Curriculum Vitae

Vivek Kumar

Professor

Centre for Rural Development and Technology,

Indian Institute of Technology Delhi,

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Summary

Vivek Kumar is Professor in CRDT at Indian Institute of Technology, Delhi. Kumar was also a visiting Research Professor in the Department of Chemical Engineering and Applied Sciences at University of Toronto. Kumar has supervised 12 Ph. D thesis, published around 180 articles in journals, conference proceedings, books (as chapters). He has completed more than 30 R&D and consultancy projects and currently implementing 05 R&D and 06 major consultancy projects.

Presently, Dr. Kumar is the National Co-Coordinator of one of the major programme of the Govt. of India, Unnat Bharat Abhiyan (UBA) that aims to utilize knowledge institutions of the country to help villages.

Dr. Kumar is also a clean technology and sustainability analysis expert for several industrial sector and in situ remediation of drains & water bodies. His key industrial interventions are process audit, process integration, implementation cleaner production projects and new greener product development. He is also actively involved in several projects of pollution prevention and control in Ganga Basin including Charters in Paper, textile, tannery, and Sugar industries. He is member of several Central Pollution Control Board's committees working for pollution control in textile industries and paper industries including the committee on 'Zero Liquid Discharge' in Pulp & Paper Mills. He was associated with a joint project being executed by the consortium of seven IITs (Indian Institute of Technology) on "National River Ganga Basin Environmental Management Plan". Some of his technical reports in this area are (i) Rapid assessment of industrial pollution of the River Ganges in Uttarakhand, and (ii) Strategy for improving condition of water bodies in the vicinity of pulp and paper industries in Ganga River basin. He is currently working on the low footprint domestic sewage treatment systems for cold region and sustainability analysis of technology systems in the area of water and wastewater management.

He has research collaboration with several international and national institutes and universities. Presently he is collaborating with Queens University & Crainfield University, UK and University of Toronto, Canada.

Dr. Vivek Kumar

Position: Professor, IIT Delhi

Contact Information

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Professional Degrees

2000, Ph. D.; Thesis title: "Waste management for small scale Pulp & Paper Industry" Indian Institute of Technology, Delhi.

1992-94, Master of Engineering, Chemical Engineering with specialization (Industrial Pollution Abatement), University of Roorkee, Roorkee.

1988-92, Bachelor of Engineering, Pulp & Paper Engineering, University of Roorkee, Roorkee.

User Profile

Research Specialization Keywords: Process Audit, Process Integration and Pinch analysis, Green Product Development, Air Pollution Emission Inventory, Enzyme Application, Bioremediation, Water &Wastewater Treatment, Composites, Industrial solid Waste Management, Environmental degradation and health risk assessment, cleaner production system, Biomass Valorization, Technology Diffusion, Community Engagement.

Research Disciplines: Process Technology, Pulp and Paper, Environmental Engineering

Areas of Research: Process Audit and Pinch analysis, Air Pollution Emission Inventory, Industrial Pollution Abatement, Environment, human health & safety, Green product Development, Biomass Valorization, Utilization of Waste in composites and building materials, and Clean & Sustainable Technologies.

Fields of Application: Industrial Cleaner Production System, Pollution Abatement & Environmental Management, Treatment system assessment and design, New Product Development, Technology Diffusion, and community engagement.

Employment

2019/5	Professor, Centre for Rural Development IIT Delhi
2017/3	Associate Professor, Centre for Rural Development IIT Delhi
2012/10	Associate Professor, Department of Paper Technology

IIT Roorkee

2014/6-2014/7 Visiting Research Professor
Department of Chemical Engineering & Applied Chemistry
University of Toronto, Toronto, Canada.

2006/8- 2012/10 Assistant Professor, Department of Paper Technology
IIT Roorkee

2004/5- 2006/8 Lecturer, Department of Paper Technology
IIT Roorkee

2002/5- 2004/5 Scientist, TIFAC, Department of Science and Technology, Govt. of India

2001/8- 2002/4 Project Scientist,
Centre for Rural Development, IIT Delhi

2000/11-2001/6 Post-Doctoral Fellow,
IWT, Applied Science University, Wolfenbuttel, Germany

1994/5 –1995/5 Consulting engineer
Chemprojects Design & Engineering Pvt. Ltd. Delhi

Masters/Doctoral Supervision

Doctoral Thesis 12 Awarded; 14 Ongoing

S.No.	Research Scholar	Institute	Year	Thesis	Co-Supervisor
1	Shashank Saini	IIT Roorkee	2022	Environmentally Benign Conversion of Rice Straw into Value-Added Products	Prof Kirtiraj Gaikwad & Prof Ashish Kadam
2	Anand Madhukar	IIT Delhi	2021	Spatio-Temporal Analysis of CropYield Trends and Climate Variability in India	Prof Kavya Dashora
3	Amrish Kumar	IIT Roorkee	2020	Organic pollutants in drinking water and their removal by membrane filtration	Prof Dharm Dutt
4	Madan Sonkar	IIT Roorkee	2020	Advanced Biological Treatment of Paper Industry Wastewater in Sequence Batch Biological Process	Prof Dharm Dutt
5	Prabhat Kumar	IIT Roorkee	2019	Valorization of Paper Industry Lime Sludge, Boiler Ash and ETP Sludge	Prof Dharm Dutt
6	Shilpa Kulkarni	IIT Roorkee	2015	Studies on De-Inking Process and Utilization of Deinking sludge	Prof. M.C Bansal
7	Nitin Verma	IIT Roorkee	2012	Studies on Microbial Production of *Cellulases* by Fermentation Process	Prof. M.C Bansal
8	Deepak Kumar	IIT Roorkee	2012	Mathematical modelling and simulation in pulp mill operations	Prof. V.P. Singh
9	Neetu Rani	IIT Delhi	2011	Pulp and Paper Mill Wastewater Treatment through Constructed Wetland Technology.	Prof. V.K Vijay, IIT Delhi

10	Sudheer Shukla	IIT Roorkee	2011	Process Integration of Water Management in Pulp and Paper Industry	Prof. M.C Bansal
11	Ajay Nagpure	IIT Roorkee	2011	Modelling of Urban Traffic Emission	Prof. B.R Gurjer
12	Ramakrishna Malkapurm	IIT Roorkee	2010	Development and Characterization of Natural Fiber Reinforced Polypropylene Composites.	Prof. Y.S. Negi

