

Dr. Saifi Izhar

Contact Information	Assistant Professor Department of Environmental Science and Engineering Indian Institute of Technology (Indian School of Mines) Dhanbad Dhanbad, 826004, Jharkhand, India Mobile No: +91-9935679065 Email: saifi@iitism.ac.in , saifiizhar5@gmail.com
Research Interests	Air Quality and its chemical, optical and toxicity characterization; Source apportionment; Application of Low-cost sensors; Personal exposure and modelling
Education	PhD, July 2016 - June 2021; CPI: 8.0; Department of Civil Engineering, Indian Institute of Technology Kanpur , Kanpur, India Title: Aerosol-fog interaction in the rural Indo Gangetic Plain during winter time Supervisors: Prof. Tarun Gupta and Dr. Arnico K. Panday MTech, July 2014 -June 2016; CPI: 7.75; Department of Environment Engineering & Management; Indian Institute of Technology Kanpur , Kanpur, India BTech, July 2010 - June 2014; CPI: 9.25; <i>Department of Civil Engineering</i> Aligarh Muslim University , Aligarh, India
Academic Achievements	International Travel Support fellowship by SERB, India 2019 Best Poster award in AGU JING meeting (AJM2018) held in Xian, China International Travel Support grant by IIT Kanpur 2018 ICIMOD 1-year PhD Fellowship 2017 PhD Scholarship from Ministry of Education for 5 years MTech. All India GATE rank 815 in Civil engineering 2014 Merit cum means scholarship 2013
Research Experience	International Centre for Integrated Mountain Development (ICIMOD) , Kathmandu, Nepal, Atmospheric Division, Research Assistant, July 2017-June 2018
Professional Experience	Indian Institute of Technology (ISM) Dhanbad , Jharkhand, India Assistant Professor, Department of Environmental Science and Engineering Aug 2021- Present World Research Institute (WRI) , Washington, U.S.A Post-Doctoral Consultant, Clean Air Catalyst Project Apr 2021- Aug 2021
Research supervision	PhD 6 (ongoing); M.Tech 6 (completed), 2 (ongoing)
Publications	7 publications as First and corresponding author and 6 co-authored Q1 (9) and Q2 (3)

List of Research Projects sanctioned

S.No	Title	Cost (in Lakh)	PI/Co-PI	Duration	Agency
1.	Understanding PM2.5 characteristics and sources in Dhanbad city	15	PI	3 years (May 2022- May 2025)	IIT ISM Dhanbad
2.	Understanding the role of chemical composition, size, and sources on the particulate matter toxicity	24.64	PI	2 years (Oct 2023- Oct 2025)	DST (SERB)
3.	Monitoring of air quality in non-monsoon period at identified locations of Mugma Area (ECL), both ambient and process area to arrive at the impact of proposed changes in cluster 1 and 2	36.72	PI	4 months (April 2023- July 2023)	Eastern Coalfields Limited, Mugma
4.	YESI Knowledge Exchange Fellows scheme: 2023-2024	2	PI	10 months (March 2024-Jan 2025)	University of York, United Kingdom

Details of Consultancy work

S.No	PI/Co-PI	Sponsoring Authority	Date of Sanction & Duration	Cost (in Lakh) Excluding taxes	Completed/ ongoing
1	CO-PI	JSW Steel Ltd, Mines Division, Odisha	September 2021	16.4	Completed
2	CO-PI	M/s Asar Social Impact Advisors Private Limited, Bangaluru	May 2024	5.1	Ongoing

List of Publications

First or corresponding author's publication

1. Jain, Rishabh Raj, Bipin Kumar Sahni, Indira Mishra, and **Saifi Izhar**. "COVID-19 lockdown impact on air quality and associated health benefit in two contrasting urban cities in Eastern Indo Gangetic Plain." *Atmospheric Environment: X* 23 (2024): 100290.
2. Mishra, Kumar Gaurav, Tarun Gupta, and **Saifi Izhar**. "Source profile of PM2. 5 emissions from different primary sources in the coal capital city Dhanbad, India." *Atmospheric Environment: X* 21 (2024): 100235.
3. **Izhar, Saifi**, Tarun Gupta, Adnan Mateen Qadri, and Arnico K. Panday. "Wintertime chemical characteristics of aerosol and their role in light extinction during clear and polluted days in rural Indo Gangetic plain." *Environmental Pollution* 282 (2021): 117034
4. **Izhar, Saifi**, Tarun Gupta, and Arnico K. Panday. "Improved method to apportion optical absorption by black and brown carbon under the influence of haze and fog at Lumbini, Nepal, on the Indo- angetic Plains." *Environmental Pollution* 263 (2020): 114640
5. **Izhar, Saifi**, Tarun Gupta, and Arnico K. Panday. "Scavenging efficiency of water soluble inorganic and organic aerosols by fog droplets in the Indo Gangetic Plain." *Atmospheric Research* 235 (2020): 104767

