

# Dr. Nitin Goyal

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Principal Scientist and Head  
CSIR-NEERI, Mumbai Zonal Centre, Mumbai

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## Education

### **Doctor of Philosophy – Environmental Science and Engineering**

from Indian Institute of Technology (IIT) Bombay, Mumbai (2008)

*Dissertation:* Characterisation and Source Apportionment of Ambient PM<sub>2.5</sub> and PM<sub>10</sub> in Mumbai and Pune

*Major Research Areas:* Air quality monitoring and mathematical modelling, physical and chemical characterization of aerosols, and instrumentation for sampling of fine particulate matter.

### **Master of Engineering – Environmental Engineering**

from Malaviya National Institute of Technology (MNIT), Jaipur (1998 – 2000)

*Thesis:* Status of Air Quality at the Rambagh Crossing and Choti Choupad of Jaipur City.

*Major Subjects:* Air pollution, Environmental chemistry, Water and wastewater treatment technology, Environmental impact assessment (EIA), Solid and hazardous waste management.

### **Bachelor of Engineering – Civil Engineering**

from Malaviya National Institute of Technology (MNIT), Jaipur (1993 – 1997)

*Thesis:* Design of Railroad Over-Bridge.

*Major Subjects:* Public health engineering, Structural engineering design, Engineering hydrology, Soil mechanics and foundation engineering, Surveying and Building technology.

## Scholastic Awards and Achievements

- **Young Scientist Award**, Department of Science and Technology (New Delhi) awarded a research grant for air quality management study in the city of Mumbai, India (total amount INR 1.50 million).
- **Invited Speaker**, Indian Science Congress, Young Scientist Session, North Eastern Hill University, Shillong, January 2009.
- **Best Paper Presentation**, received an Award of Recognition in IASTA International Conference on *Aerosols, Clouds and Indian Monsoon* held at IIT-Kanpur.
- **Institute Scholarship**, received Teaching Assistantship during academic years 2001 to 2005, IIT-Bombay, Mumbai.
- **National Scholarship Award**, for securing position in the Merit-list of XII Board Examination, 1993.

## International Assignments and Experience

- **Guest Researcher**, invited at the Desert Research Institute, Reno (USA) for studying chemical characterization methods for particulate matter.
- **International Travel Grant**, received from DST and AICTE for presenting the paper at *Air and Waste Management Association (AWMA) Annual Conference and Exhibition (ACE-2006)*, New Orleans, USA.
- **Consulting Assignment**, travelled across South-East Asia for various environmental consulting assignments.

## Research, Teaching, Consulting and Administrative Experience

2019 – present	Principal Scientist and Head, CSIR – National Environmental Engineering Research Institute (NEERI), Mumbai Zonal Centre, Mumbai
2015 – 2019	Associate Professor and Head, Department of Civil Engineering, Manipal University Jaipur, Jaipur
2014 – 2015	Associate Professor and Dean of Civil Engineering, Indore Institute of Science and Technology, Indore
2012 – 2014	Manager, Environmental Studies (Environmental Services Division), SGS India Pvt. Ltd, Gurgaon
2011 – 2012	Associate Professor of Civil Engineering, JK Lakshmipat University, Jaipur
2009 - 2011	Associate Professor of Civil Engineering, Kautilya Institute of Technology and Engineering, Jaipur
2005 - 2009	Young Scientist / Principal Investigator (CESE), IIT Bombay, Mumbai
2001 - 2005	Research Scholar / Teaching Assistant (CESE), IIT Bombay, Mumbai
2000 - 2001	Lecturer, Gyan Vihar School of Engineering and Technology, Jaipur
1999 - 2000	Research Assistant (Department of Civil Engineering), Malaviya National Institute of Technology (MNIT), Jaipur
1998 - 1999	Guest Faculty, Malaviya National Institute of Technology, Jaipur
1997 - 1998	Assistant Engineer / Graduate Engineer Trainee (Civil Projects and Maintenance Division) Sriram Rayons, Kota

## Publications/ Conference Presentations/ Reports

- Gulia, S., **Goyal, N.**, Mendiratta, S., Biswas, T., Goyal, S.K., Kumar, R. (2021), "COVID 19 Lockdown - Air Quality Reflections in Indian Cities", *Aerosol And Air Quality Research*, 21(5), 1-13.
- Kalawapudi, K., Singh, T., Vijay, R., **Goyal, N.**, and Kumar, R. (2021), "Effects of COVID-19 pandemic on festival celebrations and noise pollution levels", *Noise Mapping*, 8, 89-93.
- Goyal, N.**, (2018), "Air dispersion modelling study of a cement plant in Rajasthan" *Advances in Science and Engineering Technology International Conferences (ASET)*, Dubai, UAE, IEEE Explore, [doi: 10.1109/ICASET.2018.8376770]
- Goyal, N.**, and Vyas, A.D., (2017), "Dispersion Modelling of Air Pollutants of Coal Based Thermal Power Station", *ACBEE-17 5<sup>th</sup> International Conference on Advances in Chemical, Biological & Environmental Engineering*, Singapore, March 29-30, 2017.
- Goyal, N.**, Vyas, A.D., and Jain, S.K., (2017), "Input Output Mass Balance of Trace Elemental Species at a Typical Indian Coal Fired Power Plant", *International Journal on Emerging Technologies* 8(1): 357-362.
- Goyal, N.**, Singh, S., Jain, U., and Sinha, S., (2015) "A Comparative Assessment of Water Quality for Pithampur Industrial Area, Indore, India", *International Journal of Scientific Research in*

Science, Engineering and Technology(IJSRSET), Print ISSN : 2395-1990, Online ISSN : 2394-4099, Volume 1, Issue 4, July-August 2015.