Master's Thesis **27 Awarded**

1	Anubhav Pathak	2017	Kinetics and Environmental studies of two stage O_2 delignification of agro residue
2	Satish Singh	2017	Utilization of nanocellulose for barrier packaging paper
3	Shubham Bajpayee	2017	Life Cycle Analysis for Packaging Materials and strategy for carbon foot print reductions
4	Anand Gahukar	2016	Environmental impact Assessment of O_2 delignification stage
5	Shanshank Saini	2016	Paper using nano whiskers for barrier packaging
6	AniruddhDagar	2016	Preparation of Nano cellulosic from agriculture residue and its application
7	Jitendra Kumar	2016	Kinetic studies of the O_2 delignification of agro residue
8	YogenraSoni	2015	Characterization and Utilization of hazardous sludge from pulp and paper industry
9	Pooja Yadav	2015	Carbon foot prints of enzymatic bleaching
10	Manorama	2015	Energy saving potential of enzymes in refining of various grades of pulp
11	Gaurav Tomar	2014	Impact of strengths additives on the paper properties
12	Sushil Poswal	2014	Utilization of lime sludge in construction material
13	David Gupta	2013	Studies on the Bio-kinetic coefficients of pulp and paper mill effluent
14	Mahipal Saini	2013	Impact of coating on paper properties
15	Neetu Chauhan	2012	Enzymatic deinking methods and their environmental effects
16	Laxman Pandey	2011	Studies on Kinetics and Mechanism of Delignification of Bast Fiber of Jute Plant (Corcorus Capsularis) In Alkaline Pulping
17	Jay Kumar B. Bhasarkar	2010	Strategy to Achieve Zero Liquid Discharge In Integrated Pulp and Paper Mill
18	Piyush Borkar	2009	Opportunities and challenges for implementing CDM projects in Indian paper industry
19	Ram Bhavan Ram	2008	Strategies for System Closure In Paper Industry
20	Sanjeev Kumar Gautam	2008	Enhancement of Optical Properties of Bagasse Pulp By In-Situ Filler Precipitation
21	Kunal Sharma	2007	Technology Transfer and the Clean Development Mechanism the Case of Indian Pulp and Paper Industry
22	Majni Das	2007	Experimental Study of Dry Pine Needles for Paper Making
23	Ajay Kumar Goel	2006	Material and Energy Conservation Strategies on Paper Machine No 5 of BILT SGU, Yamuna Nagar
24	Vikas Kumar	2006	Studies on Urea Pulping of Argo Based Residues- Wheat Straw
25	Rajesh Kumar Meghwal	2006	Modelling and Simulation of Evaporator System In Paper Industry
26	Harish Kumar Arya	2006	Modelling and Simulation of Multi Cylinder Paper Drying

27	Amit Kumar Gautam	2005	Recycling potential of "Saccharum Munja "pulp

Major Research & Consultancy Funding

More than 30 R&D and Consultancy projects completed, 07 Research projects going on. Some of the major projects are given below:

Major Research Funding

Project Ongoing

S. No	PI/Co-PI	Project Title	Funding Agency	Amount in Rs.	Duration
1	**PI**	Revisiting traditional Indian agricultural practices against climate change vulnerabilities using machine learning techniques	DST	25,37,541	2 Years
2	**PI**	Scientific Management of Natural Resources for Sustainable Development in UBA Clusters of Shivalik Region	DST	2,95,28,768	3Years (Phase I up to 1 year)
3	**PI**	Sustainability Assessment for Water Distribution Network for Supply of Safe Drinking Water	MP Pey Jal Nigam	74,49,600	3 years
4	**PI**	Livelihood generation through technology intervention for sustainable harnessing of hemp and neem fruit pulp	DST	76,26,503	3 years
5	**Co-PI**	Unnat Bharat Abhiyan	MHRD	83,50,00,000	5 Years 2021-2026

Projects Completed

S. No	PI/Co-PI	Project Title	Funding Agency	Amount in Rs.	Duration
1	**PI**	Valorizing Waste from Sugar Cane Industries via Innovations in Pre-treatment, Bioproduction and Process Intensification	DBT-BBSRC	67,73,400	3 Years Completed
2	**PI**	Pt Deen Dayal Uapdhyaya Vigyan Gram Sankul Yojna- Scientific Management of Natural Resources for Sustainable Development of Uttarakhand	DST (Funding through UCOST)	6,30,00,000	3 Years Completed
3	**PI**	Inspection of Grossly Pollution Industries (GPIs) discharging into main stem of River Ganga and its tributaries	CPCB	1,90,64,450	6 months
4	**PI**	Impact Assessment of lockdown due to Covid -19 on the Waterbodies in Ganga Basin	C- Ganga, IIT Kanpur	4,56,000	6 months
5	**PI**	Utilization of Lime Sludge from Paper Mill in manufacturing of ceramic and building materials	DST &Ruchira Paper Mills Ltd (UAY)	27,70,000	2 Years Feb 2018
6	**PI**	Monitoring and Evaluation of Ionization based Air Purifying Technology	CPCB	1,86,9,1200	March 2019-
7	**PI**	Participatory Technology implementation and capacity	ONGC	14, 96,250	1 Year

		building in the rural clusters under Unnat Bharat Abhiyan programme			
8	**PI**	Evaluation pollutions load due to the pulp and paper industries in Ganga River Basin and Impact assessment of implementation of the Charter for Water Recycling & Pollution Prevention in Pulp and Paper Industry	NMCG-C-Ganga	10,00,000	1 year (2017-18)
9	**PI**	Compact High-rate Water Treatment Systems for Small Communities	IC-IMPACTS NCE (Through UoFT)	Can $1,64,500	3 Years 2014-17
10	**Co-PI**	Evaluation, Selection and Standardization of Intervention Technologies for Domestic and Industrial Pollution Sources under the project "National Ganga River Basin Management Plan"	MOEF		6 Years 2009-15
11	**PI**	Employment Generation through making value added product Principal Investigator from pine needles fibers in Uttarakhand Hills	NCRI, MHRD,	18,60,000	3 Years 2009-12
12	**Co-PI**	KVIC-IITR interface for Rural Industrialization	KVIC, Mumbai	56,00,000	6 Years 2004-10
13	**PI**	Development ecofriendly handmade packaging paper	KVIC, Mumbai	5,00,000	2004 -2006

Major Consultancy Funding (8 Lakhs and Above)

