

CURRICULUM VITAE



PERSONAL INFORMATION

Name: **Dr Sunil Kumar Gupta, Ph.D.**

<https://scholar.google.co.in/citations?user=AV9Re-QAAAAJ&hl=en>

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Nationality: Indian

Date of birth: 30th Oct. 1986

Present address: Dr Sunil K Gupta C/o Prof. Shiva Nagendra SM
Department of Civil Engineering, IIT Madras, Chennai-600036,
India

Permanent address: 15A, Kh. No. 1052, Vindhyavasini Puram, Amrai Gaon, Chinchhat,
Lucknow - 226028, India

RESEARCH AREA

1. Air pollution
2. Personal exposure and deposition modeling
3. Stationary/mobile emission inventory and health risks modeling

TEACHING INTERESTS

1. Air and noise pollution
2. Air pollution modeling
3. Air pollution control
4. Atmospheric meteorology
5. Environmental chemistry

LIST OF PUBLICATION*

1. International Journal (SCI/SCIE Index): **08** (Average impact factor: **3.58**)
2. International/National Conference: **07**

CURRENT JOB POSITION

Post-Doctoral (Air pollution) (from 17th Jan. 2022 till now).

Department of Civil Engineering, IIT Madras, Chennai, India.

Area of research: Air pollution, Emission inventory, Source Apportionment and City Specific Management Action Plan.

Supervisor: Prof. Shiva Nagendra S M

Email: snagendra@iitm.ac.in

PREVIOUS JOB POSITION

Post-Doctoral in air pollution (2-years, 2019-2021)

Department of Environmental Engineering and Management, Chaoyang University of Technology, Taiwan (Republic of China)

Area of research: Stationary/mobile emission and health risks modeling.

Supervisor: Prof. Hsi-Hsien Yang (Dean),

Office Tel.: +886-4-23323000, Fax: +886-4-23742365

EDUCATIONAL QUALIFICATION

Ph.D. in Environmental Science (2018),

Department of Environmental Science and Engineering, Indian Institute of Technology (Indian School of Mines) Dhanbad, Dhanbad - 826004, India

Title of PhD thesis: “Traffic and meteorological impacts on urban air quality and associated health risk”

Supervisor: Prof. (Dr.) Suresh Pandian Elumalai

Post-graduation (M. Tech.) in Environmental Engineering (2013),

Institute of Engineering and Technology (IET), Sitapur road, Lucknow – 226021, India (affl.: Dr. A.P.J. Abdul Kalam Technical University, Lucknow)

-First class

Post-graduation (M. Sc.) In Environmental Science (2008),

V.B.S. Purvanchal University, Jaunpur – 222001, India

-First class

Other academic achievement

UGC-NET in Environmental Science (2012),

National Eligibility Test: Eligibility for Assistant Professor in India

EXPERIENCES

1. Scientific researcher (Post-Doctoral)

2-years

Chaoyang University of Technology, Taiwan (Republic of China)

- Research work independently
- Stationary and mobile sources emission ($[PM_{2.5} = FPM_{2.5} + CPM]$ & VOCs) and health risks modeling.
- Experience to handled sophisticated “Automated Isokinetic Sampling Console” sampling system (for filterable and condensable PM).
- Manage extremely large air quality data sets using Microsoft Excel, SPSS.
- Experience in analysis of metals, water ions and VOCs.
- Research paper review, writing and publication (*Annexure 1*).
- Support supervisor to taught BS, MS students.

2. Jr. Environmental scientist

1.5-years

Ecomen Laboratories Pvt. Ltd., Lucknow, India

- Environmental monitoring (including ambient, stack, water and soil samples) at different industries.
- Sample analysis in laboratories and report preparations.
- Create and format documents using Microsoft office.

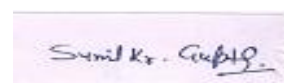
3. Other activities

Took practical classes of B. Tech (IV sem.) and M. Tech (I sem.) for following instruments handled, in the Department of Environmental Science and Engineering, during my Ph.D. at IIT (ISM) Dhanbad.

- Grimm 1.109 (aerosol spectrophotometer) used to various microenvironments including in-vehicle, nearby roadside and indoor aerosol monitoring.
- Stack monitoring kit (Vayubodhan Pvt. Ltd.) used to stack emission monitoring (PM, Sox and NOx) in different industries.
- Respirable dust sampler (Envirotech Instrument Pvt. Ltd.) used to monitor ambient air quality around roadside and mining areas.
- Personal sampler (Envirotech Instrument Pvt. Ltd.) for personal exposure to commuters.
- Vehicular sampler (Indus flue gas sampler) used to monitor vehicle exhaust emission.
- CO, ozone and VOC samplers (Kimo, Envirotech and TSI) used to monitor various microenvironments including in-vehicle, indoor and mining areas.
- Some air related software such as surfer (contour graphs), WRPLOT View (windrows diagram) and particle exposure model (AIRQ+ and ICRP model) were taught to students.

