

Contents

Personal Information	2
Position Held	2
Academic Background.....	3
Citation Analysis.....	3
Field of Specialization	3
Professional Recognitions.....	5
Service to Community	5
Other Recognitions	8
Administrative Experience	8
Theses Supervised	9
Publications.....	16
Media Highlights (National Newspaper).....	42
Teaching Experience and Coursed offered.....	53
Organizational Achievements.....	53
Workshops/Symposia Organized.....	54
Plenary/Invited Speaker.....	54
Ongoing Projects	62
Completed Projects.....	62

Resume of Sachchida Nand Tripathi

Personal Information

Name : Sachchida Nand Tripathi
Nationality : Indian
Date of birth : July 24, 1971
Official address : National Aerosol Facility building, Room no. 101, Indian Institute of Technology Kanpur, 208016, India
Telephone : +91 512-6797845
Primary email : snt@iitk.ac.in
Alternate email : sachchida.tripathi@gmail.com
URL : <https://home.iitk.ac.in/~snt/>
Residence : House No.: 628, Type VI, Indian Institute of Technology Kanpur
Mobile : +91 9415050540
Present designation : Dean, Kotak School of Sustainability and HAG Professor, Department of Civil Engineering, Indian Institute of Technology Kanpur

Board Member

January 2025 onwards — Director Airawat Research Foundation, IIT Kanpur

Position Held

Jan 2025 – Present	Project Director, Airawat Research Foundation (AI-CoE for Sustainable Cities)
Jul 2024 – Present	Dean, Kotak School of Sustainability, IIT Kanpur
May 2023 – Present	Professor, Department of Sustainable Energy Engineering, IIT Kanpur
May – Jul 2022	Senior Fellow, Institute for Advanced Sustainability Studies (IASS), Potsdam, Germany
Nov 2019 – Present	Adjunct Professor, Centre of Excellence for Research on Clean Air (CERCA), IIT Delhi
Aug 2018 – Present	HAG Professor, Department of Civil Engineering, IIT Kanpur
Jun 2018 – Jul 2021	Head, Department of Civil Engineering, IIT Kanpur
Dec 2015	Visiting Professor, School of Civil Environmental Engineering, Georgia Institute of Technology, USA
Nov 2014 – Oct 2017	Coordinator, Centre for Environmental Science & Engineering, IIT Kanpur
Nov 2014 – Oct 2016	Adjunct Professor, Department of Earth Sciences, IIT Kanpur

Jun – Jul 2014	Visiting Professor, School of Civil Environmental Engineering, Georgia Institute of Technology, USA
May – Jul 2012	Professor, Laboratoire de Physique et Chimie de l'Environnement, University of Orleans, France
Apr 2012 – Jul 2018	Professor, Department of Civil Engineering & CESE, IIT Kanpur
Aug 2009 – Jul 2010	Senior Fellow, NASA Goddard Space Flight Center, Greenbelt, Maryland, USA
Jan 2008 – Mar 2012	Associate Professor, Department of Civil Engineering & CESE, IIT Kanpur
May – Jul 2006	Visiting Associate Professor, Centre for Climate System Research, University of Tokyo, Japan
Jun 2004	Visiting Researcher, NOAA Aeronomy Laboratory, Boulder, USA
Jul 2003 – Dec 2007	Assistant Professor, Department of Civil Engineering, IIT Kanpur
Jan 2002 – Jul 2003	Post-Doctoral Research Assistant, Atmospheric, Oceanic & Planetary Physics, University of Oxford, UK
Dec 2000 – Dec 2001	Visiting Scientist, Environmental Assessment Division, BARC, Mumbai

Academic Background

Ph.D. (Meteorology), University of Reading, UK (2000)

M.Tech. (Environmental Engineering), Motilal Nehru National Institute of Technology (MNNIT), Allahabad (1995)

B.Tech. (Civil Engineering), Indian Institute of Technology, Banaras Hindu University (1992)

Citation Analysis

Google Scholar >16,838 citations; H-Index: 71 [Sachchida Nand Tripathi - Google Scholar](#)

ISI Web of Knowledge >11,757 citations; H-Index: 61 <http://www.researcherid.com/rid/J-4840-2016>

Scopus >13,087 citations; H-Index: 63 Scopus: AUID # [21935606200](#)

ORCID Profile <https://orcid.org/0000-0002-6402-4680>

Field of Specialization

Climate Change, Air Quality, Nuclear Safety, Infrastructure Monitoring, Urban Governance

Extensive research in the past few decades has brought a sharp focus on aerosols as the single most important atmospheric component guiding sustainable development through their impact on air quality, weather, global climate, and public health. My research addresses these highly topical environmental questions through a comprehensive, science-centric approach, avoiding ad hoc methods. To conserve resources and ensure societal relevance, I have adopted an interdisciplinary framework that seamlessly links air quality, public health, and climate change. The people-centric nature of my work has uniquely contributed to technological innovations and informed policy

guidelines for securing clean air in India.

I led a study providing evidence of the aerosol-induced cloud invigoration effect (AIvE) during the Indian summer monsoon, demonstrating the importance of aerosol-cloud feedback via cloud condensation nuclei. A subsequent study, published in *Nature Communications*, showed the occurrence of AIvE throughout the Indian region, significantly altering cloud structures, radiation budgets, and monsoon rainfall patterns.

In the past decade, I have undertaken seminal work in developing state-of-the-art air quality monitoring and management technologies in India. I am credited with implementing the first large-scale, dense, real-time sensor-based air quality network across two major Indo-Gangetic Plain states, which has encouraged several Urban Local Bodies (ULBs) to adopt these technologies for improved decision-making. This work has enabled a paradigm shift making affordable, accurate, and scalable air quality data accessible to policymakers, climate researchers, and environmental groups at a nationwide level. This network is the second largest network globally.

My research group pioneered AI/ML-enabled dynamic hyper-local source apportionment (RTSA) methods, further enhancing real-time understanding of pollution sources. Our new study also discovered the genesis of night-time air pollution, providing mechanistic insights into nanoparticle growth preceding severe haze pollution in Delhi, primarily driven by biomass burning emissions.

Urban sanitation infrastructure is inadequate in many low-income countries, leading to the presence of highly concentrated, uncontained faecal waste streams in densely populated areas. My pioneering work through international collaboration focuses on Detection and Quantification of Enteric Pathogens in Aerosols Near Open Wastewater Canals in Cities with Poor Sanitation, published in *Environmental Science and Technology Journal*.

As part of my commitment to nuclear safety and aerosol research, I established the National Aerosol Facility (NAF) at IIT Kanpur to enable academia's active participation in nuclear safety studies. The NAF specifically addresses aerosol safety issues relevant to Pressurized Heavy Water Reactors (PHWRs).

As Project Director of the AI Centre of Excellence (AI-CoE) for Sustainable Cities, an MoE initiative under the mission "Make AI in India, Make AI Work for India", I lead a consortium of premier Higher Education Institutes and industry partners developing scalable AI-driven solutions for energy forecasting, air quality monitoring, flood management, digital twins for urban mobility, and smart microgrid planning—aimed at creating resilient and sustainable cities. Some of the above-mentioned technologies are already being deployed in several cities in conjunction with state governments and city administrations.

I also lead the International Centre of Excellence on Advanced Technologies for Monitoring Air quality iNdicator (ATMAN), established under the aegis of the Principal Scientific Adviser's Office, Government of India. As an expert member of the Steering Committee, I have created a nationwide alliance of technical institutes (IITs, NITs, and National Laboratories) through the National Knowledge Network (NKN) to support the National Clean Air Programme (NCAP) by building local capacities in air quality management.

I continue to mentor several startups in clean technology and air monitoring sectors—many of which have become market leaders—and have guided over 25 Ph.D. scholars.

Professional Recognitions

- European Geophysical Union (EGU). (2025). *Alexander von Humboldt Medal*.
- Indian Institute of Technology Kanpur. (2024–2027). *Sir M. Visvesvaraya Chair Professor*.
- Infosys Science Foundation. (2023). *Infosys Prize in Engineering and Computer Science*.
- Institute of Advanced Sustainability Studies, Potsdam, Germany. (2021–2022). *Fellow*.
- Science and Engineering Research Board (SERB), Department of Science & Technology, Government of India. (2021–2026). *J. C. Bose National Fellow*.
- Indian Institute of Technology Kanpur. (2021–2024). *Arjun Dev Joneja Faculty Chair*.
- Indian National Science Academy. (2020). *Elected Fellow*.
- Government of Uttar Pradesh. (2018). *U.P. Ratna Award*.
- Banaras Hindu University. (2015). *Distinguished Alumnus Award*.
- The National Academy of Sciences, India. (2015). *Elected Fellow*.
- Indian Institute of Technology Kanpur. (2015–2018). *Rajeeva and Sangeeta Lahri Chair Professor*.
- Indian National Academy of Engineering. (2015). *Elected Fellow*.
- Council of Scientific and Industrial Research (CSIR). (2014). *Shanti Swarup Bhatnagar Prize in Earth, Atmosphere, Ocean and Planetary Sciences*.
- Indian Institute of Technology Kanpur. (2009–2012). *Sir M. Visvesvaraya Research Fellowship for Excellence in Teaching and Research*.
- National Aeronautics and Space Administration (NASA). (2009–2010). *Senior Fellowship*.
- National Academy of Sciences, India (NASI) & SCOPUS. (2009). *Young Scientist Award for Highest Citation in Earth Sciences*.
- All India Council for Technical Education (AICTE). (2003). *Young Teacher Career Award*.

Service to Community

67. Editorial Advisory Board, *Future Cities*, Emerald Publishing (2026–present).
66. External Board Member, NIHR Global Health Research Centre for Non-Communicable Diseases (NCDs) and Environmental Change (2025–present).
65. Member, Research Advisory Council, Bose Institute (2024–2027).
64. Editor, *Aerosol Science and Technology* (AS&T), American Association for Aerosol Research (2024–present).
63. Member, Academic Council, Shri Mata Vaishno Devi University, Jammu & Kashmir.
62. Member, Board of Governance, Guru Ghasidas Vishwavidyalaya, Bilaspur.
61. Member, Board of Governance, Rajkiya Engineering College, Ambedkar Nagar (U.P.).

60. Member, High-Powered Steering Committee, NIRANTAR (National Institute of Research and Application of Natural Resources to Transform, Adapt and Build Resilience) (2023–2025).
59. President, Indian Aerosol Science and Technology Association (IASTA) (Jan 2023–Dec 2025).
58. External Member, Research and Development Board, Coal India Limited (June 2022).
57. Member, Committee on Sustainability, Association of Academies and Societies in Sciences in Asia (AASSA) (2022).
56. Life Member, South Asian Meteorological Association (2022–present).
55. Editor, *Transactions of INAE*, flagship journal of Indian National Academy of Engineering (2022–present).
54. Technical Advisor, Government of Telangana on Air Quality Management (2021–present).
53. Member, Building and Works Committee, Indian Institute of Information Technology, Lucknow (2020–present).
52. Member, R&D Subcommittee, Commission on Air Quality Management in NCR and Adjacent Regions, Government of Uttar Pradesh (2020–present).
51. Member, Indo-Finnish Working Group on Sustainability, Department of Science and Technology (2020–present).
50. Member, National Committee for India–IIASA Programme, TIFAC, Department of Science and Technology (2020–present).
49. Coordinator, National Knowledge Network to National Clean Air Mission, MoEFCC (2020–2024).
48. Member, Programme Advisory Committee (PAC) on Civil, Infrastructure and Transportation Engineering, SERB, DST (2020–2023).
47. National Nodal Faculty, National Knowledge Network to National Clean Air Program, MoEFCC (2019–2020).
46. Member, Technology Assessment Panel, India CEO Forum for Clean Air, CII (2019).
45. Member, Expert Working Group on Hazardous Waste Import/Export, MoEFCC (2019–2020).
44. Member, Expert Committee, Climate Change Programme (CCP), DST (2019).
43. Member, Committee on Retrofitting Vehicles and DG Sets, MoEFCC (2019).
42. Member, Scientific Advisory Committee (SAC), National Atmospheric Research Laboratory (2019).
41. Member, Steering Committee, National Clean Air Program (NCAP), MoEFCC (2019).
40. Member, Advisory Committee, CCIVA 2019, IIT Kharagpur.
39. Member, Cloud Seeding Committee, Government of Uttar Pradesh (2018).
38. Member, Technical Expert Committee (TEC) for Petcoke and Alternative Fuels, MoEFCC (2018).
37. Member, International Advisory Committee, International Aerosol Conference (2018).
36. Member, National Advisory & Technical Programme Committee, AC3 Conference, Bose

- Institute, Darjeeling (2017).
35. Member, Technical Programme Committee, IASTA Conference on Aerosols & Climate Change, PRL Ahmedabad (2016).
 34. Member, Advisory Council, Mahamana Malaviya Research Centre for Ganga Development & Water Resource Management, Govt. of India (2016–present).
 33. Expert Member, Committee on Environment & Climate Change, MoEFCC (2016–present).
 32. Expert Member, Environmental Domain, MHRD IMPRINT Programme (2016–present).
 31. Expert Member, Indian National Climate Change Committee, MoWR (2015–present).
 30. Member, Institute International Relations Committee (2015–2016).
 29. Session Convener, Indo-German Frontiers of Engineering Symposium, Potsdam, Germany (2014).
 28. Session Chair, “Aerosol Characterization: Chemical,” 8th Asian Aerosol Conference, Sydney, Australia (2013).
 27. Session Convener, Indo–U.S. Frontiers of Science Symposium, Agra, India (2013).
 26. Member, National Advisory Committee, CAIPEEX, MoES (2008–2013).
 25. Evaluator, UNEP Atmospheric Brown Clouds Project, Bangkok (2012–2013).
 24. Alternate Member, Nanotechnologies Sectional Committee, MTD 33 (2011).
 23. Member, High-Level Working Group, Aerosol & Cloud Nucleation, IMD, MoES.
 22. Member, National Fire Facility, IIT Kanpur.
 21. Member, Geophysical Research Letters Editor Search Committee.
 20. Member, National Steering Committee, Cloud, Aerosol & Precipitation Enhancement Experiment, MoES.
 19. Expert Member, DST Fast Track Scientist Committee.
 18. Member, Publications Committee, American Geophysical Union (2008–2010).
 17. Member, Editorial Board, *Indian Journal of Aerosol Science and Technology*.
 16. Member, Executive Committee, IASTA.
 15. Member, Science Team, ISRO Mars Orbiter Mission (Planex Programme).
 14. Convener, Session on Climate Effects of Aerosols & Clouds, AOGS Meeting, Bangkok (2007).
 13. Participant, Indo-US Frontier of Science & Technology Meeting, New Delhi (2006).
 12. Reviewer for DST & CSIR project proposals.
 11. Participant, ISRO National Campaigns (Land Campaign II, ICARB).
 10. Fellow, Centre for Advanced Studies, IIT-BHU, Varanasi.
 9. Member, Steering Committee, ISRO Space Borne Lidar Project.
 8. Member, Steering Committee (Cloud Studies), CTCZ Experiment, DST.
 7. Member, Indian Association for Aerosol Science and Technology.
 6. Member, American Geophysical Union.

5. Reviewer for multiple journals (*JGR, Atmospheric Environment, Tellus B, Aerosol Science and Technology*, etc.).
4. PI/Co-PI for ISRO, DST, AICTE projects; cumulative research funding: ₹500 Lakhs.
3. Panelist, Workshop on Nanoparticles, IIT Bombay (2005).
2. Member, Technical Committee, Asian Aerosol Conference, Mumbai (2005).
1. Convener, Technical Committee, IASTA Aerosol, Clouds & Indian Monsoon Conference, Kanpur (2004).

Other Recognitions

- Member, Advisory Board, *Environmental Science: Atmospheres*, Royal Society of Chemistry (2021–2023).
- Member, Editorial Advisory Board, *Environmental Science & Technology Letters* (2020–present).
- Member, Scientific Advisory Committee (SAC), National Atmospheric Research Laboratory (NARL) (2019–present).
- Associate Editor, *Journal of Indian Geophysical Union* (2018–present).
- Expert Member, Committee on “Aerosol, Radiation and Trace Gases,” NARL, Gadanki (2018–present).
- National Coordinator, Department of Science and Technology’s National Network Programme on Climate Change and Aerosol (2018–2021).
- Member, Research Council, CSIR–National Environmental Engineering Research Institute (2017–2020).
- Member, Editorial Board, *Journal of Aerosol Science* (2016–2019).
- Member, Advisory Board, *Environmental Science: Processes & Impacts*, Royal Society of Chemistry (2016–2018).
- Academic Editor (Editorial Board Member), *PLOS ONE* (2014).

Administrative Experience

18. Dean, Kotak School of Sustainability, IIT Kanpur (2024–2027).
17. Chairman, *Udghosh*, Annual Sports Festival, IIT Kanpur (2022).
16. Head, Department of Civil Engineering, IIT Kanpur (2018–2021).
15. Coordinator, Sustainable Habitat Theme, Vishwajeet Proposal, IIT Kanpur (2017).
14. Member, Institute Information Cell (IC), IIT Kanpur (2016–2017).
13. Coordinator, Centre for Environmental Science and Engineering, IIT Kanpur (2014–2017).
12. Member, Senate Library Committee, IIT Kanpur (2013–2014).
11. Organizer, Alumni Seminar Series, Department of Civil Engineering, IIT Kanpur (2012–2013).
10. Coordinator, Academic Senate, IIT Kanpur (Oct 2012–Oct 2013).
9. Member, Advisory Committee, Centre for Environmental Science and Engineering, IIT Kanpur (2011–2012).

8. Member, Departmental Postgraduate Committee (DPGC), Environmental Engineering & Management Programme, IIT Kanpur (2012–2014).
7. Member, Institute Research Development Committee, IIT Kanpur (2010–2012).
6. Faculty In-Charge, Computer Laboratory, Department of Civil Engineering, IIT Kanpur (2008–2009).
5. Warden-in-Charge, Hall V, IIT Kanpur (Mar–Jun 2008).
4. Warden, Hall V, IIT Kanpur (2005–2008).
3. Convenor, DPGC, Environmental Engineering & Management Programme, IIT Kanpur (2004–2005, 2005–2006, 2011–2012).
2. Organizer, Alumni Seminar Series, Department of Civil Engineering, IIT Kanpur (2003–2004).
1. Member, Departmental Undergraduate Committee (DUGC), IIT Kanpur (2003–2004, 2012–2014).

Theses Supervised

(a) Ph.D. Theses Supervised

S. No.	Name	Year of passing	Title of the thesis/Current position
26.	Suman Kumar	Ongoing	Investigation of air quality impacts using portable sensor network
25.	Rachna Devi	Ongoing	Investigation of air quality impacts using portable sensor network
24.	Neha Sinha (Jointly with Dr. Deepika Swami, SEE)	Ongoing	Flood hazard mapping and exploration of nature-based solutions for urban floods for the city of Hyderabad
23.	Akanksha	Ongoing	Unravelling the Sources and Physicochemical Variability of PM _{2.5} in the Central Indo-Gangetic Plain using Fixed and Mobile Lab Platforms
22.	Sidyant Kumar	2025	Shock induced drop atomization Current position: Not known
21.	Vaishali Jain	2025	Spatio-temporal variation of NMVOCs and PM _{2.5} in Delhi and Lucknow using advanced techniques Current position: Humboldt Postdoc Fellow, Max Planck Institute of Chemistry, Germany
20.	Himadri Sekhar Bhowmik	2025	Comparison and Integration of Offline and Online Techniques for Source Identification of Winter-Time Water-Soluble Organic Aerosols in Delhi and their Implications on Human Health Current position: Postdoctoral Researcher, Institute of Climate and Energy Systems – Troposphere, Forschungszentrum Jülich GmbH
19.	Ashutosh Shukla	2024	Source apportionment using UMR and PMF and network analysis Current position: University of California, Davis, USA

18.	Manish Kumar	2024	Understanding Deposition, Resuspension and Cloud Formation Potential of Aerosols in Context of Severe Nuclear Accident Current position: Assistant Professor, TKIET, Warana University, Maharashtra
17.	Suneeti Mishra	2024	New Particle Formation and Particle growth study in the Delhi NCR(India) with connection to Haze Formation Current position: Postdoctoral Fellow, Paul Scherrer Institute PSI, Switzerland
16.	Vipul Lalchandani	2023	Chemical characterization of particulate matter, and understanding organic aerosol sources and evolution at downwind location of Delhi during winter season. Current position: Senior Associate, Air Quality Observations group, CSTEP, Bengaluru
15.	Gaurav Mishra	2021	Growth characteristics of cesium compound aerosols under various saturation conditions Current position: Research Scientist, IRSN, France
14.	Kunal Ghosh	2021	Role of ion in aerosol microphysical processes (modeling and experimental studies) Current position: Research Scientist, University of Leeds, UK
13.	Navaneeth M. Thampan	2021	Evolution of size, composition and mixing state of carbonaceous aerosols in Indo-Gangetic Plain Current position: Postdoctoral Fellow, University of Manchester, UK
12.	Anil Kumar Mandariya	2021	Impact of ambient relative humidity on the growth and evolution of organic aerosol Current position: Postdoctoral, Interuniversity Laboratory of Atmospheric Systems (LISA), France
11.	Anubhav Dwivedi	2020	Experimental and numerical study on micro-physical properties of aerosols and its behaviour under varying thermal-hydraulic conditions Current position: Postdoctoral Fellow, GCARE, University of Surrey, UK
10.	Manish Joshi	2018	Formation and evolution characteristics of nuclei mode particles in dense atmospheric and confined aerosol environments Current position: Scientific Officer 'E', BARC, Mumbai
9.	Shamjad P.M.	2017	Impact of carbonaceous aerosol absorption and mixing state on direct radiative forcing in Kanpur-India Current position: Scientist, Qatar Environmental and Energy Research Institute, Doha

8.	Chandan Sarangi	2017	Understanding aerosol-surface-cloud-rainfall interactions within Indian summer monsoon region Current position: Assistant Professor, Department of Civil Engineering, IIT Madras
7.	Abhishek Chakraborty	2016	Fog and organic aerosols interactions: processing, sources, and composition Current position: Assistant Professor, Centre for Environmental Science and Engineering, IIT Bombay
6.	Deepika Bhattu	2016	Effect of aerosol size, chemical composition, mixing state and volatility on cloud condensation nuclei activity in the ambient atmosphere Current position: Associate Professor, Department of Civil and Infrastructure Engineering, IIT Jodhpur
5.	Chiranjib Chaudhari	2015	Characteristics of historical climate change over Indo-Gangetic basin: Observational analysis and numerical modelling Current position: Chief Research Officer, Geosapiens Inc., Canada
4.	Daya Shankar Kaul	2014	Understanding the formation of organic aerosol in urban environment during foggy and non-foggy episodes Current position: Associate Professor, PDE University, Gujarat
3.	J. Jaidevi	2012	Effects of fine particulate matter on human health and climate Current position: Associate Professor, IITRAM, Ahmedabad
2.	Sumit Kumar Mishra	2011	Numerical estimation of optical properties of pure and polluted mineral dust particle Current position: Principal Scientist, NPL, New Delhi
1.	Sagnik Dey	2008	Aerosol radiative effects in Kanpur in the Indo-Gangetic basin, northern India Current position: Head & Chair Professor, Policy Studies, IIT Delhi

(b) M.Tech Theses Supervised

S. No.	Name	Year of passing	Title of the thesis/Current position
43.	Aditya Kushwaha	Ongoing	Particulate Matter Forecasting
42.	Varad Patil	Ongoing	Vision-Based Estimation of Ambient Particulate Matter Concentrations Using Co-located CCTV Surveillance Imagery and Low-Cost Sensors
41.	Bhairavi Sanjay Pustode	Ongoing	Source apportionment study on a mobile platform

40.	Pranshu Bajpai	Ongoing	Spatio-Temporal AI framework for air pollution attribution and short-term forecasting using mobile monitoring data
39.	Hrushikesh Nandi	Ongoing	Calibration of Low-Cost Sensors
38.	Apoorva	2026	Impact of Seasonal transition and Anthropogenic Episodes on PM _{2.5} in Urban and Industrial Lucknow
37.	Kartikay Singhal	2026	On spot source apportionment using sophisticated instruments and portable sensors across different source categories in a city
36.	Aseem Dubey	2024	Improving Low-Cost PM _{2.5} Sensor Accuracy through Predictive Modelling using Machine Learning
35.	Saurabh Kumar Maurya	2024	Optimal Deployment of Movable Sensors for Air Quality Monitoring
34.	Nishant Ajnoti	2023	Hybrid Instruments Network Optimization for Air Quality Monitoring
33.	Ayush Nagal	2021	Robust Statistical Calibration and Characterization of Portable Low-Cost Air Quality Monitoring Sensors
32.	Saurabh Kukreti	2020	Impact of variability in initial and boundary conditions of meteorology on the simulated particulate matter concentrations over Delhi during winters using WRF-Chem
31.	Pratapaditya Ghosh	2020	Understanding the non-local and local contributions during a high PM _{2.5} loading winter episode over the megacity of Delhi using WRF-Chem
30.	Shubham Naresh	2019	Spatial and temporal variability in ionic and metal composition of PM _{2.5} , across five sites of Gangetic plain; seasonality in secondary inorganic aerosol and preliminary source apportionment Current position: Environmental Engineer, THDC India Limited, Rishikesh
29.	Himadri Sekhar Bhowmik	2019	Inter and Intra seasonality in carbonaceous species (EC, OC) of PM _{2.5} aerosol over five sites of Indo-Gangetic plain, preliminary source apportionment and case study on multi-day regional SOA formation during winter at Faridabad Current position: Postdoctoral Researcher, Institute of Climate and Energy Systems – Troposphere, Forschungszentrum Jülich GmbH
28.	Saad Ahmed	2018	Application of microwave radiometer in now casting of convective activity Current position: Senior Engineer, Tata Consulting Engineers, Noida
27.	Mithun Krishnan K.V.	2017	Seasonal dynamics of surface energy balance over a semi-natural grass land in central Indo-Gangetic Basin

26.	Geet George	2017	Characterisation of cloud vertical structure (CVS) and cloud radiative forcing (CRF) over Kanpur Current position: Ph.D. Student, Max Planck Institute for Meteorology, Hamburg
25.	Bhuvana Joshi	2016	Real time size resolved analysis of organics in Kanpur city: A comparative study between fog and no-fog periods Current position: Assistant Professor, Govt. Engineering College, Banswara, Rajasthan
24.	Kuntamukkala Pavan Kumar	2016	Black carbon aerosol microphysical properties variation and electron microscopy study of PM _{2.5} in Kanpur Current position: Software Engineer, Tech Mahindra, Pune
23.	Tirthankar Chakraborty	2015	Understanding urban micrometeorology and its impact on the heat island of greater Kanpur Current position: Ph.D. Student, Yale University, USA
22.	Kundan Kumar	2015	Aerosol Direct Radiative forcing over Indo-Gangetic basin during pre-monsoon season using WRF-CHEM Current position: Assistant Executive Engineer, Panchayat Raj Circle, Adilabad, Telangana
21.	Vipul Lalchandani	2014	The need for site-, season- and instrument-specific calibrations of a photo-reference method for determining aerosol Black Carbon concentrations and examining color signal of Organic carbon particles Current position: Bengaluru
20.	Amit Sharma	2014	Assessing health impact of Particulate Matter using Weather Research Forecasting-Chem model over IG Basin Current position: Ahmedabad
19.	Anubhav Dwivedi	2013	Investigation of activation kinetics of laboratory generated and ambient particles Current position: Postdoctoral Fellow, Aarhus University, Denmark
18.	Rosalin Dalai	2013	Role of aerosol type and mixing state on CCN activity Current position: IIT Bhubaneswar
17.	Shamjad P.M.	2011	Hygroscopicity, mixing state and enhanced absorption of aerosols Current position: Postdoctoral Fellow, KAUST, Saudi Arabia
16.	Priya Choudhry	2011	Validation of MODIS-retrieved AOD over Indo-Gangetic Plain Current position: Group Engineer, SNC-Lavalin Atkins, Bengaluru