S. No	PI/Co-PI	Project Title	Funding Agency	Amount in Rs.	Status
1	**PI**	Inspection of Grossly Pollution Industries (GPIs) discharging into main stem of River Ganga and its tributaries	CPCB	2,19,81188	Ongoing
2	**PI**	Performance evaluation and adequacy assessment of I&D of drains and STP works in Bhagalpur city under Dist. Bhagalpur under Namami Gange Programme	BUIDCO	70,80,000	Ongoing
3	**PI**	Regarding Vetting of basic engineering designs for I&D of drains and STP works in Muzaffarnagar city and Budhana town under Dist. Muzaffarnagar on Hybrid annuity based PPP mode under Namamigangeprogramme	NMCG-UPJN	5900000	Ongoing
4	**PI**	Detailed Design/Drawing of the Remediation of the PushpVihar Main Nallah	SDMC	8,00,000	Ongoing

		from MB Road to Press Enclave			
5	**PI**	Preparation of Action Plan on “Alternate Technology for Management of Wastewater in Drains” for major drains under the jurisdiction of NDMC	NDMC	17,70,000	Ongoing
6	**PI**	Preparation of Action Plan on “Alternate Technology for Management of Wastewater in Drains” for major drains under the jurisdiction of SDMC	SDMC	17,70,000	Ongoing
7	**PI**	Performance Evaluation and Adequacy Assessment of HSIIDC CETPs in Haryana	HSIIDC	1000000	Completed
8	**PI**	Continuous drain monitoring in Ganga Basin	CPCB	89,00,000	Completed
9	**PI**	Inspection of Grossly Pollution Industries (GPIs) discharging into main stem of Hindon and its tributaries	CPCB	74,64,450	Completed
10	**PI**	Inspection of Grossly Pollution Industries (GPIs) discharging into main stem of River Ganga and its tributaries	CPCB	49,64,450	Completed
11	**PI**	Performance Evaluation and Adequacy Assessment of Proposed Prayagraj Sewage project	UP Jal Nigam &NMCG	76,70,000	Completed
12	**PI**	Performance Evaluation and Adequacy Assessment of Proposed Mathura Sewage project	UP Jal Nigam &NMCG	35,40,000	Completed
13	**PI**	Performance Evaluation of Electrocoagulation based Sewage and wastewater treatment system and Adequacy Assessment Sewage Treatment Plants of various capacities	Uttarakhand Pey Jal Nigam & Confident Engg	36,00,000	Completed
14	**PI**	Investigations and Research in Air Purifier Technology using Ionization of Atmosphere	Omayur Technologies Pvt. Ltd.	8,85,000	Completed

15	**Co-PI**	Adequacy Assessment of 45 MGD Kondli sewage Treatment	Delhi Jal Board	11,50,000	Completed
16	**PI**	Environmental Inspection of Grossly Polluting Industries in Ganga Basin	CPCB	9,20,000	Completed
17	**PI**	Air Quality Monitoring of Saharanpur City under NAMP-II (2015-17)	UPPCB	14,56,000	Completed
18	**PI**	Air Quality Monitoring of Saharanpur City under NAMP-I (2012-2015)	UPPCB	17,94,000	Completed
19	**Co-PI**	Performance Evaluation of Lignin Recovery Process including Effluent Treatment System and its Impact in achieving discharge standards in Agro based Pulp and Paper Industry	CPCB	12,50,000	Completed

Member Academic and Administration Committees

1. Member, Financial Committee, NIT Delhi
2. Member, BOG, NIT Delhi
3. Member, Project Evaluation Committee, NECTAR
4. Member Board of Management, Gautam Buddh University, Greater Noida
5. Nominated Member 4th Senate NIT Delhi
6. Member Regulations drafting committee Haryana State Higher Education Council
7. Member QIP proposal Committee, AICTE
8. Member, Board of Studies, School of Social Sciences, JNU
9. Member on the Special Committee, School of Engineering, JNU
10. Member National Coordination Committee – Induction Programme AICTE
11. Member, Project Evaluation Committee, Jan Sampada Division, IGNCA
12. Member Board of Studies, Centre for Energy Studies, JC Bose University
13. Member Regional Committee National Open School, Regional Office Dehradun

Publications

1. Preetam, Amrita, Arindam Modak, Prashant Ram Jadhao, S. N. Naik, K. K. Pant, and Vivek Kumar. "A comprehensive study on the extraction of transition metals from waste random access memory using acetic acid as a chelating solvent." Journal of Environmental Chemical Engineering 10, no. 6 (2022): 108761.
2. Preetam, Amrita, Prashant Ram Jadhao, S. N. Naik, K. K. Pant, and Vivek Kumar. "Supercritical fluid technology-an eco-friendly approach for resource recovery from

e-waste and plastic waste: A review." Separation and Purification Technology 304 (2023): 122314.

3. Gupta, Akansha, Amrita Preetam, Pooja Ghosh, Kalpana Arora, Satyawati Sharma, Vivek Kumar, and Manish Kumar. "A novel combinatorial approach for cleaner production of biodegradable sheets from the combination of paddy straw and pine needle waste." Journal of Cleaner Production 421 (2023): 138440.
4. Preetam, Amrita, Uma Dwivedi, S. N. Naik, K. K. Pant, and Vivek Kumar. "A feasible approach for the treatment of waste computer casing plastic using subcritical to supercritical acetone: Statistical modelling and optimization." Journal of Environmental Management 345 (2023): 118549.
5. Agarwal, Nitin Kumar, Falguni Pattnaik, Madan Kumar, Komalkant Adlak, Pratishtha Kumari, Virendra Kumar Vijay, and Vivek Kumar. "Hydrothermal pretreatment of sugarcane bagasse pith for biogas production and digestate valorization to biochar." Industrial Crops and Products 202 (2023): 116973.
6. Agarwal, Nitin Kumar, Madan Kumar, Falguni Pattnaik, Pratishtha Kumari, Virendra Kumar Vijay, and Vivek Kumar. "Exploring the Valorization Potential of Sugarcane Bagasse Pith: a Review." *BioEnergy Research* 16, no. 3 (2023): 1280-1295.
7. Gupta, Asmita, Madan Kumar, Radha Sharma, Ritu Tripathi, Vivek Kumar, and Indu Shekhar Thakur. "Screening and characterization of bioflocculant isolated from thermotolerant Bacillus sp. ISTVK1 and its application in wastewater treatment." *Environmental Technology & Innovation* 30 (2023): 103135.
8. Kumar, Smita S., Amit Kumar, Sandeep K. Malyan, Pooja Ghosh, Madan Kumar, Rimika Kapoor, Ajay Kumar Agrawal, Sumit Kumar, Vivek Kumar, and Lakhveer Singh. "Landfill leachate valorization: A potential alternative to burden off resources and support energy systems." *Fuel* 331 (2023): 125911.
9. Preetam, Amrita, Snigdha Mishra, S. N. Naik, K. K. Pant, and Vivek Kumar. "A sustainable approach for material and metal recovery from E-waste using subcritical to supercritical methanol." *Waste Management* 145 (2022): 29-37.
10. Madhukar, Anand, Vivek Kumar, and Kavya Dashora. "Temperature and precipitation are adversely affecting wheat yield in India." *Journal of Water and Climate Change* 13, no. 4 (2022): 1631-1656.
11. Madhukar, Anand, Vivek Kumar, and Kavya Dashora. "Spatial analysis of temperature trends during Rabi and Kharif seasons in India." *Letters in Spatial and Resource Sciences* (2022): 1-17.
12. K. Adlak, R. Chandra, V. Kumar, K. K. Pant, V. K. Vijay. Life cycle assessment as a comparison tool for activated carbon preparations and biomethane storage for vehicular applications. Int J Energy Res. 2022; 1- 14. doi:10.1002/er.8403.
13. Dasgupta, Pinaki, Vivek Kumar, Anushree Malik, and Madan Kumar. "Wastewater Treatment Systems for City-Based Municipal Drains for Achieving Sustainability." *Circular Economy and Sustainability* (2022): 1-22.

