

Curriculum Vitae

Name : Ajay Vikram Ahirwar
Designation : Associate Professor
Department : Civil Engineering
Address : Civil Engineering Department, National Institute of Technology, Raipur.
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Educational Qualifications:

- PhD (2018) - NIT Raipur (C.G.)
Title: “Characterization of Carbonaceous Aerosols and Identification of sources for an urban-industrial area”.
- M.Tech. (2003): Environmental Engineering from S.G.S.I.T.S Indore, M.P.
- B.E. (2000): Civil Engineering from Indira Gandhi Engineering College (IGEC), Sagar M.P.

Teaching Experience: 18 Years

- Currently working as an Associate Professor in Civil Engineering Department in National Institute of Technology, Raipur, Chhattisgarh, India (February 2009 to till date).
- Worked as a Lecturer in Civil Engineering Department at Lakshmi Narain College of Technology (LNCT) Bhopal, M.P. (February 2004 to February 2009).

Area of Interest: Air Pollution Monitoring, Atmospheric Science, Environmental and Health Impact Assessment, Solid Waste Management, Water and Waste Water Treatment.

Subject Taught: Air Pollution and Control Measures, EIA and Laws, Surveying, Environmental Engineering, Basic Civil Engineering etc.

Expertise:

- Institute of Repute representative (NIT Raipur) to work in collaboration with NKN and CECB to achieves the target of National Clean Air Mission (NCAP) under Ministry of Environment Forest & Climate Change (MoEF & CC).
- Expert member of task force working group for "Environmental Management" constituted by Chhattisgarh State Planning Commission.

- Expert member of the state level committee constituted by Chhattisgarh Environmental Conservation Board (CECB Raipur) for "No Increase in Pollution Load".
- Hands on experience on state of art instrument for measurement, monitoring and analysis of various pollutants by Atomic Absorption Spectrophotometer, Semi continuous OC/EC field analyzer, Aethalometer (Black Carbon measuring instrument), Particulate matter and Gaseous pollutants sampler.

Research/Consultancy Projects :

- Comparative study of total pollution load generated from Coal based and Coal and Dolochar based fuel in power plants” funded by Chhattisgarh Environment Conservation Board (CECB) Raipur.
- Study of the Pollutants released during Open Burning of Municipal Solid Waste” funded by CECB Raipur.
- Preparation of Drainage Pattern of Ganga river basin in Chhattisgarh state funded by CECB Raipur.
- Conduction of a certificate course on ETP/STP/CETP operation and maintenance under Green Skill Development Programme (GSDP), funded by CECB Raipur.
- Evaluation of technical bids for Continuous Ambient Air Quality Monitoring Stations (CAAQMS) and Continuous Water Quality Monitoring Stations (CWQMS) funded by CECB Raipur.
- Evaluation of technical bids for supply of spectrophotometer and digital balance, funded by CECB Raipur.
- Actively engaged in the Testing and Consultancy work of Civil Engineering Department and Institute.

Administrative Experience:

- Worked as a member of Panel for interview for post of Junior Engineer, Staff Selection Commission, Govt. of India (No.3/2/2013-exam(MPR)/40).
- Worked as an observer for CTET-2023 examination (F-8/CBSE/CTET/Exam/OB.CTET 2022/87 Dated: 10/01/23)
- Worked as an Observer for RAIPUR (CHHATTISGARH) for the Conduct of Examination(s) National Eligibility Cum Entrance Test - NEET (UG) - 2021 (On 12th Sep 2021) .

