Jerry Jose, PhD

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15 Av Blaise Pascal, 77420 (FR) ; 0 7 52 53 8950

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05 / 03 / 1989, Indian

EXPERTIZE

| KEY FIELDS

Climate variability

Aerosols, clouds

Hydrology

Scaling in geophysics

Wind, turbulence

| DATA / SKILLS

Time series analysis

Numerical simulations

Aircraft and field campaigns

Multifractals, spectral analysis

High resolution data analysis

Scientific writing/presenting

Peer review/ supervising

| PROGRAMMING

Python, Linux bash scripts

QGIS, LaTex, , Origin, MS Office

| 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)

| RESEARCH LINKS:

Google scholar, ORCID

Research Gate

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).
- Small scale variability of aerosol particles (mass and number concentration).

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 variability, extremes and intermittency of rainfall, particles and wind and across space and time, following 3 United Nations' SDG goals.
- Quantifying rainfall & turbulence in wind power production (RW-Turb).
- Characterization of atmospheric variability using extinction coefficient of particles and validation using METAR data.
- Developed a scale invariant relation for kinetic energy from rainfall rate for erosion and rural application using Universal Multifractals (UM).

Junior Research Fellow | Dec 2017 – Sep 2019

Indian Institute of Tropical Meteorology, Pune; MG University, Kerala (India)

- Cloud aerosol interaction and precipitation enhancement experiment (CAIPEEX) cloud seeding field campaign in Western Ghats during Monsoon.
- Airborne aerosol collection, their physical and chemical characterization (r black carbon, organic, inorganic) from cloud base
- Vertical profile, hygroscopicity and CCN

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)

- 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
- 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/

PUBLICATIONS

Journals (selected)

- 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
- Prabhakaran, Thara, Jerry Jose,...(2023) "CAIPEEX - Indian cloud seeding scientific experiment", Bulletin of the American Meteorological Society, doi.org/10.1175/BAMS-D-21-0291.1
- Varghese, M., Jose, J., and Prabha, T.V., (2021). Vertical profile of aerosol ..including activation over a rain shadow region in India. Atmospheric Environment, doi.org/10.1016/j.atmosenv.2021.118653
- Varghese, M., Jose, J., et al. (2023). Impact of monsoon on below cloud base aerosol hygroscopicity over a rain shadow region of India. Atmospheric Research, doi.org/10.1016/j.atmosres.2023.106630

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, Wind Tubrines (Vestas V90), APS, SMPS, CCNC
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

Dr. Auguste GIRES
Assistant Professor, HDR | HM&Co.
École des Ponts ParisTech (ENPC)
Champs-sur-Marne (Paris, France)
auguste.gires@enpc.fr

Prof. dr.ir. Remko Uijlenhoet
Civil Engineering & Geosciences
TU Delft
2628, CD Delft (Netherlands)
r.uijlenhoet@tudelft.com

Dr. Thara V Prabha
Director: Physics and Dynamics of Tropical Clouds
Indian Institute of Tropical Meteorology (IITM)
Pune, India
thara@tropmet.res.in

Dr. Yelva Roustan
Chargé de recherche, HDR
CEREA, ENPC - EDF R &
Champs-sur-Marne (Paris, France)
yelva.roustan@enpc.fr