

BIO-DATA

Dr. Ashok Kumar Gupta

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Present Position: **Professor**, Department of Civil Engineering
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Educational Qualification (Bachelor to Doctoral):

S.No.	Degree	Institution	Year
1	B. Tech	College of Technology, G.B.P.U.A.T, Pantnagar, Nainital	1993
2	M.E.	Government Engineering College, Jabalpur (M.P.)	1995
3	Ph.D.	Indian Institute of Technology Bombay, Powai, Mumbai.	2002

Professional Experience:

S.No.	Position and Organisation	Nature of Job	From (Date)	To (Date)
1	Head , School of Water Resources, Indian Institute of Technology, Kharagpur.	Teaching, Research and Consultancy	April, 2016	Till Date
2	Professor , Civil Engineering Department, Indian Institute of Technology, Kharagpur.	Teaching, Research and Consultancy	December, 2011	Till Date
3	Associate Professor , Civil Engineering Department, Indian Institute of Technology, Kharagpur.	Teaching, Research and Consultancy	April, 2007	December, 2011
4	Assistant Professor , Civil Engineering Department, Indian Institute of Technology, Kharagpur.	Teaching, Research and Consultancy	November, 2003	April, 2007

5	Visiting Faculty, Civil Engineering Department, Indian Institute of Technology, Kharagpur.	Teaching, Research and Consultancy	July, 2002	November, 2003
6	Project Engineer, Centre for Environmental Science and Engineering, Indian Institute of Technology, Bombay, Mumbai.	Project Work	November, 1996	July, 2002

Administrative Responsibilities:

Designation	Organization	Period
Head, School of Water Resources	Indian Institute of Technology, Kharagpur, West Bengal, India.	April, 2016 to Continue
Chairman, House Allotment Committee	Indian Institute of Technology, Kharagpur, West Bengal, India.	June, 2015 to continue
Professor-in-Charge (Water Works)	Indian Institute of Technology, Kharagpur, West Bengal, India.	October, 2010 to September, 2013
Professor-in-Charge (Water Works)	Indian Institute of Technology, Kharagpur, West Bengal, India.	October, 2007 to September, 2010
Chairman (Commercial Establishment & Licensing Committee)	Indian Institute of Technology, Kharagpur, West Bengal, India.	May, 2009 to May 2010

Research Areas

- Water and Wastewater Treatment
- Industrial Effluent Treatment and Reuse
- Sensor based Smart Water Supply System
- Advance Oxidation Process
- Water Pricing Model
- Fate and Transport of Environmental Pollutants
- Environmental Impact Assessment
- Air Quality Management
- Environmental Monitoring and Planning

Membership in professional bodies

- Life member of American Society of Civil Engineers (ASCE)-India Section.

- Life member of Institution of Public Health Engineers (IPHE) India.
- Life member of Indian Association for Air Pollution Control, Baroda, India.
- Life member Indian academy of social sciences, Allahabad

Professional Profile

Specialization and Expertise:

Dr. Ashok Kumar Gupta is a Professor in the Environmental Engineering Division of the Civil Engineering Department and Head, School of Water Resources, Indian Institute of Technology Kharagpur and is actively involved in teaching, research and consultancy. His research interests are primarily focused on water treatment, wastewater treatment and reuse, environmental impact assessment, monitoring and modelling of air and water pollution, geogenic pollutant scavenging etc. He has more than 60 publications in top-ranking International journals and is credited with more than 2300 citations in Scopus. Dr. Gupta is a renowned technical consultant in the arena of environmental engineering having more than 30 completed/ongoing projects of national and international importance to his credit. He has served as the guest editor of the International Journal of Ecology and Development for the Special issue in 2006 and was in the Editorial Advisory Board of Recent Patents on Chemical Engineering in 2008.

Publications:

International Journals

Total Citation: >2300 (Scopus)

h-index: 25 (Scopus)

1. **Gupta, A.K.**, Ghosal, P.S., Shrivastava, S.K., Modeling and optimization of defluoridation by calcined Ca-Al-(NO₃)-LDH using response surface methodology and artificial neural network combined with experimental design (2016), Journal of Hazardous, Toxic, and Radioactive Waste (ASCE's), DOI: 10.1061/(ASCE)HZ.2153-5515.0000343.
2. Ghosal, P.S., **Gupta, A.K.**, Enhanced efficiency of ANN using non-linear regression for modeling adsorptive removal of fluoride by calcined Ca-Al-(NO₃)-LDH (2016), Journal of Molecular Liquids, DOI: 10.1016/j.molliq.2016.07.070. **Impact Factor: 2.740**

3. Sasidharan Pillai, I.M., **Gupta, A.K.**, Anodic oxidation of coke oven wastewater: Multiparameter optimization for simultaneous removal of cyanide, COD and phenol (2016), Journal of Environmental Management, 176, pp. 45-53. **Impact Factor: 3.131**
4. Sasidharan Pillai, I.M., **Gupta, A.K.**, Effect of inorganic anions and oxidizing agents on electrochemical oxidation of methyl orange, malachite green and 2,4-dinitrophenol (2016), Journal of Electroanalytical Chemistry, 762, pp. 66-72. . **Impact Factor: 2.822**
5. Ghosal, P.S., **Gupta, A.K.**, Sulaiman, A., Multivariate optimization of process parameters in the synthesis of calcined Ca-Al-(NO₃) LDH for defluoridation using 3×3 factorial, central composite and Box-Behnken design (2016), Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, 51 (1), pp. 86-96. **Impact Factor: 1.276**
6. Ghosal, P.S., **Gupta, A.K.**, An insight into thermodynamics of adsorptive removal of fluoride by calcined Ca-Al-(NO₃) layered double hydroxide (2015), RSC Advances, 5 (128), pp. 105889-105900. **Impact Factor 3.289**
7. Sahoo, C., **Gupta, A.K.**, Photocatalytic degradation of methyl blue by silver ion-doped titania: Identification of degradation products by GC-MS and IC analysis (2015), Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, 50 (13), pp. 1333-1341. **Impact Factor: 1.276**
8. Pillai, I.M.S., **Gupta, A.K.**, Batch and continuous flow anodic oxidation of 2, 4-dinitrophenol: Modeling, degradation pathway and toxicity (2015), Journal of Electroanalytical Chemistry, 756, pp. 108-117. **Impact Factor: 2.822**
9. Ghosal, P.S., **Gupta, A.K.**, Ayoob, S., Effect of formation pH, molar ratio and calcination temperature on the synthesis of an anionic clay based adsorbent targeting defluoridation (2015), Applied Clay Science, 116-117, pp. 120-128. . **Impact Factor: 2.586**
10. Paul, D., Kazy, S.K., Banerjee, T.D., **Gupta, A.K.**, Pal, T., Sar, P., Arsenic biotransformation and release by bacteria indigenous to arsenic contaminated groundwater (2015), Bioresource Technology, 188, pp. 14-23. **Impact Factor: 4.917**
11. Sahoo, C., **Gupta, A.K.**, Characterization and photocatalytic performance evaluation of various metal ion-doped microstructured TiO₂ under UV and visible light (2015), Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and