15.	Monika Srivastava	2011	Aircraft-based CCN Closure Current position: BBD University, Lucknow
14.	Pawan Kumar Bharti	2010	A study of inter and intra variation seasonal of surface Cloud Condensation Nuclei and chemical closure in Kanpur Current position: SIDBI, Ludhiana
13.	Vishnu Patidar	2009	First surface, spatial and vertical measurements of Cloud Condensation Nuclei (CCN) over Indian CTCZ region Current position: Environmental Engineer
12.	Jariwala Chinmay G.	2009	An observational and laboratory study on the effects of Cloud Condensation Nuclei and black carbon aerosol on fog persistence Current position: Environmental Engineer, Dar AL-Handasah, Pune
11.	Vivek Pratap Singh	2008	An experimental investigation of the effects of environmental and fog condensation nuclei parameters on rate of fog dissipation Current position: Engineer, Manali
10.	Sanjay Prakash Baxla	2008	A study of ambient ultra-fine aerosols using SMPS. Current position: Sr. Process Design Engineer, SS GAS LAB ASIA PVT LTD, New Delhi
9.	Anirban Roy	2008	Measurement and simulation of particulate aerosols Current position: Postdoctoral Researcher, Carnegie Mellon University, USA
8.	Anil Kumar D. Vanga	2007	A numerical study of new particle formation in cirrus cloud Current position: Engineer, Jones Lang LaSalle, Mumbai
7.	Sudip Chakraborty	2006	Long term changes in surface and columnar water vapor over North India Current position: Research Scholar, NASA Jet Propulsion Laboratory, Pasadena, CA
6.	Abani Patnaik	2006	Climatology of cloud and aerosol over the Indian subcontinent and adjoining oceans Current position: Offshore Structural Engineer, L&T, Mumbai
5.	Roma Srivastava	2006	Study of trace gas concentration over Kanpur region Current position: Lecturer, Hindustan College of Engineering, Agra
4.	Parul Sharma	2006	Study of aerosol chemical composition over Kanpur region Current position: Sr. Director (HTEM), Lexis Nexis Risk Solutions, California
3.	Tanveer Ahmed	2005	Charging of radioactive aerosols containment wall of pressurized water reactor

			Current position: Data Scientist, TCS North America
2.	Nagesh Chinnam	2005	Analysis of ambient particles by high volume sampler and PM ₁₀
1.	Shyam Kishor	2005	Investigation into seasonal and diurnal formation of atmospheric nitrate

(c) Dual Degree B.Tech–M.Tech Theses Supervised

S. No.	Name	Year of passing	Title of the thesis/Current position
5.	Bharath Kumar	2015	Source Apportionment of Sub Micron Aerosol Over Kanpur Current position: Business Analyst, ZS Associates, Gurgaon
4.	Karn Vohra	2015	A chamber study to understand aerosol deposition phenomena Current position: Research Fellow, University of Birmingham, UK
3.	Alabhya Mishra	2014	Electrical properties of Titan and Earth Atmospheres Current position: Data & Systems Architect, Flag Asset Management, Sydney
2.	Arun Yadav	2013	An evaluation of WRF-Chem model over the Indian Domain Current position: Chief Technology & Product Officer, MakeMyIndia, Bengaluru
1.	Akhilesh Rawal	2012	Study of ion-aerosol near-cloud mechanism to explain cosmic ray cloud-climate conundrum Current position: Advisory CTO, Abhi Loans, Bengaluru

(d) B.Tech Projects Supervised

S. No.	Name	Year of passing	Title of the thesis
5.	Praveen/Naveen	2007	A study of effects of black carbon on cloud microphysical properties using a two-dimensional cloud model
4.	Nikhil/Gaurav	2006	Retrieval of aerosol organic carbon obtained due to biomass burning from various locations of the world
3.	Shiwesh/Sameer	2005	Parameterization of collision efficiency between of electrically charged aerosol particles and cloud of droplets
2.	Ashwyn/Sandip	2005	Numerical investigation of atmospheric fogs
1.	Abhishek/Chandel	2004	Comparison of satellite derived aerosol

			parameters with ground measured data over Gangetic Basin
--	--	--	--

Publications

249. Agrawal, N., Godhani, N., Chowdhury, S., Anandh, P.C., Kumar, A., Rai, P. and Tripathi, S.N. (2026). “Unveiling hidden air pollution exposure and impacts with low-cost sensor network-based frameworks.” *Nature Communications*. <https://doi.org/10.1038/s41467-026-77148-1>.
248. Kumar, S., Tripathi, S. N., and Kumar, S. (2026). “Instability mechanisms of the bag-stamen breakup.” *Physics of Fluids*, 38(2), 023328. <https://doi.org/10.1063/5.0310488>.
247. Lakra, A., Kumar, A., Sethi, D., Bhowmik, H. S., Jain, V., and Tripathi, S. N. (2026). “High-resolution source apportionment and health risks of PM_{2.5}-bound trace elements across a major Indian city: Seasonal and diurnal insights from a multi-site campaign using a mobile laboratory platform.” *Atmospheric Environment*, 365, 121675. <https://doi.org/10.1016/j.atmosenv.2025.121675>
246. Chaurasia, D., Daram, M., Kumar, R., Rao, N. T., Sangode, V., Srivastava, P. Tripathi, A., Chakraborty, S., Lakra, A., Kumar, A., Sethi, D., Tripathi, S. N., and Kar, P. (2025). “Provably outlier-resistant semi-parametric regression for transferable calibration of low-cost air-quality sensors.” Preprint. <https://doi.org/10.48550/arXiv.2511.19810>
245. Anandh, P. C., Tripathi, S. N., Godhani, N., Pandey, M., Rai, P., Agrawal, N., Kumar, A., and Ballav, S. (2025). “Regional Air Quality Management: A data-driven airshed approach in the eastern IGP regions.” *Environmental Science & Technology*, 59(48), 25527–25536. <https://doi.org/10.1021/acs.est.5c01493>
244. Kumar, M., Joshi, M., Dwivedi, A. K., Kumar, S., Saud, T., Khan, A., Mishra, G., Saha, N., Ganju, S., Tripathi, S. N., and Sapra, B. K. (2025). “Study of the deposition and resuspension phase of aerosol particles in a straight test pipe.” *Frontiers in Nuclear Engineering*, 4, 1617991. <https://doi.org/10.3389/fnuen.2025.1617991>
243. Singh, A., Swain, B., Sebastian, M., Tripathi, S. N., Pöhlker, M., Allan, J., McFiggans, G., Pöschl, U., Su, H., Martin, S. T., Andreae, M. O., Ravikrishna, R., Cheng, Y., Coe, H., Liu, P., and Gunthe, S. S. (2025). “Anthropogenic emissions in coastal India strongly influence new particle formation and cloud condensation nuclei activity.” *ACS ES&T Air*, 2(9), 1972–1986. <https://doi.org/10.1021/acsestair.5c00180>
242. Ren, Y., Oxford, C. R., Zhang, D., Liu, X., Zhu, H., Dillner, A. M., White, W. H., Chakrabarty, R. K., Hasheminassab, S., Diner, D. J., Le Roy, E. J., Kumar, J., Viteri, V., Song, K., Akoshile, C., Amador-Muñoz, O., Asfaw, A., Chang, R. Y., Francis, D., Gahungu, P., Garland, R. M., Grutter, M., Kim, J., Langerman, K., Lee, P. C., Lestari, P., Mayol-Bracero, O. L., Naidoo, M., Nelli, N., O'Neill, N., Park, S. S., Salam, A., Sarangi, B., Schechner, Y., Schofield, R., Tripathi, S. N., Windwer, E., Wu, M. T., Zhang, Q., Rudich, Y., Brauer, M., and Martin, R. V. (2025). “Black carbon emissions generally underestimated in the global south as revealed by globally distributed measurements.” *Nature Communications*, 16, 7010. <https://doi.org/10.1038/s41467-025-62468-5>
241. Maurya, S. K., Gehlot, H., and Tripathi, S. N. (2025). “Optimal deployment of movable sensors for air quality monitoring.” *Journal of Infrastructure Systems*, 31(4), 04025030. <https://doi.org/10.1061/JITSE4.ISENG-2669>
240. Lalchandani, V., Tripathi, S. N., Srivastava, D., Mishra, G., Thamban, N. M., Mishra, S., Tripathi, N., Wang, L., Prévôt, A. S. H., Bhowmik, H. S., Dixit, K., Sahu, L. K., and Gunthe,

- S. S. (2025). "Semi-volatile oxygenated organics and ammonium chloride increasing sub-micron aerosol hygroscopicity, cloud condensation nuclei and PM₁ mass in the Delhi region." *Atmospheric Environment*, 358, Article 121356. <https://doi.org/10.1016/j.atmosenv.2025.121356>
239. Joshi, M., Mariam, Khan, A., Moosakutty, S. P., Chakraborty, A., Tripathi, S. N., and Sapra, B. K. (2025). "Steam aerosol interaction experiments: Measurement of aerosol and liquid droplet size distributions." *Progress in Nuclear Energy*, 188, Article 105865. <https://doi.org/10.1016/j.pnucene.2025.105865>
238. Hao, Y., Strähl, J., Khare, P., Cui, T., Schneider-Beltran, K., Qi, L., Wang, D., Top, J., Surdu, M., Bhattu, D., Bhowmik, H. S., Vats, P., Rai, P., Kumar, V., Ganguly, D., Szidat, S., Uzu, G., Jaffrezo, J.-L., Elazzouzi, R., Rastogi, N., Slowik, J., Haddad, I. E., Tripathi, S. N., Prévôt, A. S. H., and Dällenbach, K. R. (2025). "Transported smoke from crop residue burning as the major source of organic aerosol and health risks in northern Indian cities during post-monsoon." *Environment International*, 202, Article 109583. <https://doi.org/10.1016/j.envint.2025.109583>
237. Chaudhry, S. K., Tripathi, S. N., Reddy, T. V. R., Madhwal, S., Yadav, A. K., Sahu, R., and Pradhan, P. K. (2025). "Assessment of seasonal variation in PM_{2.5} concentration using low-cost sensors: A case study of Jaipur city, India." *Atmospheric Environment*, 345, Article 121067. <https://doi.org/10.1016/j.atmosenv.2025.121067>
236. Mishra, G., Kumar, M., Tripathi, S. N., Joshi, M., Kumar, S., Saud, T., Chauhan, S., Khan, A., and Sapra, B. K. (2025). "Interaction of cesium compounds with abundant inorganic compounds of atmosphere: Effect on cloud formation potential and settling." *Journal of Hazardous Materials*, 488, Article 137248. <https://doi.org/10.1016/j.jhazmat.2025.137248>
235. Zhang, Z., Li, J., Che, H., Dong, Y., Dubovik, O., Eck, T., Gupta, P., Holben, B., Kim, J., Lind, E., Saud, T., Tripathi, S. N., and Ying, T. (2025). "Long-term trends in aerosol properties derived from AERONET measurements." *EGU sphere ACP*, 25, 4617–4637. <https://doi.org/10.5194/acp-25-4617-2025>
234. Dey, S., Arora, V., and Tripathi, S. N. (2025). "Leveraging unsupervised data and domain adaptation for deep regression in low-cost sensor calibration." *IEEE Transactions on Neural Networks and Learning Systems*, 36(4), 7277–7286. <https://doi.org/10.1109/TNNLS.2024.3409364>
233. Chaudhry, S. K., Tripathi, S. N., Reddy, T. V. R., Kumar, A., Madhwal, S., Yadav, A. K., and Pradhan, P. K. (2024). "Influence of seasonal variation on spatial distribution of PM_{2.5} concentration using low-cost sensors." *Environmental Monitoring and Assessment*, 196(12), Article 1234. <https://doi.org/10.1007/s10661-024-13377-5>
232. Pandey, M., Jain, V., Godhani, N., Tripathi, S. N., and Rai, P. (2024). "Spatio-temporal Forecasting of PM_{2.5} via Spatial-Diffusion Guided Encoder-Decoder Architecture." In *8th International Conference on Data Science and Management of Data (12th ACM IKDD CODS and 30th COMAD)*, December 18–21, 2024, Jodhpur, India. ACM, New York, NY, USA, 9 pp. arXiv:2412.13935 <https://doi.org/10.48550/arXiv.2412.13935>
231. Jain, V., Mukherjee, A., Banerjee, S., Madhwal, S., Bergin, M. H., Bhawe, P., Carlson, D., Jiang, Z., Zheng, T., Rai, P., and Tripathi, S. N. (2024). "A hybrid approach for integrating micro-satellite images and sensors network-based ground measurements using deep learning for high-resolution prediction of fine particulate matter (PM_{2.5}) over an Indian city, Lucknow." *Atmospheric Environment*, 338, Article 120798.

230. Kumar, S., Sudama, Tripathi, S. N., and Kumar, S. (2024). “Drop breakup in bag regime under the impulsive condition.” *International Journal of Multiphase Flow*, 181, Article 104977. <https://doi.org/10.1016/j.ijmultiphaseflow.2024.104977>
229. Sahu, V., Tripathi, S. N., Sutaria, R., Dumka, N., Kotwal, A., Ghosh, K., and Singh, R. K. (2024). “Assessment of a clean cooking fuel distribution scheme in rural households of India – ‘Pradhan Mantri Ujjwala Yojana (PMUY).’” *Energy for Sustainable Development*, 81, Article 101492. <https://doi.org/10.1016/j.esd.2024.101492>
228. Lakra, A., Shukla, A. K., Bhowmik, H. S., Yadav, A. K., Jain, V., Murari, V., Gaddamidi, S., Lalchandani, V., and Tripathi, S. N. (2024). “Comparative analysis of winter composite-PM_{2.5} in Central Indo Gangetic Plain cities: Combined organic and inorganic source apportionment and characterization, with a focus on the photochemical age effect on secondary organic aerosol formation.” *Atmospheric Environment*, 338, Article 120827. <https://doi.org/10.1016/j.atmosenv.2024.120827>
227. Salana, S., Yu, H., Dai, Z., Subramanian, P. S. G., Puthussery, J. V., Wang, Y., Singh, A., Pope, F. D., Leiva G., M. A., Rastogi, N., Tripathi, S. N., et al. (2024). “Inter-continental variability in the relationship of oxidative potential and cytotoxicity with PM_{2.5} mass.” *Nature Communications*, 15, Article 5263. <https://doi.org/10.1038/s41467-024-49649-4>
226. Bhowmik, H. S., Tripathi, S. N., Puthussery, J. V., Verma, V., Dave, J., and Rastogi, N. (2024). “Reactive oxygen species generation from winter water-soluble organic aerosols in Delhi’s PM_{2.5}.” *Atmospheric Environment: X*, 22, Article 100262. <https://doi.org/10.1016/j.aeaoa.2024.100262>
225. Tripathi, S. N., Yadav, S., and Sharma, K. (2024). “Air pollution from biomass burning in India.” *Environmental Research Letters*, 19(7), 073007. <https://doi.org/10.1088/1748-9326/ad4a90>
224. Liu, X., Turner, J. R., Oxford, C. R., McNeill, J., Walsh, B., Le Roy, E., Weagle, C. L., Stone, E., Zhu, H., Liu, W., Wei, Z., Hyslop, N. P., Giacomo, J., Dillner, A. M., Salam, A., Hossen, A.-A., Islam, Z., Abboud, I., Akoshile, C., Amador-Muñoz, O., Anh, N. X., Asfaw, A., Balasubramanian, R., Chang, R. Y.-W., Coburn, C., Dey, S., Diner, D. J., Dong, J., Farrah, T., Gahungu, P., Garland, R. M., Grutter de la Mora, M., Hasheminassab, S., John, J., Kim, J., Kim, J. S., Langerman, K., Lee, P.-C., Lestari, P., Liu, Y., Mamo, T., Martins, M., Mayol-Bracero, O. L., Naidoo, M., Park, S. S., Schechner, Y., Schofield, R., Tripathi, S. N., Windwer, E., Wu, M.-T., Zhang, Q., Brauer, M., Rudich, Y., and Martin, R. V. (2024). “Elemental characterization of ambient particulate matter for a globally distributed monitoring network: Methodology and implications.” *ACS ES&T Air*, 1(4), 283-293. <https://doi.org/10.1021/acsestair.3c00069>
223. Bhattu, D., Tripathi, S. N., Bhowmik, H. S., Moschos, V., Lee, C. P., Rauber, M., Salazar, G., Abbaszade, G., Cui, T., Slowik, J. G., Vats, P., Mishra, S., Lalchandani, V., Satish, R., Rai, P., Casotto, R., Tobler, A., Kumar, V., Hao, Y., Qi, L., Khare, P., Manousakas, M. I., Wang, Q., Han, Y., Tian, J., Darfeuil, S., Minguillon, M. C., Hueglin, C., Conil, S., Rastogi, N., Srivastava, A. K., Ganguly, D., Bjelic, S., Canonaco, F., Schnelle-Kreis, J., Dominutti, P. A., Jaffrezo, J.-L., Szidat, S., Chen, Y., Cao, J., Baltensperger, U., Uzu, G., Daellenbach, K. R., El Haddad, I., and Prévôt, A. S. H. (2024). “Local incomplete combustion emissions define the PM_{2.5} oxidative potential in Northern India.” *Nature Communications*, 15, 3517. <https://doi.org/10.1038/s41467-024-47785-5>

222. Verma, P. K., Devaprasad, M., Dave, J., Meena, R., Bhowmik, H. S., Tripathi, S. N., and Rastogi, N. (2024). "Summertime oxidative potential of atmospheric PM_{2.5} over New Delhi: Effect of aerosol ageing." *Science of the Total Environment*, 920, 170984. <https://doi.org/10.1016/j.scitotenv.2024.170984>
221. Yadav, P., Lal, S., Tripathi, S. N., Jain, V., and Mandal, T. K. (2024). "Role of sources of NMVOCs in O₃, OH reactivity, and secondary organic aerosol formation over Delhi." *Atmospheric Pollution Research*, 15(5), 102082. <https://doi.org/10.1016/j.apr.2024.102082>
220. Ajnoti, N., Gehlot, H., and Tripathi, S. N. (2024). "Hybrid instruments network optimization for air quality monitoring." *Atmospheric Measurement Techniques*, 17, 1651–1664. <https://doi.org/10.5194/amt-17-1651-2024>
219. Huang, W., Wu, C., Gao, L., Gramlich, Y., Haslett, S. L., Thornton, J., Lopez-Hilfiker, F. D., Lee, B. H., Song, J., Saathoff, H., Shen, X., Ramisetty, R., Tripathi, S. N., Ganguly, D., Jiang, F., Vallon, M., Schobesberger, S., Yli-Juuti, T., and Mohr, C. (2024). "Variation in chemical composition and volatility of oxygenated organic aerosol in different rural, urban, and mountain environments." *Atmospheric Chemistry and Physics*, 24(4), 2607–2624. <https://doi.org/10.5194/acp-24-2607-2024>
218. Madhwal, S., Tripathi, S. N., Bergin, M. H., Bhawe, P., de Foy, B., Reddy, T. V. R., Chaudhry, S. K., Jain, V., Garg, N., and Lalwani, P. (2024). "Evaluation of PM_{2.5} spatio-temporal variability and hotspot formation using low-cost sensors across urban-rural landscape in Lucknow, India." *Atmospheric Environment*, 319, 120302. <https://doi.org/10.1016/j.atmosenv.2023.120302>
217. Bhowmik, H. S., Tripathi, S. N., Shukla, A. K., Lalchandani, V., Murari, V., Devaprasad, M., Shivam, A., Bhushan, R., Prévôt, A. S. H., and Rastogi, N. (2024). "Contribution of fossil and biomass-derived secondary organic carbon to winter water-soluble organic aerosols in Delhi, India." *Science of the Total Environment*, 912, 168655. <https://doi.org/10.1016/j.scitotenv.2023.168655>
216. Singh, A., Patel, A., Satish, R., Tripathi, S. N., and Rastogi, N. (2023). "Wintertime oxidative potential of PM_{2.5} over a big urban city in the central Indo-Gangetic Plain." *Science of the Total Environment*, 905, 167155. <https://doi.org/10.1016/j.scitotenv.2023.167155>
215. Kohl, M., Lelieveld, J., Chowdhury, S., Ehrhart, S., Sharma, D., Cheng, Y., Tripathi, S. N., Sebastian, M., Pandithurai, G., Wang, H., and Pozzer, A. (2023). "Numerical simulation and evaluation of global ultrafine particle concentrations at the Earth's surface." *Atmospheric Chemistry and Physics*, 23(20), 13191–13215. <https://doi.org/10.5194/acp-23-13191-2023>
214. Haslett, S. L., Bell, D. M., Kumar, V., Slowik, J. G., Wang, D. S., Mishra, S., Rastogi, N., Singh, A., Ganguly, D., Thornton, J., Zheng, F., Li, Y., Nie, W., Liu, Y., Ma, W., Yan, C., Kulmala, M., Daellenbach, K. R., Hadden, D., Baltensperger, U., Prevot, A. S. H., Tripathi, S. N., and Mohr, C. (2023). "Nighttime NO emissions strongly suppress chlorine and nitrate radical formation during the winter in Delhi." *Atmospheric Chemistry and Physics*, 23, 9023–9036. <https://doi.org/10.5194/acp-23-9023-2023>
213. Molina-Cuberos, G. J., Witasse, O., Toledo, D., and Tripathi, S. N. (2023). "The low-altitude ionosphere of the ice giant planets." *Journal of Geophysical Research: Planets*, 128(3), e2022JE007568. <https://doi.org/10.1029/2022JE007568>
212. Mishra, S., Tripathi, S. N., Kanawade, V. P., Haslett, S. L., Dada, L., Ciarelli, G., Kumar, V., Singh, A., Bhattu, D., Rastogi, N., Daellenbach, K. R., Ganguly, D., Gargava, P., Slowik, J. G., Kulmala, M., Mohr, C., El-Haddad, I., and Prevot, A. S. H. (2023). "Rapid night-time

- nanoparticle growth in Delhi driven by biomass-burning emissions.” *Nature Geoscience*, 16, 224–230. <https://doi.org/10.1038/s41561-023-01138-x>
211. Jain, V., Tripathi, N., Tripathi, S. N., Gupta, M., Sahu, L. K., Murari, V., Gaddamidi, S., Shukla, A. K., and Prevot, A. S. H. (2023). “Real-time measurements of non-methane volatile organic compounds in the central Indo-Gangetic basin, Lucknow, India: source characterization and their role in O₃ and secondary organic aerosol formation.” *Atmospheric Chemistry and Physics*, 23, 3383–3408. <https://doi.org/10.5194/acp-23-3383-2023>
 210. Ghosh, S., Dey, S., Das, S., Riemer, N., Giuliani, G., Ganguly, D., Venkataraman, C., Giorgi, F., Tripathi, S. N., Ramachandran, S., Rajesh, T. A., Gadhavi, H., and Srivastava, A. K. (2023). “Towards an improved representation of carbonaceous aerosols over the Indian monsoon region in a regional climate model: RegCM.” *Geoscientific Model Development*, 16, 1–15. <https://doi.org/10.5194/gmd-16-1-2023>
 209. Mukherjee, A., Tripathi, S. N., Ram, K., and Saha, D. (2023). “New Delhi air potentially chokes from groundwater conservation policies in adjoining regions.” *Environmental Science & Technology Letters*, 10(1), 3–5. <https://doi.org/10.1021/acs.estlett.2c00848>
 208. Shukla, A. K., Tripathi, S. N., Canonaco, F., Lalchandani, V., Sahu, R., Srivastava, D., Dave, J., Thamban, M. N., Gaddamidi, S., Sahu, L., Kumar, M., Singh, V., and Rastogi, N. (2023). “Spatio-temporal variation of C-PM_{2.5} (composition-based PM_{2.5}) sources using PMF*PMF (double-PMF) and single-combined PMF technique on real-time non-refractory, BC and elemental measurements during post-monsoon and winter at two sites in Delhi, India.” *Atmospheric Environment*, 293, 119456. <https://doi.org/10.1016/j.atmosenv.2022.119456>
 207. Sreekanth, V., Ajay, R., Padmavati, K., Puttaswamy, N., Prabhu, V., Agrawal, P., Upadhya, A., Rao, S., Sutaria, R., Suman, M., Dey, S., Khaiwal, R., Balakrishnan, K., Tripathi, S. N., and Singh, P. (2022). “Inter-versus intracity variations in the performance and calibration of low-cost PM_{2.5} sensors: A multicity assessment in India.” *ACS Earth and Space Chemistry*, 6, 3007–3016. <https://doi.org/10.1021/acsearthspacechem.2c00257>
 206. Khatri, P., Hayasaka, T., Holben, B. N., Singh, R. P., Letu, H., and Tripathi, S. N. (2022). “Increased aerosols can reverse Twomey effect in water clouds through radiative pathway.” *Scientific Reports*, 12, 20666. <https://doi.org/10.1038/s41598-022-25241-y>
 205. Puthussery, J. V., Dave, J., Shukla, A., Gaddamidi, S., Singh, A., Vats, P., Salana, S., Ganguly, D., Rastogi, N., Tripathi, S. N., and Verma, V. (2022). “Effect of biomass burning, Diwali fireworks, and polluted fog events on the oxidative potential of fine ambient particulate matter in Delhi, India.” *Environmental Science & Technology*, 56, 14605–14616. DOI: <https://doi.org/10.1021/acs.est.2c02730>
 204. Bhowmik, H. S., Tripathi, S. N., Sahu, R., Shukla, A. K., Lalchandani, V., Talukdar, S., Tripathi, N., and Sahu, L. (2022). “Insights into the regional transport and local formation of secondary organic aerosol in Delhi, India.” *Aerosol and Air Quality Research*, 22, 220113. DOI: <https://doi.org/10.4209/aaqr.220113>
 203. Tripathi, N., Sahu, L. K., Wang, L., Vats, P., Soni, M., Kumar, P., Satish, R. V., Bhattu, D., Sahu, R., Patel, K., Rai, P., Kumar, V., Rastogi, N., Ojha, N., Tiwari, S., Ganguly, D., Slowik, J., Prévôt, A. S. H., and Tripathi, S. N. (2022). “Characteristics of VOC composition at urban and suburban sites of New Delhi, India in winter.” *Journal of Geophysical Research: Atmospheres*, 127(12), e2021JD035342. <https://doi.org/10.1029/2021JD035342>
 202. Manchanda, C., Kumar, M., Singh, V., Hazarika, N., Faisal, M., Lalchandani, V., Shukla, A. K., Dave, J., Rastogi, N., and Tripathi, S. N. (2022). “Chemical speciation and source

- apportionment of ambient PM_{2.5} in New Delhi before, during, and after the Diwali fireworks.” *Atmospheric Pollution Research*, 13(6), 101428. <https://doi.org/10.1016/j.apr.2022.101428>
201. Jain, V., Tripathi, S. N., Tripathi, N., Sahu, L., Gaddamidi, S., Shukla, A. K., Bhattu, D., and Ganguly, D. (2022). “Seasonal variability and source apportionment of non-methane VOCs using PTR-TOF-MS measurements in Delhi, India.” *Atmospheric Environment*, 283, 119163. <https://doi.org/10.1016/j.atmosenv.2022.119163>
 200. Kumar, S., Mishra, G., Kumar, M., Dwivedi, A. K., Saud, T., Khan, A., Sapra, B. K., Kumar, S., and Tripathi, S. N. (2022). “Response of PDPA to optical materials and thickness of test section window.” *Measurement*, 197, 111317. <https://doi.org/10.1016/j.measurement.2022.111317>
 199. Kumar, V., Giannoukos, S., Haslett, S. L., Tong, Y., Singh, A., Bertrand, A., Lee, C. P., Wang, D. S., Bhattu, D., Stefenelli, G., Dave, J. S., Puthussery, J. V., Qi, L., Vats, P., Rai, P., Casotto, R., Satish, R., Mishra, S., Pospisilova, V., Mohr, C., Bell, D. M., Ganguly, D., Verma, V., Rastogi, N., Baltensperger, U., Tripathi, S. N., Prévôt, A. S. H., and Slowik, J. G. (2022). “Highly time-resolved chemical speciation and source apportionment of organic aerosol components in Delhi, India, using extractive electrospray ionization mass spectrometry.” *Atmospheric Chemistry and Physics*, 22(11), 7739–7761. <https://doi.org/10.5194/acp-22-7739-2022>
 198. Bhowmik, H. S., Shukla, A., Lalchandani, V., Dave, J., Rastogi, N., Kumar, M., Singh, V., and Tripathi, S. N. (2022). “Inter-comparison of online and offline methods for measuring ambient heavy and trace elements and water-soluble inorganic ions (NO₃⁻, SO₄²⁻, NH₄⁺, and Cl⁻) in PM_{2.5} over a heavily polluted megacity, Delhi.” *Atmospheric Measurement Techniques*, 15, 2667–2684. <https://doi.org/10.5194/amt-15-2667-2022>
 197. Mariam, Joshi, M., Khan, A., Mishra, G., Tripathi, S. N., and Sapra, B. K. (2022). “Experimental estimates of hygroscopic growth of particulate fission product species (mixed CsI–CsOH) with implications in reactor accident safety research.” *Progress in Nuclear Energy*, 148, 104216. <https://doi.org/10.1016/j.pnucene.2022.104216>
 196. Yadav, K., Arora, V., Kumar, M., Tripathi, S. N., Motghare, V. M., and Rajput, K. A. (2022). “Few-shot calibration of low-cost air pollution (PM_{2.5}) sensors using meta learning.” *IEEE Sensors Letters*, 6(5), 1–4, Article 7001704. <https://doi.org/10.1109/LSENS.2022.3168291>
 195. Sarangi, C., Chakraborty, T. C., Tripathi, S. N., Krishnan, M., Morrison, R., Evans, J., and Mercado, L. M. (2022). “Observations of aerosol–vapor pressure deficit–evaporative fraction coupling over India.” *Atmospheric Chemistry and Physics*, 22(5), 3615–3629. <https://doi.org/10.5194/acp-22-3615-2022>
 194. Yadav, S., Tripathi, S. N., and Rupakheti, M. (2022). “Current status of source apportionment of ambient aerosols in India.” *Atmospheric Environment*. 274, Article 118987. <https://doi.org/10.1016/j.atmosenv.2022.118987>
 193. Lalchandani, V., Srivastava, D., Dave, J., Mishra, S., Tripathi, N., Shukla, A. K., Sahu, R., Thamban, N. M., Gaddamidi, S., Dixit, K., Ganguly, D., Tiwari, S., Srivastava, A. K., Sahu, L., Rastogi, N., Gargava, P., and Tripathi, S. N. (2022). “Effect of biomass burning on the PM_{2.5} composition and secondary aerosol formation during post-monsoon and winter haze episodes in Delhi.” *Journal of Geophysical Research: Atmospheres*, 127(1), e2021JD035232. <https://doi.org/10.1029/2021JD035232>
 192. Khatri, P., Hayasaka, T., Holben, B., Tripathi, S. N., Misra, P., Patra, P. K., Hayashida, S., and Dumka, U. C. (2021). “Aerosol loading and radiation budget perturbations in densely

