

Lekshmy P R

Assistant Professor

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Present status

Working as an assistant professor at the Department of Atmospheric Sciences, Cochin University of Science and Technology since February 2016.

Qualification

Post Doctoral Fellow	Physical Research Laboratory	July 2015- Feb 2016	
Ph.d	Mohanlal Sukhadia University/ Physical Research Laboratory, India	Submitted on 2015 June Awarded on 2016 April	
M.Sc Meteorology	Cochin University of Science and Technology, India	2010	7.49 CGPA
B.Sc Physics	Kerala University, India	2008	85.2 %
Higher secondary	Board of Higher Secondary Education, Kerala, India	2005	80.0 %
SSLC	Kerala State Board, India	2003	85.7 %

Awards

- Qualified Physical Research Laboratory research fellowship for PhD.
- Qualified for Lectureship in National Eligibility Test (NET) conducted by the Government of India in 2010 December.

Ph.D

Title: Stable isotopic studies on monsoon vapour/clouds and precipitation over Kerala

Supervisor: [Dr. R Ramesh](#)

Computer skills

GrADS, Sigma plot, FORTRAN, MS office.

Field Experience

- Established a network of 9 stations in south peninsular India for collecting rain water samples on daily basis for isotopic analysis.
- Participated in two cruises 1) FORV Sagar Sampada (SS-299, 12–20 April 2012) for nitrogen uptake studies, and 2) ORV Sagar Nidhi (SN-82, 14th November to 2nd December, 2013) for marine water vapour collection.

Familiar Instruments

- Europa Sercon Geo 20:20 Isotope Ratio Mass Spectrometer (Duel Inlet) with water equilibration system
- Thermo Scientific Delta V-plus Isotope Ratio Mass Spectrometer (Continuous flow) with gas-bench

Publication

- R Ramesh, SR Managave, **PR Lekshmy**, AH Laskar, MG Yadava, RA Jani (2012) Comment on “Tracing the sources of water using stable isotopes: first results along the Mangalore- Udupi region, south-west coast of India”, *Rapid Communications in Mass Spectrometry* 26 (7), 874-875.
- M Midhun, **PR Lekshmy** and R Ramesh (2013), Hydrogen and Oxygen Isotopic Compositions of Water Vapour over Bay of Bengal during Monsoon, *Geophysical Research Letters* 40, 6324-6328, doi:10.1002/2013GL058181.
- **PR Lekshmy**, M. Midhun, R. Ramesh, and R. A. Jani (2014) $\delta^{18}\text{O}$ depletion in monsoon rain relates to large scale organized convection rather than the amount of rainfall, *Scientific Reports.*, 1–5, doi:10.1038/srep05661.
- **PR Lekshmy**, M. Midhun and R. Ramesh (2015) Spatial variation of amount effect over peninsular India and Sri Lanka: role of seasonality, *Geophysical Research Letters* 42, 1-8, doi:10.1002/2015GL064517.
- **PR Lekshmy**, M. Midhun and R. Ramesh (2018) Influence of stratiform clouds on δD and $\delta^{18}\text{O}$ of monsoon water vapour and rain in a tropical coastal stations, *Journal of Hydrology*, doi: 10.1016/j.jhydrol.2018.06.001.
- Midhun M, **Lekshmy PR**, Ramesh R, Kei Yoshimura, Sandeep KK, Samresh Kumar, Rajiv Sinha, Ashutosh Singh and Shalivahan Srivastava (2018) The effect of monsoon circulation on the stable isotopic composition of rainfall, *Journal of Geophysical Research – Atmospheres*, doi: [10.1029/2017JD027427](https://doi.org/10.1029/2017JD027427)
- **PR Lekshmy**, M. Midhun and R. Ramesh (2019) Amount dependency of monsoon rainfall $\delta^{18}\text{O}$ on multiple time scales: observations from south western India, *Climate dynamics* (accepted) DOI: 10.1007/s00382-019-04620-8.
- Midhun M, **Lekshmy PR** and Ramesh R, (2018) Coherent Response of the Indo-African Boreal Summer Monsoon to Pacific SST Captured in Ethiopian Rain $\delta^{18}\text{O}$, *Climate Dynamics* (under review).

Papers published in conference proceedings

- **P.R.Lekshmy**, M.Midhun, R.Ramesh, and R.A.Jani, Is the Isotopic Composition of Rainfall of the South west coast of India Independent of Local Rainfall Amount? 12th ISMAS Triennial International Conference on Mass Spectrometry, Cidade-de-Goa, Dona Paula, March 4-8, 2013.
- M.Midhun, **P.R.Lekshmy**, R.Ramesh, and R.A.Jani, Stable isotopic composition of atmospheric vapour over the Bay of Bengal and its relation with ocean surface conditions, 12th ISMAS Triennial International Conference on Mass Spectrometry, Cidade-de-Goa, Dona Paula, March 4-8, 2013.
- S. Band, A. H. Laskar, **P. R. Lekshmy**, M. Midhun, M. G. Yadava and R. Ramesh, Holocene monsoon variability derived from speleothems, Mini-Symposium on *Reconciliation of Marine and Terrestrial Records of Summer Monsoon Variability during the Holocene*, 80~ INSA Anniversary General Meeting, Goa, 19-21 December, 2014.
- **Lekshmy, PR**, M.Midhun and R.Ramesh (2015), Rain- vapour isotopic interaction over the south-west coast of India, European Geophysical Union General Assembly, April 12-17, 2015, Vienna, Austria.
- Midhun M, **PR Lekshmy** and R.Ramesh (2015), Short-term Variability of Indian Summer Monsoon Rainfall $\delta^{18}\text{O}$, European Geophysical Union General Assembly, April 12-17, 2015, Vienna, Austria.

- **Lekshmy PR**, M.Midhun and R.Ramesh (2015), Amount effect in peninsular India and Sri Lanka aids the choice of ^{18}O based monsoon proxy sites, *National Climate Science Conference*, July 2-3, 2015, Divecha Center for Climate Change Indian Institute of Science, Bangalore.
- **Lekshmy PR**, Midhun M and Ramesh R, Recent advances in stable isotope hydrology studies over India: Implication to paleo monsoon reconstruction, International conference on Geology: Emerging methods and applications (GEM-2017), February 6-8, 2017, Christ College, Inringalakura, Kerala

School/ workshop attended

- ‘Dynamics and Forecasting of Indian Summer monsoon’ conducted by Science and Engineering Research Council (SERC), IIT Delhi, 26 June- 26 July 2011.
- Participated in a summer school on ‘Basics of atmospheric sciences’ Organised jointly by UGC-SVU Centre for MST Radar Applications, Dept. of Physics, S.V University & National Atmospheric Research Laboratory (NARL), GADANKI in 11 - 21 MARCH 2013.
- 22nd session of ‘European Research Course on Atmosphere’ organised by Joseph Fourier University, Laboratory of Glaciology and Geophysical Environment and French National Centre for Scientific research on 7th January - 7th February 2014, Grenoble, France.

Projects

1. Influence of microphysical and boundary layer processes on stable isotopic ratios of monsoon rainfall, Principal Investigator, funded by ISRO RESPOND during 2018-2020.

Teaching Subjects

Atmospheric Physics, Climate and Climate Change, Applied Meteorology

Personal details

Nationality : Indian
 Date of Birth : 02-05-1988
 Sex : Female
 Marital Status : Married
 Children : Son (DOB 9th August 2016)
 Languages known : Malayalam, English, Hindi
 Hobbies : Gardening, paper and cloth craft making, cooking... etc

References

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 Scientist-SG and Chairman,
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