Environmental Engineering, 50 (7), pp. 659-668. **Impact Factor: 1.276**

12. Sasidharan Pillai, I.M., **Gupta, A.K.**, Potentiostatic electrodeposition of a novel cost effective PbO₂ electrode: Degradation study with emphasis on current efficiency and energy consumption (2015), Journal of Electroanalytical Chemistry, 749, pp. 16-25. **Impact Factor:2.822**
13. Paul, D., Kazy, S.K., **Gupta, A.K.**, Pal, T., Sar, P., Diversity, metabolic properties and arsenic mobilization potential of indigenous bacteria in arsenic contaminated groundwater of West Bengal, India (2015), PLoS ONE, 10 (3), e0118735. **Impact Factor:3.057**
14. Indu M.S., **Gupta A. K.**, Tiwari M. K., Multivariate optimization for electrochemical oxidation of methyl orange: Pathway identification and toxicity analysis (2015, Journal of Environmental Science and Health, Part A, 50 (3), pp. 301-310. **Impact Factor: 1.276**
15. Sahoo A.K., Srivastava S.K., Raul P.K., **Gupta A.K.**, Shrivastava R., Graphene nanocomposites of CdS and ZnS in effective water purification (2014), Journal of Nanoparticle Research, 16 (7), 2473. **Impact Factor:2.101**
16. Sahoo C., **Gupta A.K.**, Application of statistical experimental design to optimize the photocatalytic degradation of a thiazin dye using silver ion-doped titanium dioxide (2013), Journal of Environmental Science and Health - Part A , 48(7), pp 694-705. **Impact Factor: 1.276**
17. Subramoney P., Karnae S., Farooqui Z., John K., **Gupta A.K.**, Identification of PM_{2.5} sources affecting a semi-arid coastal region using a chemical mass balance model (2013), Aerosol and Air quality research, 13(1) pp. 60-71. **Impact Factor: 2.393**
18. Perikamana K., Indu M S, **Gupta A.K.**, Ayoob, S, Investigation onto feasibility of an adsorbent for chromium abatement with its extended application for real mine drainage water (2013), Journal of Environmental Science and Health, Part A, 48, 67-78. **Impact Factor: 1.276**
19. Das A., **Gupta A.K.**, Mazumder T.N., A comprehensive risk assessment framework for offsite transportation of inflammable hazardous waste (2012), Journal of Hazardous Materials, 227-228, pp. 88-96. **Impact Factor: 4.836**
20. Sahoo, C., **Gupta, A.K.**, Indu M.S., Heterogeneous photocatalysis of real textile wastewater: Evaluation of reaction kinetics and

characterization (2012). Journal of Environmental Science and Health, Part A, 47 (13), 2109-2119. **Impact Factor: 1.276**

21. Sahoo C., **Gupta A.K.**, Indu M. S., Photocatalytic degradation of Methylene blue dye from aqueous solution using silver ion doped TiO₂ and its application to the degradation of real textile wastewater (2012), Journal of Environmental Science and Health, Part A, 47(10), 1428-1438. **Impact Factor: 1.276**
22. Sahoo, C., **Gupta, A.K.**, Optimization of photocatalytic degradation of methyl blue using silver ion doped titanium dioxide by combination of experimental design and response surface approach (2012), Journal of Hazardous Materials, 215-216, pp. 302-310. **Impact Factor: 4.836**
23. Das, A., **Gupta, A.K.**, Mazumder, T.N., Vulnerability assessment using hazard potency for regions generating industrial hazardous waste (2012), Journal of Hazardous Materials, 209-210, pp. 308-317. **Impact Factor: 4.836**
24. Das A., Mazumder T.N., **Gupta A.K.**, Pareto frontier analyses based decision making tool for transportation of hazardous waste (2012), Journal of Hazardous Materials, 227-228, pp. 341-352. **Impact Factor: 4.836**
25. Sulaiman, A., **Gupta, A.K.**, Basheer, A.B.A., Fixed bed sorption system for defluoridation of ground water (2009), Journal of Urban and Environmental Engineering, 3 (1), pp. 17-22
26. Ayoob, S., **Gupta, A.K.**, Performance evaluation of alumina cement granules in removing fluoride from natural and synthetic waters (2009), Chemical Engineering Journal, 150 (2-3), pp. 485-491. **Impact Factor: 5.310**
27. Barai, S.V., **Gupta, A.K.**, Kodali, J., Air quality forecaster: Moving window based neuro models (2009), Advances in Soft Computing, 52, pp. 137-146.
28. Ayoob, S., **Gupta, A.K.**, Bhat, V.T., A conceptual overview on sustainable technologies for the defluoridation of drinking water (2008), Critical Reviews in Environmental Science and Technology, 38 (6), pp. 401-470. **Impact Factor: 4.000**
29. Ayoob, S., **Gupta, A.K.**, Bhakat, P.B., Bhat, V.T., Investigations on the kinetics and mechanisms of sorptive removal of fluoride from water using alumina cement granules (2008), Chemical Engineering Journal, 140 (1-3), pp. 6-14. **Impact Factor: 5.310**
30. Kundu, S., **Gupta, A.K.**, Immobilization and leaching characteristics of