- populated and highly polluted Indo-Gangetic Plain by COVID-19: Influences on cloud properties and air temperature.” *Geophysical Research Letters*, 48(20), e2021GL093796. <https://doi.org/10.1029/2021GL093796>
191. Jangid, M., Mishra, A. K., Koren, I., Sarangi, C., Kumar, K., Singh, S., and Tripathi, S. N. (2021). “Observation of aerosol induced ‘lower tropospheric cooling’ over Indian core monsoon region.” *Environmental Research Letters*, 16(12), 124057. <https://doi.org/10.1088/1748-9326/ac3b7a>
 190. Talukdar, S., Tripathi, S. N., Lalchandani, V., Rupakheti, M., Bhowmik, H. S., Shukla, A. K., Murari, V., Sahu, R., Jain, V., Tripathi, N., Dave, J., Rastogi, N., and Sahu, L. (2021). “Air pollution in New Delhi during late winter: An overview of a group of campaign studies focusing on composition and sources.” *Atmosphere*, 12, 1432. <https://doi.org/10.3390/atmos12111432>
 189. Ginn, O., Rocha-Melogno, L., Bivins, A., Lowry, S., Cardelino, M., Nichols, D., Tripathi, S. N., Soria, F., Andrade, M., Bergin, M., Deshusses, M. A., and Brown, J. (2021). “Detection and quantification of enteric pathogens in aerosols near open wastewater canals in cities with poor sanitation.” *Environmental Science and Technology*, 55(21), 14758–14771. <https://doi.org/10.1101/2021.02.14.21251650>
 188. Jha, S. K., Kumar, M., Arora, V., Tripathi, S. N., Motghare, V. M., Shingare, A. A., Rajput, K. A., and Kamble, S. (2021). “Domain adaptation based deep calibration of low-cost PM_{2.5} sensors.” *IEEE Sensors Journal*. 21(22), 25941–25949. <https://doi.org/10.1109/JSEN.2021.3118454>
 187. Thampan, N. M., Lalchandani, V., Kumar, V., Mishra, S., Bhattu, D., Slowik, J. G., Prévôt, A. S. H., Satish, R., Rastogi, N., and Tripathi, S. N. “Evolution of size and composition of fine particulate matter in the Delhi megacity during later winter.” *Atmospheric Environment*, 207, 118752. <https://doi.org/10.1016/j.atmosenv.2021.118752>
 186. Niranjan, R., Mishra, K. P., Tripathi, S. N., and Thakur, A. K. (2021). “Proliferation of lung epithelial cells is regulated by the mechanisms of autophagy upon exposure of soots.” *Frontiers in Cell and Developmental Biology*, 9, 662597. <https://doi.org/10.3389/fcell.2021.662597>
 185. Shukla, A. K., Lalchandani, V., Bhattu, D., Dave, J. S., Rai, P., Thampan, N. M., Mishra, S., Gaddamidi, S., Tripathi, N., Vats, P., Rastogi, N., Sahu, L., Ganguly, D., Kumar, M., Singh, V., Gargava, P., and Tripathi, S. N. “Real-time quantification and source apportionment of fine particulate matter including organics and elements in Delhi during summertime.” *Atmospheric Environment*, 261, 118598. <https://doi.org/10.1016/j.atmosenv.2021.118598>
 184. Rastogi, N., Satish, R., Singh, A., Kumar, V., Thampan, N., Lalchandani, V., Shukla, A., Vats, P., Tripathi, S. N., Ganguly, D., Slowik, J., and Prévôt, A. S. H. (2021). “Diurnal variability in the spectral characteristics and sources of water-soluble brown carbon aerosols over Delhi.” *Science of the Total Environment*, 794, 148589. <https://doi.org/10.1016/j.scitotenv.2021.148589>
 183. Mishra, G., Tripathi, S. N., Saud, T., Joshi, M., Khan, A., and Sapra, B. K. (2021). “Interaction of cesium bound fission product compounds (CsI and CsOH) with abundant inorganic compounds of atmosphere: Effect on hygroscopic growth properties.” *Journal of Hazardous Materials*, 418, 126356. <https://doi.org/10.1016/j.jhazmat.2021.126356>
 182. Ghosh, K., Tripathi, S. N., Joshi, M., Mayya, Y. S., Khan, A., and Sapra, B. K. (2021). “Effect of charge on aerosol microphysics of particles emitted from a hot wire generator: Theory and

- experiments.” *Aerosol Science and Technology*, 55(9), 1084–1098. <https://doi.org/10.1080/02786826.2021.1931011>
181. Manchanda, C., Kumar, M., Singh, V., Faisal, M., Hazarika, N., Shukla, A., Lalchandani, V., Goel, V., Thampan, N., Ganguly, D., and Tripathi, S. N. (2021). “Variation in chemical composition and sources of PM_{2.5} during the COVID-19 lockdown in Delhi.” *Environment International*, 153, 106541. <https://doi.org/10.1016/j.envint.2021.106541>
 180. Mishra, G., Ghosh, K., Dwivedi, A. K., Kumar, M., Kumar, S., Chintalapati, S., and Tripathi, S. N. (2021). “An application of probability density function for the analysis of PM_{2.5} concentration during the COVID-19 lockdown period.” *Science of the Total Environment*, 782, 146681. <https://doi.org/10.1016/j.scitotenv.2021.146681>
 179. Vohra, K., Marais, E. A., Suckra, S., Kramer, L., Bloss, W. J., Sahu, R., Gaur, A., Tripathi, S. N., Van Damme, M., Clarisse, L., and Coheur, P.-F. “Long-term trends in air quality in major cities in the UK and India: A view from space.” *Atmospheric Chemistry and Physics*, 21(8), 6275–6296. <https://doi.org/10.5194/acp-21-6275-2021>
 178. Singh, A., Rastogi, N., Kumar, V., Slowik, J. G., Satish, R., Lalchandani, V., Thampan, N. M., Rai, P., Bhattu, D., Vats, P., Ganguly, D., Tripathi, S. N., and Prévôt, A. S. H. (2021). “Sources and characteristics of light absorbing fine particulates over Delhi through the synergy of real-time optical and chemical measurements.” *Atmospheric Environment*, 252, 118338. <https://doi.org/10.1016/j.atmosenv.2021.118338>
 177. Ram, K., Thakur, R. C., Singh, D. K., Kawamura, K., Shimouchi, A., Sekine, Y., Nishimura, H., Singh, S. K., Pavuluri, C. M., Singh, R. S., and Tripathi, S. N. (2021). “Why airborne transmission hasn’t been conclusive in case of COVID-19? An atmospheric science perspective.” *Science of the Total Environment*, 773, 145525. <https://doi.org/10.1016/j.scitotenv.2021.145525>
 176. Lalchandani, V., Kumar, V., Tobler, A., Thampan, N. M., Mishra, S., Slowik, J. G., Bhattu, D., Rai, P., Satish, R., Ganguly, D., Tiwari, S., Rastogi, N., Tiwari, S., Močnik, G., Prévôt, A. S. H., and Tripathi, S. N. (2021). “Real-time characterization and source apportionment of fine particulate matter in the Delhi megacity area during late winter.” *Science of the Total Environment*, 770, 145324. <https://doi.org/10.1016/j.scitotenv.2021.145324>
 175. Upadhyaya, D. B., Evans, J., Muddu, S., Tomer, S. K., Al Bitar, A., Yeggina, S., S, T., Morrison, R., Fry, M., Tripathi, S. N., Mujumdar, M., Goswami, M., Ganeshi, N., Nema, M. K., Jain, S. K., Angadi, S. S., and Yenagi, B. S. (2021). “The Indian COSMOS Network (ICON): Validating L-Band Remote Sensing and Modelled Soil Moisture Data Products.” *Remote Sensing*, 13(3), 537. <https://doi.org/10.3390/rs13030537>
 174. Ginn, O., Berendes, D., Wood, A., Bivins, A., Rocha-Melogno, L., Deshusses, M. A., Tripathi, S. N., Bergin, M. H., and Brown, J. (2021). “Open waste canals as potential sources of antimicrobial resistance genes in aerosols in urban Kanpur, India.” *American Journal of Tropical Medicine & Hygiene*, 104(5), 1761–1767. <https://doi.org/10.4269/ajtmh.20-1222>
 173. Rai, P., Slowik, J. G., Furger, M., El Haddad, I., Visser, S., Tong, Y., Singh, A., Wehrle, G., Kumar, V., Tobler, A. K., Bhattu, D., Wang, L., Ganguly, D., Rastogi, N., Huang, R.-J., Necki, J., Cao, J., Tripathi, S. N., Baltensperger, U., and Prévôt, A. S. H. (2021). “Highly time-resolved measurements of element concentrations in PM₁₀ and PM_{2.5}: Comparison of Delhi, Beijing, London, and Krakow.” *Atmospheric Chemistry and Physics*, 21, 717–730. <https://doi.org/10.5194/acp-21-717-2021>
 172. Bhowmik, H. S., Naresh, S., Bhattu, D., Rastogi, N., Prévôt, A. S. H., and Tripathi, S. N.

- (2021). “Temporal and spatial variability of carbonaceous species (EC, OC, WSOC, and SOA) in PM_{2.5} aerosol over five sites of Indo-Gangetic Plain.” *Atmospheric Pollution Research*, 12(1), 375–390. <https://doi.org/10.1016/j.apr.2020.09.019>
171. Goel, V., Hazarika, N., Kumar, M., Singh, V., Thamban, N. M., and Tripathi, S. N. (2021). “Variations in black carbon concentration and sources during COVID-19 lockdown in Delhi.” *Chemosphere*, 270, 129435. <https://doi.org/10.1016/j.chemosphere.2020.129435>
 170. Sahu, R., Nagal, A., Dixit, K. K., Unnibhavi, H., Mantravadi, S., Nair, S., Simmhan, Y., Mishra, B., Zele, R., Sutaria, R., Motghare, V. M., Kar, P., and Tripathi, S. N. (2021). “Robust statistical calibration and characterization of portable low-cost air quality monitoring sensors to quantify real-time O₃ and NO₂ concentrations in diverse environments.” *Atmospheric Measurement Techniques*, 14(1), 37–52. <https://doi.org/10.5194/amt-14-37-2021>
 169. Gautam, A. S., Tripathi, S. N., Joshi, A., Mandariya, A. K., Singh, K., Mishra, G., Kumar, S., and Ramola, R. C. (2021). “First surface measurement of variation of cloud condensation nuclei (CCN) concentration over the pristine Himalayan region of Garhwal, Uttarakhand, India.” *Atmospheric Environment*, 246, 118123. <https://doi.org/10.1016/j.atmosenv.2020.118123>
 168. McNeill, J., Snider, G., Weagle, C. L., Walsh, B., Bissonnette, P., Stone, E., Abboud, I., Akoshile, C., Anh, N. X., Balasubramanian, R., Brook, J. R., Coburn, C., Cohen, A., Dong, J., Gagnon, G., Garland, R. M., He, K., Holben, B. N., Kahn, R., Kim, J. S., Lagrosas, N., Lestari, P., Liu, Y., Jeba, F., Joy, K. S., Martins, J. V., Misra, A., Norford, L. K., Quel, E. J., Salam, A., Schichtel, B., Tripathi, S. N., Wang, C., Zhang, Q., Brauer, M., Gibson, M. D., Rudich, Y., and Martin, R. V. (2020). “Large global variations in measured airborne metal concentrations driven by anthropogenic sources.” *Scientific Reports*, 10, 21817. <https://doi.org/10.1038/s41598-020-78789-y>
 167. Choudhury, G., Tyagi, B., Vissa, N. K., Singh, J., Sarangi, C., Tripathi, S. N., and Tesche, M. (2020). “Aerosol-enhanced high precipitation events near the Himalayan foothills.” *Atmospheric Chemistry and Physics*, 20, 15389–15399. <https://doi.org/10.5194/acp-20-15389-2020>
 166. Tobler, A., Bhattu, D., Canonaco, F., Lalchandani, V., Shukla, A., Thamban, N. M., Mishra, S., Srivastava, A. K., Bisht, D. S., Tiwari, S., Singh, S., Močnik, G., Baltensperger, U., Tripathi, S. N., Slowik, J. G., and Prévôt, A. S. H. (2020). “Chemical characterization of PM_{2.5} and source apportionment of organic aerosol in New Delhi, India.” *Science of the Total Environment*, 745, 140924. <https://doi.org/10.1016/j.scitotenv.2020.140924>
 165. Johnson, A., Ginn, O., Bivins, A., Rocha-Melogno, L., Tripathi, S. N., and Brown, J. (2020). “Extended-spectrum beta-lactamase (ESBL)-positive *Escherichia coli* presence in urban aquatic environments in Kanpur, India.” *Journal of Water and Health*, 18(5), 849–854. <https://doi.org/10.2166/wh.2020.065>
 164. Sembhi, H., Wooster, M., Zhang, T., Sharma, S., Singh, N., Agarwal, S., Boesch, H., Gupta, S., Misra, A., Tripathi, S. N., Mor, S., and Khaiwal, R. (2020). “Post-monsoon air quality degradation across Northern India: Assessing the impact of policy-related shifts in timing and amount of crop residue burnt.” *Environmental Research Letters*, 15, 104067. <https://doi.org/10.1088/1748-9326/aba714>
 163. Wang, L., Slowik, J. G., Tripathi, N., Bhattu, D., Rai, P., Kumar, V., Vats, P., Satish, R., Baltensperger, U., Ganguly, D., Rastogi, N., Sahu, L. K., Tripathi, S. N., and Prévôt, A. S. H. (2020). “Source characterization of volatile organic compounds measured by PTR-ToF-MS

- in Delhi, India.” *Atmospheric Chemistry and Physics*, 20, 9753–9770. <https://doi.org/10.5194/acp-20-9753-2020>
162. Rai, P., Furger, M., El Haddad, I., Kumar, V., Wang, L., Singh, A., Dixit, K., Bhattu, D., Petit, J. E., Ganguly, D., Rastogi, N., Baltensperger, U., Tripathi, S. N., Slowik, J. G., and Prévôt, A. S. H. (2020) “Real-time measurement and source apportionment of elements in Delhi’s atmosphere.” *Science of the Total Environment*, 741, 140332. <https://doi.org/10.1016/j.scitotenv.2020.140332>
 161. Puthussery, J., Singh, A., Rai, P., Bhattu, D., Kumar, V., Vats, P., Furger, M., Rastogi, N., Slowik, J. G., Ganguly, D., Prevot, A. S. H., Tripathi, S. N., and Verma, V. (2020). “Real-time measurements of PM_{2.5} oxidative potential using dithiothreitol (DTT) assay in Delhi, India.” *Environmental Science & Technology Letters*, 7, 504–510. DOI: <https://doi.org/10.1021/acs.estlett.0c00342>
 160. Singh, R. K., and Tripathi, S. N. (2020). “Application of National Aerosol Facility (NAF) in designing of a ventilation system for isolation rooms to minimize interpersonal exposure of sneezing/coughing.” *Transactions of the Indian National Academy of Engineering.*, 5(2), 263–267, <https://doi.org/10.1007/s41403-020-00102-0>
 159. Kanawade, V. P., Tripathi, S. N., Chakraborty, A., and Yu, H. (2020). “Chemical characterisation of sub-micron aerosols during new particle formation in an urban atmosphere.” *Aerosol and Air Quality Research*, 20, 1294–1305. <https://doi.org/10.4209/aaqr.2019.04.0196>
 158. Dwivedi, A. K., Kumar, M., Mishra, G., Joshi, M., Khan, A., Tiwari, N., Kumar, S., Saud, T., Sapra, B. K., and Tripathi, S. N. (2020). “Optimization of controlling parameters of plasma torch aerosol generator and characteristics of synthesized metal oxide aerosols in context of NAF program.” *Progress in Nuclear Energy*, 123, 103311. <https://doi.org/10.1016/j.pnucene.2020.103311>
 157. Sahu, R., Dixit, K. K., Mishra, S., Kumar, P., Shukla, A. K., Sutaria, R., Tiwari, S., and Tripathi, S. N. (2020). “Validation of low-cost sensors in measuring real-time PM10 concentration at two sites in Delhi national capital region.” *Sensors*, 20, 1347. DOI: <https://doi.org/10.3390/s20051347>
 156. Mishra, G., Tripathi, S. N., Saud, T., Joshi, M., Khan, A., and Sapra, B. K. (2020). “Study on CCN activity of fission product aerosols (CsI and CsOH) and their effect on size and other properties.” *Atmospheric Research*, 236, 104816. <https://doi.org/10.1016/j.atmosres.2019.104816>
 155. Mandariya, A. K., Tripathi, S. N., Gupta, T., and Mishra, G., (2020). “Wintertime hygroscopic growth factors (HGFs) of accumulation mode particles and their linkage to chemical composition in a heavily polluted urban atmosphere of Kanpur at the centre of IGP, India: Impact of ambient relative humidity.” *Science of the Total Environment*, 704, 135363. <https://doi.org/10.1016/j.scitotenv.2019.135363>
 154. Bhat, G. S., Morrison, R., Taylor, C. M., Bhattacharya, B. K., Paleri, S., Desai, D., Evans, J. G., Pattnaik, S., Sekhar, M., Nigam, R., Sattar, A., Angadi, S. S., Kacha, D., Patidar, A., Tripathi, S. N., Krishnan, K. V. M., and Sisodiya, A., (2019). “Spatial and temporal variability in energy and water vapor fluxes observed at seven sites on the Indian subcontinent during 2017.” *Quarterly Journal of the Royal Meteorological Society*, 145, 1–14. <https://doi.org/10.1002/qj.3688>
 153. Ghosh, K., Tripathi, S. N., Joshi, M., Mayya, Y. S., Khan, A., and Sapra, B. K., (2019).

- “Particle formation from vapors emitted from glowing wires: Theory and experiments.” *Aerosol Science and Technology*, 54(3), 243–261. <https://doi.org/10.1080/02786826.2019.1688758>
152. Zheng, T., Bergin, M. H., Carlson, D. E., Tripathi, S. N., Gani, S., Archer-Nicholls, S., Eichler, D., Martin, R. V., Shirodkar, A., Ghude, S. D., Landis, S., Sutaria, R., and Gupta, T. (2019). “Gaussian process regression model for dynamically calibrating and surveilling a wireless low-cost particulate matter sensor network in Delhi.” *Atmospheric Measurement Techniques*, 12(9), 5161–5181. <https://doi.org/10.5194/amt-12-5161-2019>
 151. Brauer, M., Guttikunda, S. K., Nishad, K. A., Dey, S., Tripathi, S. N., Weagle, C., and Martin, R. V. (2019). “Examination of monitoring approaches for ambient air pollution: A case study for India.” *Atmospheric Environment*, 216, 116940. <https://doi.org/10.1016/j.atmosenv.2019.116940>
 150. Turner, A. G., Bhat, G. S., Martin, G. M., Parker, D. J., Taylor, C. M., Mitra, A. K., Tripathi, S. N., Milton, S., Rajagopal, E. N., Evans, J. G., Morrison, R., Pattnaik, S., Sekhar, M., Bhattacharya, B. K., Madan, R., Govindankutty, M., Fletcher, J. K., Willetts, P. D., Menon, A., Marsham, J. H., Hunt, K. M. R., Chakraborty, T., George, G., Krishnan, M., Sarangi, C., Belušić, D., Garcia-Carreras, L., Brooks, M., Webster, S., Brooke, J. K., Fox, C., Harlow, R. C., Langridge, J. M., Jayakumar, A., Böing, S. J., Halliday, O., Bowles, J., Kent, J., O’Sullivan, D., Wilson, A., Woods, C., Rogers, S., Smout-Day, R., Tiddeman, D., Desai, D., Nigam, R., Paleri, S., Sattar, A., Smith, M., Anderson, D., Bauguutte, S., Carling, R., Chan, C., Devereau, S., Gratton, G., MacLeod, D., Nott, G., Pickering, M., Price, H., Rastall, S., Reed, C., Trembath, J., Woolley, A., Volonté, A., and New, B. (2019). “Interaction of convective organisation with monsoon precipitation, atmosphere, surface and sea: The 2016 INCOMPASS field campaign in India.” *Quarterly Journal of the Royal Meteorological Society*, 146, 2828–2852. <https://doi.org/10.1002/qj.3633>
 149. Choudhury, G., Tyagi, B., Singh, J., Sarangi, C., and Tripathi, S. N. (2019). “Aerosol-orography-precipitation – A critical assessment.” *Atmospheric Environment*, 214, 116831. <https://doi.org/10.1016/j.atmosenv.2019.116831>
 148. Brattich, E., Serrano Castillo, E., Giulietti, F., Renard, J.-B., Tripathi, S. N., Ghosh, K., Berthet, G., Vignelles, D., and Tositti, L. (2019). “Measurements of aerosols and charged particles on the BEXUS18 stratospheric balloon.” *Annales Geophysicae*, 37, 389–403. <https://doi.org/10.5194/angeo-37-389-2019>
 147. Dwivedi, A. K., Khan, A., Tripathi, S. N., Joshi, M., and Sapra, B. K. (2019). “Aerosol depositional characteristics in piping assembly under varying flow conditions.” *Progress in Nuclear Energy*, 116, 148–157. <https://doi.org/10.1016/j.pnucene.2019.04.007>
 146. Thamban, N. M., Joshi, B., Tripathi, S. N., Sueper, D., Canagaratna, M. R., Moosakutty, S. P., Satish, R., and Rastogi, N. (2019). “Evolution of aerosol size and composition in the Indo-Gangetic Plain: Size-resolved analysis of high-resolution aerosol mass spectra.” *ACS Earth and Space Chemistry*, 3, 823–832. <https://doi.org/10.1021/acsearthspacechem.8b00207>
 145. Mishra, G., Mandariya, A. K., Tripathi, S. N., Joshi, M., and Sapra, B. K. (2019). “Hygroscopic growth of CsI and CsOH particles in context of nuclear reactor accident research.” *Journal of Aerosol Science*, 132, 60–69. DOI: <https://doi.org/10.1016/j.jaerosci.2019.03.008>
 144. Mandariya, A. K., Gupta, T., and Tripathi, S. N. (2019). “Effect of aqueous-phase processing on the formation and evolution of organic aerosol (OA) under different stages of fog life

143. Zhang, S. Y., Tlili, A., Jabiol, J., Chauhan, A. S., Tripathi, S. N., Gessner, M. O., and Mutshinda, C. M. (2019). “Intensive allochthonous inputs along the Ganges River and their effect on microbial community composition and dynamics.” *Environmental Microbiology*, 21(1), 182–196. <https://doi.org/10.1111/1462-2920.14439>
142. Weagle, C. L., Snider, G., Li, C., van Donkelaar, A., Philip, S., Bissonnette, P., Burke, J., Jackson, J., Latimer, R., Stone, E., Abboud, I., Akoshile, C., Anh, N. X., Bachrs, M. T., Brauer, M., Brook, J. R., Cohen, A. D., Dong, J., Gibson, M. D., Griffith, D., He, K. B., Holben, B. N., Kahn, R., Keller, C. A., Kim, J. S., Lagrosas, N., Lestari, P., Khian, Y. L., Liu, Y., Marais, E. A., Martins, J. V., Misra, A., Molnar, A., Morawska, L., Quel, E. J., Salam, A., Schichtel, B. A., Seo, S. D., Tripathi, S. N., Yokochi, C., Zhang, Q., and Martin, R. V. (2018). “Global sources of fine particulate matter: Interpretation of PM_{2.5} chemical composition observed by SPARTAN using a global chemical transport model.” *Environmental Science & Technology*, 52(20), 11670–11681. DOI: <https://doi.org/10.1021/acs.est.8b01658>
141. Sarangi, C., Kanawade, V. P., Tripathi, S. N., Thomas, A., and Hermansson, L. (2018). “Aerosol-induced intensification of cooling effect of clouds during Indian summer monsoon.” *Nature Communications*, 9, 3754. DOI: <https://doi.org/10.1038/s41467-018-06015-5>
140. Zheng, T., Bergin, M. H., Johnson, K. K., Tripathi, S. N., Shirodkar, S., Low, M. S., and Carlson, D. E. (2018). “Field evaluation of low-cost particulate matter sensors in high and low concentration environments.” *Atmospheric Measurement Techniques*, 11(8), 4823–4846. <https://doi.org/10.5194/amt-11-4823-2018>
139. Chakraborty, T., Sarangi, C., Krishnan, M., Tripathi, S. N., Morrison, R., and Evans, J. (2018). “Biases in model-simulated surface energy fluxes during the Indian monsoon onset period.” *Boundary-Layer Meteorology*, 170(2), 323–348. <https://doi.org/10.1007/s10546-018-0395-x>
138. Trent, M., Dreibelbis, R., Bir, A., Tripathi, S. N., and Jenkins, M. W. (2018). “Access to household water quality information leads to safer water: A cluster randomized controlled trial in India.” *Environmental Science & Technology*, 52(9), 5319–5329. <https://doi.org/10.1021/acs.est.8b00035>
137. Sarangi, C., Tripathi, S. N., Qian, Y., Kumar, S., and Leung, L. R. (2018). “Aerosol and urban land use effect on rainfall around cities in Indo-Gangetic Basin from observations and cloud resolving model simulations.” *Journal of Geophysical Research: Atmospheres*, 123, 3645–3667. <https://doi.org/10.1002/2017JD028004>
136. George, G., Sarangi, C., Tripathi, S. N., Chakraborty, T., and Turner, A. (2018). “Vertical structure and radiative forcing of monsoon clouds over Kanpur during the 2016 INCOMPASS field campaign.” *Journal of Geophysical Research: Atmospheres*, 123, 2152–2174. <https://doi.org/10.1002/2017JD027759>
135. Chakraborty, A., Ervens, B., Gupta, T., and Tripathi, S. N. (2018). “Realtime chemical characterization of post-monsoon organic aerosols in a polluted urban city: Sources, composition, and comparison with other seasons.” *Environmental Pollution*, 232, 310–321. DOI: <https://doi.org/10.1016/j.envpol.2017.09.079>
134. Shamjad, P. M., Tripathi, S. N., Thampan, N. M., and Vreeland, R. (2018). “Absorbing refractive index and direct radiative forcing of atmospheric brown carbon over Gangetic Plain.” *ACS Earth and Space Chemistry*, 2(1), 31–37.