- Worked as an observer for DMAT-2015 examination organized by association of private dental and medical colleges M.P.
- Worked as a member of selection committee for post of Faculty on Contract in Mechanical Engineering Department. (Circular no. NITRR/Estt. Gaz./2019/638 Dated: 25-06-2019)
- Worked as a member of selection committee for post of Faculty on Contract in Chemical Engineering Department. (Circular no. NITRR/R-1/2013/761 Dated: 18-12-2013)
- Worked as a member of selection committee for post of Faculty on Contract in Chemical and Mechanical Engineering Department. (Circular no. NITRR/R-1/2013/538 Dated: 02-07-2013)
- Worked as a member of selection committee for post of Technical Assistant (contract) in Department of Architecture. (Circular no. NITRR/ARCH/2012/3023 Dated: 30-10-2012)
- Worked as a member of selection committee for post of Technical Assistant and Laboratory attendant in Civil Engineering Department. (Circular no. NITRR/R-1/2011/1593 Dated: 31-05-2011)
- Member of Institute Cultural committee.
- Member of Institute grievances committee (discrimination on the basis of caste and religion).
- Chairman-Departmental (Civil Engineering) Examination Committee.
- Professor In-charge Environmental Engineering Laboratory.

Professional Membership:

- Member of Indian Aerosol Science and Technology association. [**IASTA LM-568**]
- Member of Indian Society of Remote Sensing [**L-4123**]
- Member of Institution of Engineers (India) [**AM100305-7**]
- Member of Indian Society for Technical Education [**LM-82045**]
- Member of Indian Water works Association [**LM-7218**]
- Member of The Indian Science Congress Association [**L 24058**]
- Member of National Solid Waste Association of India [**NSWAI**]

Expert Lecture Delivered:

- Delivered an expert lecture on topic “Air Pollution and Climate Change” in a AICTE Training and Learning (ATAL) Academy Sponsored One-Week Online Faculty Development Programme on “Green Technology”, held on 23rd to 27th August 2021,

Sant Longowal Institute of Engineering and Technology, Longowal, Punjab.

- Delivered an expert lecture on topic “Air Pollution and Climate Change” as a guest speaker under SAGE Talk series on 18th June 2021, at SIRT Bhopal.
- Delivered a lecture on topic “Introduction in Modern and Regular Surveying Equipment” in a online training programme held on 08th June 2021 for field engineers, organized by Rural Connectivity Training and Research centre (RCTRC), Government of Chhattisgarh.
- Delivered a lecture on topic “ Environmental Impact Assessment and Environmental Concerns During Implementation of Projects: Environment & Social Safe Guards” in a online training programme held on 09th March 2021 for field engineers, organized by Rural Connectivity Training and Research centre (RCTRC), Government of Chhattisgarh.
- Delivered an expert lecture series on topic “Introduction to Surveying, Chain and Compass Surveying and Levelling and Contouring” in a TEQIP III sponsored workshop on “Introduction to Basic Civil Engineering with Their Applications & Development of Employability and Leadership Skills”, held on 8th to 13th March 2021, at CSVTU Bhilai.
- Delivered an expert lecture on topic “Environmental Pollution and Climate Change” in a AICTE Training and Learning (ATAL) Academy Sponsored One-Week Online Faculty Development Programme on “Green Technology and Sustainability Engineering”, held on 8th to 12th December 2020, at National Institute of Technology Raipur.
- Delivered a lecture on topic “ Environmental Impact Assessment: Environment & Social Safe Guards” in a online training programme held on 24th August 2020 for field engineers, organized by Rural Connectivity Training and Research centre (RCTRC), Government of Chhattisgarh.
- Delivered an expert lecture on topic “Air Pollution Monitoring and Instrumentation” in a short term training programme on “Emerging Research Trends in Chemical and Environmental Technology”, held on 6th to 10th May 2019 at National Institute of Technology Raipur
- Delivered a lecture on topic “Surveying: Total station” in a training programme held at Nimora on 25th June 2016 for engineers, organized by Thakur Pyare Lal Institute of Panchayat and Rural development, Nimora, Raipur, Chhattisgarh.