REFERENCES

1. Prof. Suresh Pandian Elumalai (Ph.D. supervisor), Department of Environmental Science and Engineering, IIT (ISM) Dhanbad, India.
Email: espandian@iitism.ac.in
2. Prof. Hsi-Hsien Yang, Dean (Post-Doctoral supervisor), Environmental Engineering and Management, Chaoyang University of Technology, Taiwan (Republic of China).
Email: hhyang@cyut.edu.tw
3. Prof. Brijesh Kumar Mishra, Department of Environmental Science and Engineering, IIT (ISM) Dhanbad, India
Email: brijesh@iitism.ac.in



Dr. Sunil Kumar Gupta

***Annexure 1**
PUBLICATION DETAILS

(A) List of Journal publication (SCI/SCIE)

| Publication Index | | | | | | |
|--------------------------|-----------|-----------|-----------|--|--------------------------------------|------------------------------|
| Q1 | Q2 | Q3 | Q4 | Total publication (SCI/SCIE) only | Total citation (last 3 years) | Average impact factor |
| 05 | 02 | 01 | - | 08 No. (07 As first/corresponding Author + 01 As Co-author) | 92 | 3.58 |

| S. N. | Name of authors | Title of paper | Name of international journal | Journal publisher | Volume /issues | Page no. | Year | IF | 'Q' ranking |
|-------|--|---|------------------------------------|---|----------------|-------------|------|-------|-------------|
| 1 | Yang, H.H., Gupta, S.K., Dhital, N.B. | Emission factor, relative ozone formation potential and relative carcinogenic risk assessment of VOCs emitted from manufacturing industries | Sustainable Environmental Research | BioMed Central (BMC), Part of Springer nature | 30 (28) | 1-15 | 2020 | 4.980 | Q1 |
| 2 | Yang, H.H., Gupta, S.K., Dhital, N.B., Wang, L.C., Elumalai, S.P. | Comparative investigation of coal-and oil-fired boilers based on emission factors, ozone and secondary organic aerosol formation potentials of VOCs | Journal of Environmental Sciences | Elsevier | 92 | 245-255 | 2020 | 5.565 | Q1 |
| 3 | Yang, H.H., Gupta, S.K., Dhital, N.B., Lee, K.T., Hsieh, Y.S., Huang, S.C. | Establishment of indicatory metals for filterable and condensable PM _{2.5} emitted from important stationary emission sources | Energy & Fuels | American Chemical Society (ACS) | 33 (11) | 10878–10887 | 2019 | 3.605 | Q1 |

| | | | | | | | | | |
|---|---|---|--|--|---------|-----------|------|-------|----|
| 4 | Gupta, S.K., Elumalai, S.P. | Exposure to traffic-related particulate matter and deposition dose to auto rickshaw driver in Dhanbad, India | Atmospheric Pollution Research | Elsevier | 10 (4) | 1128-1139 | 2019 | 4.352 | Q1 |
| 5 | Prabhu, V., Gupta, S.K., Madhwal, S., Shridhar, V. | Exposure to atmospheric particulates and associated respirable deposition dose to street vendors at the residential and commercial sites in Dehradun City | Safety and Health at Work | Elsevier | 10 (2) | 237-244 | 2019 | 2.707 | Q1 |
| 6 | Gupta, S.K., Elumalai, S.P. | Dependence of urban air pollutants on morning/evening peak hours and seasons | Archives of Environmental Contamination and Toxicology | Springer | 76 (4) | 572-590 | 2019 | 3.399 | Q2 |
| 7 | Gupta, S.K., Elumalai, S.P. | Adverse impacts of fog events during winter on fine particulate matter, CO and VOCs: a case study of a highway near Dhanbad, India | Weather | Royal Meteorological Society (RMetS)/John Wiley & Sons | 73 (12) | 396-402 | 2018 | 1.596 | Q3 |
| 8 | Gupta, S.K., Elumalai, S.P. | Size-segregated particulate matter and its association with respiratory deposition doses among outdoor exercisers in Dhanbad City, India | Journal of the Air & Waste Management Association | Taylor & Francis | 67 (10) | 1137-1145 | 2017 | 2.906 | Q2 |

(B) List of (top 5) Conference, Seminar and Workshop: 07

| S. N. | Name of authors | Title of paper | Venue | Organization/ publisher | Type of conference | Type of presentation |
|-------|--|---|--|--|------------------------|----------------------|
| 1 | Gupta, S.K., Dhital, N.B., Lee, K.T., Hsieh, Y.S., Lee, C.C., Yang, H.H. | Identification of indicatory metals in filterable and condensable particulate matter emitted from different fuel-based industrial boilers | The 26th International Conference on Aerosol Science & Technology (ICAST). October 4–5, 2019 | Chung Yuan Christian University, No. 200, Zhongbei Rd., Zhongli Dist., Taoyuan City-320, Taiwan (R.O.C.) | International (Taiwan) | Oral |
| 2 | Gupta, S.K., Elumalai, S.P. | Exposure to traffic-related fine-particulate matter to auto rickshaw driver and its associated health risk: A case study in critically polluted Dhanbad city, India | Air pollution, Climate and Health in Southern Asia and the Hindukush Himalaya. November 27-30, 2017 | The International Centre for Integrated Mountain Development (ICIMOD) Lalitpur-44700, Kathmandu, Nepal | International (Nepal) | Poster |
| 3 | Gupta, S.K., Elumalai, S.P. | Seasonal variation of ambient fine particulate matter concentration at near urban roadway | 2nd International conference on Bioenergy, Environment and Sustainable Technologies. January 28-31, 2015 | Arunai Engineering College, Velu Nagar, Tiruvannamalai-606603, Tamilnadu, India | International (India) | Oral |
| 4 | Gupta, S.K., Elumalai, S.P. | Effect of aerosol on stratospheric ozone and climate change | Techno-management fest (Concetto 2015). October 30, 2015 | Indian Institute of Technology (ISM) Dhanbad-826004, Jharkhand, India. | National (India) | Oral |
| 5 | Gupta, S.K., Elumalai, S.P. | The platinum group elements (i.e., Pt, Pd, Ru, Ir and Rh) emitted by the automobile catalyst converters and their health risk | The national conference on recent trends in chemical and environmental sciences. February 27-28. 2014 | Arni University, Kathgarh, Tehsil Indora, Distt. Kangra-176401, Himachal Pradesh, India | National (India) | Oral |

(C) Reviewed research papers: >15