133. Holben, B. N., Eck, T. F., Slutsker, I., Pantina, P., Giles, D. M., Schafer, J. S., Sinyuk, A., Sorokin, M., Smirnov, A., Yamaguchi, M., Brooks, S. D., Vishnevetskaya, F., Crawford, I., Ritter, C., Carstens, P., Itterly, K., Hillamo, R., Arola, A., Kupiszewski, P., Tripathi, S. N., Blarel, L., Goloub, P., Silberstein, R., Schulz, M., and Derimian, Y. (2018). "An overview of mesoscale aerosol processes, comparison and validation studies from DRAGON networks." *Atmospheric Chemistry and Physics*, 18, 655–671. <https://doi.org/10.5194/acp-18-655-2018>
132. Mhawish, A., Banerjee, T., Broday, D. M., Misra, A., and Tripathi, S. N. (2017). "Evaluation of MODIS collection 6 aerosol retrieval algorithms over Indo-Gangetic Plain: Implications of aerosols types and mass loading." *Remote Sensing of Environment*, 201, 297–313. <https://doi.org/10.1016/j.rse.2017.09.016>
131. Thamban, N. M., Tripathi, S. N., Moosakutty, S. P., Kuntamukkala, P., and Kanawade, V. P. (2017). "Internally mixed black carbon in the Indo-Gangetic Plain and its effect on absorption enhancement." *Atmospheric Research*, 197, 211–223. DOI: <https://doi.org/10.1016/j.atmosres.2017.07.007>
130. Lal, S., Venkataramani, S., Tripathi, S. N., Ram, K., Patra, P. K., Seddik, S., Kumar, S., Sahu, L. K., and Sheel, V. (2017). "Loss of crop yields in India due to surface ozone: An estimation based on a network of observations." *Environmental Science and Pollution Research*, 24(26), 20972–20981. <https://doi.org/10.1007/s11356-017-9729-3>
129. Mishra, S. K., Saha, N., Singh, S., Sharma, C., Prasad, M. V. S. N., Gautam, S., Misra, A., Gaur, A., Bhattu, D., Ghosh, S., Dwivedi, A., Dalai, R., Paul, D., Gupta, T., Tripathi, S. N., and Kotnala, R. K. (2017). "Morphology, mineralogy and mixing of individual atmospheric particles over Kanpur (IGP): Relevance of homogeneous equivalent sphere approximation in radiative models." *MAPAN – Journal of Metrology Society of India*, 32(3), 229–241. <https://doi.org/10.1007/s12647-017-0215-7>
128. Satish, R., Shamjad, P., Thamban, N., Tripathi, S. N., and Rastogi, N. (2017). "Temporal characteristics of brown carbon over the central Indo-Gangetic Plain." *Environmental Science & Technology*, 51(12), 6765–6772. <https://doi.org/10.1021/acs.est.7b00734>
127. Chowdhury, S., Dey, S., Tripathi, S. N., Beig, G., Aggarwal, A. K., and Soni, V. K. (2017). "'Traffic intervention' policy fails to mitigate air pollution in megacity Delhi." *Environmental Science & Policy*, 74, 8–13. <https://doi.org/10.1016/j.envsci.2017.04.018>
126. Sarangi, C., Tripathi, S. N., Kanawade, V. P., Koren, I., and Pai, D. S. (2017). "Investigation of aerosol-cloud-rainfall association over Indian Summer Monsoon region." *Atmospheric Chemistry and Physics*, 17, 5185–5204. <https://doi.org/10.5194/acp-17-5185-2017>
125. Dimri, A. P., Chevuturi, A., Niyogi, D., Thayyen, R. J., Ray, K., Tripathi, S. N., Pandey, A. K., and Mohanty, U. C. (2017). "Cloudbursts in Indian Himalayas: A review." *Earth Science Reviews*, 168, 1–23. <https://doi.org/10.1016/j.earscirev.2017.03.006>
124. Yu, H., Dai, L., Zhao, Y., Kanawade, V. P., Tripathi, S. N., Ge, X., Chen, M., and Lee, S. H. (2017). "Laboratory observations of temperature and humidity dependencies of nucleation and growth rates of sub-3 nm particles." *Journal of Geophysical Research: Atmospheres*, 122(3), 1919–1929. <https://doi.org/10.1002/2016JD025619>
123. Soni, P., Tripathi, S. N., and Srivastava, R. (2017). "Radiative effects of black carbon aerosols on Indian monsoon: A study using WRF-Chem model." *Theoretical and Applied Climatology*, 132(1–2), 115–134. <https://doi.org/10.1007/s00704-017-2057-1>

122. Vohra, K., Ghosh, K., Tripathi, S. N., Thangamani, I., Goyal, P., Dutta, A., and Verma, V. (2017). "Submicron particle dynamics for different surfaces under quiescent and turbulent conditions." *Atmospheric Environment*, 152, 330–344. <https://doi.org/10.1016/j.atmosenv.2016.12.013>
121. Chakraborty, A., Tripathi, S. N., and Gupta, T. (2017). "Effect of organic aerosol loading and fog processing on organic aerosol volatility." *Journal of Aerosol Science*, 105, 73–83. <https://doi.org/10.1016/j.jaerosci.2016.11.015>
120. Ghosh, K., Tripathi, S. N., Joshi, M., Mayya, Y. S., Khan, A., and Sapra, B. K. (2017). "Modeling studies on coagulation of charged particles and comparison with experiment." *Journal of Aerosol Science*, 105, 35–47. <https://doi.org/10.1016/j.jaerosci.2016.11.019>
119. Chakraborty, T., Sarangi, C., and Tripathi, S. N. (2016). "Understanding diurnality and inter-seasonality of a sub-tropical urban heat-island." *Boundary-Layer Meteorology*, 163(2), 287–309. <https://doi.org/10.1007/s10546-016-0223-0>
118. Shamjad, P. M., Tripathi, S. N., Thampan, N., and Vreeland, H. (2016). "Refractive index and absorption attribution of highly absorbing brown carbon aerosols from an urban Indian city–Kanpur." *Scientific Reports*, 6, 37735. <https://doi.org/10.1038/srep37735>
117. Cardnell, S., Witasse, O., Molina-Cuberos, G. J., Michael, M., Tripathi, S. N., Déprez, G., Montmessin, F., and O'Brien, K. (2016). "A photochemical model of the dust-loaded ionosphere of Mars." *Journal of Geophysical Research: Planets*, 121(11), 2335–2348. <https://doi.org/10.1002/2016JE005077>
116. Sen, I. S., Tripathi, S. N., Bizimis, M., and Khanna, S., Emerging (2016). "Emerging airborne contaminants in India: Platinum group elements from catalytic converters in motor vehicles." *Applied Geochemistry*, 75, 100–106. <https://doi.org/10.1016/j.apgeochem.2016.10.006>
115. Vreeland, H., Schauer, J. J., Russell, A. G., Marshall, J. D., Fushimi, A., Jain, G., Sethuraman, K., Verma, V., Tripathi, S. N., and Bergin, M. H. (2016). "Chemical characterization and toxicity of particulate matter emissions from roadside trash combustion in urban India." *Atmospheric Environment*, 147, 22–30. <https://doi.org/10.1016/j.atmosenv.2016.09.041>
114. Lal, R. M., Nagpure, A., Luo, L., Tripathi, S. N., Ramaswami, A., Bergin, M. H., and Russell, A. G. (2016). "Municipal solid waste and dung cake burning: Discoloring the Taj Mahal and human health impacts in Agra." *Environmental Research Letters*, 11, 104009. <https://doi.org/10.1088/1748-9326/11/10/104009>
113. Kumar, B., Chakraborty, A., Tripathi, S. N., and Bhattu, D. (2016). "Highly time resolved chemical characterization of submicron organic aerosols at a polluted urban location." *Environmental Science: Processes & Impacts*, 18, 1285–1296. <https://doi.org/10.1039/c6em00392c>
112. Chakraborty, A., Tripathi, S. N., and Gupta, T. (2016). "Combined effects of organic aerosol loading and fog processing on organic aerosols oxidation, composition, and evolution." *Science of the Total Environment*, 573, 690–698. <https://doi.org/10.1016/j.scitotenv.2016.08.156>
111. Bhattu, D., Tripathi, S. N., and Chakraborty, A. (2016). "Deriving aerosol hygroscopic mixing state from size-resolved CCN activity and HR-ToF-AMS measurements." *Atmospheric Environment*, 142, 57–70. <https://doi.org/10.1016/j.atmosenv.2016.07.032>
110. Misra, A., Kanawade, V. P., and Tripathi, S. N. (2016). "Quantitative assessment of AOD from 17 CMIP5 models based on satellite derived AOD over India." *Annales Geophysicae*,

- 34, 657–671. DOI: <https://doi.org/10.5194/angeo-34-657-2016>
109. Snider, G., Weagle, C. L., Murdymootoo, K. K., Ring, A., Ritchie, Y., Stone, E., Walsh, A., Akoshile, C., Anh, N. X., Balasubramanian, R., Brook, J., Qonitan, F. D., Dong, J., Griffith, D., He, K., Holben, B. N., Kahn, R., Lagrosas, N., Lestari, P., Ma, Z., Misra, A., Norford, L. K., Quel, E. J., Salam, A., Schichtel, B., Segev, L., Tripathi, S. N., Wang, C., Yu, C., Zhang, Q., Zhang, Y., Brauer, M., Cohen, A., Gibson, M. D., Liu, Y., Martins, J. V., Rudich, Y., and Martin, R. V. (2016). “Variation in global chemical composition of PM_{2.5}: Emerging results from SPARTAN.” *Atmospheric Chemistry and Physics*, 16, 9629–9653. <https://doi.org/10.5194/acp-16-9629-2016>
 108. Sarangi, C., Tripathi, S. N., Mishra, A. K., Goetz, J. D., and Sullivan, A. P. (2016). “Elevated aerosol layers and their radiative impact over Kanpur during monsoon onset period.” *Journal of Geophysical Research: Atmospheres*, 121, 7936–7957. <https://doi.org/10.1002/2015JD024711>
 107. Chakraborty, A., Gupta, T., and Tripathi, S. N. (2016). “Chemical composition and characteristics of ambient aerosols and rainwater residues during Indian summer monsoon: Insight from aerosol mass spectrometry.” *Atmospheric Environment*, 136, 144–155. <https://doi.org/10.1016/j.atmosenv.2016.04.024>
 106. Chakraborty, A., Ervens, B., Gupta, T., and Tripathi, S. N. (2016). “Characterization of organic residues of size-resolved fog droplets and their atmospheric implications.” *Journal of Geophysical Research: Atmospheres*, 121, 4317–4332. <https://doi.org/10.1002/2015JD024508>
 105. Harrison, R. G., Barth, E., Esposito, F., Merrison, J., Montmessin, F., Aplin, K. L., Borlina, C., Berthelot, J. J., Déprez, G., Farrell, W. M., Houghton, I. M. P., Renno, N. O., Nicoll, K. A., Tripathi, S. N., and Zimmerman, M. (2016). “Applications of electrified dust and dust devil electrodynamics to Martian atmospheric electricity.” *Space Science Reviews*, 203(1–4), 299–345. <https://doi.org/10.1007/s11214-016-0241-8>
 104. Kumar, N., Linderman, M., Chu, A. D., Buda, T., Tripathi, S. N., Foster, A. D., and Liang, D. (2016). “Delhi’s air pollution (Re) distribution and air quality regulations.” *Environmental Policy and Law*, 46(1), 77–86. <https://doi.org/10.3233/EPL-46105>
 103. Sen, I. S., Bizimis, M., Tripathi, S. N., and Paul, D. (2016). “Lead isotopic fingerprinting of aerosols to characterize the sources of atmospheric lead in an industrial city of India.” *Atmospheric Environment*, 129, 27–33. <https://doi.org/10.1016/j.atmosenv.2016.01.005>
 102. Ram, K., Singh, S., Sarin, M. M., Srivastava, A. K., and Tripathi, S. N. (2016). “Variability in aerosol optical properties over an urban site, Kanpur, in the Indo-Gangetic Plain: A case study of haze and dust events.” *Atmospheric Research*, 174–175, 52–61. <https://doi.org/10.1016/j.atmosres.2016.01.014>
 101. Tiwari, S., Hopke, P. K., Thimmaiah, D., Dumka, U. C., Srivastava, A. K., Bisht, D. S., Rao, P. S. P., Chate, D. M., Srivastava, M. K., and Tripathi, S. N. (2016). “Nature and sources of ionic species in precipitation across the Indo-Gangetic Plains, India.” *Aerosol and Air Quality Research*, 16(4), 943–957. <https://doi.org/10.4209/aaqr.2015.06.0423>
 100. Arola, A., Schuster, G. L., Pitkänen, M. R. A., Dubovik, O., Kokkola, H., Lindfors, A. V., Mielonen, T., Raatikainen, T., Romakkaniemi, S., Tripathi, S. N., and Lihavainen, H. (2015). “Direct radiative effect by brown carbon over Indo-Gangetic Plain.” *Atmospheric Chemistry and Physics*, 15(22), 12731–12740. <https://doi.org/10.5194/acp-15-12731-2015>
 99. Sarangi, C., Tripathi, S. N., Tripathi, S., and Barth, M. C. (2015). “Aerosol-cloud associations

- over Gangetic Basin during a typical monsoon depression event using WRF-Chem simulation.” *Journal of Geophysical Research: Atmospheres*, 120(20), 10974–10995. <https://doi.org/10.1002/2015JD023634>
98. Shamjad, P. M., Tripathi, S. N., Pathak, R., Hallquist, M., Arola, A., and Bergin, M. H. (2015). “Contribution of brown carbon to direct radiative forcing over the Indo-Gangetic Plain.” *Environmental Science & Technology*, 49(17), 10474–10481. <https://doi.org/10.1021/acs.est.5b03368>
 97. Lalchandani, V., Tripathi, S. N., Graham, E. A., Ramanathan, N., Schauer, J. J., and Gupta, T. (2015). “Recommendations for calibration factors for a photo-reference method for aerosol black carbon concentrations.” *Atmospheric Pollution Research*, 7(1), 75–81. <https://doi.org/10.1016/j.apr.2015.07.007>
 96. Chakraborty, A., Bhattu, D., Gupta, T., Tripathi, S. N., and Canagaratna, M. (2015). “Real-time measurements of ambient aerosols in a polluted Indian city: Sources, characteristics and processing of organic aerosols during foggy and non-foggy periods.” *Journal of Geophysical Research: Atmospheres*, 120(17), 9006–9019. <https://doi.org/10.1002/2015JD023419>
 95. Kamra, A. K., Siingh, D., Gautam, A. S., Kanawade, V. P., Tripathi, S. N., and Srivastava, A. K. (2015). “Atmospheric ions and new particle formation events at a tropical location, Pune, India.” *Quarterly Journal of the Royal Meteorological Society*, 141, 3140–3156. <https://doi.org/10.1002/qj.2598>
 94. Chaudhuri, C., Tripathi, S. N., Srivastava, R., and Misra, A. (2015). “Observation- and numerical-analysis based dynamics of the Uttarkashi cloudburst.” *Annales Geophysicae*, 33(6), 671–686. <https://doi.org/10.5194/angeo-33-671-2015>
 93. Patange, O. S., Ramanathan, N., Rehman, I. H., Tripathi, S. N., Misra, A., Kar, A., Graham, E., Singh, L., Bahadur, R., and Ramanathan, V. (2015). “Reductions in indoor black carbon concentrations from improved biomass stoves in rural India.” *Environmental Science & Technology*, 49(7), 4749–4756. <https://doi.org/10.1021/es506208x>
 92. Snider, G., Weagle, C. L., Martin, R. V., van Donkelaar, A., Conrad, K., Cunningham, D., Gordon, C., Zwicker, M., Akoshile, C., Artaxo, P., Anh, N. X., Brook, J., Dong, J., Garland, R. M., Greenwald, R., Griffith, D., He, K., Holben, B. N., Kahn, R., Koren, I., Lagrosas, N., Lestari, P., Ma, Z., Vanderlei Martins, J., Quel, E. J., Rudich, Y., Salam, A., Tripathi, S. N., Yu, C., Zhang, Q., Zhang, Y., Brauer, M., Cohen, A., Gibson, M. D., and Liu, Y. (2015). “SPARTAN: A global network to evaluate and enhance satellite-based estimates of ground-level particulate matter for global health applications.” *Atmospheric Measurement Techniques*, 8(1), 505–521. <https://doi.org/10.5194/amt-8-505-2015>
 91. Bhattu, D., and Tripathi, S. N. (2015). “CCN closure study: Effects of aerosol chemical composition and mixing state.” *Journal of Geophysical Research: Atmospheres*, 120, 766–783. <https://doi.org/10.1002/2014JD021978>
 90. Bergin, M. H., Tripathi, S. N., Devi, J. J., Gupta, T., McKenzie, M., Rana, K. S., Shafer, M. M., Villalobos, A. M., and Schauer, J. J. (2015). “The discoloration of the Taj Mahal due to particulate carbon and dust deposition.” *Environmental Science & Technology*, 49(2), 808–812. <https://doi.org/10.1021/es504005q>
 89. Villalobos, A. M., Amonov, M. O., Shafer, M. M., Devi, J. J., Gupta, T., Tripathi, S. N., Rana, K. S., McKenzie, M., Bergin, M. H., and Schauer, J. J. (2015). “Source apportionment of carbonaceous fine particulate matter (PM_{2.5}) in two contrasting cities across the Indo-Gangetic Plain.” *Atmospheric Pollution Research*, 6(3), 398–405.

88. Gaur, A., Tripathi, S. N., Kanawade, V. P., Tare, V., and Shukla, S. P. (2014). "Four-year measurements of trace gases (SO₂, NO_x, CO, and O₃) at an urban location, Kanpur, in Northern India." *Journal of Atmospheric Chemistry*, 71(4), 283–301. <https://doi.org/10.1007/s10874-014-9295-8>
87. Dumka, U. C., Bhattu, D., Tripathi, S. N., Kaskaoutis, D. G., and Madhavan, B. L. (2014). "Seasonal inhomogeneity in cloud precursors over Gangetic Himalayan region during GVAX campaign." *Atmospheric Research*, 155, 158–175. <https://doi.org/10.1016/j.atmosres.2014.11.022>
86. Kedia, S., Ramachandran, S., Holben, B. N., & Tripathi, S. N. (2014). "Quantification of aerosol type, and sources of aerosols over the Indo-Gangetic Plain." *Atmospheric Environment*, 98, 607–619. : <https://doi.org/10.1016/j.atmosenv.2014.09.022>
85. Misra, A., Gaur, A., Bhattu, D., Ghosh, S., Dwivedi, A. K., Dalai, R., Paul, D., Gupta, T., Tare, V., Mishra, S. K., Singh, S., and Tripathi, S. N. (2014). "An overview of the physico-chemical characteristics of dust at Kanpur in the central Indo-Gangetic Basin." *Atmospheric Environment*, 97, 386–396. <https://doi.org/10.1016/j.atmosenv.2014.08.043>
84. Kanawade, V. P., Tripathi, S. N., Siingh, D., Gautam, A. S., Srivastava, A. K., Kamra, A. K., Soni, V. K., and Sethi, V. (2014). "Observations of new particle formation at two distinct Indian subcontinental urban locations." *Atmospheric Environment*, 90, 370–379. <https://doi.org/10.1016/j.atmosenv.2014.08.001>
83. Huttunen, J., Arola, A., Myhre, G., Lindfors, A. V., Mielonen, T., Mikkonen, S., Schafer, J. S., Tripathi, S. N., Wild, M., Komppula, M., and Lehtinen, K. E. J. (2014). "Effect of water vapour on the determination of aerosol direct radiative effect based on the AERONET fluxes." *Atmospheric Chemistry and Physics*, 14(12), 6103–6110. <https://doi.org/10.5194/acp-14-6103-2014>
82. Kanawade, V. P., Tripathi, S. N., Bhattu, D., and Shamjad, P. M. (2014). "Sub-micron particle number size distributions characteristics at an urban location, Kanpur, in the Indo-Gangetic Plain." *Atmospheric Research*, 147–148, 121–132. : <https://doi.org/10.1016/j.atmosres.2014.05.010>
81. Mishra, A., Michael, M., Tripathi, S. N., and Béghin, C. (2014). "Revisited modeling of Titan's middle atmosphere electrical conductivity." *Icarus*, 238, 230–234. <https://doi.org/10.1016/j.icarus.2014.04.018>
80. Dumka, U. C., Tripathi, S. N., Misra, A., Giles, D. M., Eck, T. F., Sagar, R., and Holben, B. N. (2014). "Latitudinal variation of aerosol properties from Indo-Gangetic Plain (IGP) to central Himalayan foothills during TIGERZ campaign." *Journal of Geophysical Research: Atmospheres*, 119, 4750–4769. <https://doi.org/10.1002/2013JD021040>
79. Ram, K., Tripathi, S. N., Sarin, M. M., and Bhattu, D. (2014). "Primary and secondary aerosols from an urban site (Kanpur) in the Indo-Gangetic Plain: Influence on CCN, CN concentrations and optical properties." *Atmospheric Environment*, 89, 655–663. <https://doi.org/10.1016/j.atmosenv.2014.02.009>
78. Kaul, D. S., Gupta, T., and Tripathi, S. N. (2014). "Source apportionment for water soluble organic matter of submicron aerosol: A comparison between foggy and nonfoggy episodes." *Aerosol and Air Quality Research*, 14, 1527–1533. <https://doi.org/10.4209/aaqr.2013.10.0319>
77. Bhattu, D., and Tripathi, S. N. (2014). "Inter-seasonal variability in size-resolved CCN

- properties at Kanpur, India.” *Atmospheric Environment*, 85, 161–168. <https://doi.org/10.1016/j.atmosenv.2013.12.016>
76. Ghosh, S., Gupta, T., Rastogi, N., Gaur, A., Misra, A., Tripathi, S. N., Paul, D., Tare, V., Prakash, O., Bhattu, D., Dwivedi, A. K., Kaul, D. S., Dalai, R., and Mishra, S. K. (2014). “Chemical characterization of summertime dust events at Kanpur: Insight into the sources and level of mixing with anthropogenic emissions.” *Aerosol and Air Quality Research*, 14, 879–891. <https://doi.org/10.4209/aaqr.2013.07.0240>
 75. Renard, J. B., Tripathi, S. N., Michael, M., Rawal, A., Berthet, G., Fullekrug, M., Harrison, R. G., Robert, C., Tagger, M., and Gaubicher, B. (2013). “In situ detection of electrified aerosols in the upper troposphere and stratosphere.” *Atmospheric Chemistry and Physics*, 13, 1–8. <https://doi.org/10.5194/acp-13-7895-2013>
 74. Arola, A., Eck, T. F., Huttunen, J., Lehtinen, K. E. J., Lindfors, A. V., Myhre, G., Smirnov, A., Tripathi, S. N., and Yu, H. (2013). “Influence of observed diurnal cycles of aerosol optical depth on aerosol direct radiative effect.” *Atmospheric Chemistry and Physics*, 13, 7895–7901. <https://doi.org/10.5194/acp-13-7895-2013>
 73. Srivastava, M., Tripathi, S. N., Dwivedi, A. K., Dalai, R., Bhattu, D., Bharti, P. K., Jaidevi, J., and Gupta, T. (2013). “CCN closure results from Indian Continental Tropical Convergence Zone (CTCZ) aircraft experiment.” *Atmospheric Research*, 132–133, 322–331. <https://doi.org/10.1016/j.atmosres.2013.05.025>
 72. Kaskaoutis, D. G., Sinha, P. R., Vinoj, V., Kosmopoulos, P. G., Tripathi, S. N., Misra, A., Sharma, M., and Singh, R. P. (2013). “Aerosol properties and radiative forcing over Kanpur during severe aerosol loading conditions.” *Atmospheric Environment*, 79, 7–19. <https://doi.org/10.1016/j.atmosenv.2013.06.020>
 71. Rawal, A., Tripathi, S. N., Michael, M., Srivastava, A. K., and Harrison, R. G. (2013). “Quantifying the importance of galactic cosmic rays in cloud microphysical processes.” *Journal of Atmospheric and Solar-Terrestrial Physics*, 102, 243–251. <https://doi.org/10.1016/j.jastp.2013.05.017>
 70. Devi, J. J., Gupta, T., Jat, R., and Tripathi, S. N. (2013). “Measurement of personal and integrated exposure to particulate matter and co-pollutant gases: A panel study.” *Environmental Science and Pollution Research*, 20(3), 1632–1648. <https://doi.org/10.1007/s11356-012-1179-3>
 69. Joshi, M., Sapra, B. K., Khan, A., Tripathi, S. N., Shamjad, P. M., Gupta, T., and Mayya, Y. S. (2012). “Harmonisation of nanoparticle concentration measurements using GRIMM and TSI scanning mobility particle sizers.” *Journal of Nanoparticle Research*, 14(12), 1–14. <https://doi.org/10.1007/s11051-012-1268-8>
 68. Choudhry, P., Misra, A., and Tripathi, S. N. (2012). “Study of MODIS derived AOD at three different locations in the Indo-Gangetic plain: Kanpur, Gandhi College and Nainital.” *Annales Geophysicae*, 30, 1479–1493. <https://doi.org/10.5194/angeo-30-1479-2012>
 67. Dey, S., Di Girolamo, L., van Donkelaar, A., Tripathi, S. N., Gupta, T., and Mohan, M. (2012). “Variability of outdoor fine particulate (PM_{2.5}) concentration in the Indian Subcontinent: A remote sensing approach.” *Remote Sensing of Environment*, 127, 153–161. <https://doi.org/10.1016/j.rse.2012.08.021>
 66. Sawamura, P., Vernier, J. P., Barnes, J. E., Berkoff, T. A., Welton, E. J., Alados-Arboledas, L., Navas-Guzmán, F., Pappalardo, G., Mona, L., Madonna, F., Lange, D., Sicard, M., Godin-Beekmann, S., Payen, G., Wang, Z., Hu, S., Tripathi, S. N., Cordoba-Jabonero, C., and Hoff,

- R. M. (2012). "Stratospheric AOD after the 2011 eruption of Nabro volcano measured by lidar over the northern hemisphere." *Environmental Research Letters*, 7(3), 034013. <https://doi.org/10.1088/1748-9326/7/3/034013>
65. Shamjad, P. M., Tripathi, S. N., Aggarwal, S. G., Mishra, S. K., Joshi, M., Khan, A., Sapra, B. K., and Ram, K. (2012). "Comparison of experimental and modeled absorption enhancement by Black Carbon (BC) cored polydisperse aerosols under hygroscopic conditions." *Environmental Science & Technology*, 46(15), 8082–8089. <https://doi.org/10.1021/es300295v>
 64. Banerjee, S., Tripathi, S. N., Das, U., Ranjan, R., Jadhav, N., Singh, V. P., Jariwala, C., Sonkar, S. K., and Sarkar, S. (2012). "Enhanced persistence of fog under illumination for carbon nanotube fog condensation nuclei." *Journal of Applied Physics*, 112(2), 024901. <https://doi.org/10.1063/1.4736557>
 63. Kaskaoutis, D.G., R.P. Singh, R. Gautam, M. Sharma, P.G. Kosmopoulos and Tripathi, S. N., (2012). "Variability and trends of aerosol properties over Kanpur, northern India using AERONET data (2001–10)." *Environmental Research Letters*, 7(2), 024003. <https://doi.org/10.1088/1748-9326/7/2/024003>
 62. Mishra, S. K., Tripathi, S. N., Aggarwal, S. G., and Arola, A. (2012). "Optical properties of accumulation mode, polluted mineral dust: Effects of particle shape, hematite content and semi-external mixing with carbonaceous species." *Tellus B: Chemical and Physical Meteorology*, 64(1), 18536. : <https://doi.org/10.3402/tellusb.v64i0.18536>
 61. Misra, A., Tripathi, S. N., Kaul, D. S., and Welton, E. J. (2012). "Study of MPLNET-derived aerosol climatology over Kanpur, India, and validation of CALIPSO level 2 version 3 backscatter and extinction products." *Journal of Atmospheric and Oceanic Technology*, 29(9), 1285–1294. <https://doi.org/10.1175/JTECH-D-11-00162.1>
 60. Patidar, V., Tripathi, S. N., Bharti, P. K., and Gupta, T. (2012). "First surface measurement of cloud condensation nuclei over Kanpur, IGP: Role of long-range transport." *Aerosol Science and Technology*, 46, 973–982. <https://doi.org/10.1080/02786826.2012.685113>
 59. Eck, T. F., Holben, B. N., Reid, J. S., Giles, D. M., Rivas, M. A., Singh, R. P., Tripathi, S. N., Bruegge, C. J., Platnick, S., Arnold, G. T., Krotkov, N. A., Carn, S. A., Sinyuk, A., Dubovik, O., Arola, A., Schafer, J. S., Artaxo, P., Smirnov, A., Chen, H., and Goloub, P. (2012). "Fog and cloud induced aerosol modification observed by the Aerosol Robotic Network (AERONET)." *Journal of Geophysical Research: Atmospheres*, 117, D07206. <https://doi.org/10.1029/2011JD016839>
 58. Srivastava, A. K., Tripathi, S. N., Dey, S., Kanawade, V. P., and Tiwari, S. (2012). "Inferring aerosol types over the Indo-Gangetic basin from ground based Sunphotometer measurements." *Atmospheric Research*, 109, 64–75. <https://doi.org/10.1016/j.atmosres.2012.02.010>
 57. Ram, K., Sarin, M. M., and Tripathi, S. N. (2012). "Temporal trends in atmospheric PM_{2.5}, PM₁₀, elemental carbon, organic carbon, water-soluble organic carbon, and optical properties: Impact of biomass burning emissions in the Indo-Gangetic plain." *Environmental Science & Technology*, 46(2), 686–695. <https://doi.org/10.1021/es202857w>
 56. Jai Devi, J., Tripathi, S. N., Gupta, T., Singh, B. N., Gopalakrishnan, V., and Dey, S. (2011). "Observation-based 3-D view of aerosol radiative properties over Indian Continental Tropical Convergence Zone: Implications to regional climate." *Tellus B: Chemical and Physical Meteorology*, 63(5), 971–989. <https://doi.org/10.1111/j.1600-0889.2011.00580.x>