14. Anand, A., Pathak, S., Kumar, V., & Kaushal, P. (2022). Biochar production from crop residues, its characterization and utilization for electricity generation in India. Journal of Cleaner Production, 133074. https://doi.org/10.1016/j.jclepro.2022.133074
15. Anand, A., Kumar, V.,& Kaushal, P. (2022). Biochar and its twin benefits: Crop residue management and climate change mitigation in India. Renewable and Sustainable Energy Reviews, 156, 111959. https://doi.org/10.1016/j.rser.2021.111959
16. Morya, Raj, Madan Kumar, Isha Tyagi, Ashutosh Kumar Pandey, Jungsu Park, Tirath Raj, Ranjna Sirohi, Vivek Kumar, and Sang-Hyoun Kim. "Recent advances in black liquor valorization." Bioresource technology (2022): 126916.
17. Anand, A.,Sakhiya, A. K., Aier, I., Kakati, U., Kumar, V.,& Kaushal, P. (2022). Assessment of electricity generation potential from biochar in Northern India. Energy and Climate Change, 3, 100068. https://doi.org/10.1016/j.egycc.2021.100068
18. Nitin Kumar Agarwal, Madan Kumar, Pooja Ghosh, Smita S. Kumar, Lakhveer Singh, Virendra Kumar Vijay, Vivek Kumar. Anaerobic digestion of Sugarcane bagasse for biogas production and digestate valorization. Chemosphere, 295 (2022)doi:10.1016/j.chemosphere.2022.133893.
19. Pinaki Dasgupta, Vivek Kumar, Anushree Malik, Madan Kumar, Wastewater Treatment Systems for City-based Municipal Drains for achieving Sustainability. Circular Economy and Sustainability. Doie:10:1007/s43615-022-00163-z
20. Falguni Pattnaik, Sonil Nanda, Vivek Kumar, Satyanarayan Naik, Ajay K. Dalai. Isolation of cellulose fibers from wetland reed grass through an integrated subcritical water hydrolysis-pulping-bleaching process. Fuel. (2022) 1;311:122618. https://doi.org/10.1016/j.fuel.2021.122618
21. Monalisa Sahoo, Sushree Titikshya, Pramod Aradwad, Vivek Kumar, S.N. Naik. Study of the drying behaviour and color kinetics of convective drying of yam (Dioscoreahispida) slices. Industrial Crops and Products. (2022) 1;176:114258. https://doi.org/10.1016/j.indcrop.2021.114258
22. Falguni Pattnaik, Sonil Nanda, Shobhangam Mohanty, Ajay K. Dalai, Vivek Kumar, Senthil Kumar Ponnusamy, Satyanarayan Naik. Cannabis: Chemistry, extraction and therapeutic applications. Chemosphere. (2022) 1; 289:133012. https://doi.org/10.1016/j.chemosphere.2021.133012
23. Kumar, Vivek, Pratishtha Kumari, Pooja Yadav, and Madan Kumar. "Ancient to contemporary—The saga of Indian handloom sector." (2021).
24. Pooja Yadav, Ramin Farnood, Vivek Kumar. HMO-incorporated electrospun nanofiber recyclable membranes: Characterization and adsorptive performance for Pb (II) and As (V). Journal of Environmental Chemical Engineering. 2021 1;9(6):106507.https://doi.org/10.1016/j.jece.2021.106507.
25. Madhukar, Anand, Kavya Dashora, and Vivek Kumar. "Climate trends in temperature and water variables during wheat growing season and impact on yield." *Environmental Processes* 8, no. 3 (2021): 1047-1072.

26. Morya, Raj, Madan Kumar, Vivek Kumar, and Indu Shekhar Thakur. "Biovalorization of lignin derived compounds with molasses as co-substrate for polyhydroxyalkanoate production." *Environmental Technology & Innovation* 23 (2021): 101695.
27. Madhukar, Anand, Kavya Dashora, and Vivek Kumar. "Investigating historical climatic impacts on wheat yield in India using a statistical modeling approach." *Modeling Earth Systems and Environment* 7, no. 2 (2021): 1019-1027.
28. Falguni Pattnaik, Shreya Tripathi, Biswa R. Patra, Sonil Nanda, Vivek Kumar, Ajay K. Dalai, Satyanarayan Naik. Catalytic conversion of lignocellulosic polysaccharides to commodity biochemicals: a review. Environmental Chemistry Letters. (2021)19(6):4119-36. https://doi.org/10.1007/s10311-021-01284-x
29. Falguni Pattnaik, Sonil Nanda, Vivek Kumar, Satyanarayan Naik, Ajay K. Dalai. Subcritical water hydrolysis of Phragmites for sugar extraction and catalytic conversion to platform chemicals. Biomass and Bioenergy. (2021) 1;145:105965. https://doi.org/10.1016/j.biombioe.2021.105965.
30. Yadav, Pooja, Ramin Farnood, and Vivek Kumar. "HMO-incorporated electrospun nanofiber recyclable membranes: Characterization and adsorptive performance for Pb (II) and As (V)." *Journal of Environmental Chemical Engineering* 9, no. 6 (2021): 106507.
31. Pooja Yadav, Ramin Farnood, Vivek Kumar, Superhydrophobic modification of electrospun nanofibrous Si@PVDF membranes for desalination application in vacuum membrane distillation. 287,(2), 2021, doi.org/10.1016/j.chemosphere.2021.132092
32. Gaurav Tomar, Ajay Singh Nagpure, Vivek Kumar, Yash Jain. High resolution vehicular exhaust and non-exhaust emission analysis of urban-rural district of India, Science of The Total Environment (2021), doi.org/10.1016/j.scitotenv.2021.150255.
33. Shashank Saini, Ashish A. Kadam, Vivek Kumar, Kirtiraj K. Gaikwad, Surendra Pratap Singh, Dharm Dutt**.** Conversion of rice straw into disposable food-serving bowl via refiner mechanical pulping: an environmentally benign approach to mitigate stubble burning and plastic pollution.Biomass Conversion and Biorefinery (2021) DOI: 10.1007/s13399-021-01728-y
34. Sachin Krushna Bhujbal, Madan Kumar, Virendra Kumar Vijay, Vivek Kumar, Pooja Ghosh. Potential of termite gut microbiota for biomethanation of lignocellulosic wastes: Current status and future perspective. Rev Environ Sci Biotechnol (2021) 20:419–438
35. Smita S. Kumar, Pooja Ghosh, Navish Kataria, Deepak Kumar, Sveta Thakur, Deepak Pathania, Vivek Kumar, Mohd Nasrullah, Lakhveer Singh. The Role of Conductive Nanoparticles in Anaerobic Digestion: Mechanism, Current Status and Future Perspectives. Chemosphere 280(2021):13601
36. Prabhat Vashistha, S. K. Singh, DharmDutt, Vivek Kumar, Sustainable Utilization of Paper-Industry Lime Sludge through Development of Metakaolinite-Based Cementitious Binder. (2021), Journal of Materials in Civil Engineering 33(3)

