

EDUCATION

- Ph.D., Civil Engineering, GPA (9.0/10.0)
IIT Delhi, Delhi, India (Jul 2011 – Sep 2016)
Dissertation: Hazard Rating of Municipal Solid Waste (MSW) Dumps Considering Potential for Contamination of Air, Surface Water and Groundwater
Advisor: Prof. Manoj Datta, Prof. A. K. Nema and Dr. R. K. Singh
- M.S., Environmental Engineering, GPA (3.844/4.000)
University of Central Florida, Orlando, FL, USA (Aug 2005 – Dec 2007)
Advisor: Prof. Debra Reinhart
- M. Tech., Environmental Engineering & Management, GPA (7.98/10.00)
IIT Delhi, Delhi, India (Jul 2003 – Jun 2005)
Advisor: Prof. A. K. Nema
- B. E., Civil Engineering, (69.72%)
Punjab Engineering College (PEC), Chandigarh, India (Aug 1999 – Jun 2003)

PROFESSIONAL EXPERIENCE

- 03/2019 – Present *Assistant Professor*, MNIT Jaipur, Jaipur, India
Teaching and Research
- 01/2018 – 03/2019 *Assistant Professor*, NIT Jalandhar, Jalandhar, India
Teaching and Research
- 07/2016 – 12/2017 *National Post-Doctoral Fellow*, IIT Roorkee, Roorkee, India
Research on waste dumps/landfills and coordinating project activities
- 04/2016 – 07/2016 *Project Scientist*, IIT DELHI, Delhi, India
Research on waste dumps/landfills and coordinating project activities
- 01/2013 – 03/2016 *Project Associate*, IIT DELHI, Delhi, India
Research on waste dumps/landfills and coordinating project activities
- 08/2011 – 01/2013 *Assistant Professor*, AMITY UNIVERSITY, Noida, UP, India
Teaching with potential of direct application drawing on his own experience from industry and Departmental Coordinator for Newsletter & International Collaborations
- 07/2010 – 08/2011 *Assistant Manager*, HSCC INDIA LTD., Noida, UP, India
Prepared BOQ, Estimate and tender documents for design of Public Health Engineering aspects for hospitals complexes in India; Supervised a team of engineers & draughtsman
- 03/2010 – 07/2010 *Design Engineer*, MEINHARDT SINGAPORE PTE. LTD., Noida, UP, India
Design of sewerage system and storm water drainage system for various cities in India
- 10/2007 – 03/2009 *Associate Civil Engineer*, MWH GLOBAL, Cape Coral, FL, USA
Process Design & Project Management; Prepared feasibility reports and analyzed Process Control; Facilitated effective communication between MWH, sub-contractor and other stakeholders.
- 08/2005 – 09/2007 *Research Assistant*, UNIV. OF CENTRAL FLORIDA, Orlando FL, USA

Performed research on Bioreactor Landfills; Analyzed relation between moisture content and temperature in a full scale bio-reactor landfill

