

NIKHIL RASTOGI

• E-mail: rsnikhil@iitk.ac.in • Phone: (91-989) 710-1132

RESEARCH INTERESTS

Source apportionment, receptor modeling, human exposure and health impacts, chemical characterization of PM, regional air quality modeling, air quality in developing countries

EDUCATION

Master of Science in Environmental Engineering and Management (2013)

Indian Institute of Technology- Kanpur, India

Thesis title: Using chemical characterization data to apportion and to locate sources of air pollutants at Kanpur

Advisor: Dr. Tarun Gupta

CGPA: 8.75/10

Bachelor of Science in Civil Engineering (2011)

Govind Ballabh Pant University of Agriculture and Technology, Pantnagar, India

Project Title: Design of multi-storey building (G + 3)

Advisor: Dr. P.S. Mahar

CGPA: 7.791/10

RESEARCH EXPERIENCE

MASTER'S DISSERTATION

- Worked on source apportionment of submicron particulate matter (PM₁)
- Worked on inductively coupled plasma- optical emission spectroscopy (ICPOES) and ion chromatograph (IC) for chemical characterization of metals and ions
- USEPA's positive matrix factorization (PMF) was used for source apportionment
- Using conditional probability function (CPF), we determined the likely direction of sources
- CPF plots were superimposed on point source emission map of Kanpur

PROJECTS AND TERM PAPERS

- Project on "Composite sampling & analysis of performance parameters for 130 MLD wastewater treatment plant in Kanpur" under Prof. Vinod Tare, Environmental Engineering and Management Program, IIT Kanpur (2012)
- Project on "Sampling & Analysis Of Various Water Quality Parameters For River Ganga Water In Kanpur" under Prof. Vinod Tare (2012)
- Term paper on "Black Carbon emissions- Indian context" as a part of course work under Dr. S.K. Tandon, Dept. of Earth Sciences, IIT Kanpur (2014)
- Term paper on "Cyclones and effect of aerosols on intensity of cyclones" as a part of coursework under Dr. Javed Malik, Dept. of Civil Engineering, IIT Kanpur (2014)

PROFESSIONAL EXPERIENCE

Assistant Professor: Department of Civil Engineering (Aug '13 to Jun '14)

Bipin Tripathi Kumaon Institute of Technology, Uttarakhand Technical University

Dwarahat, India

- Taught air pollution and its control, highway engineering, and waste water engineering
- Contributed towards setting up of environmental engineering laboratory

Teaching Assistant: Department of Environmental Engineering and Management

Indian Institute of Technology- Kanpur, India

(Jul '11 to Aug '13)

- Supervised Waste water lab and guided a batch of 100 students from BS and MS in Civil and Environmental engineering
- Tutored ecological and biological principles, advanced mathematics for civil engineers

AWARDS AND FELLOWSHIPS

- Dr. S. D. Bokil Memorial Award for best academic performance, awarded by IIT Kanpur, India (June, 2014)
- Ministry of Human Resource and Development (MHRD) scholarship for Graduate Aptitude Test in Engineering (GATE) qualified graduates (2011-13)

PUBLICATIONS

REFEREED INTERNATIONAL JOURNALS

1. Ghosh S., Gupta T., **Rastogi N.**, et al., (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.
2. **Rastogi N.** and Gupta T., (2014). Coupling of meteorological data and submicron aerosol chemical speciation details to apportion and locate prime sources of air pollutants at Kanpur. Manuscript under review. *Atmospheric Environment*.
3. Bergin M.H. and Tripathi S.N., (2014). Source attribution of the discoloration of the Taj Mahal due to ambient particulate deposition. (Acknowledged **N. Rastogi**). Manuscript under review- *Environmental Science and Technology*.

CONFERENCE PROCEEDINGS

4. **Rastogi N.** and Gupta T., (2013). "Chemical Composition Change of PM₁₀ over a period of five years at an urban location". Proceedings of the International Workshop on Changing Chemistry in Changing Climate: Monsoon- C4: Monsoon & Metropolitan Air Quality Forecasting & Services (SAFAR). Indian Institute of Tropical Meteorology, Pune, India.
5. **Rastogi N.** and Gupta T., (2012). "Understanding aerosol mixing and aging using particulate mass and chemical data collected over last five years at an urban location". Proceedings of the Conference of Indian Aerosol Science & Technology Association (IASTA) and Bhabha Atomic Research Centre (BARC), Mumbai, India.

TECHNICAL SKILLS

- Software Skills: Adobe Photoshop, MS Office, Latex
- Programming skills: C, C++, MATLAB and Fortran
- Instrumentation skills: Mass spectrometry (ICPOES and ICP-MS), Ion and gas chromatograph (IC and GC)

POSITIONS OF RESPONSIBILITY

INDIAN INSTITUTE OF TECHNOLOGY KANPUR

- Served as in-charge of Inductively Coupled Plasma (ICP-OES) in Atmosphere Lab at EEM Dept.
- Supervised waste water engineering lab at EEM Dept.
- Worked as Reading Room Committee Member, managed our hostel library
- Worked as Orientation Team Member in Counselling Service; guided new students
- Volunteered in organizing Jashn'12, the Annual Cultural Night of our hostel

COLLEGE OF TECHNOLOGY, GOVIND BALLABH PANT UNIVERSITY OF AGRI. & TECH.

- Coordinator of event Structomania at Colosseum'11, the Annual Technical Festival
- Co-coordinator of event Structomania at Colosseum'10, the Annual Technical
- Member of Core Organizing Team – I-Bridge & Home Shanti Home '09, bridge building and model making competition
- Member of Civil Engineering Branch Chapter – “Nirmaan” -2007-08

EXTRACURRICULAR ACTIVITIES

- Participated in a successful “GUINNESS World Record Attempt” for maximum no. of people simultaneously solving a Rubik's cube, at Techkriti'13, National Level Technical Festival at IIT Kanpur (2013)
- National Service Scheme (NSS) of India- 'B' Certificate for social service (2009)
- Won 2nd Prize in “Connections” a bridge building event, Avishkar'08, National Level Technical Festival at MNNIT, Allahabad (2008)
- Appreciation certificate for remarkable leadership quality in the Youth Leadership Hunt Contest organized by Vivekananda Swadhyay Mandal (2008)
- Actively campaigned for various Plantation and cleaning drives

REFERENCES

Provided upon request