- arsenic from cement and/or lime solidified/stabilized spent adsorbent containing arsenic (2008), *Journal of Hazardous Materials*, 153 (1-2), pp. 434-443. **Impact Factor: 4.836**
31. Ayoob, S., **Gupta, A.K.**, Insights into isotherm making in the sorptive removal of fluoride from drinking water (2008), *Journal of Hazardous Materials*, 152 (3), pp. 976-985. **Impact Factor: 4.836**
 32. **Gupta, A.K.**, Karar, K., Ayoob, S., John, K., Spatio-temporal characteristics of gaseous and particulate pollutants in an urban region of Kolkata, India (2008), *Atmospheric Research*, 87 (2), pp. 103-115. **Impact Factor: 3.377**
 33. Ayoob, S., **Gupta, A.K.**, Sorptive response profile of an adsorbent in the defluoridation of drinking water (2007), *Chemical Engineering Journal*, 133 (1-3), pp. 273-281. **Impact Factor: 5.310**
 34. Kundu, S., **Gupta, A.K.**, As(III) removal from aqueous medium in fixed bed using iron oxide-coated cement (IOCC): Experimental and modeling studies (2007), *Chemical Engineering Journal*, 129 (1-3), pp. 123-131. **Impact Factor: 5.310**
 35. Kundu, S., **Gupta, A.K.**, Adsorption characteristics of As(III) from aqueous solution on iron oxide coated cement (IOCC) (2007), *Journal of Hazardous Materials*, 142 (1-2), pp. 97-104. **Impact Factor: 4.836**
 36. **Gupta, A.K.**, Karar, K., Srivastava, A., Chemical mass balance source apportionment of PM10 and TSP in residential and industrial sites of an urban region of Kolkata, India (2007), *Journal of Hazardous Materials*, 142 (1-2), pp. 279-287. **Impact Factor: 4.836**
 37. Karar, K., **Gupta, A.K.**, Source apportionment of PM10 at residential and industrial sites of an urban region of Kolkata, India (2007), *Atmospheric Research*, 84 (1), pp. 30-41. **Impact Factor: 3.377**
 38. Ayoob, S., **Gupta, A.K.**, Bhakat, P.B., Performance evaluation of modified calcined bauxite in the sorptive removal of arsenic(III) from aqueous environment (2007), *Colloids and Surfaces A: Physicochemical and Engineering Aspects*, 293 (1-3), pp. 247-254. **Impact Factor: 2.760**
 39. Bhakat, P.B., **Gupta, A.K.**, Ayoob, S., Feasibility analysis of As(III) removal in a continuous flow fixed bed system by modified calcined bauxite (MCB) (2007), *Journal of Hazardous Materials*, 139 (2), pp. 286-292. **Impact Factor: 4.836**
 40. Ayoob, S., **Gupta, A.K.**, Bhakat, P.B., Analysis of breakthrough

developments and modeling of fixed bed adsorption system for As(V) removal from water by modified calcined bauxite (MCB) (2007), Separation and Purification Technology, 52 (3), pp. 430-438. **Impact factor:3.299**

41. Ayoob, S., **Gupta, A.K.**, Fluoride in drinking water: A review on the status and stress effects (2006), Critical Reviews in Environmental Science and Technology, 36(6), pp. 433-487. **Impact Factor: 4.000**
42. Kundu, S., **Gupta, A.K.**, Adsorptive removal of As(III) from aqueous solution using iron oxide coated cement (IOCC): Evaluation of kinetic, equilibrium and thermodynamic models (2006), Separation and Purification Technology, 51 (2), pp. 165-172. **Impact factor:3.299**
43. Karar, K., **Gupta, A.K.**, Kumar, A., Biswas, A.K., Characterization and identification of the sources of chromium, zinc, lead, cadmium, nickel, manganese and Iron in PM10 particulates at the two sites of Kolkata, India (2006), Environmental Monitoring and Assessment, 120 (1-3), pp. 347-360. **Impact factor: 1.633**
44. Kundu, S., **Gupta, A.K.**, Arsenic adsorption onto iron oxide-coated cement (IOCC): Regression analysis of equilibrium data with several isotherm models and their optimization (2006), Chemical Engineering Journal, 122 (1-2), pp. 93-106. **Impact Factor: 5.310**
45. Karar, K., **Gupta, A.K.**, Kumar, A., Biswas, A.K., Seasonal variations of PM10 and TSP in residential and industrial sites in an urban area of Kolkata, India (2006), Environmental Monitoring and Assessment, 118 (1-3), pp. 369-381. **Impact factor: 1.633**
46. Karar, K., **Gupta, A.K.**, Seasonal variations and chemical characterization of ambient PM10 at residential and industrial sites of an urban region of Kolkata (Calcutta), India (2006), Atmospheric Research, 81 (1), pp. 36-53. **Impact Factor: 3.377**
47. Bhakat, P.B., **Gupta, A.K.**, Ayoob, S., Kundu, S., Investigations on arsenic(V) removal by modified calcined bauxite (2006), Colloids and Surfaces A: Physicochemical and Engineering Aspects, 281 (1-3), pp. 237-245. **Impact Factor:2.760**
48. Karar, K., **Gupta, A.K.**, Kumar, A., Biswas, A.K., Devotta, S., Statistical interpretation of weekday/weekend differences of ambient particulate matter, vehicular traffic and meteorological parameters in an urban region of Kolkata, India (2006), Indoor and Built Environment, 15 (3), pp. 235-245.

49. **Gupta, A.K.**, Patil, R.S., Gupta, S.K., A comparison of air quality indices for a port and harbour region in India (2006) International Journal of Environment and Pollution, 26 (4), pp. 313-326.
50. **Gupta, A.K.**, Nag, S., Mukhopadhyay, U.K., Characterisation of PM₁₀, PM_{2.5} and benzene soluble organic fraction of particulate matter in an urban area of Kolkata, India (2006) Environmental Monitoring and Assessment, 115 (1-3), pp. 205-222. **Impact factor: 1.633**
51. **Gupta, A.K.**, Nag, S., Mukhopadhyay, U.K., Measurements of inhalable particles <10 μm(PM₁₀) and total suspended particulates (TSP) concentrations along the North-South Corridor, in Kolkata, India (2006), Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, 41 (3), pp. 431-445. **Impact Factor:1.276**
52. Kundu, S., **Gupta, A.K.**, Investigations on the adsorption efficiency of iron oxide coated cement (IOCC) towards As(V) - Kinetics, equilibrium and thermodynamic studies (2006), Colloids and Surfaces A: Physicochemical and Engineering Aspects, 273 (1-3), pp. 121-128. **Impact Factor:2.760**
53. **Gupta, A.K.**, Pal, A., Sahoo, C., Photocatalytic degradation of a mixture of Crystal Violet (Basic Violet 3) and Methyl Red dye in aqueous suspensions using Ag⁺ doped TiO₂ (2006) Dyes and Pigments, 69 (3), pp. 224-232. **Impact Factor:4.055**
54. Kundu, S., **Gupta, A.K.**, Sorption kinetics of As(V) with iron-oxide-coated cement - A new adsorbent and its application in the removal of arsenic from real-life groundwater samples (2005), Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, 40 (12), pp. 2227-2246. **Impact Factor:1.276**
55. Nag, S., **Gupta, A.K.**, Mukhopadhyay, U.K., Size distribution of atmospheric aerosols in Kolkata, India and the assessment of pulmonary deposition of particle mass (2005), Indoor and Built Environment, 14 (5), pp. 381-389.
56. Kundu, S., **Gupta, A.K.**, Analysis and modeling of fixed bed column operations on As(V) removal by adsorption onto iron oxide-coated cement (IOCC) (2005), Journal of Colloid and Interface Science, 290 (1), pp. 52-60. **Impact Factor:3.782**
57. Sahoo, C., **Gupta, A.K.**, Pal, A., Photocatalytic degradation of Methyl Red dye in aqueous solutions under UV irradiation using Ag⁺ doped TiO₂ (2005), Desalination, 181 (1-3), pp. 91-100. **Impact Factor:4.412**