55. Kaul, D. S., Gupta, T., Tripathi, S. N., Tare, V., and Collett, J. L. Jr. (2011). "Secondary organic aerosol: A comparison between foggy and nonfoggy days." *Environmental Science & Technology*, 45(17), 7307–7313. <https://doi.org/10.1021/es201081d>
54. Giles, D. M., Holben, B. N., Tripathi, S. N., Eck, T. F., Newcomb, W. W., Slutsker, I., Dickerson, R. R., Thompson, A. M., Mattoo, S., Wang, S. H., Singh, R. P., Sinyuk, A., and Schafer, J. S. (2011). "Aerosol properties over the Indo-Gangetic Plain: A mesoscale perspective from the TIGERZ experiment." *Journal of Geophysical Research: Atmospheres*, 116, D18203. <https://doi.org/10.1029/2011JD015809>
53. Srivastava, A. K., Tiwari, S., Devara, P. C. S., Bisht, D. S., Srivastava, M. K., Tripathi, S. N., Goloub, P., and Holben, B. N. (2011). "Pre-monsoon aerosol characteristics over the Indo-Gangetic Basin: Implications to climatic impact." *Annales Geophysicae*, 29, 789–804. <https://doi.org/10.5194/angeo-29-789-2011>
52. Kanawade, V. P., Tripathi, S. N., Sihto, S. L., Vana, M., Sanders, A. F., Kulmala, M., and de Gouw, J. A. (2011). "Isoprene suppression of new particle formation in mixed deciduous forest." *Atmospheric Chemistry and Physics*, 11(12), 6013–6027. <https://doi.org/10.5194/acp-11-6013-2011>
51. Fatima, H., Upadhyaya, H. C., Tripathi, S. N., Sharma, O. P., and Yu, F. (2011). "On radiative forcing of sulphate aerosol produced from ion promoted nucleation mechanisms in an atmospheric global model." *Meteorology and Atmospheric Physics*, 112(3–4), 101–115. <https://doi.org/10.1007/s00703-011-0138-8>
50. Dumka, U. C., Krishna Moorthy, K., Tripathi, S. N., Hegde, P., and Sagar, R. (2011). "Altitude variation of aerosol properties over the Himalayan range inferred from spatial measurements." *Journal of Atmospheric and Solar-Terrestrial Physics*, 73, 1747–1761. <https://doi.org/10.1016/j.jastp.2011.04.002>
49. Michael, M., Tripathi, S. N., Arya, P., Coates, A., Wellbrock, A., and Young, D. T. (2011). "High-altitude charged aerosols in the atmosphere of Titan." *Planetary and Space Science*, 59(9), 880–885. <https://doi.org/10.1016/j.pss.2011.03.010>
48. Singh, V. P., Gupta, T., Tripathi, S. N., Jariwala, C., and Das, U. (2011). "Experimental study of the effects of environmental and fog condensation nuclei parameters on the rate of fog formation and dissipation using a new laboratory scale fog generation facility." *Aerosol and Air Quality Research*, 11(2), 140–154. <https://doi.org/10.4209/aaqr.2010.08.0071>
47. Arola, A., Schuster, G., Myhre, G., Kazadzis, S., Dey, S., and Tripathi, S. N. (2011). "Inferring absorbing organic carbon content from AERONET data." *Atmospheric Chemistry and Physics*, 11, 215–225. <https://doi.org/10.5194/acp-11-215-2011>
46. Srivastava, A. K., and Tripathi, S. N. (2010). "Numerical study for production of space charges within stratiform cloud." *Journal of Earth System Science*, 119(5), 627–638. <https://doi.org/10.1007/s12040-010-0053-2>
45. Ram, K., Sarin, M. M., and Tripathi, S. N. (2010). "A 1 year record of carbonaceous aerosols from an urban site in the Indo-Gangetic plain: Characterization, sources and temporal variability." *Journal of Geophysical Research*, 115, D24313. <https://doi.org/10.1029/2010JD014188>
44. Eck, T. F., Holben, B. N., Sinyuk, A., Pinker, R. T., Goloub, P., Chen, H., Chatenet, B., Li, Z., Singh, R. P., Tripathi, S. N., Reid, J. S., Giles, D. M., Dubovik, O., O'Neill, N. T., Smirnov, A., Wang, P., and Xia, X. (2010). "Climatological aspects of the optical properties of fine/coarse mode aerosol mixtures." *Journal of Geophysical Research: Atmospheres*,

- 115(D19), D19205. <https://doi.org/10.1029/2010JD014002>
43. Ram, K., Sarin, M. M., and Tripathi, S. N. (2010). “Inter-comparison of thermal and optical methods for determination of atmospheric black carbon and attenuation coefficient from an urban location in northern India.” *Atmospheric Research*, 97(3), 335–342. <https://doi.org/10.1016/j.atmosres.2010.04.006>
42. Baxla, S. P., Roy, A. A., Gupta, T., Tripathi, S. N., and Bandyopadhyaya, R. (2009). “Analysis of diurnal and seasonal variation of submicron outdoor aerosol mass and size distribution in a northern Indian city and its correlation to black carbon.” *Aerosol and Air Quality Research*, 9, 458–469. <https://doi.org/10.4209/aaqr.2009.03.0017>
41. Nakajima, T. Y., Nakajima, T., Yoshimori, K., Mishra, S. K., and Tripathi, S. N. (2009). “Development of a light scattering solver applicable to particles of arbitrary shape on the basis of the surface-integral equations method of Muller-type (SIEM/M): Part 1. Methodology, accuracy of calculation and electromagnetic current on the particle surface.” *Applied Optics*, 48(19), 3526–3536. <https://doi.org/10.1364/AO.48.003526>
40. Ganguly, D., Ginoux, P., Ramaswamy, V., Winker, D. M., Holben, B. N., and Tripathi, S. N. (2009). “Retrieving the composition and concentration of aerosols over the Indo-Gangetic basin using CALIOP and AERONET data.” *Geophysical Research Letters*, 36, L13806. <https://doi.org/10.1029/2009GL038315>
39. Devi, J. J., Gupta, T., Tripathi, S. N., and Ujainwal, K. K. (2009). “Assessment of personal exposure to inhalable indoor and outdoor particulate matter for student residents of an academic campus (Indian Institute of Technology Kanpur).” *Inhalation Toxicology*, 21(14), 1208–1222. <https://doi.org/10.3109/08958370902822875>
38. Michael, M., Tripathi, S. N., Borucki, W., and Whitten, R. C. (2009). “Highly charged cloud particles in the atmosphere of Venus.” *Journal of Geophysical Research (Planets)*, 114(E4), E04008. <https://doi.org/10.1029/2008JE003258>
37. Mehta, B., Venkataraman, C., Bhushan, M., and Tripathi, S. N. (2009). “Identification of sources affecting fog formation using receptor modeling approaches and inventory estimates of sectoral emissions.” *Atmospheric Environment*, 43(6), 1288–1295. <https://doi.org/10.1016/j.atmosenv.2008.11.041>
36. Roy, A. A., Baxla, S. P., Gupta, T., Bandyopadhyaya, R., and Tripathi, S. N. (2009). “Particles emitted from indoor combustion sources: Size distribution measurement and chemical analysis.” *Inhalation Toxicology*, 21(10), 837–848. <https://doi.org/10.1080/08958370802538050>
35. Mishra, S. K., Dey, S., and Tripathi, S. N. (2008). “Implication of particle composition and shape to dust radiative effect: A case study from the Great Indian desert.” *Geophysical Research Letters*, 35(23), L23814. <https://doi.org/10.1029/2008GL036058>
34. Michael, M., and Tripathi, S. N. (2008). “Effect of charging of aerosol in the lower atmosphere of Mars during the dust storm of 2001.” *Planetary and Space Science*, 56(13), 1696–1702. <https://doi.org/10.1016/j.pss.2008.07.030>
33. Mishra, S. K., and Tripathi, S. N. (2008). “Modeling optical properties of mineral dust over the Indian Desert.” *Journal of Geophysical Research: Atmospheres*, 113, D23201. <https://doi.org/10.1029/2008JD010048>
32. Michael, M., Tripathi, S. N., and Mishra, S. K. (2008). “Dust charging and electrical conductivity in the day and night-time atmosphere of Mars.” *Journal of Geophysical*

- Research (Planets)*, 113(E7), E07010. <https://doi.org/10.1029/2007JE003047>
31. Whitten, R. C., Borucki, W. J., O'Brien, K., and Tripathi, S. N. (2008). "Predictions of the electrical conductivity and charging of the cloud particles in Jupiter's atmosphere." *Journal of Geophysical Research (Planets)*, 113(E4), E04001. <https://doi.org/10.1029/2007JE002975>
 30. Dey, S., and Tripathi, S. N. (2008). "Aerosol direct radiative effects over Kanpur in the Indo-Gangetic basin, northern India: Long-term (2001–2005) observations and implications to regional climate." *Journal of Geophysical Research*, 113(D4), D04212. <https://doi.org/10.1029/2007JD009029>
 29. Dey, S., Tripathi, S. N., and Mishra, S. K. (2008). "Probable mixing state of aerosols in the Indo-Gangetic Basin, Northern India." *Geophysical Research Letters*, 35(3), L03808. <https://doi.org/10.1029/2007GL032622>
 28. Tripathi, S. N., Pattanaik, A., and Dey, S. (2007). "Aerosol indirect effect over Indo-Gangetic plain." *Atmospheric Environment*, 41(33), 7037–7047. <https://doi.org/10.1016/j.atmosenv.2007.05.007>
 27. Tripathi, S. N., Srivastava, A. K., Dey, S., Satheesh, S. K., and Krishnamoorthy, K. (2007). "The vertical profile of atmospheric heating rate of black carbon aerosols at Kanpur in northern India." *Atmospheric Environment*, 41(32), 6909–6915. <https://doi.org/10.1016/j.atmosenv.2007.06.032>
 26. Sharma, M., Kishore, S., Tripathi, S. N., and Behera, S. N. (2007). "Role of atmospheric ammonia in the formation of inorganic secondary particulate matter: A study at Kanpur, India." *Journal of Atmospheric Chemistry*, 58, 1–17. <https://doi.org/10.1007/s10874-007-9074-x>
 25. Nair, V. S., Moorthy, K. K., Alappattu, D. P., Kunhikrishnan, P. K., George, S., Nair, P. R., Babu, S. S., Abish, B., Satheesh, S. K., Tripathi, S. N., Niranjan, K., Madhavan, B. L., Srikant, V., Dutt, C. B. S., Badarinath, K. V. S., and Reddy, R. R. (2007). "Wintertime aerosol characteristics over the Indo-Gangetic Plain (IGP): Impacts of local boundary layer processes and long-range transport." *Journal of Geophysical Research*, 112(D13), D13205. <https://doi.org/10.1029/2006JD008099>
 24. Whitten, R. C., Borucki, W. J., and Tripathi, S. N. (2007). "Predictions of the electrical conductivity and charging of the aerosols in Titan's night time atmosphere." *Journal of Geophysical Research (Planets)*, 112(E4), E04001. <https://doi.org/10.1029/2006JE002788>
 23. Michael, M., Barani, M., and Tripathi, S. N. (2007). "Numerical predictions of aerosol charging and electrical conductivity of the lower atmosphere of Mars." *Geophysical Research Letters*, 34(4), L04201. DOI: <https://doi.org/10.1029/2006GL028434>
 22. Dey, S., and Tripathi, S. N. (2007). "Estimation of aerosol optical properties and radiative effects in the Ganga basin, northern India, during the winter time." *Journal of Geophysical Research*, 112(D3), D03203. <https://doi.org/10.1029/2006JD007267>
 21. Tripathi, S. N., Tare, V., Chinnam, N., Srivastava, A. K., Dey, S., Agarwal, A., Kishore, S., Lal, R. B., Manar, M., Kanawade, V. P., Chauhan, S. S. S., Sharma, M., Reddy, R. R., Rama Gopal, K., Narasimhulu, K., Siva Sankara Reddy, L., Gupta, S., and Lal, S. (2006). "Measurements of atmospheric parameters during Indian Space Research Organization Geosphere Biosphere Programme Land Campaign II at a typical location in the Ganga basin: 1. Physical and optical properties." *Journal of Geophysical Research: Atmospheres*, 111(D23), D23209. DOI: <https://doi.org/10.1029/2006JD007278>

20. Tare, V., Tripathi, S. N., Chinnam, N., Srivastava, A. K., Dey, S., Manar, M., Kanawade, V. P., Agarwal, A., Kishore, S., Lal, R. B., and Sharma, M. (2006). "Measurements of atmospheric parameters during Indian Space Research Organization Geosphere Biosphere Programme land campaign II at a typical location in the Ganga Basin: 2. Chemical properties." *Journal of Geophysical Research: Atmospheres*, 111(D23), D23210. <https://doi.org/10.1029/2006JD007279>
19. Tripathi, S. N., Vishnoi, S., Kumar, S., and Harrison, R. G. (2006). "Computationally efficient expressions for the collision efficiency between electrically charged aerosol particles and cloud droplets." *Quarterly Journal of the Royal Meteorological Society*, 132(618), 1717–1731. <https://doi.org/10.1256/qj.05.125>.
18. Chinnam, N., Dey, S., Tripathi, S. N., and Sharma, M. (2006). "Dust events in Kanpur, northern India: Chemical evidence for source and implications to radiative forcing." *Geophysical Research Letters*, 33(8), L08803. : <https://doi.org/10.1029/2005GL025278>
17. Borucki, W. J., Whitten, R. C., Bakes, E. L. O., Barth, E., and Tripathi, S. N. (2006). "Predictions of the electrical conductivity and charging of the aerosols in Titan's atmosphere." *Icarus*, 181(2), 527–544. <https://doi.org/10.1016/j.icarus.2005.10.030>
16. Dey, S., Tripathi, S. N., Singh, R. P., and Holben, B. N. (2006). "Retrieval of black carbon and specific absorption over Kanpur city, northern India during 2001–2003 using AERONET data." *Atmospheric Environment*, 40(3), 445–456. <https://doi.org/10.1016/j.atmosenv.2005.09.053>
15. Kanawade, V. P., and Tripathi, S. N. (2006). "Evidence for the role of ion-induced particle formation during an atmospheric nucleation event observed in Tropospheric Ozone Production about the Spring Equinox (TOPSE)." *Journal of Geophysical Research*, 111(D2), D02209. <https://doi.org/10.1029/2005JD006366>
14. Tripathi, S. N., Dey, S., Tare, V., and Satheesh, S. K. (2005). "Aerosol black carbon radiative forcing at an industrial city in northern India." *Geophysical Research Letters*, 32(8), L08802. <https://doi.org/10.1029/2005GL022515>
13. Tripathi, S. N., Dey, S., Tare, V., Satheesh, S. K., Lal, S., and Venkataramani, S. (2005). "Enhanced layer of black carbon in a north Indian industrial city." *Geophysical Research Letters*, 32(12), L12802. <https://doi.org/10.1029/2005GL022564>
12. Tripathi, S. N., Dey, S., Chandel, A., Srivastava, S., Singh, R. P., and Holben, B. N. (2005). "Comparison of MODIS and AERONET derived aerosol optical depth over the Ganga basin, India." *Annales Geophysicae*, 23(4), 1093–1101. <https://doi.org/10.1432-0576/ag/2005-23-1093>
11. Modgil, M. S., Kumar, S., Tripathi, S. N., and Lovejoy, E. R. (2005). "A parameterization of ion-induced nucleation of sulphuric acid and water for atmospheric conditions." *Journal of Geophysical Research*, 110(D19), D19205. <https://doi.org/10.1029/2004JD005475>
10. Dey, S., Tripathi, S. N., Singh, R. P., and Holben, B. N. (2005). "Seasonal variability of the aerosol parameters over Kanpur, an urban site in Indo-Gangetic basin." *Advances in Space Research*, 36(5), 778–782. <https://doi.org/10.1016/j.asr.2005.06.040>
9. Dey, S., Tripathi, S. N., Singh, R. P., and Holben, B. N. (2004). "Influence of dust storms on the aerosol optical properties over the Indo-Gangetic basin." *Journal of Geophysical Research*, 109(D20), D20211. <https://doi.org/10.1029/2004JD004924>
8. Singh, R. P., Dey, S., Tripathi, S. N., Tare, V., and Holben, B. (2004). "Variability of aerosol

- parameters over Kanpur, northern India.” *Journal of Geophysical Research*, 109(D23), D23206. <https://doi.org/10.1029/2004JD004966>
7. Tripathi, S. N., and Harrison, R. G. (2002). “Enhancement of contact nucleation by scavenging of charged aerosol particles.” *Atmospheric Research*, 62(1), 57–70. [https://doi.org/10.1016/S0169-8095\(02\)00020-0](https://doi.org/10.1016/S0169-8095(02)00020-0)
 6. Mayya, Y. S., Tripathi, S. N., and Khan, A. (2002). “Boundary conditions and growth of mean charges for radioactive aerosol particles near absorbing surfaces.” *Journal of Aerosol Science*, 33(5), 781–795. DOI: [https://doi.org/10.1016/S0021-8502\(01\)00213-0](https://doi.org/10.1016/S0021-8502(01)00213-0)
 5. Tripathi, S. N., and Harrison, R. G. (2001). “Scavenging of electrified radioactive aerosols.” *Atmospheric Environment*, 35(33), 5817–5821. [https://doi.org/10.1016/S1352-2310\(01\)00299-0](https://doi.org/10.1016/S1352-2310(01)00299-0)

Review Article

4. Tripathi, S. N., Michael, M., and Harrison, R. G. (2008). “Profiles of ion and aerosol interactions in planetary atmospheres.” *Space Science Reviews*, 137(1–4), 193–211. DOI: <https://doi.org/10.1007/s11214-008-9367-7>

Discussion Papers

3. Michael, M., Yadav, A., Tripathi, S. N., Kanawade, V. P., Gaur, A., Sadavarte, P., and Venkataraman, C. (2014). “Simulation of trace gases and aerosols over the Indian Domain: Evaluation of the WRF-Chem model.” *Atmospheric Chemistry and Physics Discussions*, 13, 12287–12336. <https://doi.org/10.5194/gmdd-7-431-2014>
2. Kaul, D. S., Gupta, T., and Tripathi, S. N. (2012). “Chemical and microphysical properties of the aerosol during foggy and non-foggy episodes: A relationship between organic and inorganic content of the aerosol.” *Atmospheric Chemistry and Physics Discussions*, 12, 14483–14524. <https://acp.copernicus.org/preprints/acp-2012-373/>
1. Mishra, S. K., Tripathi, S. N., Aggarwal, S. G., and Arola, A. (2010). “Effects of particle shape, hematite content and semi-external mixing with carbonaceous components on the optical properties of accumulation mode mineral dust.” *Atmospheric Chemistry and Physics Discussions*, 10, 1–48. <https://acp.copernicus.org/preprints/acp-2010-881/>

Books

1. Sharma, A., & Tripathi, S. N. “Sustainability of Cyber Digital Worlds”. *Springer* (in process)

Book Chapters

4. Dey, S., and Tripathi, S. N. (2013). “Remote Sensing of Atmospheric Aerosols.” In Colbeck, I., and Lazaridis, M. (eds.), *Aerosol Science: Technology and Applications*, John Wiley & Sons Ltd., Chichester, 119–151. <https://onlinelibrary.wiley.com/doi/abs/10.1002/9781118682555.ch6>
3. Srivastava, A. K., Dey, S., and Tripathi, S. N. (2012). “Aerosol characteristics over the Indo-Gangetic basin: Implications to regional climate.” In Abdul-Ruzzak, H. (ed.), *Atmospheric Aerosol Regional Characteristics – Chemistry and Physics*, InTech, 47–80.

2. Varunsheel, Ramachandran, S., Tripathi, S. N., and Michael, M. (2010). “Chemistry and aerosols in the atmospheres of Earth and Mars.” In Haider, S. A., Sheel, V., and Lal, S. (eds.), *Modeling of Planetary Atmospheres*, Macmillan Publishers India Ltd., 83–144.
1. Tripathi, S. N., Michael, M., and Harrison, R. G. (2008). “Profiles of ion and aerosol interactions in planetary atmospheres.” In Leblanc, F., Aplin, K. L., Yair, Y., Harrison, R. G., Lebreton, J. P., and Blane, M. (eds.), *Planetary Atmospheric Electricity*, Springer, 193–211.
[e01_978-0-387-87663-4_01.pdf](#)

Patents

1. “Direct Synchronous Scattered Light Detection System and Method for Accurate Low-Cost Air Quality Particle Counting.” *Indian Patent Application* (under examination).

Lead Author

1. Tripathi, S. N. (2009). *Science Plan, Continental Tropical Convergence Zone Programme. Indian Climate Research Programme, Department of Science and Technology, Government of India*

Volume Edited

2. Tripathi, S. N. (2007–2009). *Member, Editorial Board of Asia Oceania GeoSciences–Planetary Sciences Newsletter.*
1. Tripathi, S. N. (2004). *IASTA Bulletin on International Conference on Aerosols, Clouds and Indian Monsoon.*

Meeting Reports

2. Singh, R. P., Tare, V., and Tripathi, S. N. (2005). “Aerosols, Clouds and Monsoon.” *Current Science*, 88(9), 1366–1368.
1. Singh, R. P., Tare, V., and Tripathi, S. N. (2005). “Meeting Report on International conference on aerosols, clouds and monsoon.” *EOS*, 86(24), 228–229.

Technical Reports

7. Central Pollution Control Board (CPCB). (2020). “Real time source apportionment study for Delhi: A Report on Impact of Lockdown on Ambient Air Quality.” *Ministry of Environment, Forest & Climate Change, Govt. of India*, September 23, 2020.
6. Ramanathan, V., Molina, M. J., Zaelke, D., Borgford-Parnell, N., Alex, K., Auffhammer, M., Bledsoe, P., Collins, W., Croes, B., Forman, F., Tripathi, S. N., et al. (2016). “Under 2 Degrees Celsius: Fast action policies to protect people and the planet from extreme climate changes.” *Committee to Prevent Extreme Climate Change (CPECC)*, COP22 Summit, Marrakech, November 14, 2016.
5. Sharma, S., Rehman, I. H., Ramanathan, V., Balakrishnan, K., Beig, G., Carmichael, G., Tripathi, S. N., et al. (2016). “Breathing Cleaner Air: Ten scalable solutions for Indian cities.”

World Sustainable Development Summit, New Delhi, October 6, 2016. Published by The Energy and Resources Institute (TERI) in collaboration with University of California, San Diego.

4. Ramanathan, V., Sundar, S., Harnish, R., Sharma, S., Seddon, J., Croes, B., Lloyd, A., Tripathi, S. N., et al. (2014). "India–California Air Pollution Mitigation Program: Options to reduce road transport pollution in India." *The Energy and Resources Institute (TERI)* in collaboration with University of California, San Diego and California Air Resources Board.
3. Tripathi, S. N., Gupta, T., Sapra, B. K., and Ganju, S. (2013). "Measurement of aerosol and liquid droplet size distributions and validation of aerosol and droplet microphysical models." *BRNS Report*, 2009/36/119-BRNS/3384.
2. Tripathi, S. N., Dayal, S., and Srivastava, N. "A fast microphysical model for mixed phase clouds." *Department of Civil Engineering, Indian Institute of Technology Kanpur*.
1. Tripathi, S. N., Vancassel, X. P., Grainger, R. G., and Rogers, H. L. (2004). "A Fast Stratospheric Aerosol Microphysical Model (SAMM): H₂SO₄–H₂O aerosol development and validation." *AOPP Memorandum*, Department of Physics, University of Oxford.

Op-Ed

21. Aravali Diaries with Prof. S. N. Tripathi, IIT Kanpur, Gyan Vigyan Samvad – Jan 8, 2026 <https://www.youtube.com/watch?v=eeZgh9PJjzI>
20. What Will It Take to Give India Clean Air? | India's Pollution Crisis – Dec 15, 2025 https://www.youtube.com/live/4k_zuojnYok
19. Living under a cloud – IITK Atman, Dec 15, 2025 <https://iitk.ac.in/atman/data/Living-under-a-cloud.pdf>
18. Insights on sea of toxic foam on River Thenpannai – Dec 4, 2024 <https://www.youtube.com/watch?v=BOECyQNqcYg>
17. Prof. Tripathi on technology to curb pollution – *The Week*, Nov 28, 2024 <https://www.youtube.com/watch?v=1mX0qeLhC2c>
16. Delhi Air Pollution | Can Artificial Rain Help Fight Delhi Air Pollution? – Nov 16, 2024 <https://www.youtube.com/watch?v=OfvqBw2u378>
15. Delhi Air Pollution | Can Artificial Rain Help Delhi as Air Quality Plummet? – NDTV, Nov 16, 2024 <https://www.youtube.com/watch?v=eQDJ8mgoEAg>
14. Delhi में ज़हरीली हवा और खराब होते AQI के बाद Grap-3 की पाबंदियां लागू – Nov 15, 2024 <https://www.youtube.com/watch?v=1LsFo8JPMrM>
13. An expert explains: How AI can help chart pathways of sustainable development for India – *Indian Express*, Nov 12, 2024 <https://indianexpress.com/article/explained/explained-sci-tech/an-expert-explains-ai-sustainable-development-9664295/>
12. Opinion: What Makes PM_{2.5} The Most Important Factor in Efforts to Beat Air Pollution – *ABP Live*, Sep 20, 2024 <https://news.abplive.com/blog/pm2-5-most-important-factor-successful-mitigation-air-pollution-1718524>
11. Struggle to Breathe – An account of the Delhi Air Crisis – *Upword platform*, Prof. Tripathi as expert <https://www.youtube.com/watch?v=7esXlxwEgho>
10. Scientists decipher the cause of New Delhi's haze – *Al Jazeera*, Mar 18, 2023 https://www.youtube.com/watch?v=3_rZOLUDCT8

9. Need for Long-term measures – *Dainik Jagran*, Dec 14, 2022
8. Strengthen Pollution Regulator, get more staff, train them in tech and backup with stringent norms – *Indian Express*, Nov 7, 2022 <https://indianexpress.com/article/idea-exchange/atmospheric-scientist-professor-iit-kanpur-strengthen-pollution-regulators-get-more-staff-train-them-in-tech-and-back-up-with-stringent-norms-8253520/>
7. Why tackling air pollution is a win-win – *The Hindu Business Line*, Jan 12, 2022 <https://www.thehindubusinessline.com/opinion/why-tackling-air-pollution-is-a-win-win/article38239774.ece>
6. WHO's stark message on air quality – and what India must do – *Indian Express*, Oct 7, 2021 <https://indianexpress.com/article/explained/explained-whos-stark-message-on-air-quality-and-what-india-must-do-7556737>
5. Measuring indoor air pollution: Why low-cost technology is critical – *Hindustan Times*, Jun 17, 2021 <https://www.hindustantimes.com/opinion/measuring-indoor-airpollution-why-low-cost-technology-is-critical-101623911895014.html>
4. Rediscovering sustainable development through a COVID-19 lockdown lens – *Indian Express*, May 8, 2020 <https://indianexpress.com/article/opinion/web-edits/rediscoveringsustainable-development-through-a-covid-19-lockdown-lens-6399986>
3. Witnessing the future through the coronavirus lockdown – *The Hindu*, Apr 25, 2020 <https://www.thehindu.com/sci-tech/energy-and-environment/witnessing-the-future-through-the-lockdown/article31432865.ece>
2. Air pollution: Reduced self-cleansing capacity of atmosphere – *Business Standard & Financial Express*, Dec 1, 2017 https://www.business-standard.com/article/news-ians/air-pollution-reduced-self-cleansing-capacity-of-atmosphere-comment-special-to-ians-117120100271_1.html
1. Pollution: particulate matter in India higher than WHO limit – *The Hindu*, May 7, 2015 <https://www.thehindu.com/sci-tech/Pollution-particulate-matter-in-India-higher-than-WHO-limit/article60167057.ece>

Articles (unreferred)

4. Tripathi, S. N.; Michael, M. Dust, haze and clouds on Mars and Titan. *Direction*, 2015, 15 (1), 18–23.
3. Ramaswami, A.; Russell, A.; Chertow, M.; Hollander, R.; Tripathi, S. N.; et al. International, interdisciplinary education on sustainable infrastructure and sustainable cities. *The Bridge*, 2014, 44 (3), 11–21.
2. Tripathi, S. N.; Vancassel, X.; Grainger, R. G.; Rogers, H. L. A fast stratospheric aerosol microphysical model. *Proc. Eur. Conf.*, Friedrichshafen, Germany, 310–315, 2003.
1. Tripathi, S. N.; Grainger, R. G.; Rogers, H. L. Development of a fast microphysical model for aerosol interactions, condensational growth and coagulation. *Bull. Indian Aerosol Sci. Technol. Assoc.*, *Proc. IASTA-2002 Conf.*, Thiruvananthapuram, 2002.