37. Anand Madhukar, Kavya Dashora and Vivek Kumar. Spatial Analysis of Yield Trends and Impact of Temperature for Wheat Crop Across Indian Districts. International Journal of Plant Production 15, 325–335, 2021.
38. Sonkar M., Kumar M., Dutt D., Kumar V., 2019.Treatment of pulp and paper mill effluent by a novelbacteriumBacillussp. IITRDVM-5 through a sequential batch process.Biocatal. Agric. Biotechnol., 20,101232.doi.org/10.1016/j.bcab.2019.101232.
39. Sonkar, M., Kumar, V., Dutt, D., 2020. Use of paper mill sludge and sewage sludge powder as nitrogen andphosphorus sources with bacterialconsortiumfor the treatment of paper industry wastewater. Biocatal.Agric. Biotechnol., 101843. https://doi.org/10.1016/j.bcab.2020.101843.
40. Madhukar, Anand, Vivek Kumar, and Kavya Dashora. "Spatial and temporal trends in the yields of three major crops: wheat, rice and maize in India." *International Journal of Plant Production* 14, no. 2 (2020): 187-207.
41. Sonkar M., Kumar, V., Dutt, D., A novel sequence batch treatment of wastewater using Bacillussp.IITRDVM-5 mixing with paper mill and sewage sludge powders, Environmental Technology &Innovation., 21, (2019): 101288. https://doi.org/10.1016/j.eti.2020.101288
42. Anand Madhukar, Kavya Dashora, Vivek Kumar, investigating historical climatic impacts on wheat yield in India using a statistical modeling approach, *Modeling Earth Systems and Environment,* (33)7, 1019–1027, 2021
43. Nitin Verma and Vivek Kumar, Impact of process parameters and plant polysaccharide hydrolysates in cellulase production by Trichoderma reesei and Neurospora crassa under wheat bran based solid state fermentation, Biotechnology Reports 25(2020)
44. Rimika Kapoor, Pooja Ghosh, Madan Kumar, Subhanjan Sengupta, Asmita Gupta, Smita S. Kumar, Vandit Vijay, Vivek Kumar, Vijay Virendra Kumar, Deepak Pant, Valorization of agricultural waste for biogas based circular economy in India: A Research Outlook, *Bioresource Technology,* 2020 (304)
45. Pooja Ghosh, Madan Kumar, Rimika Kapoor, Smita S Kumar, Lakhveer Singh, Vandit Vijay, V. Kumar Vijay, Vivek Kumar, I Shekhar Thakur, Enhanced biogas production from municipal solid waste via co-digestion with sewage sludge and metabolic pathway analysis, *Bioresource Technology,* 2020 (296)
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50. Singh, V. P, Kumar Vivek, Kumar Deepak, "Numerical Solution of diffusion model of Brown Stock washing beds of finite length Using MATLAB" Proceeding of "Second UKSIM European Symposium on Computer Modeling and Simulation, IEEE Digital Library pp. 295-300, (Sept.) 2008

51. Kumar Deepak, Kumar Vivek, Singh, V. P., “Numerical Solution of Brown Stock Washer Problems in Paper Industry” 11th Punjab Science Congress, held at Thapar University, Patiala, Feb 07-09, 2008.
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54. R. B. Ram, Sudheer Kumar Shukla, Vivek Kumar, M.C. Bansal, andDharmDatt "Application of water pinch technology for minimization of fresh water consumption and waste water generation in Indian paper industry" presented at the "International Convention on Water Resources Developments and Management (ICWRDM-2008) held on 23-26 October, 2008" at BITS, Pilani, Rajasthan (India).
55. Ajay SinghNagpure, Sudheer Kumar Shukla, Sunisha Baby , Preeti Shrivastava, Deepali Singh “Impact of Cement Industry on Plant Vegetation - A case Study” presented in International Conference on Air Pollution Control-Challenges and Technological Solutions (ICAPC-2008) January 24-25, 2008 NEERI, Nagpur.
56. Nitin Verma,Vivek Kumar, M.C.Bansal., Regulatory Aspects of Industrially Important Cellulases:A review, 2nd International conference on trends in cellular and molecular biology, held on Jan 5-7,2008,held at School of Life Sciences, JNU, New Delhi, India.
57. Nitin Verma, M.C. Bansal, Vivek Kumar., Growth Studies of Trichoderma reesei with Different Sugar Treatments in Submerged Fermentation, IUPAC sponsored 1st International conference on agriculture protecting crop, health and natural environment, held on Jan 8-11,2008 at IARI, New Delhi.
58. Nitin Verma, Vivek Kumar, M.C.Bansal, S.K.Mandal, Fungal Production of Pectinase by Fermentation using Agricultural Waste, IUPAC sponsored 1st International conference on agriculture protecting crop, health and natural environment, held on Jan 8-11,2008 at IARI, New Delhi.
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60. R. Malkapuram, V. Kumar and Y.S. Negi, Effect of Fiber Pretreatment on the Performance of Pine Needle Fiber Reinforced Polypropylene Composites; Poster Presentation Asian Polymer Association, Int. Conf. POLY-08” January 28th – 31st, 2008, IIT Delhi, India.

