
- February 2020  **2nd International Workshop on Extreme Severe Storms and Disaster Mitigation Strategy (ESSDMS2)**, Central University of Rajasthan.
- August 2019  **Satellite Meteorology and Oceanography Research and Training (SMART)**, ISRO-SAC, Ahmedabad.
- February 2019  **SERB School on Numerical Modelling and Forecasting of Desert storms and Cloudburst.**, Central University of Rajasthan.

Best Conference Paper

- 1 **P. P. Musaid**, S. K. Mehta, S. Tegtmeier, M. Fujiwara, and S. Das, "Relative roles of advection and convection on asian summer monsoon anticyclone," in 2nd International Conference on Asian Summer Monsoon Anticyclone (ASMA2023), Best Paper award.

Travel award/support

- 2024  **CSIR Travel award, Govt. of India.** To present a paper at the COSPAR 2024, Busan, S. Korea.
-  **WCRP APARC.** To present a paper at the STIPMEX international workshop, IITM Pune.
- 2023  **SPARC project, MHRD, Govt. of India.** To travel to international host institute, University of Saskatchewan, Canada.
-  **WCRP SPARC Travel grant.** To present a paper at the QBO workshop in Oxford, UK.
- 2022  **WCRP SPARC Travel grant.** To present a paper at the 7th SPARC General Assembly in Reading, UK (attended online).

Projects

Academic Projects

- 1 *M.sc. mini project : Simulation of ideal gravity wave using wrf model.*
- 2 *M.sc. thesis : Understanding thunderstorm frequency in india and a study on 2019 pre-monsoon severe weather events over jamshedpur using wrf model.*
- 3 *M.sc. summer internship : Investigation on influence of west pacific typhoons on the 2018 kerala flood using wrf model.*

Corporate / Extra-Curricular Projects

- 1 *Developed and maintained an automated high-resolution daily weather forecasting system for n.e. tamil nadu using the wrf model at srm ist, along with a campus-wide content management system during 2021 to 2024.*
- 2 *Designed and maintaining a website using wix platform for atmospheric observation and modelling laboratory, department of physics and nanotechnology, srm ist <https://srmaoml.wixsite.com/home>.*
- 3 *Active engagement in the cloud seeding research program and associated in the reversal of desertification and water harvesting research program of technoculture research, v v biotech, bengaluru, india -from july 2020 to june 2021.*

Membership

- 2023 - 2025  **Student Coordinator (India)**
South Asian Meteorological Association (SAMA).

References

Dr. Vinu K. Valsala

Scientist -G
Project Director - DESK
Indian Institute of Tropical Meteorology,
Dr Homi Bhabha Rd, Pashan,
Pune, India 411008

 vinu.valsala@gmail.com
 valsala@tropmet.res.in
 +91-(0)20-25904509

Susann Tegtmeier Dr. rer.nat

Professor
Institute of Space and Atmospheric Studies,
Department of Physics & Engineering Physics,
University of Saskatchewan,
Saskatoon, SK, Canada,

 susann.tegtmeier@usask.ca
 +(306) 966-6457

Dr. Manoj M.G.

Scientist -D
Advanced Centre for Atmospheric Radar Research,
Cochin University of Science and Technology,
Cochin, Kerala - 682022, India

 mgatmos@gmail.com
 manoj.acarr@cusat.ac.in
 +91 9497644055