Media Highlights (National Newspaper)

191. IIT-K hosts lecture on biodiversity conservation and climate resilience <https://timesofindia.indiatimes.com/city/kanpur/iit-k-hosts-lecture-on-biodiversity-conservation->

191. How AI-based system is expected to make AQI forecast sharper in Delhi – *Indian Express*, Jun 27, 2026 https://indianexpress.com/article/cities/delhi/how-ai-based-system-is-expected-to-make-aqi-forecast-sharper-in-delhi-10757938/?utm_source
190. Ahmedabad gets real-time pollution tracking lab-on-wheels – *Times of India*, Jun 6, 2026 <https://timesofindia.indiatimes.com/city/ahmedabad/ahmedabad-gets-real-time-pollution-tracking-lab-on-wheels/articleshow/131539965.cms>
189. Master Plan to Make Ahmedabad Pollution Free Before Commonwealth: Inauguration of State-of-the-art 'Mobile Laboratory Van'; The exact cause of pollution from vehicles, construction, factories and dust roads will be known – *Divya Bhaskar*, Jun 2026 <https://www.divyabhaskar.co.in/local/gujarat/ahmedabad/video/ahmedabad-air-pollution-tech-van-launch-138113825.html?type=video>
188. AMC launches AI-driven air quality project in city – *Ahmedabad Mirror*, Jun 6, 2026 <https://www.ahmedabadmirror.com/amc-launches-ai-driven-air-quality-project-in-city/81915080.html>
187. AMC Launches AI-Powered Air Quality Monitoring Project with IIT Kanpur; CM Flags Off Mobile Real-Time Lab – *Desh Gujarat*, Jun 5, 2026 https://deshgujarat.com/2026/06/05/amc-launches-ai-powered-air-quality-monitoring-project-with-iit-kanpur-cm-flags-off-mobile-real-time-lab/#google_vignette
186. आज दिल्ली सरकार और IIT कानपुर के AIRAWAT Research Foundation के बीच MoU साइन किया गया – May 22, 2026 https://x.com/gupta_rekha/status/2057824732402377004
185. Ahmedabad turns civic systems into start-up lab for urban fixes – *Hindustan Times*, May 4, 2026 <https://www.hindustantimes.com/india-news/ahmedabad-turns-civic-systems-into-start-up-lab-for-urban-fixes-101777832747880.html>
184. IIT Kanpur hosts International Workshop on Clean Air – *Medium*, Apr 10, 2026 https://medium.com/@vsrawat.digital_5389/iit-kanpur-hosts-international-workshop-on-clean-air-a0e62eaa7395
183. Swastibhavatu Lecture Series at IITK – *Times of India*, Mar 26, 2026 <https://timesofindia.indiatimes.com/city/kanpur/swastibhavatu-lecture-series-at-iit-k/articleshow/129810751.cms>
183. AQI as city's new electoral battleground – *Mumbai Mirror*, Jan 22, 2026 <https://mumbaimirror.indiatimes.com/others/sunday-read/aqi-as-citys-new-electoral-battleground/articleshow/126456071.html>
182. How IIT-Kanpur is using mobile labs and AI to map solutions for Delhi's pollution – *Indian Express*, Dec 22, 2025 <https://indianexpress.com/article/cities/delhi/how-iit-kanpur-is-using-mobile-labs-and-ai-to-map-solutions-for-delhis-pollution-10431370/>
181. Reimagining higher education governance for India's future – *Times of India*, Dec 20, 2025 https://timesofindia.indiatimes.com/blogs/voices/reimagining-higher-education-governance-for-indias-future/?fbclid=IwY2xjawO0SnFzcnRjBmFwcF9pZBAyMjIwMzkxNzg4MjAwODkyAAEeXG61KwTcsTs2hD7VKLbonGa759QKo9tQF4qqShSJOZPdI95UMfkUICoaJHU&brid=zx2F8pE_a4gt157IG4kVSA
180. What Delhi Needs: Machine Learning-Based 'Airshed Approach', Low-Cost Sensors and Irrefutable Data to Tackle Air Pollution – *The Wire*, Dec 18, 2025 <https://thewire.in/environment/what-delhi-needs-machine-learning-based-airshed-approach-low-cost-sensors-and-irrefutable-data-to-tackle-air-pollution>
179. Mumbai Air Pollution: Why BMC Thinks An AI-Based AQI Monitor May Be The Solution – *News18*, Dec 17, 2025 <https://www.news18.com/cities/mumbai-news/mumbai-to-get-ai-based-air-quality-monitor-how-manas-will-help-bmc-track-pollution-ws-kl-9771786.html>

178. First-ever AI model to monitor AQI: IIT Kanpur provides Mumbai its own independent AQI monitoring platform MANAS – *Indian Express*, Dec 3, 2025 <https://indianexpress.com/article/cities/mumbai/ai-model-cost-effective-independent-aqi-monitoring-platform-10398071/>
177. Mumbai's AI-Enabled AQI System: How IIT Kanpur's 'MANAS' Model Will Track Air Quality – *Mumbai Now*, Dec 3, 2025 <https://www.timesnownews.com/mumbai/mumbais-ai-enabled-aqi-system-how-iit-kanpurs-manas-model-will-track-air-quality-full-details-inside-mumbai-news-article-153239643>
176. Rural Bihar hidden air pollution hotspot, 90% days unsafe to breathe – *India Today*, Nov 27, 2025 <https://www.indiatoday.in/environment/story/bihar-rural-air-pollution-pm25-crisis-brick-kilns-biomass-burning-winter-toxic-airshed-amrit-study-2827069-2025-11-27>
175. Culprits behind Delhi's toxic air are hiding in plain sight – *Indian Express*, Oct 23, 2025 <https://indianexpress.com/article/opinion/columns/culprits-behind-delhi-toxic-air-pollution-10322803/lite/>
174. आईआईटी कानपुर और आईबीएम ने एआई-आधारित वायु गुणवत्ता समाधान के लिए समझौता किया – *Aap Ki Khabar*, Jul 5, 2025 <https://aapkihabar.com/news/iit-kanpur-and-ibm-sign-mou-for-ai-based-air-quality/cid17009043.htm>
173. Industry and Traffic-Related Emissions Identified as Primary Sources of Air Pollution in Jaipur – *Exclusive News*, Feb 2025 <https://exclusivenews.co.in/industry-and-traffic-related-emissions-identified-as-primary-sources-of-air-pollution-in-jaipur/>
172. Industry and Traffic-Related Emissions Identified as Primary Sources of Air Pollution in Jaipur – *Democratic Jagat*, Feb 2025 <https://democraticjagat.com/news-post/8895/industry-and-traffic-related-emissions-identified-as-primary-sources-of-air-pollution-in-jaipur>
171. Guwahati's winter air pollution nearly three times above safe limits – *Sentinel Assam*, Feb 21, 2025 <https://www.sentinelassam.com/cities/guwahati-city/guwahati-citys-winter-air-pollution-nearly-three-times-above-safe-limit>
170. Assam: Guwahati's air pollution hits hazardous levels, study finds – *North East Now*, Feb 20, 2025 <https://nenow.in/north-east-news/assam/assam-guwahatis-air-pollution-hits-hazardous-levels-study-finds.html>
169. Guwahati faces severe winter pollution, study finds transboundary impact – *Economic Times*, Feb 19, 2025 <https://economictimes.indiatimes.com/news/india/guwahati-faces-severe-winter-pollution-study-finds-transboundary-impact/articleshow/118394177.cms>
168. फैक्ट्रियों और गाड़ियों के उत्सर्जन से जयपुर की हवा खराब – Feb 2025
167. कानपुर में AI समाधान पर दो दिवसीय संगोष्ठी का आयोजन – *Dainik Bhaskar*, Feb 2025 <https://www.bhaskar.com/local/uttar-pradesh/kanpur/news/two-day-seminar-on-ai-solutions-organized-in-kanpur-134413253.html>
166. Two-Day National Conference on Innovative AI Solutions For Sustainable Cities Held In Kanpur – *News18*, Feb 5, 2025 <https://www.news18.com/tech/two-day-national-conference-on-innovative-ai-solutions-for-sustainable-cities-held-in-kanpur-9214891.html>
165. शहरों पर बढ़ रहा आबादी का दबाव, तकनीक का लेना होगा सहारा – *Navbharat Times*, Feb 4, 2025 https://epaper.navbharattimes.com/imageview_17337_75715_4_9_04-02-2025_7_i_1_sf.html
164. शहरी समस्याओं के हल के लिए एआई महत्वपूर्ण – *Amrit Vichar*, Feb 4, 2025 <https://www.amritvichar.com/article/520311/to-solve-urban-problems-ai-important-assembly-speaker-satish-mahana#>
163. Harnessing AI is crucial to identify pathways for urban sustainable development – *Education Times*, Jan 20, 2025 <https://www.educationtimes.com/article/campus-beat-college-life/99737309/harnessing-ai-is-crucial-to-identify-pathways-for-urban-sustainable->

[development](#)

162. Indigenous PM_{2.5} sensor to tackle air quality challenges under works at IIT-Kanpur – *The Print*, Dec 8, 2024 <https://theprint.in/india/indigenous-pm2-5-sensor-to-tackle-air-quality-challenges-under-works-at-iit-kanpur/2393496/>
161. Air Pollution is a national problem. Can you live with it? – *Mint*, Dec 6, 2024 <https://www.livemint.com/mint-lounge/ideas/air-pollution-delhi-climate-change-crisis-crop-burning-11733469734208.html>
160. एआई की मदद से कानपुर समेत कई शहरों को स्मार्ट बनाएगा आईआईटी – *Amar Ujala*, Dec 4, 2024 <https://www.amarujala.com/uttar-pradesh/kanpur/up-iit-will-make-kanpur-and-many-other-cities-smart-with-the-help-of-ai-2024-12-04>
159. आपात स्थिति में GRAP लागू करने से नहीं होगा प्रदूषण का समाधान – *Jagran Epaper*, Nov 24, 2024
157. Delhi air quality may stagnate “very poor” – *Times of India*, Nov 22, 2024 <https://timesofindia.indiatimes.com/city/delhi/delhi-air-quality-at-risk-of-remaining-very-poor-amid-meteorological-changes/articleshow/115540047.cms>
<https://epaper.jagran.com/epaper/24-Nov-2024-262-national-edition-national-page-13.html>
156. Pollution making North India weather more smog-prone: US study – *Times of India*, Nov 21, 2024 <https://timesofindia.indiatimes.com/india/pollution-making-north-india-weather-more-smog-prone-us-study/articleshow/115503097.cms>
155. IIT-Kanpur’s AI-driven CoE for Sustainable Cities to address existing problems – *Governance Now*, Nov 16, 2024 <https://www.governancenow.com/news/regular-story/iitks-aidriven-coe-for-sustainable-cities-to-address-existing-problems>
154. As deadly smog threatens parts of India, Pakistan, experts urge joint climate action – *South China Morning Post*, Nov 8, 2024 <https://www.scmp.com/week-asia/health-environment/article/3285813/deadly-smog-threatens-parts-india-pakistan-experts-urge-joint-climate-action>
153. एकीकृत कार्य योजना से ही नियंत्रित होगा वायु प्रदूषण – Nov 7, 2024
152. IIT-Kanpur to lead Centre of Excellence on 'sustainable cities' – Oct 30, 2024 https://invest.up.gov.in/wp-content/uploads/2024/10/IIT_261024.pdf
151. Mumbai, Nagpur Lead Air Quality Improvements in Maharashtra Amidst Rising Pollution in Other Cities: Report – *Nagpur News*, Oct 22, 2024 <https://www.nagpurnews.live/article/mumbai-nagpur-lead-air-quality-improvements-in-maharashtra-amidst-rising-pollution-in-other-cities-report>
150. New report highlights air quality struggles in Pune, Mumbai and Navi Mumbai – *Punekar News*, Oct 22, 2024 <https://www.punekarnews.in/new-report-highlights-air-quality-struggles-in-pune-mumbai-and-navi-mumbai/>
149. Yamuna river froth contains harmful organic matter that releases volatile gases directly into atmosphere, warns expert – *Economic Times*, Oct 20, 2024 <https://economictimes.indiatimes.com/news/india/yamuna-river-froth-contains-harmful-organic-matter-that-releases-volatile-gases-directly-into-atmosphere-warns-expert/articleshow/114393963.cms?from=mdr>
148. Centre sets up AI hubs for research on health, agriculture, sustainable cities – *The Hindu*, Oct 15, 2024 <https://www.thehindu.com/news/national/centre-sets-up-ai-hubs-for-research-on-health-agriculture-sustainable-cities/article68757384.ece/amp/>
147. Govt announces 3 AI CoEs for healthcare, agriculture, sustainable cities – *Business Standard*, Oct 15, 2024 https://www.business-standard.com/amp/technology/tech-news/govt-announces-3-ai-coes-for-healthcare-agriculture-sustainable-cities-124101500734_1.html
146. Highest recipient of air quality funds, Mumbai slips 18 positions to 28th in Centre’s annual

- report – *Indian Express*, Sep 19, 2024 <https://indianexpress.com/article/cities/mumbai/highest-recipient-air-quality-funds-mumbai-swachh-vayu-sarvekshan-report-9570316/>
145. 21 Cities Saw 40% PM₁₀ Pollutant Reduction In 6 Years: CPCB Data – *NDTV*, Sep 9, 2024 <https://www.ndtv.com/video/21-cities-saw-40-pm10-pollutant-reduction-in-6-years-cpcb-data-835444>
 144. How Electric Cooking Can Help Indian Families Transition to Cleaner Fuels – *IndiaSpend*, Jul 19, 2024 <https://www.indiaspend.com/earthcheckindia/how-electric-cooking-can-help-indian-families-transition-to-cleaner-fuels-916525>
 143. इंसानी गतिविधियों से 5-7 डिग्री बढ़ रहा तापमान, ऐसा क्यों कह रहे आईआईटी कानपुर के प्रफेसर? – *Navbharat Times*, Jun 6, 2024 <https://navbharattimes.indiatimes.com/state/uttar-pradesh/kanpur/iit-kanpur-claims-temperature-is-increasing-by-5-7-degrees-due-to-human-activities/articleshow/110758789.cms>
 142. How Partial Combustion Fuels Your Bad-Air Woes – *Times of India*, May 2, 2024 <https://timesofindia.indiatimes.com/city/delhi/incomplete-combustions-role-in-air-pollution-and-health-risks-in-north-india/articleshow/109764539.cms>
 141. IIT-K's prof study sheds light on air pollution impact on health in N India – *Times of India*, Apr 30, 2024 <https://timesofindia.indiatimes.com/city/kanpur/iit-ks-study-on-air-pollution-impact-on-health-in-northern-india/articleshow/109708205.cms>
 140. वायु प्रदूषण के स्रोतों और स्वास्थ्य पर पड़ने वाले प्रभाव को उजागर करेगा आईआईटी कानपुर का शोध – *Vichar Suchak*, Apr 29, 2024 <https://vicharsuchak.in/iit-kanpurs-research-will-highlight-the-sources-of-air-pollution-and-its-effects-on-health/>
 139. Kanpur IIT ने तैयार किया लैबोरेट्री वैन, शहरभर टहल कर लगाएगी प्रदूषण का पता, 11 दिन में देगी रिपोर्ट – *News18 Hindi*, Apr 25, 2024 <https://hindi.news18.com/news/uttar-pradesh/kanpur-kanpur-iit-prepared-laboratory-van-for-pollution-relief-8268109.html>
 138. Dubai's Devastating 'Desert Storm' Prompts Experts to Sound Alarm Bells on Climate Change – *News18*, Apr 18, 2024 <https://www.news18.com/india/dubais-devastating-desert-storm-prompts-experts-to-sound-alarm-bells-on-climate-change-8856331.html>
 137. कानपुर समेत 5 शहरों की बदलेगी सूरत, AI की मदद से IIT के विशेषज्ञ करेंगे यह काम – *ETV Bharat*, Mar 27, 2024 <https://www.etvbharat.com/hi/state/iit-experts-rejuvenate-5-cities-with-the-help-of-artificial-intelligence-ups24032700792>
 136. आर्टिफिशियल इंटेलिजेंस की मदद से इन 5 शहरों की बदलेगी सूरत, IIT कानपुर को दी गई जिम्मेदारी – *News18 Hindi*, Mar 26, 2024 <https://hindi.news18.com/news/uttar-pradesh/kanpur-iit-kanpur-will-transform-these-cities-into-sustainable-cities-with-the-help-of-ai-8164236.html>
 135. Nitish launches pioneering climate strategy at Bihar Climate Action Conclave in Patna – *The Hindu*, Mar 4, 2024 <https://www.thehindu.com/news/national/other-states/nitish-launches-pioneering-climate-strategy-at-bihar-climate-action-conclave-in-patna/article67913254.ece>
 134. Nitish launches Climate Strategy, projects worth 108 cr – *Times of India*, Mar 4, 2024 <https://timesofindia.indiatimes.com/city/patna/nitish-kumar-launches-bihar-climate-action-conclave-and-projects-worth-108cr/articleshow/108223387.cms>
 133. Bihar Takes the Lead in Climate Action: Chief Minister Nitish Kumar to Inaugurate Climate Action Conclave on Monday – *Patna Press*, Mar 3, 2024 <https://patnapress.com/bihar-takes-the-lead-in-climate-action-chief-minister-nitish-kumar-to-inaugurate-climate-action-conclave-on-monday/>
 132. India set to transition to hyperlocal extreme weather forecasting – *The Hindu*, Feb 11, 2024 <https://www.thehindu.com/sci-tech/india-set-to-transition-to-hyperlocal-extreme-weather-forecasting/article67829459.ece>
 131. The weather report: Why getting it right is important for India – *Indian Express*, Feb 7, 2024 <https://indianexpress.com/article/opinion/columns/weather-report-why-getting-it-right->

- [important-for-india-9145273/](#)
130. Adopt ecology-based designs to combat air pollution: IIT Professor – *The New Indian Express*, Jan 21, 2024 <https://www.newindianexpress.com/states/karnataka/2024/Jan/21/adopt-ecology-based-designs-to-combatair-pollution-iit-professor>
 129. Bairia, Madhubani most polluted areas in Bihar in November, improved monitoring network shows – *Indian Express*, Dec 30, 2023 <https://indianexpress.com/article/cities/patna/bairia-madhubani-most-polluted-areas-in-bihar-in-november-9088424/>
 128. Sensor-based hyperlocal air quality monitors plan for city – *Times of India*, Dec 21, 2023 <https://timesofindia.indiatimes.com/city/mumbai/sensor-based-hyperlocal-air-quality-monitors-plan-for-city/articleshow/106167963.cms>
 127. Artificial rain as panacea for pollution crisis? Not long-term, too expensive, say experts – *NDTV Swachh India*, Dec 19, 2023 <https://swachhindia.ndtv.com/artificial-rain-as-panacea-for-pollution-crisis-not-long-term-too-expensive-say-experts-86154/>
 126. पराली शूरय, अब आग और वाहनों का धुआँ कर रहा हवा जहरीली – Dec 19, 2023
 125. क्षेत्र और स्रोत की पहचान कर सख्त कार्रवाई से ही नियंत्रित होगा नासूर बन चुका प्रदूषण – *Dainik Jagran*, Dec 4, 2023
 124. Air Quality: वायु प्रदूषण के हालात और स्रोत की होगी सटीक पहचान, आईआईटी कर रहा सेंसर से निगरानी – *Dainik Jagran*, Nov 20, 2023 <https://www.gaonjunction.com/paryavaran/situation-and-source-of-air-pollution-will-be-identified-monitoring-started-with-iit-s-sensors>
 123. Delhi turns to artificial rain to ease air pollution crisis – *Financial Times*, Nov 17, 2023 <https://www.ft.com/content/54646fe4-350e-41d2-8b9a-c4641f44e4dc?syn-25a6b1a6=1>
 122. Delhi to try out artificial rain over pollution woes – *The Hindu*, Nov 9, 2023 <https://www.thehindu.com/news/cities/Delhi/delhi-proposes-to-induce-artificial-rains-to-tackle-rising-pollution/article67513937.ece>
 121. Delhi to try induced rain to fight bad air – *Hindustan Times*, Nov 9, 2023 <https://www.hindustantimes.com/cities/delhi-news/delhi-to-try-induced-rain-to-fight-bad-air-101699467934741.html>
 120. IIT Kanpur establishes a Center of Excellence for monitoring air quality – *Hindustan Times*, Nov 7, 2023 <https://www.hindustantimes.com/education/news/iit-kanpur-establishes-a-center-of-excellence-for-monitoring-air-quality-101699264984945.html>
 119. Court-appointed panel won't have jurisdiction barriers: Experts – *Indian Express*, Nov 7, 2023 <https://indianexpress.com/article/cities/mumbai/court-appointed-panel-wont-have-jurisdiction-barriers-experts-9016496/>
 118. Delhi odd-even scheme: Its impact on vehicular pollution levels, and why it is not a silver bullet – *Indian Express*, Nov 7, 2023 <https://indianexpress.com/article/explained/delhi-pollution-odd-even-scheme-no-silver-bullet-given-the-exemptions-but-cuts-toxic-emissions-9016425/>
 117. Bombay HC sets up panel on pollution, civic chiefs to report to it – *Times of India*, Nov 7, 2023 <https://timesofindia.indiatimes.com/city/mumbai/hc-sets-up-panel-on-pollution-civic-chiefs-to-report-to-it-daily/articleshow/105025522.cms>
 116. Why Mumbai is witnessing more poor air quality days – *Indian Express*, Oct 26, 2023 <https://indianexpress.com/article/explained/explained-climate/why-mumbai-is-witnessing-more-poor-air-quality-days-8998070/>
 115. Policy, mitigation must be long-term focus: Experts weigh in on Delhi's pollution fight – *Indian Express*, Oct 22, 2023 <https://indianexpress.com/article/cities/delhi/policy-mitigation-must-be-long-term-focus-experts-weigh-in-on-delhis-pollution-fight-8994280/>
 114. Mumbai requires 67 air monitoring stations, has just 21, less than a third – *Indian Express*, Oct 22, 2023 <https://indianexpress.com/article/cities/mumbai/mumbai-air-pollution-monitoring-stations-8993131/>

113. Sources of air pollution identified, intervention needed – *Dainik Jagran*, Oct 11, 2023
112. IIT Kanpur to investigate the sources of air pollution – *Navbharat Times*, Oct 11, 2023
111. IIT Kanpur scientists develop a movable system to map sources of air pollutant in cities – *Times of India*, Oct 10, 2023 <https://timesofindia.indiatimes.com/home/science/iit-kanpur-scientists-develop-a-movable-system-to-map-sources-of-air-pollutants-in-cities/articleshow/104320100.cms>
110. Small device, big deal: Bihar to tackle air pollution with better monitoring – *Indian Express*, Oct 9, 2023 <https://indianexpress.com/article/india/small-device-big-deal-bihar-to-tackle-air-pollution-with-better-monitoring-8974118/#lnihiz9mewguz1srva5>
109. कानपुर: शहर-शहर घूमकर प्रदूषण की रोकथाम में सहायक बनेगी आइआईटी की मोबाइल प्रयोगशाला, तीन वैज्ञानिक होंगे तैनात – *Dainik Jagran*, Jun 23, 2023 <https://www.jagran.com/uttar-pradesh/kanpur-city-iits-mobile-laboratory-will-be-helpful-in-preventing-pollution-by-roaming-in-city-to-city-three-scientists-will-be-deployed-23453023.html>
108. IIT-K conducts artificial rain test through cloud seeding – *Hindustan Times*, Jun 23, 2023 <https://www.hindustantimes.com/cities/lucknow-news/iitk-conducts-artificial-rain-test-through-cloud-seeding-101687450854923.html>
107. Why India's approach to renewable energy is effective – *Indian Express*, Jun 24, 2023 <https://indianexpress.com/article/opinion/columns/why-indias-approach-to-renewable-energy-is-effective-8684198/>
106. IIT Kanpur to monitor air pollution with indigenous technology & suggest mitigation strategies – *Dainik Jagran*, Jun 5, 2023
105. Prof. S. N. Tripathi featured on "Post box no.111, Akashvani, All India Radio" – Oct 2022 (InvenTiv 2022 highlights)
104. India's Air Pollution Season Is Off to a Terrible Start – *New York Times*, Nov 4, 2022 https://www.nytimes.com/2022/11/04/world/asia/india-air-pollution-sickness.html?eafs_enabled=false
103. Stubble burning is factor for 10–15 days, but weather, geography too – *Indian Express*, Nov 5, 2022 <https://indianexpress.com/article/idea-exchange/stubble-burning-factor-for-10-15-days-weather-geography-also-play-a-role-sachchida-nand-tripathi-8250516/>
102. North India under extreme air pollution, schools closed in Delhi – *Dainik Jagran*, Nov 5, 2022
101. How effective are anti-smog guns in Delhi? Here's what experts have to say – *Indian Express*, Oct 19, 2022 <https://indianexpress.com/article/explained/how-effective-are-anti-smog-guns-in-delhi-heres-what-experts-have-to-say-8217050/>
100. Prof. Tripathi as a panelist on Sansad TV, discussing air pollution – Oct 25, 2022 <https://www.youtube.com/watch?v=HmzrN2DHYWs&t=825s>
99. 1 million green jobs in air quality domain alone, says IIT Professor – *Indian Express*, Aug 25, 2022 <https://indianexpress.com/article/cities/bangalore/1-million-green-jobs-in-air-quality-domain-alone-iit-professor-8111831/lite/>
98. IIT-Kanpur to establish network of air-quality sensors to measure pollution in rural India – *The Hindu*, Jul 10, 2022 <https://www.thehindu.com/news/national/iit-kanpur-to-establish-network-of-air-quality-sensors-to-measure-pollution-in-rural-india/article65623953.ece>
97. What happened to Modi's national 'clean air' project? Not much in three years – *NewsLaundry*, Jun 3, 2022 <https://www.newsLaundry.com/2022/06/03/what-happened-to-modis-national-clean-air-project-not-much-in-three-years>
96. Here's why fighting winter air pollution is a lot of gas – *Times of India*, Jun 10, 2022 <https://timesofindia.indiatimes.com/city/delhi/heres-why-fighting-winter-air-pollution-is-a->

- [lot-of-gas/articleshow/92113686.cms](https://timesofindia.indiatimes.com/lot-of-gas/articleshow/92113686.cms)
95. Delhi: How meeting clean air targets may raise life expectancy by 6.6 years – *Times of India*, Jun 15, 2022 <https://timesofindia.indiatimes.com/city/delhi/delhi-how-meeting-clean-air-targets-may-raise-life-expectancy-by-6-6-years/articleshow/92214218.cms>
 94. Delhi: How vehicular emissions are fueling assault on your health – *Times of India*, May 13, 2022 <https://timesofindia.indiatimes.com/city/delhi/how-vehicular-emissions-are-fuelling-assault-on-your-health/articleshow/91526461.cms>
 93. Rain shortfall has kept Delhi's air 'poor' for most of the summer – *Hindustan Times*, May 12, 2022 <https://www.hindustantimes.com/cities/delhi-news/rain-shortfall-has-kept-delhi-s-air-poor-for-most-of-summer-101652294503713.html>
 92. Bundelkhand temperatures may rise to 52–54°C – *Hindustan*, Apr 9, 2022 <https://www.livehindustan.com/uttar-pradesh/jhansi/story-april-weather-changes-scorching-heat-and-rain-in-bundelkhand-201775233187032.html>
 91. New Delhi is the most polluted city in the world! – *India Today (Twitter)*, Mar 23, 2022 <https://twitter.com/indiatoday/status/1506605962492145667?s=24>
 90. Pollution control board joins hands with IIT Kanpur and Ericsson to monitor air pollution in Jaipur – *Ericsson*, Mar 14, 2022 <https://www.ericsson.com/en/press-releases/2/2022/3/iit-kanpur-and-airtel-collaborate-with-rajasthan-pollution-control-board-to-monitor-air-quality-in-jaipur>
 89. Sensors installed to check the Air Quality in Jaipur – Mar 15, 2022
 88. Are FM's clean energy, EV announcements in line with India's climate commitments? Experts weigh in – *Economic Times*, Feb 1, 2022 <https://economictimes.indiatimes.com/industry/renewables/are-fms-clean-energy-ev-announcements-in-line-with-indias-climate-commitments-experts-weigh-in/articleshow/89279424.cms?from=mdr>
 87. Budget 2022 sends important signal to markets, financial institutions – *Business Standard*, Feb 1, 2022 <https://economictimes.indiatimes.com/industry/renewables/are-fms-clean-energy-ev-announcements-in-line-with-indias-climate-commitments-experts-weigh-in/articleshow/89279424.cms?from=mdr>
 86. Budget: Env experts hail proposal to issue green bonds to mobilise resources for green infra – *The Print*, Feb 1, 2022 <https://theprint.in/india/budget-env-experts-hail-proposal-to-issue-green-bonds-to-mobilise-resources-for-green-infra/818664/>
 85. Improvement by treating Delhi-NCR as a single entity – *Dainik Jagran*, Jan 27, 2022
 84. Biomass burning to blame for Delhi haze, study finds – *Indian Express*, Dec 16, 2021 <https://indianexpress.com/article/cities/delhi/biomass-burning-to-blame-for-delhi-haze-study-7675182/>
 83. NO₂ not in the safe limit for even a year since 2013: Study – *Times of India*, Dec 15, 2021 <https://timesofindia.indiatimes.com/city/delhi/no2-not-in-the-safe-limit-for-even-a-year-since-2013-study/articleshow/88285724.cms>
 82. Winter Air More 'Acidic' in Delhi, Particles Finer than Rest of NCR – *Times of India*, Sep 30, 2021 <https://timesofindia.indiatimes.com/city/delhi/winter-air-more-acidic-in-delhi-particles-finer-than-rest-of-ncr/articleshow/86625703.cms>
 81. Kitchens of restaurants and power plants are also polluting Delhi – *Hindustan*, Jul 7, 2021
 80. After dust, power plants top source of air pollution in Delhi in summers: study – *Times of India*, Jul 6, 2021 <https://timesofindia.indiatimes.com/city/delhi/after-dust-power-plants-top-source-of-air-pollution-in-summers-study/articleshow/84156085.cms>
 79. Even the methods of cooking are polluting the air – *Dainik Jagran*, Jul 6, 2021
 78. Dust, fuel combustion among city's chief summer pollutants – *Hindustan Times*, Jul 05, 2021