58. Sahoo, C., **Gupta, A.K.**, Pal, A., Photocatalytic degradation of Crystal Violet (C.I. Basic Violet 3) on silver ion doped TiO₂ (2005), Dyes and Pigments, 66 (3), pp. 189-196. **Impact Factor:4.055**
59. **Gupta, A.K.**, Gupta, S.K., Patil, R.S., Environmental management plan for port and harbour projects (2005), Clean Technologies and Environmental Policy, 7 (2), pp. 133-141. **Impact Factor:1.934**
60. **Gupta, A.K.**, Gupta, S.K., Patil, R.S., Statistical analyses of coastal water quality for a port and harbour region in India (2005), Environmental Monitoring and Assessment, 102 (1-3), pp. 179-200. **Impact Factor: 1.633**
61. **Gupta, A.K.**, Patil, R.S., Gupta, S.K., A statistical analysis of particulate data sets for Jawaharlal Nehru Port and surrounding harbour region in India (2004), Environmental Monitoring and Assessment, 95 (1-3), pp. 295-309. **Impact Factor: 1.633**
62. **Gupta, A.K.**, Patil, R.S., Gupta, S.K., Influence of meteorological factors on air pollution concentration for a coastal region in India (2004), International Journal of Environment and Pollution, 21 (3), pp. 253-262.
63. **Gupta, A.K.**, Patil, R.S., Gupta, S.K., A Long-Term Study of Oxides of Nitrogen, Sulphur Dioxide, and Ammonia for a Port and Harbor Region in India (2003), Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, 38 (12), pp. 2877-2894. **Impact Factor: 1.276**
64. **Gupta, A.K.**, Gupta, S.K., Patil, R.S., A comparison of water quality indices for coastal water (2003), Journal of Environmental Science and Health - Part A Toxic/Hazardous Substances and Environmental Engineering, 38 (11), pp. 2711-2725. **Impact Factor: 1.276**
65. **Gupta, A.K.**, Patil, R.S., Gupta, S.K., Air pollution potential indices in a coastal region in India (2003), International Journal of Environment and Pollution, 19 (5), pp. 430-441.
66. **Gupta, A.K.**, Patil, R.S., Gupta, S.K., Emissions of gaseous and particulate pollutants in a port and harbour region in India (2002), Environmental Monitoring and Assessment, 80 (2), pp. 187-205. **Impact Factor: 1.633**

National Journals

1. Karar, K., **Gupta, A. K.**, Kumar, A., Biswas, A. K., Devotta, S., Statistical interpretation of weekday/weekend differences of ambient gaseous pollutants, vehicular traffic and meteorological parameters in an urban region of Kolkata, India (2005), Journal of Environmental Science and Engineering, 47(3), pp. 164-175.
2. Ayoob, S., **Gupta, A.K.**, Fluoride bioavailability and human toxicity profile (2005), Journal of the Institution of Public Health Engineers, 2, pp. 28-32.
3. Moulick, S., **Gupta, A.K.**, Dikshit, A.K., Aspects of ecocity development (2004), Journal of the Institution of Public Health Engineers, 2, pp. 8-13.
4. Karar, K., **Gupta, A.K.**, Impact of Indoor Air Quality on Health-An overview(2004), Journal of the Institution of Public Health Engineers, 2, pp. 8-14.
5. **Gupta, A.K.**, Gupta, S. K., Patil, R. S., A long term study of turbidity and suspended solid concentration for a port and harbour region in India(2004), Journal of Indian Association for Environmental Management, 31(2) , pp. 132-140.

Book and Book Chapter

1. **Gupta, A.K.**, Ayoob, S., Fluoride in Drinking Water: Status, Issues, and Solutions, CRC Press, (2016).
2. **Gupta, A.K.**, Sahoo, C., Treatment of Industrial wastewater, in: Sengupta D.(eds), Recent Trends in Modelling of Environmental Contaminants, Springer, India, pp. 143-165. 2014.

Patent details

1. Indu, M.S., **Gupta, A.K.**, Srivastava, S.K. A method for coating lead dioxide on mild steel by electrodeposition from alkaline bath and coated electrode obtained thereof. Patent application no. 709/KOL/2013

International Conferences

1. Patil, R.S., **Gupta, A.K.** and Gupta, S.K., Emissions and ambient concentration of particulates for a port and harbour region in India, 2nd Asian Aerosol Conference, Pusan, Korea, July 1-4, 2001, pp. 341-342.
2. **Gupta, A.K.**, Environmental aspects of port and harbour projects, international conference on energy and environmental technologies for sustainable development, Malaviya National Institute of Technology, Jaipur, October 8-10, 2003, pp. 23-29.
3. Dikshit, A.K. and **Gupta, A.K.**, An approach for sustainable construction, International conference on Construction Management and Materials (CONMAT, 2003), IIT Kharagpur, January, 2003, pp. 335-344.
4. Karar, K. and **Gupta, A.K.**, An Approach for Eco-tourism, International Conference on Environment and Development; Kolkata, India, during 04-08 February 2004.
5. Sahoo, C., **Gupta, A.K.**, and Pal, A., Effect of interferences on photocatalytic degradation of crystal violet dye on silver ion doped TiO₂. International Conference on Environment and Development, February 3-7 2004, Institute of Social Studies, Calcutta.
6. **Gupta, A.K.**, Nag, S. and Mukhopadhyay, U.K., Measurement of inhalable particles, fine particles and its organic in urban region, India, First International Conference on Environmental Science and Technology (EST), New Orleans, Louisiana, USA, January 23-26, 2005, pp. 25.
7. Nag, S., **Gupta, A.K.** and Mukhopadhyay, U.K., Air quality assessment at traffic intersections of Kolkata city urban region – Indices basis, International Conference on Structural and Road Transport Engineering, IIT Kharagpur, January, 3-5, 2005, pp. 769-776.
8. Nag, S., **Gupta, A.K.** and Mukhopadhyay, U.K., Size distribution of atmospheric aerosols in Kolkata and the assessment of pulmonary deposition of particle mass, An International Specialty Conference, Atlanta, GA (USA), February 7-11, 2005, PP.114.
9. Kodali, J., **Gupta, A.K.** and Barai, S., Artificial Neural Networks (ANN) Based Ozone Forecast Using Moving Window Modelling, 2nd Indian International Conference on Artificial Intelligence (IICAI-05) in Pune

India, December 20-22 2005.

10. **Gupta, A.K.**, Indu, M.S. and Ayoob, S., Biomass fuel: Airing Issues of Health Risk, Indo-French Seminar on Indoor Air Quality: Monitoring, Prediction Assessment and Cleaning, Ecole des Mines de Nantes, France, May 31-June 3, 2010.