- Delivered keynote address at short term hands on training programme held during 16th November to 20th November, 2015 entitled “ Testing Methods in Civil Engineering Construction” on topic “ Fundamental of Surveying, Conventional Survey techniques and Demonstration of Various Conventional Instruments” at Civil Engineering Department, NIT Raipur
- Delivered a demonstration lecture on topic “Atomic Absorption Spectroscopy and its Applications” in a short term course on “Recent Research Methodologies and Instrumentation Techniques on Chemical and Biomedical Engineering”, held on 15th to 19th December 2014 at National Institute of Technology Raipur.
- Delivered a lecture on topic “Earthquake an Overview” in a short term course for the Practicing Engineers of the Government Department of Government of Chhattisgarh, under National Programme for Capacity Building of Engineers in Earthquake Risk Management funded by Ministry of Home Affairs, Government of India, on 4th May 2010 at National Institute of Technology Raipur.
- Delivered a lecture on “Hazardous waste Management an Overview” as an Expert for Academic and Industrial Participant on Hazardous Waste Management two days seminar under Ministry of Environment and Forest Department, Government of India in association with National Institute of Technology Raipur at National Institute of Technology Raipur Chhattisgarh (22nd August 2009).

Research Paper Published in International / National Journals/Proceedings:

1. Vishal Kumar, **Ajay Vikram Ahirwar**, A.D. Prasad "Monitoring and mapping noise levels of university campus in central part of India". JAPH. 2023;8(1):1-12.
2. Vishal Kumar, **Ajay Vikram Ahirwar**, A.D. Prasad “Assessment of noise pollution and health impacts of the exposed population in an urban area of Chhattisgarh, India” Nature Environment and Pollution Technology. Vol. 22, No. 3 (September), Year 2023 (accepted for publication)
3. Pallavi Pradeep Khobragade, **Ajay Vikram Ahirwar**, “Source identification and ambient trace element concentrations of PM10 using receptor modeling in an urban area of Chhattisgarh, India”, Geocarto International-Taylor and Francis (SCIE-Accepted). DOI: 10.1080/10106049.2022.2066201.
4. Pallavi Pradeep Khobragade, **Ajay Vikram Ahirwar**, “Assessment of Suspended

Particulate Matter and Heavy Metal Analysis During Diwali Festival”, Journal of Environmental Engineering and Science (JEES), February 16, 2022.

5. Khobragade, Pallavi Pradeep, and **Ajay Vikram Ahirwar**. "Source apportionment of SPM by positive matrix factorization and PM_{2.5} analysis in an urban industrial area." *World Journal of Engineering* (2021).
6. Pallavi Pradeep Khobragade, **Ajay Vikram Ahirwar**, “Seasonal variation and source identification of PM₁₀ in an industrialised city”, *Macromolecular Symposia-Wiley (Scopus-Accepted)*
7. Pallavi Pradeep Khobragade, **Ajay Vikram Ahirwar**, “Heavy Metals in PM₁₀ Aerosols Over an Urban Industrial City”, *International Journal of Engineering and Advanced Technology (IJEAT) Volume-9 Issue-1, October 2019, pages: 1402-1408.*
8. **Ajay Vikram Ahirwar** and Samir Bajpai. “Wintertime Variation of Black Carbon in PM_{2.5} Aerosols over an Urban Industrial City in East-Central India”. *Pol. J. Environ. Stud. Vol. 26, No. 4 (2017), 1443-1451*
9. **Ajay Vikram Ahirwar** and Samir Bajpai. “Seasonal variability of TSPM, PM₁₀ and PM_{2.5} in ambient air at an urban industrial area in eastern central part of India” *International Journal of Civil Engineering and Technology (IJCIET) Volume 8, Issue 3, March 2017, pp. 252–261*
10. **Ahirwar, Ajay V.**, and Samir Bajpai. "Monitoring of Ambient Air Particulate Matter during Diwali Festival at an Urban Industrial Area in Eastern Central part of India." *IJCTA, 10(07), 2017, pp. 103-109*
11. **Ahirwar A. V.** and Bajpai S. (2015) “Assessment of Noise Pollution during Deepawali festival in Raipur City of Chhattisgarh, India” *Proceedings of international conference: "International Conference on Chemical, Environmental, and Biological Sciences" organized by International Institute of Chemical, biological & Environmental Engineering, pp 105--107. (ISBN: 978-93-84422-11-0)*
12. **Ahirwar A. V.** and Bajpai S. (2014) “A Reduction in Environmental Degradation and Disaster Vulnerability through Sustainable Urban Planning” *Proceedings of international conference: "Sustainable Development Conference 2014" Tomorrow People Organization, pp 16-23. (ISBN: 978-86-87043-23-7).*

