

Dr. REKHA

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Career Statement

Dedicated to advancing scientific understanding and contributing to impactful Atmospheric research.

Experience

1. Post-Doctoral Associate at National Institute of Advanced Studies (NIAS), Indian Institute of Science (IISc), Bangalore from *September 2025-Current*
2. Consultant PDF at National Institute of Advanced Studies (NIAS), Indian Institute of Science (IISc), Bangalore from *August 2024-August 2025*
3. Project Associate-II at Council of Scientific & Industrial Research-National Environmental Engineering Research Institute (CSIR-NEERI), Delhi Zonal Centre from *January-August 2023*
4. Teaching Experience: Assistant Professor of Environment Studies to B.Sc. Physics in Guru Nanak Dev University, Amritsar, Punjab, India for the session *July-December 2019*.

Academic Qualifications

Ph.D. (Environmental Sciences) (2016-2023)

Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, India.

Thesis Title: *Multivariate analysis of ambient air quality and winter fog of Amritsar: Generation of wind rose and air mass trajectories.*

CGPA Pre-PhD Coursework = 8.94 out of 10 (79.56%)

M.Sc. (Honours) Environmental Sciences (2014-2016)

Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, India (69.06% marks).

B.Sc. (2011-2014) *Major Subjects:* Botany, Zoology, Chemistry
Kurukshetra University, Kurukshetra, Haryana, India (68.34% marks)

12th C.B.S.E. (2011)

St. Mary's Convent Sr. Sec. School, Panipat, Haryana, India (67.20% marks)

Major Subjects: Biology, Chemistry, Physics

10th C.B.S.E. (2009)

St. Mary's Convent Sr. Sec. School, Panipat, Haryana, India (76.60% marks)

Academic Achievements

Qualified UGC-NET Examination for eligibility of Assistant Professor in Environmental Sciences, 2019

Research Interests

Atmospheric Science

Instrumentation Skills and Expertise

Ambient air quality analysis and Water quality analysis

Air quality: *Multivariate statistical data analysis, Data Retrieving, Earthdata, FIRMS, Data Cleaning, Air mass trajectories, Receptor Modelling, Emission Inventory, Climatology, anomalies and hands-on experience on sophisticated instrumentation: Ion chromatography and UV-Vis spectrophotometer, PM_{2.5} sampler (Envirotech, Instrumex),*

Portable PM_{2.5} sampler

Water Quality: *Analysis of water quality parameters including Hardness, Nitrate, Sulphate, Chloride, Fluoride, Basic pH, conductivity and turbidity measurements*

Softwares: *SPSS, Sigma Plot, Past, Origin, Design-Expert, Edraw Max, BioRender, Smartdraw, WRPLOT View, CMB, GrADS (beginner), CDO (beginner), HYSPLIT and proficiency in Microsoft Office, intermediate in QGIS*

Programming Languages: *Python (intermediate)*

Awards

1. Second Position in merit for Sardarni Kuldip Kaur and Sardar Gurmukh Singh Memorial Young Scientist Award in Environmental Sciences on March 22, 2023, at Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, India
2. First Prize in the poster competition in the workshop on “Capacity Building on Climate Change” on 29 March 2016, at the Department of Botanical and Environmental Sciences, Guru Nanak Dev University, Amritsar, Punjab, India

International Collaboration = 1(Japan)

Aakash project (Working Group-2: Atmospheric Science & Remote Sensing) member w.e.f. 20 October 2020-March 2025 by the *Research Institute of Humanity and Nature* (National Research Institute by Govt. of Japan), **Kyoto, Japan** on a project entitled “An Interdisciplinary Study Towards Clean Air, Public Health and Sustainable Agriculture: The Case of Crop Residue Burning in North India”.