National Conferences

1. Kundu, S. and **Gupta, A.K.**, Arsenic in drinking water: A review. XXVII Indian Social Science Congress, December 3-7, 2003, Indian Institute of Technology, Kharagpur, pp. 227.
2. **Gupta, A.K.**, Patil, R.S., and Gupta, S.K., Meteorological data analysis for environmental management for a port and harbor project, Abstract of National Symposium on Meteorology for Sustainable Development, TROPMET, Mumbai, February, 2001, pp. 107-108.
3. **Gupta, A.K.**, Patil, R.S., and Gupta, S.K., Dispersal capacity of the atmosphere over port and harbour area with respect to air pollution, National Symposium on Meteorology for Sustainable Development, TROPMET, Mumbai, February, 2001, pp. 559-563.
4. Karar, K. and **Gupta, A.K.**, Environmental Impact Assessment, A tool for sustainable development. XXVII Indian Social Science Congress, December 3-7, 2003, Indian Institute of Technology, Kharagpur, pp. 227.
5. Ayoob, S. and **Gupta, A.K.**, Fluoride as a geoinicator and its pathways: a review National Conference on advances in water engineering for sustainable development (NCAWESD-2005), IIT Madras, May 16-17, 2005, pp. 161-168.
6. Ayoob, S. and **Gupta, A.K.**, Fluoride in drinking water: a global perspective, Indian Science Congress, January 3-7, 2007 Annamalai University Chidambaram.
7. Sahoo, C. and **Gupta, A.K.**, The effects of various interfering ions on the photocatalytic degradation of crystal violet and methyl red using Ag⁺² doped TiO₂, National Conference on Advances in Environmental Engineering, NIT Rourkela, , 2009, PP. 43-50.
8. Indu, M.S. and **Gupta, A.K.**, Electrochemical Oxidation-An advanced technique for dye decolourization, National Conference on Advances in Environmental Engineering, NIT Rourkela, 209, PP. 219-221.

Sponsored R&D projects completed/handled

1. **Project Title:** Ganga river basin management plan (GMP-II) (GMP/2).
Role: Principal Investigator
2. **Project Title:** Management of urban water supply network: Technical, Economic, Feasibility assessment and ensuring losses controls and sustainability (AAY).
Role: Principal Investigator
3. **Project Title:** Pilot Scale and Field Scale Studies on Removal of Arsenic from Drinking Water including Sludge Management.
Role: Principal Investigator
4. **Project Title:** To formulate environmentally sensitive action plan for mine closure planning and rehabilitation of ecologically degraded areas of Korba and Environs (FES).
Role: Co-principal Investigator
5. **Project Title:** Development of a low-cost technology for arsenic removal and an easy to detect method for arsenic analysis for the rural areas of West Bengal.
Role: Principal Investigator
6. **Project Title:** Assessment of microbial diversity and Community structure and their role in Arsenic transformation and mobilization in Arsenic contaminated groundwater of west Bengal (acs)
Role: Co-principal Investigator

Consultancy Projects

1. **Project Title:** Preparation of conceptual Plan for Sewage Treatment Plant at Bolani Township, at Bolani Ores Mines of RMD-SAIL.
Role: Consultant
2. **Project Title:** Re-development of steel township of IISCO steel plant at Burnpur, West Bengal.
Role: Co-Consultant
3. **Project Title:** Land use and development control plan for Haldia planning area- Nandigram I & II block.
Role: Consultant in Charge
4. **Project Title:** Impact Assessment of Light and Sound Show at Khandagiri and Konark.
Role: Consultant in Charge

5. **Project Title:** Technical assistance for remediation of Hexavalent Chromium from mine effluent and surface runoff in south Kaliapani mines of OMC Ltd.
Role: Consultant in Charge
6. **Project Title:** Preparation of detailed design for Chromium effluent treatment plant, Misrilall Mines Pvt. Ltd. In Saruabil Chromite Mines of Sukinda Valley.
Role: Consultant in Charge
7. **Project Title:** Preparation of air quality evaluation report of Haldia.
Role: Consultant in Charge
8. **Project Title:** Technical Review of Current 24X7 Water Distribution Project in Mysore.
Role: Consultant in Charge
9. **Project Title:** Revision/amendment of the landuse and development control plan for old Haldia Planning Area.
Role: Co-Consultant
10. **Project Title:** Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) for the proposed Dwarakeswar Gandheswari Reservoir project (West Bengal).
Role: Consultant in Charge
11. **Project Title:** Preparation of Master Plan of Drainage System in Planning Area of Sriniketan Santiniketan Development Authority (SSDA).
Role: Consultant in Charge
12. **Project Title:** Preparation of Socio-Economic Perspective Plan for the Development of Paschimanchal Unnayan Parshad Area (DPUP).
Role: Co-Consultant
13. **Project Title:** Preparation of Perspective Plan 2025 for Planning Areas under Asansol Durgapur Development Authority and Burdwon Development Authority (PADB).
Role: Co-Consultant
14. **Project Title:** Preparation of feasibility study report on establishment of common effluent treatment plant(s) in Sukinda valley area.
Role: Consultant in Charge
15. **Project Title:** Preparation of Mater Plan on Water Supply Distribution Network (for Domestic and Industrial) covering Haldia Municipal Area.
Role: Consultant in Charge

16. **Project Title:** Preparation of Perspective Plan- Vision 2030 and Comprehensive Development Plan areas of Bhubaneswar and Cuttack development Authority (PADB).
Role: Co-Consultant
17. **Project Title:** Scrutiny of hydraulics and structural designs and drawings of the project sewerage collection and treatment system for Puri.
Role: Co-Consultant
18. **Project Title:** Design of Pipe Line, Pumping Station and Septic Tank at Kalaikunda (PSST).
Role: Consultant in Charge
19. **Project Title:** Preparation of city development plan for Burdwan planning area (BDAP).
Role: Co-Consultant
20. **Project Title:** Preparation of Aizawl Master Plan (PAMP).
Role: Co-Consultant
21. **Project Title:** City Development Plan for Haldia (CDPH).
Role: Consultant in Charge
22. **Project Title:** Adequacy of measures taken by Rourkela Steel Plant regarding the sewage treatment system of Rourkela Steel Plant Township (RSPT).
Role: Consultant in Charge
23. **Project Title:** Preparation of Storm Water drainage Master Plan for Haldia Municipal Area (PSWD).
Role: Consultant in Charge
24. **Project Title:** Improvement of Drainage Facilities at dock and adjoining area at Haldia Dock Complex (DFHD).
Role: Consultant in Charge
25. **Project Title:** Sewerage Master Plan for Haldia Municipal Area (SMPH).
Role: Consultant in Charge
26. **Project Title:** Performance Evaluation studies on improvement of south saraswati (both upper and lower portion) from Off-take (Chainage 0.00) at Nasibpur, to its outfall Chainage (1410.00) at Sankrail (ISSN).
Role: Consultant in Charge