77. View: Budget 2021 is a shot in the arm for India's war on air pollution – *Economic Times*, Feb 12, 2021 <https://m.economictimes.com/news/economy/policy/view-budget-2021-is-a-shot-in-the-arm-for-indias-war-on-air-pollution/articleshow/80882651.cms>
76. 120 institutes identified to form network to measures cities' performance under NCAP – *Hindustan Times*, Jan 21, 2021
75. New dashboard to monitor bad-air fight – *Times of India*, Jan 21, 2021 <https://timesofindia.indiatimes.com/city/delhi/new-dashboard-to-monitor-bad-air-fight/articleshow/80375600.cms>
74. Knowledge network of IIT will help in pollution prevention, *Hindustan*, Jan 20, 2021
73. Need political will to fight pollution, says Delhi govt. – *Indian Express*, Oct 30, 2020 <https://indianexpress.com/article/cities/delhi/need-political-will-to-fight-pollution-says-delhi-govt-6909303/>
72. EPCA lauds creation of the new body that took its job – *The Times of India City*, Oct 30, 2020
71. Air pollution: New law, new hope, old challenges – *Hindustan Times*, Oct 30, 2020 <https://www.hindustantimes.com/delhi-news/new-law-new-hope-old-challenges/story-5sn2w4GUk7x4lX9ekiGgFO.html>
70. Ordinance to curb pollution in Delhi – *The Tribune*, Oct 30, 2020 <https://www.tribuneindia.com/news/delhi/ordinance-to-curb-pollution-in-delhi-163197/>
69. Centre sets up permanent Commission to tackle air pollution in Delhi territory – *The Hindu*, Oct 29, 2020 <https://www.thehindu.com/news/national/centre-sets-up-permanent-commission-to-tackle-air-pollution-in-delhi-territory/article32975397.ece>
68. The speed of pollution is frightening, the condition has worsened over the past – *Dainik Jagran*, Oct 3, 2020
67. Indian capital loses cleaner lockdown air as farmers burn crop waste – *Reuters*, Sep 30, 2020 <https://www.reuters.com/business/environment/indian-capital-loses-cleaner-lockdown-air-farmers-burn-crop-waste-2020-09-30/>
66. Vehicle emissions fell to 5% in early lockdown: Study – *Hindustan Times*, Sep 24, 2020 <https://www.hindustantimes.com/cities/vehicle-emissions-fell-to-5-in-early-lockdown-study/story-vsZs9BnufstZ19rOoEIDPN.html>
65. Air is becoming black due to coal power plants – *Dainik Jagran*, Jul 2020
64. Water policy change contributed to Delhi's toxic smog – *Times of India*, Jul 24, 2020 <https://timesofindia.indiatimes.com/city/nagpur/water-policy-change-contributed-to-delhis-toxic-smog/articleshow/77136580.cms>
63. India's 1st low-cost air monitoring study to be conducted across 15 MMR spots – *Hindustan Times*, Jul 24, 2020 <https://www.hindustantimes.com/mumbai-news/india-s-1st-low-cost-air-monitoring-study-to-be-conducted-across-15-mmr-spots-in-november-says-maharashtra-pollution-control-body/story-RWAccErSE5UmRrykbPpRUK.html>
62. सावधान! कोरोना काल में खतरनाक हो सकता है वायु प्रदूषण – *Amar Ujala*, Jul 24, 2020 <https://www.amarujala.com/delhi-ncr/air-pollution-can-be-dangerous-during-corona-period>
61. Scientists agree, more pollution may increase corona mortality – *Hindustan*, Jul 23, 2020
60. दिल्ली की हवा को काला कर रहे एनसीआर के कोयला संयंत्र – *Dainik Jagran*, Jul 21, 2020 <https://www.jagran.com/delhi/new-delhi-city-ncr-ncr-coal-plants-blackening-delhi-air-know-what-experts-says-jagran-special-20534949.html>
59. 100 Days of Lockdown: What's Lost is Found! – *Hastakshep*, Jul 16, 2020
58. New metric to measure aerosol pollution in Delhi – *The Hindu*, Jul 16, 2020 <https://www.thehindu.com/news/national/new-metric-to-measure-aerosol-pollution-in->

- delhi/article32096436.ece
57. Infected components of particulate matter will be found in two minutes – *Dainik Jagran*, Jun 6, 2020
 56. Coronavirus: Be it America, China, Italy or India, where air pollution is the highest, the effect of corona is also the deadliest – *Divya Bhaskar*, Apr 2020
<https://www.divyabhaskar.co.in/news/the-united-states-china-italy-or-india-where-air-pollution-is-highest-the-corona-effect-is-also-the-deadliest-127376508.html>
 55. First nuclear reactor safety research facility to be established in IIT Kanpur – *Hindustan*, Nov 28, 2017 <https://www.livehindustan.com/uttar-pradesh/story-kanpur-will-be-the-countries-first-nuclear-research-centre-1668367.html>
 54. IIT Kanpur awaits cloud cover to test artificial rain to cut air pollution – *Hindustan Times*, Nov 21, 2017 <https://www.hindustantimes.com/environment/iit-kanpur-awaits-cloud-cover-to-test-artificial-rain-to-cut-air-pollution/story-PWqjtMTmojQAWCYIpChz4L.html>
 53. IIT Kanpur's smart sensors to issue smog warning monitor pollution – *Hindustan Times*, Nov 16, 2017 <https://www.hindustantimes.com/cities/low-cost-air-quality-sensors-to-provide-pollution-data-to-residents/story-A9lcN1LuXB0YwyIOHN6E3L.html>
 52. The problem of pollution in Delhi is 10 years, as is the case with Western countries – *The Hindu*, Nov 11, 2017
 51. Delhi air pollution: Is it smog or fog? Opinions differ – *Hindustan Times*, Nov 8, 2017 <https://www.hindustantimes.com/delhi-news/delhi-air-pollution-is-it-smog-or-fog-opinions-differ/story-1WgAiUZ6psTNnTN6Wc9l8O.html>
 50. More diesel vehicles hit efforts to combat pollution in Delhi – *Hindustan Times*, Jul 19, 2017 <https://www.hindustantimes.com/delhi-news/more-diesel-vehicles-hit-efforts-to-combat-pollution-in-delhi/story-eoEgJz1mNi8gVmO55Eo1zJ.html>
 49. Delhi air quality not 'good' in over 500 days, not even when it rained – *Hindustan Times*, Jul 7, 2017 <https://www.hindustantimes.com/delhi-news/delhi-air-quality-not-good-in-over-500-days-even-when-it-rained/story-PW8uVlsBujfV3rvJETzMLI.html>
 48. Bad air to blame for irregular rain – *Times of India*, Jul 3, 2017 <https://timesofindia.indiatimes.com/city/delhi/bad-air-to-blame-for-irregular-rain/articleshow/59415734.cms>
 47. Negligible fall in Delhi pollution after odd-even formula shows new study – *Hindustan Times*, May 11, 2017 <https://www.hindustantimes.com/delhi-news/negligible-fall-in-delhi-pollution-after-odd-even-formula-shows-new-study/story-d26Y1jbasotC9IHVmbnfgK.html>
 46. At odds on impact of odd-even on pollution – *The Telegraph*, May 11, 2017 <https://www.telegraphindia.com/india/at-odds-on-impact-of-odd-even-on-pollution/cid/1499952>
 45. Study shows Delhi's odd-even scheme had little impact on air pollution – *Business Line*, May 10, 2017 <https://www.thehindubusinessline.com/news/national/study-shows-delhis-odd-even-scheme-had-little-impact-on-air-pollution/article64268477.ece>
 44. More aerosol in atmosphere results in heavier rainfall – *The Hindu*, Apr 22, 2017 <https://www.thehindu.com/sci-tech/science/more-aerosol-in-atmosphere-results-in-heavier-rainfall/article18191175.ece>
 43. Pollution increased by 7% over Kanpur – *Hindustan*, Apr 22, 2017
 42. IIT Kanpur is 10% less polluted compared to city – *Dainik Jagran*, Mar 28, 2017
 41. Delhi air pollution: Secondary pollutants bigger threat, warns EPCA – *Hindustan Times*, Mar 20, 2017 <https://www.hindustantimes.com/delhi/delhi-air-pollution-secondary-pollutants-bigger-threat-warns-epca/story-x1CMpg7kKrkAlGeH21MliN.html>
 40. Unraveling the myriad causes of North India's pollution pall – *Yale Environment 360*, Feb 9, 2017 <https://e360.yale.edu/features/origins-of-north-indias-air-pollution>

39. More stubble burning in winter adds to fog – *Times of India*, Jan 20, 2017
<https://timesofindia.indiatimes.com/city/delhi/more-stubble-burning-in-winter-adds-to-fog/articleshow/56674260.cms>
38. Blame crop burning for fog: IIT study – *Indian Express*, Dec 13, 2016
<https://indianexpress.com/article/india/delhi-pollution-smog-crop-burning-for-fog-iit-4424138/>
37. Air quality in holy city of Varanasi ‘most toxic in India’ – *The Guardian*, Dec 12, 2016
<https://www.theguardian.com/world/2016/dec/12/air-quality-holy-city-varanasi-most-toxic-in-india-report>
36. Varanasi was one of the pollutant city last year – *Amar Ujala*, Dec 13, 2016
35. IIT team tracks brown carbon’s effect on atmospheric warming – *The Hindu*, Nov 26, 2016
<https://www.thehindu.com/sci-tech/energy-and-environment/IIT-team-tracks-brown-carbon%E2%80%99s-effect-on-atmospheric-warming/article16703349.ece>
34. Aerosol factor in global warming: IIT Kanpur Scientist – *Hindustan Times*, Nov 25, 2016
33. Smog Warning, 10-point solution came last month at Delhi meet – *Hindustan Times*, Nov 9, 2016
32. Sky blue colour in danger – *Dainik Jagran*, Nov 8, 2016
31. Haryana fog spreads over Kanpur – *Dainik Jagran*, Nov 7, 2016
30. Poison spreads in environment, breathing gets difficult – *Hindustan*, Nov 7, 2016
29. Openly burning garbage around Agra is discolouring the Taj Mahal – *The Wire*, Oct 9, 2016
<https://science.thewire.in/environment/taj-mahal-discolouration-pollution/>
28. Open mass burning of garbage in Agra discolouring Taj Mahal, causing 713 premature deaths annually – *Times of India*, Oct 7, 2016
<https://timesofindia.indiatimes.com/city/agra/open-mass-burning-of-garbage-in-agra-discolouring-taj-mahal-causing-713-premature-deaths-annually/articleshow/54729273.cms>
27. ‘Rain-chasing’ aircraft predicts good rainfall in UP after July 15 – *Hindustan Times*, Jul 12, 2016
26. ‘Rain plane’ to take off from Lucknow today – *Hindustan Times*, Jul 11, 2016
25. To study atmosphere, IIT Kanpur releases weather balloons – *Hindustan Times*, Jul 7, 2016
24. Quicker, more accurate monsoon predictions soon – *Hindustan Times*, Jun 8, 2016
23. Two more atomic reactors to boost power generation soon – *Hindustan Times*, Feb 24, 2016
22. IIT Kanpur will start performing tests about nuclear accidents – *Dainik Jagran*, Feb 24, 2016
21. IIT Kanpur to get Asia’s first aerosol facility soon – *Hindustan Times*, Feb 18, 2016
20. IIT Kanpur research team finds reason behind Tamil Nadu floods – Dec 2, 2015
19. Cleaning our environment is everyone’s responsibility – *Hindustan*, *Amar Ujala*, *Dainik Jagran*, Aug 25, 2015
18. Dust, other ions can cause health problems – *The Pioneer*, Aug 25, 2015
17. Pollution: particulate matter in India higher than WHO limit – *The Hindu*, May 7, 2015
<https://www.thehindu.com/sci-tech/Pollution-particulate-matter-in-India-higher-than-WHO-limit/article60167057.ece>
16. Pollution turning Taj Mahal yellow: Study – *Times of India*, Jan 16, 2015
<https://timesofindia.indiatimes.com/india/pollution-turning-taj-mahal-yellow-study/articleshow/45723593.cms>
15. Winners of Shanti Swarup Bhatnagar Awards – *Live Mint*, Nov 17, 2014
<https://www.livemint.com/Money/p9bzT3mZ7mwyEqJeOgbWrJ/Shanti-Swarup-Bhatnagar-Awards-2014.html>
14. Ravana is ‘troubling’ even after burning up – *Dainik Jagran*, Oct 6, 2014
13. Dr. Tripathi’s research on aerosols – *Dainik Jagran*, Sep 28, 2014
12. Monitoring of air pollution, IIT Kanpur – *Dainik Jagran*, Sep 2, 2014

11. Smoke from field fires can travel up to 1,000 km: Study – *Times of India*, Nov 12, 2012
<https://timesofindia.indiatimes.com/home/environment/pollution/smoke-from-field-fires-can-travel-up-to-1000km-study/articleshow/17188057.cms>
10. Thick layer of carbon beyond the cloud: Distressful – *Dainik Jagran*, Sep 27, 2012
9. Weather is changing due to thick carbon layer – *Dainik Jagran*, Apr 22, 2012
8. Is monsoon pattern changing? Indo-UK study to find if climate change affecting seasonal rains – *Times of India*, Mar 1, 2012
<https://timesofindia.indiatimes.com/home/environment/global-warming/is-monsoon-pattern-changing-india-uk-study-will-try-to-find-out/articleshow/12086837.cms>
7. Thick Layer of Carbon in the Sky, Weather Cycle will be Affected – *Dainik Jagran*, Sep 16, 2011
6. Insights into Titan's Ionosphere – *Nature India*, Jul 25, 2011
<https://doi.org/10.1038/nindia.2011.110>
5. JGR Planets paper (Michael et al., 2009) – Among top 5 downloads that week
4. Biting dust in Mars – *Nature India*, Jul 28, 2008 <https://doi.org/10.1038/nindia.2008.249>
3. Lifting the veil from Jupiter cloud – *Nature India*, Apr 9, 2008
<https://doi.org/10.1038/nindia.2008.177>
2. Aerosols: The Earth's sun shield – *The Hindu Survey of Environment*, 2008
1. Pollution, aerosols, and the climate change – *The Hindu*, Sep 4, 2006

Teaching Experience and Coursed offered

- Earth and Environment — taught twice at the postgraduate level (class size ~15).
- Atmospheric Physics and Chemistry — taught three times at the postgraduate level (class size ~25).
- Fate and Transport of Contaminants in Natural Systems — taught twice at the postgraduate level (class size 10–50).
- Environmental Quality and Pollution — taught three times at the undergraduate level (class size 60–80).
- Computational Methods in Engineering — taught four times at the undergraduate level (class size 160–400).
- Advanced Mathematics for Civil Engineers (Numerical Methods Module) — taught three times at the undergraduate level (class size 55–70).
- Modeling of Natural Systems — taught twice at the postgraduate level.
- Air Pollution and its Control (Co-taught) — taught once at the postgraduate level (class size ~30).

Courses Tutored:

- Computational Methods in Engineering (five times).
- Mechanics of Solids (four times).
- Fluid Mechanics (two times).

Organizational Achievements

2. Summer School on “Sustainable Cities” — held at Indian Institute of Technology Kanpur, organized by the Centre for Environmental Science and Engineering, June 2–27, 2013. Conducted in collaboration with University of Minnesota, Georgia Tech, National Academy of

Engineering (NAE), Yale University, NCAR, and University of Colorado. Sponsored by USAID and NSF. Attended by more than 30 students and scientists from IITs, collaborating universities, ROI, and ICLEI.

1. DST Training School on “Aerosol-Cloud Interaction” — held at Indian Institute of Technology Kanpur, March 7–15, 2009. Attended by more than 25 students and scientists from IITs, universities, and research laboratories including NPL, SPL, IITM, and IMD.

Workshops/Symposia Organized

18. Airawat Research Foundation – Centre of Excellence in Artificial Intelligence for Sustainable Cities: Roundtable on “*Addressing Urban Sustainability Challenges – Budgetary Recommendations to Finance Ministry*”, New Delhi, January 2025.
17. Smart Transportation for Reducing Emissions and Congestion in Indian Cities (STREC): Workshop at IIT Kanpur Outreach Center, NOIDA, July 20, 2024.
16. Brainstorming Workshop on Sustainable Cities: National Aerosol Facility (NAF), IIT Kanpur, March 9, 2024.
15. Indian Aerosol Science and Technology Association Conference: Hotel Vivanta, Navi Mumbai, December 12–14, 2023.
14. Online Training Program on Air Quality Management: Funded by World Bank, February–March 2022.
13. North Indian Air Pollution Meeting: Online (Zoom), August 23–24, 2020.
12. IITK–UPPCB Workshop: “*National Knowledge Network (NKN) to support National Clean Air Programme*”, Indira Gandhi Pratishthan, Lucknow, October 14–15, 2019.
11. IITK–PSI Workshop: “*Early Results from Delhi Air Quality Experiment 2017–18 and Future Forward*”, India International Centre, New Delhi, October 26–27, 2018.
10. DST Meeting: National Network Programme on Aerosol (NNP-A) under Climate Change Programme, IIT Delhi, October 23, 2018.
9. IITK–MoES Workshop: “*Real-time Nationwide Low-Cost Sensor Network for Air Quality Monitoring*”, Ganga Auditorium, MoEFCC, New Delhi, August 29, 2018.
8. DST–UKIERI Workshop: “*Introduction to Earth Observation Techniques: Applications to Land and Atmosphere*”, IIT Kanpur, March 26–28, 2018.
7. DST National Workshop: “*Aerosols: Science and Application*”, IIT Kanpur, May 11–12, 2017.
6. DBT–RCUK Workshop: “*Biological Solutions to Reducing Industrial Waste, Environmental Inefficiency and Pollution in India*”, CESE, IIT Kanpur, March 21–23, 2017.
5. Theme Meeting: “*Aerosol Behavior Studies in a Nuclear Reactor under Severe Accident Conditions*”, IIT Kanpur, February 23–25, 2016.
4. Indo–US Workshop: “*Sources of Environmental Pollution in India: Municipal Solid Waste and Biomass Burning Impacts*”, IIT Kanpur, October 25–26, 2015.
3. IITK–ASI Joint Workshop: “*Impacts of Atmospheric Haze on Taj Mahal Monument*”, under Indo–US Science and Technology Forum, IIT Kanpur, February 17, 2012.
2. Tiger-Z (Indo–NASA Joint Field Experiment) Workshop: IIT Delhi, January 7–8, 2009 (Co-Convenor).
1. Biennial Conference of IASTA: “*Aerosol, Clouds and Indian Monsoon*”, IIT Kanpur, November 15–17, 2004 (Co-Convenor).

Plenary/Invited Speaker

169. Delivered talk “*From Wisdom to Algorithms: The Future of Indian Cities*”, C.N.R. Rao Lecture

- Series, Indian Institute of Technology Kanpur, March 27, 2026.
168. Invited talk “*Building Resilience to Heat and Pollution*”, Mitigating Heat Risks: Challenges & Opportunities for India, India International Centre, New Delhi, May 28, 2025.
 167. Invited talk “*Empowering Data-Driven Air Quality Management: Insights from the ATMAN*”, Alexander von Humboldt Medal Lecture – EGU25, Vienna, May 2, 2025.
 166. Invited talk “*Sustainability – An All-Pervasive and Timeless Idea*”, Watershed Development Component under PMKSY, IIT Kanpur, April 4, 2025.
 165. Invited talk “*Sustainability – An All-Pervasive and Timeless Idea*”, REACH 2025, Agra, March 9, 2025.
 164. Invited talk “*Climate Change and Sustainable Strategies*”, ICONSDG, PSIT College of Higher Education, Kanpur, February 28, 2025.
 163. Invited talk “*Climate Change, AI and Its Use in City Planning and Sustainability*”, Phase IV Mid-Career Training Program, LBSNAA Mussoorie, January 24, 2025.
 162. Invited talk “*AI-Assisted, Data-Driven Sustainable Urban Spaces*”, Office of Registrar General and Census Commissioner of India, January 17, 2025.
 161. Invited talk “*Realizing Sustainability through PhD Research*”, Navigating PhD and Beyond, IIT Kanpur, December 31, 2024.
 160. Invited talk “*AI Driven Sustainable and Livable Urban Spaces*”, Think India National Convention, IIT Roorkee, December 23, 2024.
 159. Invited talk “*Data Driven, AI Powered Digital Goods for Sustainable Cities*”, National Academy of Sciences, IIT BHU Varanasi, November 14, 2024.
 158. Invited talk at Infosys Lecture Series, “*Clean Air for All: Scalable Air Quality Monitoring Technologies for Securing Clean Air, Better Health, and Sustainable Cities*”, Indian Institute of Technology Gandhinagar, July 3, 2024.
 157. Invited talk at “*Air Quality Challenges in Indian Cities*”, Rajasthan Technical University, Kota — “*Clean Air for Breathable and Livable Cities*”, March 27, 2024.
 156. Invited talk at INAE Workshop on “*Sustainability in Water and Environment*”, “*AI and Data Driven Approaches to Secure Clean Air for Sustainable Cities*”, Indian Institute of Technology BHU, February 26–27, 2024.
 155. Keynote address at National Environmental Conference, “*AI and Data Driven Approaches to Secure Clean Air for Sustainable Cities*”, Indian Institute of Technology Bombay, February 15–17, 2024.
 154. Keynote Speaker at International Conference on Climate Change and Agroecosystem (INAGMET-2024), “*Clean Air for Sustainable Agriculture: Air Pollution as a Major Threat to Food Security*”, Indian Institute of Technology BHU, February 8–10, 2024.
 153. Invited speaker at INFOSYS PRIZE 2023 – Winners’ Symposium Edition III, “*Clean Air Technologies for Sustainable Policies & Improved Public Health*”, Taj West End Hotel, Bangalore, January 12, 2024.
 152. Invited speaker at *Airshed Modelling for Air Quality Management*, Delhi, December 4, 2023.
 151. Invited talk “*Opportunities for Researchers to Support Air Quality Action*”, National Consultation on Air Pollution and Health in India, AIIMS New Delhi, November 17, 2023.
 150. Talk “*Sustainable and Scalable Technologies for Air Quality Monitoring*”, Sustainable and Emerging Technologies for Food Safety and Environmental Toxicology (SET-FEST), Lucknow, October 12–13, 2023.
 149. Invited talk “*Scientific & Technological Contributions and Capacity Building Under NCAP*”, Golden Jubilee Celebration of West Bengal Pollution Control Board, September 22, 2023.
 148. Invited talk “*Clean Air and Water for Sustainable Future*”, World Environment Day, IISER Kolkata, June 5, 2023.
 147. Invited talk “*Clean Air and Water for Sustainable Future*”, Research Scholars’ Day 2023,

- Department of Sustainable Energy Engineering, IIT Kanpur, June 1, 2023.
146. Talk “*Nationwide Air Quality Monitoring Combining Sensors Plus Satellite Images with AI & ML*”, Aakash Project 2023 Workshop, India Habitat Centre, New Delhi, March 28–29, 2023.
 145. Invited speaker at Regional (East) Meet of Institutes of Repute Associated with NCAP, “*Nationwide Air Quality Monitoring Combining Sensors Plus Satellite Images with AI & ML*”, Hotel Chanakya, Patna, March 24–25, 2023.
 144. Talk “*Scalable and Affordable Solutions for Hyperlocal Monitoring, Source Attribution and Source Control*”, Maharashtra Prathamik Shikshan Parishad (MPSP), March 18, 2023.
 143. Invited talk, Indian Physics Association (IPA), Prof. P. A. Pandya Endowment Lecture, “*Nationwide Air Quality Monitoring Combining Sensors Plus Satellite Images with AI & ML*”, IIT Kanpur, March 14, 2023.
 142. Keynote talk “*Nano Particles Night Time Growth: Implications to Haze and Climate*”, International Symposium Nano-2023, Hyderabad, March 13–14, 2023.
 141. Talk “*Combining Sensors Plus Satellite Images with AI & ML for Nationwide Air Quality Monitoring*”, Symposium on UNFCCC CoP vs Local Climate Action, IIT Kanpur, March 2, 2023.
 140. Lecture “*Real-time Source Apportionment Using Advanced Instruments*”, Winter School on Instrumentation and Analytical Techniques, Central University of Jammu, February 20–25, 2023.
 139. Invited talk “*Hybrid Technologies for Monitoring Particulate Matter, Source Attribution and Health Impacts at Scale*”, Air Quality in Mumbai – Stakeholder Workshop, January 12, 2023.
 138. Invited speaker, Institute Research Symposium (IRS’23), “*Hybrid Technologies for Monitoring Particulate Matter, Source Attribution and Health Impacts at Scale*”, IIT Kanpur, January 7–8, 2023.
 137. Invited talk “*Nation Wide Sensor Based Monitoring and Source Attribution*”, UKRI India/NERC LEMS Workshop, December 14–15, 2022.
 136. Invited talk “*Changes in Atmospheric Composition: Implication to Global and Regional Climate and Atmospheric Chemistry*”, SUMANGALAM PANCHAMAHABHOOT, SoA University, Bhubaneswar, December 3–4, 2022.
 135. Invited talk “*Hybrid Technologies for Monitoring Particulate Matter, Source Attribution and Health Impacts at Scale*”, Environment and Sustainability Event, Indian National Science Academy, New Delhi, November 6–8, 2022.
 134. Invited talk “*Scientific and Technological Solutions for Clean Air*”, Symposium on India’s Sustainable Future, IIT Kanpur, October 12, 2022.
 133. Invited talk “*Nationwide Sensor-Based Air Quality Monitoring: From Laboratory to Field Deployments*”, RSC-IITM Desktop Seminar, IIT Madras, October 11–12, 2022.
 132. Invited talk “*Clean Air for the Sustainable Future*”, Recent Advances in Environmental Engineering towards Sustainability, NIT Patna, October 10–14, 2022.
 131. Keynote talk “*Capacity Building and Technology Development by Universities in India’s Clean Air Program*”, Friday Colloquium Series, CSIR-NPL, New Delhi, October 7, 2022.
 130. Invited talk, *Tech for Impact-Bharat*, Bengaluru, September 12, 2022.
 129. Invited talk “*Journey of Sensor Based Air Quality Monitoring in India*”, Air Sensors International Conference (ASIC), Bangalore, August 26, 2022.
 128. Invited talk “*Journey of Sensor Based Air Quality Monitoring in India*”, Air Sensors International Conference (ASIC), Bangalore, August 26, 2022.
 127. Invited talk “*Role of NCAP in Tackling Air Pollution*”, Storytelling for Environmental Change, Jamia Millia Islamia, New Delhi, August 22–23, 2022.
 126. Invited talk “*Capacity Building and Technology Development by Universities and Research Laboratories in India’s Clean Air Program*”, Capacity Building Workshop on Air Action Plan,

August 22, 2022.