Research Paper in International / National Conferences:

1. Satyendra Kumar Dewangan, **Ajay Vikram Ahirwar**, "A Review Article on By-Product of Blast Furnace Process: Flue Dust", 7th International Conference (Shaastrarth-2022) March 25- 26th, 2022, organized by RCET Bhilai.
2. Vishal Kumar, **Ajay Vikram Ahirwar**, A.D. Prasad, Noise mapping of different zones in an urban area during Deepawali festival". 2nd International Conference on Geography and Geoinformatics for Sustainable Development (ICGGS), 07-08 April 2022 organized at Phuket Thailand.
3. Vishal Kumar, **Ajay Vikram Ahirwar**, A.D. Prasad, 2022, "Noise Mapping during New Year Eve in selected residential zone of Raipur City". International Conference on Advances in Earth and Environmental Studies (AEES), 25-26 Feb 2022, organized by NIT Raipur.
4. Pallavi Pradeep Khobragade, **Ajay Vikram Ahirwar**, Exploring temporal variation of PM_{2.5} and PM₁₀ and their association with meteorological data in Raipur, Chhattisgarh, 2nd International Conference on Advances in Earth and Environmental Studies (AEES 2022), 25-26 February, 2022 organized by NIT Raipur.
5. D.J. Killedar, Ajay Vikram Ahirwar, Purva Rathore, A Concise Air Quality on Impact of COVID-19 Lockdown for Two Industrial Cities of Chhattisgarh. 2nd International Conference on Advances in Earth and Environmental Studies (AEES 2022), 25-26 February, 2022 organized by NIT Raipur.
6. Satyendra Kumar Dewangan, **Ajay Vikram Ahirwar**, By-product of Blast Furnace Operation "Flue Dust": A Review Article, International Conference on Advances in Sustainable Research for Energy and Environmental Management (ASREEM-2021) August 06- 08th, 2021, organized by SVNIT Surat.
7. Pallavi Pradeep Khobragade, **Ajay Vikram Ahirwar**, "PM₁₀ metals concentration and source apportionment study in an urban industrial zone" International Conference on Recent Development on Materials, Reliability and Safety and Environmental Issues (IMRSE-2021) held on 25-27 June 2021, organized by NIT Jalandhar.
8. Vishal Kumar, **Ajay Vikram Ahirwar**, A D Prasad "The Impact of COVID-19 Janata Curfew and Lockdown on the Air Quality of the Major Cities of India". International Conference on Recent Development on Materials, Reliability and Safety and Environmental Issues (IMRSE-2021) held on 25-27 June 2021, organized by NIT

Jalandhar.