27. **Project Title:** Preparation of Zonal Developmental Plan for 14 Planning Zones of Bhubaneswar Development Plan Area (PZDP).
Role: Co-Consultant

Reports

1. Final Report on Preparation of Mater Plan on Water Supply Distribution Network (for Domestic and Industrial) covering Haldia Municipal Area, October, 2009.
2. Final Report on Sewerage Master Plan for Haldia Municipal Area, September 2009.
3. Final Report on Improvement of Draiange Facilities at dock and adjoining area at haldia Dock Complex, April, 2008.
4. Final Report on Storm Water drainage Master Plan for Haldia Municipal Area, 2008
5. Final Report on Preparation of Socio-Economic Perspective Plan for the Development of Paschimanchal Unnayan Parshad Area (DPUP).
6. Final Report on Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) for the proposed Dwarakeswar Gandheswari Reservoir project (West Bengal), April 2007.
7. Final report on Drainage System in Planning Area of Sriniketan Santiniketan Development Authority (SSDA), January, 2007.
8. Final report on Comprehensive Development Plan of Bhubaneswar Development Plan area (BDPA), January, 2010.
9. Draft Report on Aizawl Master Plan (PAMP).
10. Draft Report on City Development Plan for Haldia.
11. Final Report on Pilot Scale and Field Scale study for Arsenic Removal Including Sludge Mangement, Sponsored by DST, New Delhi.
12. Final Report on Development of a low-cost technology for arsenic removal and an easy to detect method for arsenic analysis for the rural areas of West Bengal.
13. Final Report on Design of Pipe Line, Pumping Station and Septic Tank at Kalaikunda (PSST).

14. Inception Report of Perspective Plan for Asansol Durgapur Planning Area VISION-2025, November, 2005.
15. Concept Paper on Perspective Plan for Bhubaneswar- Cuttack Urban Complex Area VISION-2030, February, 2006.
16. Draft Proposal of Perspective Plan for Asansol Durgapur Planning Area VISION-2025, March 2006.
17. Status Report of Perspective Plan for Asansol Durgapur Planning Area VISION-2025, January 2006.
18. Concept Paper of Perspective Plan for Barddhaman Planning Area VISION-2025, July 2006.
19. Status Report of Perspective Plan for Barddhaman Planning Area VISION-2025, August 2006.
20. Draft Report of Perspective Plan for Bhubaneswar- Cuttack Urban Complex Area VISION-2030, November 2006.
21. Short Term Course on “Environmental Impact Assessment and Management Plan” during November 14-19, 2005 at IIT Kharagpur.
22. Short Term Course on “Advances Technologies for Water and Wastewater Treatment” during Nov. 20-25, 2006.

Awards and Distinctions:

1. Member Board of Course Studies for the Centre of Mining Environment for Proposed B. Tech Environmental Engineering Course, ISM Dhanbad (2011)
2. Editor of International Journal of Ecology and Development for the special issues on Non Linear Mathematical Models for Ecology and Ecosystem (2006)
3. Awarded the Shiksha Rattan Puraskar, award by the IIFS, New Delhi (2012)

Short term course/workshop organised

1. Short Term Course on “Waste Minimization & Bio-energy Recovery (WMBR)” during Nov. 22-26, 2009
2. Short Term Course on “Advances Technologies for Water and Wastewater Treatment” during Nov. 20-25, 2006.
3. Short Term Course on “Environmental Impact Assessment and Management Plan” during November 14-19, 2005 at IIT Kharagpur.
4. Short Term Course on “Methodologies and Techniques for Assessing Environmental Impacts of Developmental Projects” during June 25-27, 2003 at IIT Kharagpur.
5. Workshop on “Water Purification, Arsenic, Fluoride, Iron Removal and Biodegradable/Biomedical Polymers” at IIT Kharagpur during 15-16th July 2004, sponsored by Department of Science and Technology, New Delhi.

Academic Activities:

Teaching:

Courses at Undergraduate Level

- Water Supply and Sanitary Engineering;
- Water and Wastewater Engineering;
- Environmental Engineering;
- Engineering Drawing and Computer Graphics;
- Environmental Engineering and Science;
- Environmental Science

Courses at Post Graduate Level

- Water Supply System ;
- Wastewater Management;
- Design of Env. Engg. Facilities;
- Air Quality Management;
- Environmental Impact Assessment;
- Environmental Engineering Lab II;

Coordinator: Environmental Science (From 2010- up to June 2016)

Ph.D. / M Tech guidance

Sl. no	Name of the student / research Scholar	Title of Thesis	Doctorate or Master's level	Year of completion (or in progress)	Co-guide(s) (if any)
1	Dr. Kakoli Karar	Monitoring and modeling of ambient air quality in residential, commercial and industrial regions of an urban area	Doctorate	2007	-
2	Dr. Sanghamitra Kundu	Analysis and modelling of arsenic sorption onto iron oxide coated cement (IOCC) from aqueous environment	Doctorate	2008	-
3	Dr. S. Ayoob	Sorptive Removal of Fluoride from Drinking Water by Alumina Cement Granules	Doctorate	2008	-
4	Dr. Arup das	Multi objective Approach for Offsite Transportation of Hazardous waste	Doctorate	2013	Dr. T. N. Mazumder
5	Dr. C. Sahoo	Analysis and Modelling of Photocatalytic Degradation of Textile Wastewater	Doctorate	2015	

6	Dr. Indu M S	Analysis and Modelling of Electrochemical Oxidation of Recalcitrant Organic Wastewater	Doctorate	2016	-
7	Mr. Partha Sarathi Ghosal	Water Treatment	Doctorate	In Progress	-
8	Mr. Amitava Sengupta	Assessment and Minimization of Life Cycle Impact of Urban Water System	Doctorate	In Progress	Dr. M.K. Tiwari
9	Ms. Dina Zaman	Water Supply Systems	Doctorate	In Progress	Dr. M.K. Tiwari
10	Mr. Manoj Kumar Yadav	Water Treatment	Doctorate	In Progress	Dr. A. Mukherjee
11	Ms. Pubali Mandal	Industrial Wastewater Treatment	Doctorate	In Progress	Dr. B.K. Dubey
12	Mr. Debjyoti Debnath	Industrial Wastewater Treatment	Doctorate	In Progress	-
13	Mr. Sandipan Ganguly	Fate and Transport of Arsenic	Doctorate	In Progress	Dr. A. Dhar
14	Mr. Humanyun Kabir	Industrial Wastewater Treatment	Doctorate	In Progress	-
15	Ms. Soumi Dutta	Industrial Wastewater Treatment	Doctorate	In Progress	Dr. S.K. Srivastava
16	Ms. Swati Mishra	Fate and Transport of Pollutant	Doctorate	In Progress	Dr. M.K. Tiwari