PUBLICATIONS

Journal Publications

1. Rana, Shubham, Kumar, A., Kumar, N., Jat, Mahesh Kumar. (2023), "A review of nitrogen flow in the anthroposphere to identify key control sectors", Clean Technologies and Environmental Policy. Vol 25. (*Accepted for publication*).
2. Chaudhary, S., Rana, S., Singh, R., Gurian, P., Betancourt, W, Kumar, Arun, Kumar, Amit. (2023). Non-potable water reuse and the public health risks from protozoa and helminths: case study from a city with a semi-arid climate. Journal of Water & Health. Vol 21 No 8, 981 doi: 10.2166/wh.2023.283
3. Jain, M., Kumar, A., Kumar, A. (2022). Landfill mining: A review on Material recovery and its Utilization challenges. Process Safety and Environmental Protection. Vol. 169, Pages 948-958. DOI: <https://doi.org/10.1016/j.psep.2022.11.049> (IF: 7.9)
4. Chowdhari, S., Rana, S., Rana, S., Morrison, C., Abney, S., Singh, R., Gurian, P., Kumar, Amit, Kumar, Arun, Betancourt, W., and Perumal V. (2022). Quantitative assessment of microbial pathogens and indicators of wastewater treatment performance for safe and sustainable water reuse in India. Microbiology Spectrum. 10(6), e01720-22. DOI: <https://doi.org/10.1128/spectrum.01720-22>
5. Rana, S., Kumar, A., Arora, H. (2022). Nitrogen flow through waste management systems in an academic campus. Vol. 57, Issue 4, Pg 1938-1943. Material Today Proceedings. <https://doi.org/10.1016/j.matpr.2022.03.046>
6. Gupta, M., Kumar, A., Kumar, S., Jat, M. K. (2021). Substance flow analysis of lead and chromium through wastewater management system in a region. Bulgarian Chemical Communications, Volume 53, Issue D. Pg 32-39. http://www.bcc.bas.bg/BCC_Volumes/Volume_53_Special_D_2021/bcc-53-d-2021-32-39-kumar.pdf
7. Gupta, M., Kumar, A., Kumar, S. (2021). Review of lead flows in the anthropogenic environment. Bulgarian Chemical Communications, Volume 53, Issue D. Pg 5-10. http://www.bcc.bas.bg/BCC_Volumes/Volume_53_Special_D_2021/bcc-53-d-2021-05-10-kumar.pdf
8. Kumar, A., & Jat, M. K. (2021). Wind energy in India - Waste generation and end-of-life management for sustainability. Shelter. Vol. 22 (1). Pg 13-19. ISSN 2347-4912
9. Katiyar, R., Gurjar, B. R., **Kumar, A.**, Bharti, R. (2021). An Integrated Approach for Phycoremediation of Municipal Wastewater and Production of Sustainable Transportation Fuel Using Oleaginous Chlorella sp. Journal of Water Process Engineering. Volume 42, 102183. <https://doi.org/10.1016/j.jwpe.2021.102183>.
10. Ghanimeh, S., Gómez-Sanabria, A., Tsydenova, N., Štrbová, A., Iossifidou, M., **Kumar, A.** (2019). Two-Level Comparison of Waste Management Systems in Low-, Middle- and High-Income Cities. Environmental Engineering Science. DOI: 10.1089/ees.2019.0047. (IF – 1.61).
11. **Kumar, A.**, Datta, M., Nema, A. K. Singh, R. K. and Gurjar, B. (2019). Response of Groundwater Contamination Hazard Rating Systems to Variations in Subsoil Conditions beneath Municipal Solid Waste (MSW) Dumps in Developing Countries. Arabian Journal of Geosciences. 12, Pg 405-. DOI: 10.1007/s12517-019-4560-4. (IF – 1.327).