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62. Sudheer Kumar Shukla, Vivek Kumar and M.C. Bansal, "Performance Assessment of Membranes for the Closure of E- Stage Bleaching Plant Effluent" proceedings of 23rd annual convention of chemical engineers on recent trends in chemical engineering, at Department of Chemical Engineering, IIT Roorkee, Oct 5-7, 2007, p.321-331.
63. Majani Das, Vivek Kumar, A.K. Ray -A Statistical approach to evaluate the potential of Pine Needles for pulp production-ibid, pp-312-320.
64. Vikas Kumar Agarwal, A.K. Ray, Vivek Kumar, A statistical approach to evaluate the potential of Lantana plant for pulp production, ibid, pp. 332-339.
65. Vikas K. Agarwal, A. K. Ray and Vivek Kumar-"Comparative study of cationic starch and Guar Gum along with AKD Sizing" National Conference in Chemical engineering & Technology (ACET 07) held between 26-27 March, 2007, Sant Longowal Institute of Engineering & Technology, Longowal, Sangrur, Punjab, India pp 244-248
66. Tripathi Prerana, Pandey Mukesh, Dubey Amit, Misra Shiv Mangal, Vivek Kumar, Treatment Of Municipal Sewage By The Combination Of Anaerobic And Facultative Treatment Process–A Case Study, Accepted in International conference on Environment Engineering, 21-24 September, 2006, IASI, Roamania.
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68. Sudheer Kumar Shukla, Vivek Kumar and M.C. Bansal "Clean Development Mechanism Opportunity in Indian Pulp and Paper Industry" in Annual session of AEB and National Seminar on Environmental Scenario: Challenges and Solution Organized by School of Environmental Biology, APSU, Rewa and The Academy of Environmental Biology, Lucknow held on 23 -25 Dec.2006
69. Bansal MC and Vivek Kumar, Incineration of Municipal Solid Waste: processes and problems, procc. of National workshop on solid waste management, JIET, Radaur, March 2005.
70. Vivek Kumar and A.K Ray, Recycling Approach in Small Pulp and Paper Industry: Viable Option for Environmental Challenges. National Seminar on Pollution in Urban and Industrial Environment. Dec 2-3, 2004. RRL Bhubaneswar.
71. M.K Mohanty, Vivek Kumar, VPS Sorayan and S.N Naik, Experimental Studies on Anaerobic Digestion of Stable Waste. International Seminar on Downsizing Technology for Rural Development. Oct 7-9, 2003. RRL Bhubaneswar.

72. S.G. Deshmukh, Vivek Agarwal, V.K. Vijay and A.K Pant, Some Reflections on E-Governance and the India Democracy, International Conference on "E-Governance" in Dec 2003 at IIT Delhi
73. Vivek Kumar and R.C. Maheshwari, Handmade Papermaking in India: A Sustainable Production System, Shaping the Future – Project EXPO 2000, 11-13 July, Germany
74. Vivek Kumar and R.C.Maheshwari, Improving Treatment Efficiency of Pulp and Paper Mill Effluent by Using Low Cost Adsorbents in Aerobic Treatment Systems, Conference on Industry & Environment, Karad, INDIA 27-29 Dec. 1999

Chapter in Books (Co-Authored)

1. Sahoo, M., Titikshya, S., Aradwad, P., Kumar, V., & Naik, S. N. (2022). Blanching, Pasteurization and Sterilization: Principles and Applications. Thermal Food Engineering Operations, ch.3, 75-116. Nitin Kumar, Anil Panghal and M. K. Garg (eds.), Scrivener Publishing LLC.
2. Sahoo, M., Panigrahi, C., Aradwad, P., Kumar, V., & Naik, S. N. (2022). Irradiation of Food. Novel Technologies in Food Science, ch.09, 333-374. NavnidhiChhikara, Anil Panghal and Gaurav Chaudhary (eds.), Scrivener Publishing LLC.
3. Sahoo, M., Aradwad, P., Sanwal, N., Sahu, J.K., Kumar, V., & Naik, S. N. (2022). Fermented Foods in Health and Disease Prevention. Microbes in the Food Industry, ch.02, 39-86. Navnidhi Chhikara, Anil Panghal and Gaurav Chaudhary (eds.), Scrivener Publishing LLC.
4. Gupta, A., Kumar, M., Kumar, V. and Thakur, I.S., 2022. Hydrogen production and carbon sequestration for biofuels and biomaterials. In Biomass, Biofuels, Biochemicals (pp. 231-252). Elsevier.
5. Titikshya, S., Sahoo, M., Kumar, V. and Naik, S.N., 2022. Microbial Inactivation with Heat Treatments. Thermal Food Engineering Operations, pp.45-74.
6. Kumar, M., Morya, R., Gupta, A., Kumar, V. and Thakur, I.S., 2021. Bacterial-Mediated Depolymerization and Degradation of Lignin. In Environmental Microbiology and Biotechnology (pp. 83-103). Springer, Singapore.
7. Bioelectroremediation technologies in remediation of environmental pollutants: challenges and future prospects in a book Bioremediation for Environmental Sustainability: Approaches to Tackle Pollution for Cleaner and Greener Society by Elsevier, 2020
8. Electroanalytical Techniques for Investigating Biofilms in Microbial Fuel Cells', in a book on 'Bio -electrochemical Interface Engineering' by Wiley. 2018
9. Recent Advancement on Bioaugmentation Strategies for Process Industry Wastewater (PIWW) Treatment in the book "Water Remediation" Springer Publication 2017
10. State of the Art of Algal Biofuel Production Processes Using Wastewater in the book "Algal Biofuels: Recent Advances and Future Prospects" Springer Publication 2016

11. Recycling of Regenerated Wastewater in the Process using Water Cascade Analysis in Pulp and Paper Mills (pp.209/24),in Book, Recycling:Technological Systems, Management Practices and Environmental Impact, Nova Science Publication 2013.

Reports (Co-Authored)

1. Preparation of Annual report of year 2019-20, 20-21 and 21-22 for National Commission for Scheduled Tribes.
2. Rapid assessment of industrial pollution of the River Ganges in Uttarakhand, GIZ, New Delhi.
3. Technoeconomic feasibility of implementation of 'Zero Liquid Discharge' in Pulp & Pape r Mills operating in Ganga River Basin" published by CPCB.
4. Techno-economic Feasibility for Report Setting up of Common Chemical Recovery Plant (CCRP) & Common Effluent Treatment Plant (CETP) for Pulp & Paper Industries Operating in Identified Clusters in Uttar Pradesh & Uttarakhand, CPCB, New Delhi.
5. Performance Evaluation of Lignin Recovery Process including Effluent Treatment System and its Impact in achieving discharge standards in Agro based Pulp and Paper Industry, CPCB, New Delhi.
6. Pulp And Paper Industries in Ganga River Basin: Water Recycling And Pollution Prevention-GBRMP report.