17	Mr. Subhankar Nag	Statistical analyses of air pollutants and their atmospheric behaviour in urban region of Kolkata	Master's	2004	-
18	Mr. Chittaranjan Sahoo	Photocatalytic degradation of dye containing effluents using Ag ⁺ doped TiO ₂	Master's	2004	-
19	Mr. Sarbeswar Barik	Performance study of duckweed pond for wastewater treatment	Master's	2004	Prof. M. Bandyopadhyay
20	Mr. Janardan Singh	Removal of crystal violet, a cationic dye by different adsorbents	Master's	2004	-
21	Mr. Jayachandar Kodali	Air quality forecasting using artificial neural networks	Master's	2004	Dr. S.K. Barai
22	Mr. Phani Bhusan Bhakat	Removal of Arsenic from Drinking Water by Adsorption onto Modified Calcined Bauxite (MCB)	Master's	2006	-
23	Mr. Uma Mahesh	Environmental Impact Assessment of Dwarakeswar and Gandheswari Reservoir Project	Master's	2007	Mr. Y.K. Srivastava
24	Ms. Bijoli Mondal	Performance Evaluation of waste Activated Carbon from Aquagaurd as Adsorbent for the	Master's	2007	Dr. A Pal

		removal of phenol from aquatic environment			
25	Mr. Loknath Sahu	Arsenic Removal from Drinking Water by Iron Oxide Coated Calcined Bauxite Bedded Filter	Master's	2008	
26	Mr. K Vidyasagar	Storm Water Management Plan for a Port Region	Master's	2008	
27	Mr. Kashinath Halder	Optimized Route Planning of Solid Waste Collection, Transportation for Urban Region of Bhubaneswar	Master's	2008	
28	Ms. Indu M S	Electrocatalytic Degradation of Dye Wastewater	Master's	2010	
29	Mr. Avinash Gadekar	Design of Sewerage System for Aizwal	Master's	2010	
30	Mr. K. Bhagyaraj	Design and Optimization of water supply facilities using software tools: a case study	Master's	2011	
31	Mr. Krishnadas P.	Sorption of Hexavalent Chromium by iron impregnated calcined bauxite	Master's	2012	
32	Mr. Rahul Bhimrao Gavhane	Adsorptive removal of Fluoride from water using calcined bauxite modified with Fe(III)	Master's	2012	

33	Ms. Asha	Treatment of phenols using Ag+ doped TiO ₂	Master's	2013	
34	Mr. Pratul K Choudhury	Approach for Sustainable Water Supply Systems	Master's	2013	
35	Ms. Aneesha K V	Development of Water Tariff Model	Master's	2014	Dr. M.K. Tiwari
36	Ms. Anu Lekha T	Removal of Hexavalent Chromium using LDH	Master's	2014	
37	Mr. Bhaskar Tiwari	Water Pricing	Master's	2015	
38	Mr. Ashurosh Das	Water Distribution	Master's	2015	
39	Mr. Akash Kumar Yadav	Water Distribution Systems	Master's	2015	
40	Mr. Sujay Das	Solid Waste Management	Master's	2015	Dr. B.K. Dubey
41	Mr. Sudipta Sarkar	LCIA	Master's	2015	Dr. B.K. Dubey

Invited lectures

1. Was invited to provide Faculty Support to conduct the Session on "Pollution Assessment Methods and Techniques" in the training programme titled "Pollution Monitoring, Assessment and Control" organized by Management Training Institute (MTI), Steel Authority of India Ltd., Bokaro, February 28, 2003.
During the above session, delivered eleven talks on following topics: (1) Pollution Evaluation through Impact Assessment (2) Social Environment (3) Biotic Environment (4) Abiotic Environment (5) Environmental Performance and Evaluation (6) Environmental Assessment Techniques (7) Environmental Impact Assessment (EIA) - A

decision making tool (8) EIA Framework (9) EIA Methodology (10) Environmental Appraisal & Compliance Control (11) Feedback to Environmental Monitoring Programme.

2. Delivered the lectures on "Air Pollution Monitoring and Modelling" in the short term course on "Environmental Science, Technology and Modelling for Mining and Reclamation Engineers" organised by Department of Mining Engineering, IIT Kharagpur, April 14-19, 2003.
3. Delivered Invited Lecture on "Air Pollution Monitoring" to students, faculty and staff of Royal Bhutan Institute of Technology, Bhutan, May 17, 2003.
4. Have been invited to deliver a talk on "Air Quality Modelling" at the short-term course on 'Hazardous Waste Management' organized by Department of Civil Engineering, IIT Madras, July 7-18, 2003.
5. Delivered the following lectures at the short term course on 'Methodologies and Techniques for Assessing Environmental Impacts of Developmental Projects' organized by Department of Civil Engineering, IIT Kharagpur, June 25-27, 2003. (a) Introduction to EIA (b) Process and Framework of EIA (c) Guidelines, Policies and Procedures of EIA (d) EIA Assessment Methodologies (e) Monitoring and Modelling of Air Pollutants (f) Case Study of Thermal Power Project.
6. Delivered Invited Lecture on "Hydraulic and Structural Design of Pipes" to students, faculty and staff of Royal Bhutan Institute of Technology, Bhutan, October 1, 2003.
7. Delivered Invited Lecture on "Design of Water Treatment plant" to students, faculty and staff of Royal Bhutan Institute of Technology, Bhutan, October 1, 2003.
8. Delivered Invited talk on "An Application of Artificial Neural Networks to the Prediction of Air Pollution Concentrations" at the short-term course on "Soft Computing Tools in Civil Engineering (November 10-16, 2003) at Department of Civil Engineering, I.I.T. Kharagpur.
9. Delivered Invited talk on "'Photocatalytic Degradation of Crystal Violet Dye on Silver Ion Doped TiO₂" in the INDO-FRENCH SEMINAR on Emerging Technologies for Water and Wastewater Management at Department of Civil Engineering, IIT Delhi from 9-12th February, 2004.
10. Delivered Invited lecture on "Rural Drinking Water System and Sanitation: Role of NSS" in 76th Orientation Course for untrained NSS Programme Officers at NSS Training and Orientation Center, Rural

Development Centre, Indian Institute of Technology Kharagpur from June 21-30, 2004.