9. Satyendra Kumar Dewangan, **Ajay Vikram Ahirwar**, " Impact of Blast Furnace Solid Waste 'Flue Dust' on Environment". International Conference on Environment & Sustainable Development in Post COVID-19 through SDGs, held on June 3-5 , 2021, organized by Society for Environment & Sustainable Development, New Delhi, India.
10. Pallavi Pradeep Khobragade, **Ajay Vikram Ahirwar**, "Impact of lockdown on air quality in megacities of India during Covid-19 pandemic" International Virtual Conference on 'Earth's Changing Climate: Past, Present & Future' held on 15-17 Oct, 2020, organized by The society of Earth Scientists.
11. Pallavi Pradeep Khobragade, **Ajay Vikram Ahirwar**, "Source apportionment of PM10 in an urban industrial area using positive matrix factorization", Three day online international conference on Aerosol, Air Quality, Climate Change and Impact on Water Resources and Livelihoods in the Greater Himalayas organized by Aryabhata Research Institute of Observational Sciences (ARIES), Nainital Uttarakhand from 14th – 16th September 2020.
12. Pallavi Pradeep Khobragade, **Ajay Vikram Ahirwar**, "Assessment of Suspended particulate matter and heavy metal analysis during Diwali festival", ASCE India Conference, Challenges of Resilient and Sustainable Infrastructure Development in Emerging Economies (CRSIDE) held at Kolkata from 2nd- 4th March 2020.
13. Pallavi Pradeep Khobragade, **Ajay Vikram Ahirwar**, "Influence of fireworks on PM₁₀ aerosol during Diwali festival", National Thermal Power Corporation Limited, International O&M Conference, Indian Power Stations (IPS) held at Raipur from 13th – 14th February 2020.
14. Pallavi Pradeep Khobragade, **Ajay Vikram Ahirwar**, "Seasonal variation of PM₁₀ in the ambient air over an urban industrial area" International Conference on Recent Trends in Renewable Energy and Sustainable Development (ICRTRESD) held at BIT, Raipur on January 30-31, 2020.
15. **Ahirwar, Ajay V.**, and Samir Bajpai. Presented a paper "Monitoring of Ambient Air Particulate Matter during Diwali Festival at an Urban Industrial Area in Eastern Central part of India." at International conference (ICACEC 2017) held at Hong Kong during 16th -17th January 2017.
16. **Ahirwar A. V.** and Bajpai S. (2015) "Assessment of Noise Pollution during Deepawali festival in Raipur City of Chhattisgarh, India". International Conference on Chemical, Environmental, and Biological Sciences -2015 (CEBS-2015) March 18-19, 2015 Dubai,

UAE.

17. **Ahirwar A. V.** and Bajpai S. (2014) "A Reduction in Environmental Degradation and Disaster Vulnerability through Sustainable Urban Planning". International conference on Sustainable Development 2014(SDC-2014) July 5-7, 2014 Bangkok, Thailand.

Books/ Book Chapter Published:

1. Pallavi Pradeep Khobragade, **Ajay Vikram Ahirwar**, Book chapter in Water Resources Technology, published by De Gruyter 2021 on the topic "Seasonal Variation of PM₁₀ in the ambient air over an urban industrial area". <https://doi.org/10.1515/9783110721355>
2. Pallavi Pradeep Khobragade, **Ajay Vikram Ahirwar**, "Air Quality: Source Apportionment Approaches and Techniques", B.P International 2 October, 2021. ISBN: 978-93-5547-153-6.
3. Vishal Kumar, **Ajay Vikram Ahirwar**, A.D. Prasad "Noise Pollution monitoring, mapping and health impacts", B.P International 26 October, 2021. ISBN: 978-93-5547-266-3.
4. Suraj Kumar Mukti, **Ajay Vikram Ahirwar**, Animesh Agrawal "Industry 4.0: Advances and Applications", B.P International 26 November, 2021. ISBN: 978-93-5547-288-5.

Conference/ STTP organized

- Organized 2nd International Conference Advances in Earth and Environmental Studies (AEES 2022) held during February 25th - 26th, 2022 at National Institute of Technology Raipur, Chhattisgarh, India in virtual mode.