Special Lectures

1. Invited lecture on "Alternative Approaches for Environmental Management in Industry: Case study of Ganga Basin P&P sector" in iLEAPS World Environment Day 2022: A South Asian Perspective on 5th June 2022.
2. Invited talk on "Wastewater Treatment and Reuse with Special Context of Rural Areas of Asian and African Countries" under CEP-AARDO pogramme 09th February 2022.
3. Invited for "Alignment and Awareness event for Publicity of Department of Scientific and Industrial Research - Promoting Innovations in Individuals, Start-ups and MSMEs (DSIR-PRISM)" in association with Unnat Bharat Abhiyan (UBA), Ministry of Education; Rural Technology Action Group (RuTAG), IIT Delhi; and Smart Indian Hackathon (SIH), Ministry of Education on March 30, 2021.
4. TEQIP-III lecture on "Biomass valorization and its life cycle assessment" on 3rd December 2020.
5. Special Lecture in 2 day National Workshop on 21st and 22nd January, 2020 at Inter-University Accelerator Centre (IUAC), organized by UGC.

6. Plenary Lecture on “Framework for Sustainability Analysis of Water Resource Management” in National Workshop on Ecosystem Adaptations of River Basins during at GGSIP University Delhi, March 4-5, 2020.
7. Plenary lecture on “ZLD Concept in Process Industries” in Workshop On “Increasing Water Use Efficiency in Industries” Organised by National Water Mission 5th March 2020
8. Technical Lecture on Prospects of Electro Coagulation for sewage treatment”inAll India Seminar on "Opportunities and Challenges in Water Supply and Sewerage System organized by Indian Water Works Association "October 13, 2019, Dehradun
9. Invited Lecture on “Ecological Perspective & Growth” in FDP course -Technical challenges and solutions for resource limited communities organized during 16th January 2020, ARSD College, Delhi University.
10. Invited Lecture in the RSC-DCPPAI Training Programme on Management of Air Pollution in Pulp & Paper Industry in NCBM, Ballabhgarh on 7th February 2019, organized by CPPRI
11. Invited Lecture on Ecological Prospective of Growth in One Week Faculty Development Programmeon SustainableDevelopment organized by ARSD College, Delhi University from 15-22 October 2018
12. Invited Lecture on “Role of certification in organic agriculture for export agri-business” in TEQUIP III +CEP Programme Agribusiness Planning and project appraisal techniques, organized during 03rd -08th December 2018, IIT Delhi
13. Invited Lecture on “Certification of organic crops” in TEQUIP III +CEP Programme Low Cost Technology Development for Physical Pest Management, organized during 13-17 October 2018, IIT Delhi- Sonipat Campus
14. Invited Lecture on “Ecological Perspective & Growth” in GIAN course -Technical challenges and solutions for resource limited communities organized during 14-19September 2018, IIT Delhi
15. Invited Lecture on “Water and sanitation solutions for rural communities” in GIAN course -Technical challenges and solutions for resource limited communities organized during 14-19 September 2018, IIT Delhi
16. Invited Lecture on “Sustainability Analysis of Renewable Energy Projects” in One Week Faculty Development Programmeon Ethics of Sustainable Technologies in Energy and Environment organized by Galgotia College of Engineering and Technology, NOIDA from 7-11 May 2018

17. Invited Lecture on “Unnat Bharat Abhiyan and inclusive Technical Education” in One Week Faculty Development Programme on Ethics of Sustainable Technologies in Energy and Environment organized by Galgotia College of Engineering and Technology, NOIDA from 7-11 May 2018
18. Plenary Lecture in 3rd National Conference on Pulp and Paper :Understanding the Trade-offs in Water& Wastewater Management for taking informed decisions, organised by CII, 29th June, 2018 Hotel Leela Palace, New Delhi
19. Special Lecture on“Ecological Perspective of Growth”in Faculty Development Programme on Sustainable Development, 15-22 October 2018, Atma Ram Sanatan Dharma College, University of Delhi
20. Invited Lecture in ODF & SLWM (Uttarakhand) workshop in Dehradun, 17-18 April 2018.
21. Plenary Lecture in for National Consultative Workshop on Solid and Liquid Resource Management (SLRM), Ministry of Drinking Water and Sanitation, New Delhi 22-23 Feb, 2018.
22. Special lecture on Exploring the Alternative Approaches for Wastewater Management in Indian Pulp and Paper Industry in one day workshop National Conference on Moving Towards Making Pulp and Paper Sector Water Secure and Sustainable, organised by CII on 23rd June 2017 at Hotel Shangri La, New Delhi
23. Invited Speaker at International Workshop on “Making Smart, Sustainable and Healthy Cities: Learning’s from US, China and India” organized by University of Minnesota and ICLEI-SA at 11-12 Jan 2016, New Delhi
24. Special lecture on Emerging trends in wastewater treatment in paper industry in one day workshop National Conference on “Innovative Water Management strategies towards Enhancing Competitiveness of the Pulp and Paper Industry, organised by CII on 10th June 2016 at Hotel Shangri La, New Delhi
25. Special lecture on Advances in Biological treatment- Recent trends in Pulp and Paper industry on 10th Feb 2015, in CPPRI
26. Special lecture on Advances in Wastewater treatment- AOP and Green Systems” on 29th June 2015, in CPPRI
27. Invited speaker in World Expo 2000 Hannover, GERMANY for deliberation on Handmade Paper making in India