- Goyal, N.**, (2015), Report on "Study on Mass Balance of Toxic Elements in NTPC Ramagundam Super Thermal Power Station, Karimnagar, Telangana", SGS India Pvt Ltd., Gurgaon.
- Goyal, N.**, (2014), Report on "Air Dispersion Modelling Study of JK Lakshmi Cement (Sirohi), Rajasthan", SGS India Pvt Ltd., Gurgaon.
- Goyal, N.**, (2014), Report on "Pollutant Source Apportionment Study, Ntpc Ltd., Singrauli, Dist. Sonebhadra, Uttar Pradesh", SGS India Pvt Ltd., Gurgaon.
- Goyal, N.**, (2014), Report on "Pollutant Source Apportionment Study, Ntpc Ltd., Sipat, Dist. Bilaspur, Chhatisgarh", SGS India Pvt Ltd., Gurgaon.
- Goyal, N.**, (2014), Report on " Pollutant Source Apportionment Study for NTPC Vindhyachal Super Thermal Power Station, Singrauli, Madhya Pradesh", SGS India Pvt Ltd., Gurgaon.
- Goyal, N.**, (2013), Chapter on Air Dispersion Modelling and Impact Analysis in report "Environmental Impact Assessment and Social Impact Assessment Studies for Exploration and Production of Hydrocarbon in RSF-9 Block at Myanmar", SGS India Pvt Ltd., Gurgaon.
- Goyal, N.**, (2013), Chapter on Air Dispersion Modelling and Impact Analysis in report "Environmental Impact Assessment and Social Impact Assessment Studies for Exploration and Production of Hydrocarbon in PSC-I Block at Myanmar", SGS India Pvt Ltd., Gurgaon.
- Goyal, N.**, (2013), Report on "Pollutant Source Apportionment Study, Kahalgaon, Bihar", SGS India Pvt Ltd., Gurgaon.
- Goyal, N.**, (2013), Chapter on Air Dispersion Modelling and Impact Analysis in report "Environmental and Social Impact Assessment of 305-350 MW Dual Fuel Combined Cycle Power Plant at Meghnaghat, Bangladesh", SGS India Pvt Ltd., Gurgaon.
- Goyal, N.**, (2012), Report on "Design of Ambient Air Quality Monitoring Network of Chennai Petroleum Corporation Limited (CPCL), Chennai", SGS India Pvt Ltd., Gurgaon.
- Goyal, N.**, Selvakumar, N., Patil, R.S., and Sethi, V., (2006), "Design, development, calibration and field evaluation of an indigenous PM<sub>2.5</sub> sampler", *Current Science*, 90, 151-157.
- Goyal, N.**, Kumar, R., Patil, R.S., and Sethi, V., (2007), "PM<sub>10</sub> and PM<sub>2.5</sub> measurements in Pune and Mumbai (India)", *Proceedings of the Asian Aerosol Research Assembly (AARA) 5<sup>th</sup> Asian Aerosol Conference (AAC-2007), Kaohsiung, Taiwan, August 26-29, 2007.*
- Ojha, A., **Goyal, N.**, Kumar, R., Patil, R.S., and Sethi, V., (2006), "Sampling and characterization of PM<sub>2.5</sub> and PM<sub>10</sub> in Pune, India", *Proceedings of the American Association for Aerosol Research (AAAR) 7<sup>th</sup> International Aerosol Conference, St. Paul, Minnesota, Sep 10-15, 2006.*
- Goyal, N.**, Kumar, R., Patil, R.S., and Sethi, V., (2006), "Size-resolved chemical characteristics of ambient particulate matter in Mumbai, India", *Proceedings of the Air and Waste Management Association (AWMA) Annual Conference and Exhibition (ACE-2006), New Orleans, USA, June 20-23, 2006.*
- Goyal, N.**, Kumar, R., Patil, R.S., and Sethi, V., (2005), "Mass size distributions and size-resolved chemical composition of ambient aerosols at a commercial location in Mumbai, India", *Proceedings of the Asian Aerosol Conference 2005, Mumbai, December 13-16, 2005.*
- Goyal, N.**, Selvakumar, N., Parikh, P., and Sethi, V., (2004), "Comparison of performance of sampling devices : MOUDI and single stage impactor for PM<sub>2.5</sub> in producer gas from thermal biomass gasifiers", *Proceedings of IASTA 2004 Conference, IIT-Kanpur, November 15-17, 2004.*
- Goyal, N.** and Sethi, V., (2004), "Sampling and analysis of PM<sub>2.5</sub> from IC engines: determination of hydrocarbons using thermo-gravimetric analysis", *Proceedings of IASTA 2004 Conference, IIT-Kanpur, November 15-17, 2004.*

**Goyal, N.**, Singh, S.V., Jain, R. and Gupta, A.B., (2000), "Use of rice-husk in removal of dye colors from wastewater – a case study of Sanganer dyeing and printing industries", *Proceedings of IPC 2000, National Conference on Industrial Pollution and its Control*, February 18-19, 2000, BHU, Varanasi.

### **Book Chapters**

Arti R. S.; Amrit K.; **Goyal N.** (2021). COVID-19 and transportation modes in India. In: *Transportation Amid COVID-19 and Pandemics: Practices and Policies*. Elsevier (2021, Under print).

**Goyal, Nitin et al.**, Status of Air Quality at the Rambagh Crossing and Choti Choupad of Jaipur City, *Advances in Environmental Research*, Volume 26, 2012, Nova Science Publishers, New York, USA.

**Goyal, Nitin et al.**, Status of Air Quality at the Rambagh Crossing and Choti Choupad of Jaipur City, *Environmental and Agricultural Researcher Biographical Sketches and Research Summaries*, Volume 1, 2014, Environmental Research Advances, Nova Science Publishers, New York, USA.