Jerry Jose, PhD

https://jerryjose7.github.io/

15 Av Blaise Pascal, 77420 (France)
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linkedin.com/in/jerryjose7
Passport Talent (FR)

Research profiles: ORCID, Google scholar, Research Gate

EXPERTIZE

| KEY FIELDS

Climate variability
Aerosols, clouds
Hydrology
Renewable energy (wind)
Scaling in geophysics
Climate chamber simulations

| SKILLS / DATA

Aircraft and field campaigns
Scientific writing/presenting
Peer review/ supervising
In-situ measurements
Analysis of high-res datasets

. Time series analysis
. Numerical simulations
. Stochastic analysis
. Multifractals, spectral analysis

| PROGRAMMING

Python, Linux bash scripting, Git
QGIS, LaTex, server usage
OS: Linux, Mac, Microsoft

| PUBLICATIONS

Journal papers (8, 3 first author)
Reviewer for (4 journals)
Book chapters (2)
International conferences (10)
Non-academic publications (5)

| TEACHING / MENTORSHIP

Teaching (250+ hrs, UG & PG)
Co supervision (3 students)
Thesis committee (1 student)

WORK EXPERIENCE

Post Doctoral Researcher | Mar 2023 – Apr 2024
CEREA / HM&Co. (ENPC), Paris (France)

- Below cloud scavenging of size resolved aerosols (nm, µm) particles, their correlation with rain rate (using IRSN data from Cherbourg-Octeville).
- Scaling of rain using mini doppler radar, 3d stereo and optical disdrometers

PhD: Environmental Sciences | Oct 2019 – Mar 2023

HM&Co. , École nationale des ponts et chaussées (ENPC), Paris (France)

Thesis: Independent and joint multifractal analysis of atmospheric fields in real and controlled environments: https://www.theses.fr/2023ENPC0016

- Characterizing uncertainties in geophysical fields across space and time, by considering extreme variability and intermittency following 3 UN SDG goals.
- Developed a scale invariant relation for kinetic energy from rainfall rate for erosion and rural application using Universal Multifractals (UM).
- Statistical characterization of visibility from extinction coefficient of particles and compared analysis using METAR data.
- Quantifying rainfall influence on wind power production (RW-Turb).

Junior Research Fellow | Dec 2017 – Sep 2019
Indian Institute of Tropical Meteorology, Pune; MG University, Kerala (India)

- Aircraft campaign for quantifying the impacts of pollution and aerosols on monsoon clouds, over drought prone regions of western ghats.
- Airborne aerosol collection, and their physical and chemical characterization (r black carbon, organic, inorganic), effect on CCN, rain; $PM_{2.5}$, PM_{10} monitoring
- Comparisons using models and satellite data HYSPLIT, ERA5, MERRA2 etc.

Ad hoc faculty | Jul 2015 – Jun 2017
National Institute of Technology, Calicut (India)
Assistant Manager | Jun 2013 – Feb 2015
Manufacturing, Dana India Pvt. Ltd, Pune (India)

EDUCATION

| PhD (Environmental Science & Technology), 2023
École nationale des ponts et chaussées (ENPC), Paris (France)
| M. Tech (Materials Science, gold medal), 2013
Defence Institute of Advanced Technology (DIAT), Pune (India)
| B. Tech (Mechanical Engineering, distinction), 2010
Mar Athanasius College of Engineering (MACE), Kerala (India)

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PROJECTS (selected)

- RW-Turb (ANR, France and Boralex: Characterizing effect of rainfall and small scale effect of wind turbulence in wind turbine power, 2020 to 2023) - https://hmco.enpc.fr/portfolio-archive/rw-turb/
- CAIPEEX (MoES, Government of India: flights campaigns for enhancing precipitation over Western Ghats following WMO standards and IPCC AR5, 2017 - 2019) - https://www.tropmet.res.in/~caipeex/cloud-seeding.php

PUBLICATIONS

Journals (selected)

- Jose, J., Gires, A., Schnorenberger...: (2024) Part 2: Joint multifractal analysis of .. wind power and rain intensity from an operational wind farm, Nonlin. Processes Geophys. Discuss. [preprint], https://doi.org/10.5194/npg-2024-6
- Prabha, T.V,.. Jose, J,...(2023) "CAIPEEX - Indian cloud seeding scientific experiment", Bulletin of the American Meteorological Society, doi.org/10.1175/BAMS-D-21-0291.1
- Jose, J., Gires, A., Tchiguirinskaia, .. & Schertzer, D. (2022). Scale invariant relationship between rainfall kinetic energy and intensity...Journal of Hydrology.., doi.org/10.1016/j.jhydrol.2022.127715
- Gires, A., Jose, J., Tchiguirinskaia, I., & Schertzer, D. (2022). Combined high-resolution rainfall and wind data collected... on a wind farm 110 km southeast of Paris (France). *Earth System Science Data*, *14*(8). doi.org/10.5194/essd-14-3807-2022
- Varghese, M., Jose, J.,. and Prabha, T.V., (2021). Cloud and aerosol characteristics during dry and wet days of southwest monsoon... India. *Meteorology and Atmospheric Physics*, *133*(4), pp.1299-1316. doi.org/10.1007/s00703-021-00811-3

Peer reviewer in

- Hydrology and Earth System Sciences, Earth Surface Processes, Hydrological Sciences Journal, Chaos

Conferences (latest)

- Jose, J., Roustan, Y.. and Schertzer, D.: Multifractal analysis of aerosol ..concentration during rain & dry .. in nm/µm range, EGU 2024, Vienna, Austria, doi.org/10.5194/egusphere-egu24-17721, 2024.

OTHERS

Instrumentation:	Optical disdrometers, 3d sonic anemometers, meteo stations, Wind Tubrines (Vestas V90) Aerosols: APS, SMPS, AIMMS, PCASP, CCNC, CDP, SP2
Membership:	European Geosciences Union (EGU), American Geosciences Union (AGU)
Awards:	Sao Paulo Aerosol 2019, Roland Schlich ECSTS (19,20), Masters gold, State rank 10th
Writing:	Words Edge, People Archive of Rural India (PARI), Strange Horizons, Mithila review
Languages:	English, Malayalam, Hindi, French (B1)
Hobbies:	Writing, reading, skating, traveling, badminton

REFERENCES

Available upon request