6. **Izhar, Saifi**, Tarun Gupta, Aliva P. Minz, Shantibhusan Senapati, and Arnico K. Panday. "Influence of regional and long range transport air masses on fog water composition, contribution and toxicological response at Indo Gangetic Plain." *Atmospheric Environment* (2019): 116888
7. **Izhar, Saifi**, Prashant Rajput, and Tarun Gupta. "Variation of particle number and mass concentration and associated mass deposition during Diwali festival." *Urban climate* 24 (2018): 1027-1036
8. **Izhar, Saifi**, Anubha Goel, Abhishek Chakraborty, and Tarun Gupta. "Annual trends in occurrence of submicron particles in ambient air and health risk posed by particle bound metals." *Chemosphere* 146 (2016): 582-590

Co-authors publications

1. Khan, Imran, Bharat C. Choudhary, **Saifi Izhar**, Devender Kumar, Manavalan Satyanarayanan, Vishnu D. Rajput, and Shahwaz Khan. "Exploring geochemical distribution of potentially toxic elements (PTEs) in wetland and agricultural soils and associated health risks." *Environmental Science and Pollution Research* (2023): 1-17
2. Khan, Imran, Rashid Umar, and **Saifi Izhar**. "Hydrogeochemical and health risk assessment in and around a Ramsar-designated wetland, the Ganges River Basin, India: Implications for natural and human interactions." *Environmental Monitoring and Assessment* 194, no. 7 (2022): 483.
3. Soni, Ashish, Anil Kumar Mandariya, Pradhi Rajeev, **Saifi Izhar**, Gyanesh Kumar Singh, Vikram Choudhary, Adnan Mateen Qadri, Aman Deep Gupta, Amit Kumar Singh, and Tarun Gupta. "Multiple site ground-based evaluation of carbonaceous aerosol mass concentrations retrieved from CAMS and MERRA-2 over the Indo-Gangetic Plain." *Environmental Science: Atmospheres* 1, no. 7 (2021): 577-590.
4. Goel, Anubha, Pinki Bhandari, **Saifi Izhar**, Chhavi Sharma, P K Patanjali. "Effect of Spray Particle Size Distribution on Deposition in Human Respiratory Tract – Safety Evaluation." *Journal of Scientific and Industrial Research* 79 (2020)
5. Rajput, Prashant, **Saifi Izhar**, and Tarun Gupta. "Deposition modeling of ambient aerosols in human respiratory system: Health implication of fine particles penetration into pulmonary region." *Atmospheric Pollution Research* 10, no. 1 (2019): 334-343
6. Goel, Anubha, **Saifi Izhar**, and Tarun Gupta. "Study of environmental particle levels, its effects on lung deposition and relationship with human behaviour." In *Environmental Contaminants*, pp. 77-91. Springer, Singapore, 2018

Conferences

Izhar, Saifi, Tarun Gupta, and Arnico K. Panday (2019) "Impact of Visibility on Light Absorption by Atmospheric Aerosol Brown Carbon". EAC2019 (Gothenburg, Sweden) (Oral).

Izhar, Saifi, Tarun Gupta, and Arnico K. Panday (2018) "Understanding persistent winter fog impact on aerosol chemistry by evaluating day and night time particulate matter and their chemical species concentration at UNESCO World Heritage site Lumbini, Nepal" in AGU JING (Joint International Network in Geoscience) (AJM2018) (Xian, China) (Poster).

Izhar, Saifi, Tarun Gupta, and Arnico K. Panday (2018) "Impacts of air masses on fog water chemical composition and contribution in the Indo Gangetic Plain". Conference of Indian Aerosol Science & Technology Association-2018, (IIT Delhi) (Poster).

Izhar, Saifi, Tarun Gupta, and Arnico K. Panday (2018) "Fog scavenging of aerosol particles in the foothills of Himalayas". International Conference on Atmospheric Chemistry and Physics in Highly Polluted Environments, CIAAS 2019, (IIT Delhi) (Oral).

Izhar, Saifi, Siva Praveen Puppala, Maheswar Rupakheti, August Andersson, Örjan Gustafsson, Sujan Shrestha, Arnico K. Panday (2017) "Understanding the volatile compounds influence on absorbing properties of aerosol in the Kathmandu Valley". International workshop and science policy dialogue on Air Pollution, Climate and Health in Southern Asia and Hind Kush Himalaya-2017 (ICIMOD, Kathmandu) (Poster).