Seminar / STTP/ Workshop / Conference / Convention Attended:

1. Three day International conference on "Aerosol Climate Change Connections (AC3)" 25-27th April, 2017 organized by Bose Institute, Darjeeling, held at Darjeeling India.
2. Four day training programme on "Sophisticated instruments: ICP, AAS, FTIR and NMR) at Lab-India Analytical Instruments Pvt Ltd at Rabale, Navi Mumbai from 1st June to 4th June, 2016.
3. One day workshop on "Data Analysis" 19th November, 2017 held at RSSU Raipur, organized by SOS in Physical Education.
4. Two day Workshop on "Sustainable Construction Materials from Agricultural Waste" on 11th and 12th October 2015, Organized by Visvesvarya National Institute of Technology Nagpur held at Visvesvarya National Institute of Technology Nagpur..
5. Two day Workshop on "Water Resources in developing countries: Planning and

management” “27-28 August 2015 at NIT Raipur

6. One day workshop under research project “Construction of Low Volume Roads on Soft Sub-grade Soil Improved by Locally Available Marginal Materials” funded by Human Settlement Management Institute (HSMI), HUDCO New Delhi at Civil Engineering Department, National Institute of Technology Raipur in association with HSMI, HUDCO New Delhi on 14th August 2015. One day workshop “Research Schemes in DST & Recent Advances in Civil & Transportation Engineering” under TEQIP-II at Civil Engineering Department, National Institute of Technology Raipur on 1st August 2015.
7. International Conference on Chemical, Environmental, and Biological Sciences" organized by International Institute of Chemical, biological & Environmental Engineering at Dubai, UAE- March 18-19 ,2015
8. Two day workshop on “Collection Development of E-books in Libraries”, organized by Central Library, NIT, Raipur during 14th- 15th November 2014.
9. International conference on Sustainable Development Organized by Tomorrow People Organization at Bangkok Thailand - 5th July to 7th July 2014
10. Workshop on "Academic Ethics and IPR" on 4th and 5th April 2014, Organized by National Institute of Technology Raipur and Chhattisgarh Council of Science and Technology, held at National Institute of Technology Raipur..
11. One week National Workshop on “Visual Modflow” Organized by Department of Civil Engineering, National Institute of Technology Raipur at NIT Raipur from 18-22nd November 2013
12. Workshop on Mathematical Modelling, Chemoinformatics and Quantum Chemistry on 19th February 2013 conducted by Department of Electronics & Telecommunication and Central Computing Center, held at National Institute of Technology, Raipur.
13. Regional Educational Workshop on “Structural Engineering Solutions” organized by Civil Engineering Department, National Institute of Technology Raipur in association with Concept Tele Systems (Bentley Channel Partner) on 29th and 30th October 2012 at National Institute of Technology Raipur. Workshop on “ Value education” Organized by, Centre for education in universal values, NIT Raipur during 9th March to 14th march 2012
14. Workshop on “ Global climate : climate change, water, environment and society” Organized by, ITM University and Michigan Technological USA at Delhi during 5th March to 6th march 2012
15. Three days 44th Annual convention of Indian Water Works Association at Shri Agrasen Dham, Raipur, CG, India (7th to 9th January 2012).

16. One week refresher course on “Finite Element Method” Organized by Department of Mechanical Engineering, National Institute of Technology Raipur at NIT Raipur from 18-22nd June 2012.
17. Short term course on “Waste Treatment and Cleaner Technologies” held at National Institute of Technology Raipur organized by Department of Chemical Engineering during 28th May to 1st June 2012.
18. Short term course on “Remote Sensing and GIS” held at Institute of Technology BHU Varanasi, during 16th March to 18th march 2012.
19. Workshop on “ convergence of technology, management and global business” Organized by, National Institute of Technology Raipur at NIT Raipur on 20 December 2011.
20. Two days National Seminar on “Future Urbanization” organized by Architecture Department, National Institute of Technology Raipur at National Institute of Technology Raipur. (27th and 28th July 2010).
21. One week short term training programme on “Approaches & Practice in Urban Transportation Planning” organized by SVNIT Surat, during 5th January to 9th January 2009