125. Invited talk *“Advancing Environmental Innovations in India: Insights from Experimental Research”*, Online Conference, Energy Policy Institute at University of Chicago, July 22, 2022.
124. Invited talk *“Capacity Building and Technology Development by Universities in India’s Clean Air Program”*, Max Planck Institute for Chemistry, Mainz, July 14, 2022.
123. Invited talk *“Capacity Building and Technology Development by Technical Institutions in NCAP”*, Azadi ka Amrit Mahotsav Lecture Series, ICAR, July 13, 2022.
122. Invited talk *“Hybrid Air Quality Monitoring Network”*, National Air Quality Resource Framework (NARFI), IIC New Delhi, June 22, 2022.
121. Invited talk *“Hyper Local Air Quality Monitoring and Source Attribution in Cities of Lucknow and Kanpur”*, Advisors and Influencers Round Table, IIT Kanpur, June 6, 2022.
120. Invited talk *“Achieving Clean Air Goal in Sustainable Indian Cities”*, Webinar on Air Quality Management and Sustainability, Dayal Bagh Educational Institute, Agra, June 3, 2022.
119. Invited talk *“Capacity Building and Technology Development by Universities in India’s Clean Air Program”*, National Workshop on Air Pollution and Health Impacts, Central University of Jammu, June 1, 2022.
118. Invited talk *“Implementing ICCC as a Service Model in Cities”*, Consultation Workshop, India Habitat Centre, New Delhi, December 15, 2021.
117. Keynote talk *“Precipitation in Himalayas: Role of Aerosols and Orography”*, Workshop on Himalayan Biosphere-Atmosphere-Hydrosphere Interactions, GBPNHIE, Almora, December 14, 2021.
116. Invited talk *“Sensor Based AQ Network in India”*, US Environment Protection Agency, October 26, 2021.
115. Invited talk *“New Technologies to Measure Air Pollution and its Sources”*, Air Pollution: Facts to Act, Lucknow, September 29, 2021.
114. Plenary talk *“Sources, Processing and Impacts of Atmospheric Haze over Indo-Gangetic Plains”*, Frontiers in Geoscience Research Conference, PRL, September 28, 2021.
113. Invited talk *“Assessment of Low-Cost Sensor Based PM_{2.5} and PM₁₀ Monitoring Network in Maharashtra”*, Third India Air Quality Convening, September 27, 2021.
112. Invited talk *“Formation, Composition and Evolution of Secondary Organic Aerosols (SOA) during Winter in Indo-Gangetic Plain”*, Joint Research Centre, European Commission, September 24, 2021.
111. Invited talk *“Low-Cost Sensor-Based Air Quality Monitoring Networks”*, Capacity Development Programme, RRC.AP, Asian Institute of Technology, Bangkok, September 13, 2021.
110. Invited talk *“Advanced Monitoring Technologies and Capacity Building to Support India’s Clean Air Program”*, Institute of Advanced Sustainability Studies, Potsdam, September 7, 2021.
109. Invited talk *“Advanced Technologies to Help Clean Air Program”*, Tata Steel, September 7, 2021.
108. Invited talk *“Capacity Building for Air Pollution Control in India”*, National Knowledge Network under NCAP, Air Pollution Webinar, January 20, 2021.
107. Invited talk *“Air Pollution Monitoring and Analysis in India”*, Symposium on Air Pollution Measurement and Analysis Systems (APMAS), IIT Delhi & World Bank, January 15–20, 2021.
106. Invited talk *“Capacity Building for Air Pollution Control in India”*, Symposium on Air Pollution Measurement and Analysis Systems (APMAS), IIT Delhi & World Bank, January 15–20, 2021.
105. Invited talk *“Particulate Matter and Gas Sensors Calibrations”*, Technical Exchange on Mainstreaming of New Air Quality Sensor Technologies, Department of Environmental Health,

December 16, 2020.

104. Plenary talk “*Scaling of Sensor-Based Monitoring, Real-Time Source Apportionment and Capacity Building under the National Clean Air Mission*”, Fifth Indian International Conference on Air Quality Management (IICAQM 2020), IIT Madras, December 11, 2020.
103. Panelist and speaker, “*Source Apportionment and Emission Inventories Studies in Nonattainment Cities in India*”, IIT Delhi, November 26, 2020.
102. Invited talk “*Nationwide Sensor-Based Monitoring, Real-Time Source Apportionment and Capacity Building under the National Clean Air Mission*”, Shakti Sustainable Energy Foundation Webinar, November 17, 2020.
101. Invited talk “*Aerosols and Their Impacts on Climate and Crop Yield*”, Agriculture and Food Technologies Webinar, CSIR-NBRI Lucknow, November 11, 2020.
100. Invited talk “*Air Pollution–Land Use–Cloud Interactions: Impact on Climate Change, Agriculture, Hydrological Cycle, Human Health and Monumental Heritages*”, Online Sustainability Seminar Series, IIT Gandhinagar, November 9, 2020.
99. Invited talk “*Sensor-Based Streaming Analytics and Near-Real Time Source Apportionment of Air Pollution*”, International Conference on Aerosol Air Quality, ARIES Nainital, September 14, 2020.
98. Panel discussion “*Air Pollution Data and Science*”, CII 15th Sustainability Summit, September 10, 2020.
97. Invited talk “*Tracking Sources of Air Pollution in Real-Time*”, CERCA Webinar, International Day of Clean Air for Blue Skies, September 7, 2020.
96. Invited talk “*Unraveling Tiny Monstrous Organic Aerosols: Key to Achieve Blue Skies and Improved Human Health*”, ACS Science Talks Virtual Lecture Series, August 28, 2020.
95. Invited talk “*Importance and Need for Reliable and Robust Data for Improving Air Quality*”, India Clean Air Summit, hosted by Center for Study of Science, Technology and Policy (CSTEP), August 25, 2020.
94. Invited talk “*Importance and Need for Reliable and Robust Data for Improving Air Quality*”, India Clean Air Summit, CSTEP, August 25, 2020.
93. Invited talk “*Air Quality in New Delhi during the COVID-19 Induced Lockdown*”, World Bank & NCAP Knowledge Network Webinar, July 28, 2020.
92. Invited talk “*Published Results of Air Quality Experiment in Delhi*”, Global Strategic Communications Council Meeting, July 23, 2020.
91. Invited lecture “*Implementation of National Clean Air Programme*”, Princeton University Global India Conference, USA, March 27, 2020.
90. Invited talk “*Combination of Dynamic Real-Time Source Apportionment and Low-Cost Sensors for Air Pollution Reduction*”, Earth Science Lecture Series, IIT Gandhinagar, January 6, 2020.
89. Invited talk “*Air Quality Improvement through Dynamic Source Apportionment*”, 4th Indian International Conference on Air Quality Management, IIT Bombay, December 19, 2019.
88. Invited talk “*Dynamic Source Apportionment for Air Quality Improvement*”, India CEO Forum for Clean Air, India Habitat Centre, New Delhi, December 17, 2019.
87. Panelist “*Alignment of CSR with SDGs – Air Pollution Focus*”, CII National CSR Summit, Hyatt Regency, New Delhi, December 12, 2019.
86. Invited talk “*Role of Sensor Technology in Policymaking*”, Stakeholder Consultation Workshop, Shakti Sustainable Energy Foundation, India Habitat Centre, New Delhi, August 7, 2019.
85. Keynote talk “*New Initiatives to Measure and Understand Air Pollution in Northern India: Hybrid Approach Based on High-End Mass Spectrometer and Low-Cost Sensors*”, 6th SEE Event on Air Pollution, IIT Kanpur, January 10, 2019.

84. Keynote talk *“New Initiatives to Measure and Understand Air Pollution in Northern India: Hybrid Approach Based on High-End Mass Spectrometer and Low-Cost Sensors”*, ATIPC-2018 Conference, IEST Shibpur, Kolkata, December 18, 2018.
83. Invited talk *“Streaming Analytics over Temporal Variables from Air Quality Monitoring (SATVAM)”*, Evening Networking Reception, Le Meridien, New Delhi, December 13, 2018.
82. Invited talk *“Aerosol-Cloud-Rainfall Interactions over India”*, IASTA Conference, IIT Delhi, November 26, 2018.
81. Invited talk *“Urban and Aerosol-Induced Short to Long-Term Changes in Rainfall in Indian Summer Monsoon Region”*, 63rd Seward Memorial Lecture, BSIP Lucknow, November 14, 2018.
80. Invited talk *“Current State of Play of Air Pollution – Challenges and Gaps for Lucknow and Kanpur”*, National Workshop, Hotel Claridges, New Delhi, June 15, 2018.
79. Invited talk *“Delhi Air Quality Experiment”*, NCAP Stakeholder Consultation Workshop, MoEFCC, CPCB, World Bank & TERI, New Delhi, April 18, 2018.
78. Invited talk *“Aerosol-Surface Forcing–Rainfall Associations over Gangetic Plains”*, NCRAES-2018, JNU New Delhi, March 22, 2018.
77. Invited talk *“Problem, Measurement and Sources – The Air Quality Conundrum”*, Dainik Jagran Clean Air Conclave, Lucknow, February 17, 2018.
76. Invited talk *“Sensor-Based Technologies for Air Pollution Monitoring”*, MoEFCC Workshop, New Delhi, February 13, 2018.
75. Popular lecture *“The State of Air Pollution in Indo-Gangetic Plains and Possible Solutions”*, Dayalbagh Educational Institute, Agra, December 22, 2017.
74. Invited talk *“Cities Infrastructure & Sustainability”*, SRU-ICMR Training Program, Chennai, December 19–20, 2017.
73. Panelist, Washington University St. Louis Forum on Energy, Environment & Agriculture, Leela Palace Hotel, New Delhi, December 15–16, 2017.
72. Invited talk *“Aerosol-Cloud-Surface-Radiation-Rainfall-Climate Interactions over Indian Monsoon Region”*, 5th Rajasthan Science Congress, Amity University Jaipur, October 13, 2017.
71. Invited talk *“Aerosol-Surface Forcing–Rainfall Associations over Gangetic Plains”*, Urban Climate Workshop, IIT Bhubaneswar, September 21–22, 2017.
70. Invited talk *“Aerosol Impact on Weather to Climate Scales over IG Basin”*, UPCAR Conference, S.V. University, Tirupati, June 26–28, 2017.
69. Invited talk *“Chemical Properties of Geoengineering Aerosols”*, National Roundtable Discussion, IIT Delhi, June 23, 2017.
68. Keynote talk *“Hygroscopicity–CCN–Clouds and Rainfall Associations over Ganga Plains”*, Wadia Institute of Himalayan Geology, Dehradun, May 18, 2017.
67. Lead talk *“Direct and Indirect Effects of Aerosols on Radiative Forcing and Rainfall over Indo-Gangetic Plains”*, AC3 Conference, Bose Institute, Darjeeling, April 25, 2017.
66. Invited talk *“Scale and Adequacy of Monitoring Needed in Indian Cities”*, GSCC Air Quality Workshop, IHC New Delhi, April 12, 2017.
65. Invited talk *“Aerosol Direct and Indirect Effects in Gangetic Plains”*, Climate Change Research Brainstorming Meeting, IIT BHU Varanasi, February 23, 2017.
64. Invited talk *“Aerosol–Cloud–Surface–Radiation–Rainfall Interactions over Indo-Gangetic Plains”*, Indo-Dutch International Conference, IIT Delhi, February 21, 2017.
63. Invited talk *“Aerosol Pollution: Implications to Health, Economy and Climate”*, INSPIRE-2017 Programme, Amity University Lucknow, February 15, 2017.
62. Lead talk *“Air Pollution Sources in India: Measurement and Latest Findings”*, Workshop on Air Quality, Hotel Westinn, Varanasi, December 12, 2016.

61. Invited talk *“Coupling of Aerosol–Land–Cloud–Rainfall System over Gangetic Plains: Observations and Modeling Analysis”*, Indo-UK Water Center (IUKWC) Workshop, IITM, November 30, 2016.
60. Invited talk *“Variability in Aerosol Properties: Direct and Indirect Effects over Gangetic Plains”*, Seminar at Centre for Ecology and Hydrology, Wallingford, UK, September 17, 2016.
58. Invited talk *“Air Pollution Sources in India: Measurements and Latest Findings”*, Air Quality in Indian Cities, Taj Hotel, Lucknow, May 25–26, 2016.
57. Invited talk *“Organic Aerosols (OA) in Gangetic Basin: Composition, Chemistry, CCN, Radiative and Health Effects”*, Workshop on Biosphere–Atmosphere Interactions, IISER Mohali, March 21, 2016.
56. Invited talk *“Air Pollution Implications to Health, Climate, Agriculture and Economy”*, Surya Roundtable Meeting, India International Centre, New Delhi, March 15, 2016.
55. Invited talk *“Aerosol’s Impact on Health and Climate of Gangetic Plain”*, INSPIRE Programme, Amity University, Gwalior, January 21, 2016.
54. Invited talk *“Smoke, Dust, and Haze: Implications to Health, Climate, and Economy”*, INAE Kanpur Chapter Seminar, IIT Kanpur, January 20, 2016.
53. Invited talk *“Discoloration of the Taj Mahal, Adverse Health Effects and Climate Forcing due to Municipal Solid Waste and Dung Cake Burning”*, Workshop on Smart, Healthy and Sustainable Cities, The Lalit Hotel, New Delhi, January 11, 2016.
52. Invited talk *“Hydro Climate of Gangetic System”*, India–UK Workshop on Future Ganga, Tal Mahal Hotel, New Delhi, December 3, 2015.
51. Invited talk *“The Human–Ganga Biome Interactions: Unravelling the Influences of Environmental Pollutants on Humans and a Living River”*, Workshop on Non-Putrefying Properties of Ganga Water, AIIMS New Delhi, November 16, 2015.
50. Contributed talk *“Particulate Pollution and Daily Surface Rainfall: Observational Study over Indian Summer Monsoon Region”*, AGU Chapman Conference, Chinese University of Hong Kong, June 14–18, 2015.
49. Contributed talk *“Optical Properties of Brown Carbon and Its Impact on Earth’s Radiative Budget”*, IGAC-MANGO Workshop, Asian Institute of Technology, Bangkok, June 11–12, 2015.
48. Invited participant *“Science–Policy Dialogue”*, Climate and Clean Air Coalition (CCAC), World Meteorological Organization HQ, Geneva, May 20–21, 2015.
47. Contributed talk *“Size-Resolved Fog Water Chemistry and Its Atmospheric Implications”*, European Geosciences Union, Vienna, Austria, April 12–17, 2015.
46. Invited talk *“Aerosol’s Impacts on Climate, Health, Agriculture and Monuments”*, Chandigarh Science Congress, Punjab University, February 25, 2015.
45. Invited talk *“Aerosol–Cloud–Rainfall Associations over India”*, International Workshop on Climate Change, Ansal University, Gurgaon, January 12, 2015.
44. Invited talk *“Atmospheric Observations and Laboratory Studies of Carbonaceous Aerosols”*, IASTA Biennial Conference, Banaras Hindu University, Varanasi, November 12, 2014.
43. Invited talk *“Brown Carbon Absorption and Its Impact on Atmospheric Radiative Forcing”*, ABC–SLCP Symposium, Tokyo, Japan, July 21–23, 2014.
42. Theme leader and organiser, *“Clean Air”*, Indo-German Frontiers of Engineering, Potsdam, Germany, June 23–25, 2014.
41. Invited talk *“Climate Science and Policy”*, 1st Workshop, IIT Bombay, March 6–7, 2014.
40. Invited talk *“Scientific Basis for Knowledge to Action”*, Policy Conclave on Vehicular Emissions, Taj Hotel, New Delhi, February 4, 2014.
39. Invited talk *“Observations and Monitoring Needs”*, Policy Conclave on Vehicular Emissions, Taj Hotel, New Delhi, February 4, 2014.

38. Invited interdisciplinary lecture “*Atmospheric Aerosol Measurements: India Perspective*”, National Space Science Symposium, Dibrugarh University, Assam, February 1, 2014.
37. Plenary lecture “*Long-Term Field Observations and Laboratory Studies of Atmospheric Aerosols from Kanpur, Indo-Gangetic Basin*”, 8th Asian Aerosol Conference, Sydney, Australia, December 3, 2013.
36. Invited talk “*Aerosol Measurements: India Perspective*”, India–California Air Pollution Mitigation Program, Scripps Institute of Oceanography & TERI, Oakland, USA, October 22, 2013.
35. Invited talk “*Role of Chemical Composition on CCN Activity and Evaluation of Microphysics Parameterizations in WRF Against CAIPEEX Profiles*”, CAIPEEX Science Meeting, IITM Pune, October 17, 2013.
34. Invited talk “*Long-Term Field Observations and Laboratory Studies of Atmospheric Aerosols from Kanpur, Indo-Gangetic Basin*”, Center for Climate Change, IIT Bombay, October 9, 2013.
33. Invited talk “*Evaluation of WRF-Chem Simulations During an Extreme Rainfall Event over Indo-Gangetic Plain*”, Indo-French Monsoon Research Meeting, New Delhi, October 5, 2013.
32. Invited talk, *CAIPEEX-Phase III – IGP Campaign Meeting*, IITM Pune, August 30, 2013.
31. Invited talk “*Mars Orbiter Mission*”, Workshop, Physical Research Laboratory, Ahmedabad, July 26–27, 2013.
30. Invited talk “*First Annual Regional Atmospheric Science (FARAS)*”, ICIMOD Workshop, Kathmandu, June 13–14, 2013.
29. Invited lecture, Naraina Group of Institution, Kanpur, June 11, 2013.
28. Invited talk “*GCR Generated Aerosol Electrification and Effects on Cloud Microphysics*”, CNRS Orleans, France, July 4, 2012.
27. Invited talk “*Climate Impacts of Aerosol over Ganga Basin*”, Alpine Summer School on Climate, Aerosols and Cryosphere, CNRS–ISAC–NSF, Valle d’Aosta, Italy, June 27, 2012.
26. Invited talk, ICIMOD Workshop, Kathmandu, Nepal, April 2–3, 2012.
25. Invited talk “*Climate Impacts of Aerosols*”, Conference on Climate Change: Science and Society, IIT Kanpur, March 30–31, 2012.
24. Invited lecture “*Interdisciplinary Application of Weather and Climate – Computational Perspective*”, C-DAC, Pune, January 25, 2012.
23. Invited talk “*Air Quality and Climate*”, US–India Workshop, Administrative Staff College of India, Hyderabad, September 12–14, 2011.
22. Lead talk “*Indo-German Frontier of Engineering*”, Khandala, June 2011.
21. Invited talk, Bhabha Atomic Research Center, Mumbai, June 9, 2011.
20. Invited talk, QIP Course, IIT Delhi, May 2011.
19. Invited talk, Brainstorming Session on Technology Vision 2035, IIT-BHU, Varanasi, May 2011.
18. Invited lecture, Brainstorming Session on Mars, Physical Research Laboratory, Ahmedabad, March 2011.
17. Invited lecture, Colloquium, National Physical Laboratory, New Delhi, March 2011.
16. Invited talk, National Atmospheric Research Laboratory, Department of Space, Gadanki, February 2011.
15. Invited lecture, Institution of Engineers (Local Chapter), HBTU Kanpur, 2010.
14. Invited talk, Geophysical Fluid Dynamics Laboratory, Princeton University, USA, June 2010.
13. Invited lecture “*Planetary Exploration Program of ISRO*”, Physical Research Laboratory, Ahmedabad, May 2009.
12. Invited colloquium, Physical Research Laboratory, Ahmedabad, May 2009.
11. Lead speaker “*Third Indo-US Frontier of Science*”, Agra, March 1–4, 2009.
10. Invited lecture, Aryabhata Research Institute of Observational Sciences (ARIES), Nainital,

October 2008.

9. Lecture, Air Force Administrative College, Coimbatore, December 2007.
8. Five lectures delivered “*Modeling of Planetary Atmospheres*”, Winter School, Physical Research Laboratory, Ahmedabad, January 2007.
7. Invited seminar, Center for Climate System Modeling, The University of Tokyo, Japan, July 2006.
6. Invited talk, Department of Chemical Engineering, Institute of Technology, Banaras Hindu University, Varanasi, February 2006.
5. Invited talk “*Nanoparticle Aerosol Science and Technology (NAST): Emerging Trends and Priorities*”, IIT Bombay, Mumbai, December 2005.
4. Invited lecture, Center for Atmospheric and Oceanic Sciences, IISc Bangalore, September 2005.
3. Five invited lectures “*Space and Atmospheric Science*”, CSSTEAP PG Course, Physical Research Laboratory, Ahmedabad, July 2005.
3. Invited seminar, Aeronomy Laboratory, NOAA, Boulder, USA, June 2004.
2. Invited lecture, Academic Staff College, Banaras Hindu University, Varanasi, March 2004.
1. Invited lecture, Institution of Engineers (Local Chapter), Harcourt Butler Technical University, Kanpur, January 2004.

Ongoing Projects

9. Clean Air Fund (CAF) — *Air Pollution Mitigation in Delhi NCR*, 2026–2027.
8. Ahmedabad Municipal Corporation — *SMART-VAYU: Vision-Based Ahmedabad Air Analysis for Urban Management*, 2026–2028.
7. BP India Private Limited — *CSR Project: AI Enabled Methane Emission Monitoring*, 2025–2027.
6. Mumbai Municipal Corporation — *Mumbai Air Network for Advanced Sciences (MANAS)*, 2025–2030.
5. GE India Pvt. Ltd. — *Collecting Airborne Dust Samples from Airports Across India*, 2024–2026.
4. Swati India Pvt. Ltd. — *Joint Collaboration with Swati Energy for Knowledge Sharing*, 2024–2027.
3. Klenviron Technologies Pvt. Ltd. — *Testing Efficacy of Air Purifier Modules Under Outdoor and Room Conditions*, 2024–2027.
2. Ministry of Earth Sciences (MoES) — *Ice-Crunch: Ice Nucleating Particle & Cloud Condensation Nuclei Properties in the North-Western Himalayas*, 2024–2027.
1. Open Philanthropy — *Support for Rural Air Quality Monitoring Project*, 2022–2025.

Completed Projects

59. Clean Air Fund (CAF) — *Supporting Indigenous Development of Low-Cost Sensors*, 2024–2025.
58. Rail India Technical & Economic Services Ltd. (RITES) — *DHSA at Kanpur*, 2023–2025.
57. Clean Air Fund (CAF) — *Atman-Centre of Excellence: Core Support Grant*, 2023–2025.
56. Clean Air Fund (CAF) — *Dynamic Hyper-Local Source Apportionment for Real-Time Policy Action*, 2023–2025.
55. CPMU, AI CoE — *Center of Excellence in Artificial Intelligence for Sustainable Cities*, 2024–2025.

54. Autotronics Innovations Pvt. Ltd. — *Testing the Efficacy of Air Purifier Modules Under Room Conditions*, 2024–2025.
53. BARC — *Aerosol Transport Behaviour Experiments at National Aerosol Facility in Context of Nuclear Reactor Accidents*, 2023–2025.
52. Central Pollution Control Board — *Creation of Secretarial Support at IIT Kanpur*, 2022–2025.
51. Swiss Agency for Development and Cooperation — *Contribution to Research for Clean Air Project in India*, 2020–2024.
50. Duke University — *Building Capacity to Improve Air Quality in South Asia: Reducing PM_{2.5} through Low-Cost Sensor Network Driven Policy Decisions*, 2020–2024.
49. Udupi Power Corporation Limited — *Study on Effect of Coal Blending on Ambient Air Quality and Management of Fly Ash*, 2022–2023.
48. Ericsson India Pvt. Ltd. — *Large-Scale Multicity Dense Urban IoT Real-Time Air Quality Monitoring Networks in India*, 2021–2023.
47. International Sustainable Energy Foundation (ISEF) — *Easiur India: Development of Air Quality Modeling Decision Support Tools for Policy-Makers*, 2023.
46. Devic Earth Pvt. Ltd. — *Testing the Efficacy of Pure Skies in Real Field Conditions at a City Deployment*, 2022–2024.
45. Clean Air Fund (CAF) — *Integrated Online Air Pollution Monitoring and Decision Support System*, 2021–2022.
44. New Venture Fund — *Development of Air Quality Modeling Decision Support Tools for Policy-Makers*, 2013–2022.
43. Maharashtra Pollution Control Board — *Ambient Air Quality and Atmospheric Haze Condition in Mahul Area*, 2021.
42. National Health Systems Resource Centre — *Evaluation of Pradhan Mantri Ujjawala Yojana (PMUY) in Six States of India*, 2020–2022.
41. Maharashtra Pollution Control Board — *Technical Assessment of Low-Cost Sensor-Based PM_{2.5} and PM₁₀ Monitoring Network in Maharashtra*, 2020–2022.
40. Central Pollution Control Board (CPCB) — *Delhi Air Quality Experiment: A Paradigm Shift in Source Apportionment*, 2019–2021.
39. Indo-US Science & Technology Forum (IUSSTF) — *Streaming Analytics over Temporal Variables from Air Quality Monitoring (SATVAM)*, 2017–2022.
38. Board of Research in Nuclear Sciences (BRNS), BARC — *Studies on Aerosol Behaviour Under Severe Accident Conditions in Indian Nuclear Reactors (National Aerosol Facility)*, 2015–2018 (extended to 2021).
37. Department of Biotechnology — *Delhi Air Pollution: Health and Effects (DAPHNE)*, 2017–2021.
36. Bloomberg Philanthropies — *Pilot of Low-Cost Sensor Technologies in Mumbai (with MPCB and IIT Kanpur)*, 2020–2021.
35. Devic Earth Pvt. Ltd. — *Testing and Efficacy of Pure Skies Under Different Conditions*, 2020–2021.
34. Centre for Study of Science, Technology and Policy (CSTEP) — *Source Apportionment Studies – Analysis of Samples*, 2021.
33. NASA — *TIGERZ Project*, 2008–2021.
32. Shakti Sustainable Energy Foundation — *Network of Technical Institutions as Knowledge Partner of NCAP*, 2019–2021.
31. Ericsson India Pvt. Ltd. — *Real-Time Atmos Air Quality Monitoring with NB-IoT Network*, 2019–2021.
30. Uttar Pradesh State Government — *Comprehensive Agriculture Information System*, 2019–

- 2020.
29. Centre for Study of Science Technology and Policy CSTEP — *Source Apportionment Studies – Analysis of Samples*, 2019–2020.
28. Science and Technology Facilities Council (STFC) — *Thermal Infrared Technologies for Environmental Assessment in the Ganges Basin*, 2018–2020.
27. DST — *Indo-UK Joint Project on Climatic Stresses and Agriculture (Indo-Gangetic Plain)*, 2017–2020.
26. Respirer Living Sciences Pvt. Ltd. — *Measurement and Calibration of Air Quality Monitors in 10 Cities of India*, 2018–2020.
25. ISRO-GBP — *Environmental Observatory*, 2007–2019.
24. BP India Services Pvt. Ltd. — *India Air Pollution Study for BP*, 2018.
23. Ministry of Earth Sciences (MoES) — *INCOMPASS: South Asian Monsoon Dynamics and Thermodynamics*, 2015–2018 (extended to 2019).
22. Georgia Institute of Technology (GIT) — *Crowdsourcing Water Quality in Rural India*, 2016–2017.
21. USAID & NSF-PIRE — *Developing Low-Carbon Cities in India: Urban Infrastructure, Public Health, Climate Risks and Vulnerability*, 2013–2016.
20. Indo-UK MoES & NERC — *SAPRISE: South Asian Precipitation Assessment*, 2011–2016.
19. BARC — *Experimental Evaluation of Aerosol Behaviour Relevant to Indian Nuclear Reactors*, 2013–2016.
18. DST — *Modeling Relative Impact of Aerosol and LULC Changes on Regional Climate of Ganga Basin*, 2013–2016.
17. MHRD — *Novel System for Soot Measurement, Toxicity Assessment and Source Identification*, 2014–2015.
16. Finnish Meteorological Institute (FMI) — *Black and Brown Carbon Influence on Climate Change in India*, 2014–2015.
15. Regional Resources Center for Asia and the Pacific (UNEP Collaboration) — *Atmospheric Brown Clouds (ABC)*, 2012–2013.
14. MoES — *Cosmic Rays–Cloud–Climate Conundrum*, 2011–2014.
13. BRNS — *Measurement of Aerosol and Droplet Size Distributions and Model Validation*, 2010–2013.
12. IFCPAR — *Development of Non-Hydrostatic Finite-Volume Icosahedral Model for Regional/Global Climate Simulation*, 2009–2012.
11. Indo-US Science & Technology Forum — *Atmospheric Haze: Adverse Impacts on Glaciers and Cultural Heritage in India*, 2009–2012.
10. ISRO-GBP — *Long-Term Variation of Aerosol Black Carbon over Kanpur Region*, 2005–2008.
9. DST — *Impact of Anthropogenic Aerosols on Cloud Microphysics*, 2007–2010.
8. ISRO — *Cosmic Ray Induced Effects During Total Solar Eclipse*, 2009–2010.
7. ISRO — *Modeling Microphysical and Optical Properties of Mixed-Phase Clouds over Indian Subcontinent*, 2007–2009.
6. Indian Railways (MHRD) — *Laboratory Investigations of Fog Microphysical Properties*, 2005–2008.
5. ISRO-RESPOND Program — *Effects of Ionization Rate Variation on Aerosol and Cloud Microphysical Properties*, 2003–2006.
4. DST — *Aerosol Optical Properties over Kanpur Region*, 2003–2006.
3. ISRO-GBP — *Integrated Campaign for Aerosols, Gases and Radiation Budget (ICARB)*, 2006–2007.
2. ISRO PLANEX — *Aerosol Charging and Electrical Conductivity in the Lower Atmosphere*

of Mars, 2004–2007.

1. ISRO — *Atmospheric Pollution (North India Land Campaign)*, 2004–2007.

Certified that the information given above is correct to my knowledge.

Sachchida Nand Tripathi