11. Delivered Invited lecture on “Rural Drinking Water System and Sanitation: Role of NSS” in 77th Orientation Course for untrained NSS Programme Officers at NSS Training and Orientation Center, Rural Development Centre, Indian Institute of Technology Kharagpur from August 3-12, 2004.
12. Delivered Invited lecture on “Rural Drinking Water System and Sanitation: Role of NSS” in 78th Orientation Course for untrained NSS Programme Officers at NSS Training and Orientation Center, Rural Development Centre, Indian Institute of Technology Kharagpur from September 27- October 6, 2004.
13. Delivered Invited lecture on “Rural Drinking Water System and Sanitation: Role of NSS” in 79th Orientation Course for untrained NSS Programme Officers at NSS Training and Orientation Center, Rural Development Centre, Indian Institute of Technology Kharagpur from November 18-27, 2004.
14. Delivered Invited lecture on AICTE sponsored National Workshop on “Sustainable Management of Environmental Pollution” Royal College of Pharmacy and Health Sciences and hapasara Road Berhampur, Orissa on September 26, 2004.
15. Delivered Invited lecture on “Rural Drinking Water System and Sanitation: Role of NSS” in 80th Orientation Course for untrained NSS Programme Officers at NSS Training and Orientation Center, Rural Development Centre, Indian Institute of Technology Kharagpur from March 7-16th March, 2005.
16. Delivered the following lectures at the short term course on Mine Closure Planning and Environmental Management: Remote Sensing and GIS Applications' organized by Department of Mining Engineering, IIT Kharagpur, August 1-6, 2005.
17. Delivered Invited Lecture on “Monitoring and Modelling of Air Pollutants” to students and faculty of Motilal Nehru National Institute of Technology, Allahabad, September 19, 2005.
18. Delivered Invited Lecture on “Measurement of Aerosols and Its Organic Fraction in an Urban Region, India” to students and faculty of Motilal Nehru National Institute of Technology, Allahabad, September 19, 2005.
19. Delivered Invited lecture on “Rural Drinking Water System and Sanitation: Role of NSS” in 81th Orientation Course for untrained NSS

Programme Officers at NSS Training and Orientation Center, Rural Development Centre, Indian Institute of Technology Kharagpur from September 19th -28th September, 2005.

20. Delivered Invited lecture on “Environmental Management Plan for Port and Harbour Projects” at AICTE sponsored National Workshop on “Environment and Pollution Awareness” Rural Development Centre, IIT Kharagpur on September 30, 2005.
21. Delivered Invited Lecture on “Measurement of Atmospheric Aerosols in an Urban Region, India and The Assessment of Pulmonary Deposition of Particle Mass” at the at the national Level Brainstorming Workshop on Indian Urban Air Quality 2005 during 24-25 October, 2005 at NEERI, Nagpur, sponsored by Indian National Science Academy (New Delhi) and Council of Scientific and Industrial Research (New Delhi).
22. Delivered Invited lecture on “Rural Drinking Water System and Sanitation: Role of NSS” in 82nd Orientation Course for untrained NSS Programme Officers at NSS Training and Orientation Center, Rural Development Centre, Indian Institute of Technology Kharagpur from November 19th -28th, 2005.
23. Delivered Invited lecture on “Environmental impact Assessment of Mining Project including Environmental Management Plan” in the Refresher Course for District Mining Officers, Jharkhand (Module II, Batch I, Environment and Quality) on December 20th, 2005.
24. Delivered Invited lecture on “Environmental impact Assessment of Mining Project including Environmental Management Plan” in the Refresher Course for District Mining Officers, Jharkhand (Module II, Batch III, Environment and Quality) on December 30th, 2005.
25. Delivered Invited lecture on “Sources and Classification of Municipal Solid Waste” on November 28, 2005 in the QIP short term course on “Managing Municipal Solid and Biomedical Wastes for Communities” organized by CESE, IIT Bombay from Nov. 28 to Dec. 2, 2005.
26. Delivered Invited Lecture on “Measurement of Atmospheric aerosols in an Urban Region, India and assessment of Pulmonary Deposition of Particle Mass” in the National Level Brainstorming Workshop “Indian Urban Air Quality 2005” Organized by National Environmental Engineering Research Institute Nagpur from October 24-25, 2005.
27. Delivered the following lectures at the QIP short term course on “Environmental Impact Assessment and Management Plan” organized by Department of Civil Engineering, IIT Kharagpur, November 14-19, 2005.

(a) Introduction to EIA, (b) Monitoring and Modelling of Air Pollutants (c) Air Quality Impact Analysis, (d) Policies and Procedure for EIA.

28. Delivered Invited lecture on “Rural Drinking Water System and Sanitation: Role of NSS” in 83rd Orientation Course for untrained NSS Programme Officers at NSS Training and Orientation Center, Rural Development Centre, Indian Institute of Technology Kharagpur from February 15th -24th, 2006.
29. Delivered Invited lecture on “Rural Drinking Water System and Sanitation: Role of NSS” in 84th Orientation Course for untrained NSS Programme Officers at NSS Training and Orientation Center, Rural Development Centre, Indian Institute of Technology Kharagpur from March 5th -14th, 2006.
30. Delivered Invited lecture on “Assessing Water Quality Using Water Quality Indices” in the training programme on Watershed management and Restoration Measures on June 25, 2006, organized by Agriculture and Food Engineering Department, IIT Kharagpur during June 22-27, 2006.
31. Invited to deliver a special lecture on Fluoride in Drinking Water: A Global Perspective in 94th Science Congress to be held in Annamalainagar from January 3-7, 2007, Annamalainagar, Chidambaram-608 002.
32. Delivered lectures on Urban Water supply and sanitation and Fluoride as A Geo-Indicator and Its Pathways in the refresher course on “Governance of Urban Water Supply and Sanitation during December 11-16, 2006.
33. Delivered lecture at the QIP short term course on “Fluoride As A Geo-Indicator and Its Pathways” organized by Department of Civil Engineering, IIT Kharagpur, November 20-25, 2006.
34. Delivered invited lecture at the QIP short term course on “An Application of Artificial Neural Networks to the Prediction of Air Pollution Concentrations” organized by Department of Civil Engineering, IIT Kharagpur, November 13-19, 2006.
35. Delivered invited lecture on Fluoride and Arsenic in Drinking Water and their Effects on Human Health” in the Seminar on “ Health Care Through Integrated Systems of Medicine – A Holistic Approach “ to be held at ‘IRIIM BHAWAN’ Mourigram, HOWRAH on DECEMBER 8- 10, 2006.

36. Delivered Invited lecture on “Rural Drinking Water System and Sanitation: Role of NSS” in Orientation Course for untrained NSS Programme Officers at NSS Training and Orientation Center, Rural Development Centre, Indian Institute of Technology Kharagpur on November 12, 2006.
37. Fluoride in Drinking Water-A global perspective at Angul, Orrisa (During 2008-09)
38. Solid Waste Management: A Recent Trends at NIT Durgapur (During 2008-09)