Research Publications

<https://scholar.google.com/citations?user=jFBZVZAAAAAJ&hl=en>

Conference Presentations = 4

Kindly refer to Annexure-1

International Trainings and National Trainings = 14

Kindly refer to Annexure-2

Reviewer of the Journals

Water, Air & Soil Pollution, Urban Climate, Environmental Monitoring and Assessment, Scientific Reports, Discover Geoscience and Environmental Science: Advances

Memberships

Life Member of Indian Aerosol Science and technology Association (IASTA)-IASTA-LM-718 wef January 9, 2025

Personal Information

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References

Available upon request

Dr. Rekha
(31-03-2026)

Conference Presentations

1. **Yadav, Rekha.**, Asif, M., Bhatti, M.S., Kansal, S.K. and Mandal, T.K. (2022). Elemental analysis using WD-XRF of fine particulate matter (PM_{2.5}) in Amritsar city: Meta-analysis of health risk assessment. International Symposium on Sustainable Urban Environment on October 11-14, 2022. School of Engineering, University of the Petroleum and Energy Studies, Bidholi, Uttarakhand, India. ***International***
2. Asif, M., **Yadav, Rekha.** and Bhatti, M.S. (2022). Chemical composition of winter fog in North Indian city. International Conference on Environmental Science and Engineering on January 20-22, 2022. Environmental Science and Engineering Department, Indian Institute of Technology, Bombay, Mumbai, India. ***International***
3. **Yadav, Rekha.**, Asif, M and Bhatti, M.S. (2021). Impact of Diwali during COVID-19 on ambient air quality: A Comparative Study. National Conference on Air, Noise & Odour Pollution on October 22-23, 2021. Department of Civil Engineering, Sardar Vallabhbhai National Institute of Technology, Surat, Gujarat, India. ***National***
4. **Yadav, Rekha.**, Bhatti, M.S. and Kansal, S.K. (2019). Fog characterization & ambient air quality of Amritsar: A winter study. International Conference on Climate Change towards Health and Agricultural Sustainability on February 18-20, 2019. Department of Environmental Science and Engineering, Guru Jambheshwar University of Science & Technology, Hisar, Haryana, India. ***International***

**Rekha Yadav is full name that is used in the research publications.*

National Trainings and Courses

1. Three Days Skill Training Program on “Air Pollution Monitoring, Emission Inventory, Modelling and Management” organized by CSIR-NEERI, Delhi Zonal Centre from February 1-3, 2023, 2023.
2. AICTE Training and Learning (ATAL) Academy online elementary FDP on “Air, Noise and Odour Pollution: Control and Modeling Practices” by Sardar Vallabhbhai National Institute of Technology, Surat from July 19-23, 2021.
3. Two days online training on “Air Pollution and Air Quality Modelling” by National Productivity Council, Delhi from June 3-4, 2021.
4. Completed CPD activity on “Choosing the Correct Monitor and Understanding How to Operate and Maintain it” organized by TSI instruments Ltd. on November 25, 2020.
5. Participated in a one-week online training program on “Environmental Sustainability” organized by Bakhtiyarpur College of Engineering, Patna and Universiti Tun Hussein Onn, Malaysia from 25-29 May 2020.
6. Internal Auditor Training Course ISO 14001:2015 on Environment Management System conducted at Guru Nanak Dev University from May 28-29, 2018 by Intertek.
7. ‘Environmental Aspects of Production’ in Engineering Department from 1 June to 6 July 2015 in Nestle, Samalkha, Panipat, Haryana.

International Trainings and Courses

1. GRASP Earth courses training course on “Introduction to Satellite Products for Air Quality Applications” February 16th – 19th, 2025 held at Dayananda Sagar University, Bengaluru, India
2. GRASP Earth courses training course on “Advanced Application of Remote Sensing Data Using GRASP” February 20th - 21st, 2025 held at Dayananda Sagar University, Bengaluru, India
3. Course on “The Paris Agreement on Climate Change as a Development Agenda” organized by United Nations Climate Change and United Nations System Staff College from 31 May to 9 July 2021.
4. NASA Applied Remote Sensing training on “Satellite Observations and Tools for Fire Risk, Detection and Analysis” from May 11-27, 2021.
5. Participated in four days online “2020 HYSPLIT Workshop” from June 22-25, 2020 organized by NOAA, Air Resource Laboratory, United States.
6. NASA-ARSET Training on “Satellite Remote Sensing of Air Quality: Data, Tools and Applications” from May 23-26, 2017 at IITM, Pune.