Expert Members in Committees

1. Advisory Groups for consultation on new Central Sector Scheme ‘MERITE’-reg.

2. Chairman of the appraisal committee NECTAR for the project, "Improving Sustainability of Traditional Terracotta and Pottery Business in Asharikandi" approved under SEED Division of Department of Science and Technology, Govt. of India.
3. External expert member in CSIR-NIScPR interview committee for in-house/OLP projects.
4. Member, to review Proposal under the Common Research & Technology Development Hubs (CRTDHs) Programme of DSIR.
5. Member, of the Expert-Committee for Revision of formula for the Treatment Charges of effluent at CETP.
6. Member NDWG and UN initiative for developing LCA data base in India.
7. Member, Study Group V (Water and Sewerage, Solid Waste Management, Drainage & Irrigation), National Capital Region Planning Board
8. Member, Common Review Mission, Ministry of Rural Development (MoRD) [constituted for the review of Rural Development schemes in eight state].
9. Member, Committee of Ministry of Drinking Water and Sanitation for Manual preparation for Rural Liquid Waste Management
10. Member expert committee constituted by CPCB, Delhi, for the Charter preparation for Textile Industry
11. Member Project Review Committee Jan Sampada Divison, Indira Gandhi National Centre for Arts (IGNCA).
12. Member expert committee constituted by CPCB, Delhi, to explore and assess the techno-economic feasibility of implementation of 'Zero Liquid Discharge' in Pulp & Paper Mills operating in Ganga River Basin
13. Member, Charter Compliance Committee constituted for implementation of charter for pollution prevention in the Paper mill clusters in the Ganga Basin.
14. Member, Expert group on Pollution Prevention of Indian Paper Makers Association (IPMA)
15. Member Committee constituted by West Bengal Pollution Control Board "To evaluate and validate the individual action plans of the pulp & paper mills operating in Ganga River Basin States for implementation of the Charter for Water Recycling & Pollution Prevention in Pulp & Paper Industries
16. Member Committee constituted byUttarakhand Pollution Control Board to evaluate a ndvalidate the individual action plans of the pulp & paper mills operating in Ganga River Basin States for implementation of the 'Charter for Water

Recycling &Pollution Prevention in Pulp & Paper Industries

17. Member Course Design Committee Atal Bihari Vajpayee Hindi Vishwa Vidhyalaya, Bhopal.
18. Member, Monitoring Committee of CPCB for pulp and paper industries of Kashipur, Mooradabd, Muzaffaranagar, and Meerut.

Award and Honors

- Elected International Director of Bio-Forest Product Division of American Institute of Chemical Engineers (AIChE) for three years from 2014-2017.
- Invited Speaker at International Workshop on "Making Smart, Sustainable and Healthy Cities: Learning's from US, China and India" organized by University of Minnesota and ICLEI-SA at 11-12 Jan 2016, New Delhi

International and National Collaboration

- Cranfield University, UK
- Queensland University, UK
- University of Nottingham, UK
- University of Minnesota, USA
- University of Toronto, Canada
- ETH Zurich, Switzerland
- University of Yonsei, South Korea
- CIPET, Hyderabad, India
- Central Building Research Institute, Roorkee, India
- IIP Dehradun, India
- VSI, Pune
- IIT Bombay
- CPPRI

Workshop and Conferences organized

- Organised Environmental Segment of IISF 2020, 22-25 Nov 2021
- Co-organised Water Segment of IISF 2020, 22-25 Dec 2020.
- Organized Three Days Workshop on Technology Outreach as an Enabler for Inclusive & Sustainable Development – Tech4Seva, August 2019
- Organized National Consultation Workshop on Rural Liquid Waste Management Programme' on 29th January 2018. Supported by Ministry of Drinking Water and Sanitation.

- Organized National Consultation Workshop on Rural Solid Waste Management Programme' on 29th January 2018. Supported by Ministry of Drinking Water and Sanitation.
- Conducted and interactive and exploratory tour "Srijan" for approximately 120 artisans Madhya Pradesh to Uttar Pradesh. Supported by MP Council of Science & Technology 2007.
- Organized a National workshop from 14th – 18th May 2008 "Scientific Management of Natural Resources for Sustainable Development.
- Organized 7th Round Table of NCRI 20th Sep 2008 at IIT Roorkee Saharanpur Campus

Activities under Unnat Bharat Abhiyan (UBA)

- Co-PI of the Project
- Overall Coordinator of Subject Expert group
- Coordinator Subject Expert Group on Liquid and Solid Waste Management
- Faculty In charge Gaindikhata Cluster
- Organizing Secretary Tech4Seva
- Key Resource person for Orientation Workshops
- Organized two specific workshops on Education and Artisans under
- Pre-CoP Meeting on 30th October 2017

Administrative Experience

(I) Academic and Research

IIT Delhi

- Faculty Incharge, Gramodaya Parisar (Micro Model), CRDT, IIT Delhi
- Faculty coordinator for Rural Internship Programme

IIT Roorkee

- Member course revision of B. Tech.(P&P) and M. Tech.(P&P) course curriculum.
- Member Committee for designing of new course curriculum of five years IDD programmeB.Tech (Process Engineering) with MBA in Saharanpur Campus, IIT Rookee
- Member Departmental Academic Committee since 2010, IIT Roorkee Saharanpur Campus
- Member Departmental Research Committee from 2007-2010, IIT Roorkee Saharanpur Campus
- Member Institutes Board of Studies (Institute) 2006-08
- Member FIST level –II project committee for the Department of Paper Technology (Received grant of Rs. 3.5 crore from DST).

- Chairman vision document committee of the department for next 20 years and prepared a blue print for the department's research activities.
- Member of Centre of Transportation, IIT Roorkee
- Professor Incharge Paper Lab for eight years and carried out complete upgradation of Lab under process; procuring equipment worth approx.350 lakhs, Department of Paper Technology

(II) **Institute Level and Student's Activities**

IIT Delhi

- Head (2023-2025), CRDT, IIT Delhi
- Chairman, JEE (Advanced) 2023, IIT Delhi
- Vice Chairman, JEE (Advanced) 2022, IIT Delhi
- Warden Jwalamukhi (2018-2022)

IIT Roorkee

- Professor Incharge Computer Centre and Networking Facilities of Saharanpur Campus for five years and major achievement were:
  - Upgradation of Computer center with a budget allocation of Approx. 180 lakhs.
  - Getting NKN network in Saharanpur Campus, IIT Roorkee, now has both the campus connected with NKN
- Warden, Malviya Bhawan, IIT Roorkee from 2009-2012
- Advisor student chapter of Alumni cell
- Faculty Advisor, SPIC-MACAY, Saharanpur Campus
- Conceptualized first annual cultural festival at Saharanpur campus of IIT Roorkee in 2007
- Faculty Advisor Annual Cultural Festival IIT Rroorkee Saharanpur Campus RAVE 07 & 09-
- Department Faculty Advisor for IIT Rroorkee Annual Technical Festival COGNIZENCE 06, 07 & 08

Membership/Association with other organization

- Member AIChE
- Member IPPTA

Special Achievement

- Elected International Director of Bio-Forest Product Division of American Institute of Chemical Engineers (AIChE) for three years from 2014-2017.
- Selected for DST sponsored two weeks workshop on "Leadership reforms for rural and Urban Management" in South Africa and Egypt, Dec 2003.

Countries Travelled

USA, Canada, UK, Germany, South Africa, Egypt, France, Singapore, UAE, Austria