12. Katiyar, R., Gurjar, B. R., **Kumar, A.**, Bharti, R. K., Biswas, S., Pruthi, V. (2019). A novel approach using Low Cost Citrus limetta Waste for Mixotrophic Cultivation of Oleaginous Microalgae to Augment Automotive Quality Biodiesel Production. *Environmental Science and Pollution Research*. 26 (16). pp 16115–16124. DOI: 10.1007/s11356-019-04946-0. (IF: 3.056)
13. **Kumar, A.**, and Gurjar, B. (2019). Low-Cost Sensors for Air Quality Monitoring in Developing Countries – A Critical View. *Asian Journal of Water, Environment and Pollution*, 16 (2), pp. 65–70. DOI 10.3233/AJW190021.
14. **Kumar, A.**, Datta, M., Nema, A. K. and Singh, R. K. (2018). Surface Water Contamination from Municipal Solid Waste (MSW) Sites in Indian Cities: Development and Application of Hazard Rating System. *Shelter*. 19 (2). Pg 30-39. ISSN 2347-4912.
15. Katiyar, R., Bharti, R. K., Gurjar, B. R., **Kumar, A.**, Biswas, S., Pruthi, V. (2018). Utilization of de-Oiled Algal Biomass for Enhancing Vehicular Quality Biodiesel Production from *Chlorella* sp. in Mixotrophic Cultivation Systems. *Renewable Energy*. 122, Pg 80-88. DOI: 10.1016/j.renene.2018.01.037 (IF – 6.274).
16. **Kumar, A.**, Datta, M., Nema, A. K. Singh, R. K. and Gurjar, B. (2018). Improved Rating System for Hazard Assessment Related to Subsurface Migration of Landfill Gas from Municipal Solid Waste Landfills and Dumps. *ASCE Journal of Hazardous, Toxic, and Radioactive Waste*. 22(3), Pg 04018003-1-10. ISSN (print): 2153-5493 | ISSN (online): 2153-5515. DOI: 10.1061/(ASCE)HZ.2153-5515.0000393.
17. **Kumar, A.**, Datta, M., Nema, A. K., Singh, R. K. and Gurjar, B. (2018). Closure of Municipal Solid Waste Dumps – Site Rating for Odour Impact. *Environmental Protection Engineering Journal*. 44(2). Pg 37-56. ISSN: 0324-8828 (print version) 2450-260X (electronic version) (IF – 0.812).
18. Datta, M., **Kumar, A.** (2017). Assessment of Subsurface Contamination Potential of Municipal Solid Waste (MSW) Dumps. *Indian Geotechnical Journal*. 47 (4). Pg 410-420. DOI: 10.1007/s40098-017-0247-5. ISSN: 2277-3347 (electronic version).
19. Katiyar, R., Gurjar, B. R., Bharti, R. K., **Kumar, A.**, Biswas, S., Pruthi, V. (2017). Heterotrophic Cultivation of Microalgae in Photobioreactor Using Low Cost Recycled Crude Glycerol for Enhanced Biodiesel Production. *Renewable Energy*. 113. Pg 1359 – 1365. DOI: 10.1016/j.renene.2017.06.100. ISSN: 0960-1481 (IF – 6.274).
20. **Kumar, A.**, Datta, M., Nema, A. K. and Singh, R. K. (2017). Suitability of Hazard Rating Systems for Air Contamination from Municipal Solid Waste (MSW) Dumps and Improvements to Enhance Performance. *Canadian Journal of Environmental Engineering and Science (Incorporated in Canadian Journal of Civil Engineering)*. 44. Pg 549 – 557. DOI: 10.1139/cjee-2016-0500. ISSN (electronic): 1208-6029 (IF – 0.985).
21. **Kumar, A.**, Datta, M., Nema, A. K. and Singh, R. K. (2016). An Improved Rating System for Assessing Surface Water Contamination Potential from MSW Landfills. *Environmental Modeling and Assessment*. 21. Pg 489-505. DOI: 10.1007/s10666-015-9493-z. ISSN: 1573-2967 (electronic version) (IF – 1.634).

Book Chapters

1. Chaudhary, Ayushi, Kumar Ashwani, Thakur, Rahul Singh, Kumar, Amit, Dutta, Anirban "Microplastic Contamination in Water Intended for use & reuse." In Arvind Kumar Agnihotri, Krishna R. Reddy, H. S. Chore (eds) *Proceedings of 4th International Conference on Environmental Geotechnology, Recycled Waste Materials and Sustainable Engineering (EGRWSE) 2023*. Springer Nature Singapore 2023. (*accepted for publication*).
2. Ashwani Kumar, Yash Choudhary, Amit Kumar, Sudhir Kumar, Nand Kumar. (2023). Monitoring of municipal solid waste operations in urban areas: a review. In K. D. Yadav, N. D. Jariwala, A. Kumar, A. Sinha (Eds.), *Recent Advances in Sustainable Waste Management Practices*. Springer Nature Singapore. ISBN 978-981-99-4185-8; DOI: <https://doi.org/10.1007/978-981-99-4186-5>

3. Jain, S., Kumar, A., Kumar, S., Kumar, A. & Choudhary, Aditya (2023). Data-driven prediction of effluent BOD5 from an institutional wastewater treatment plant. In S. Das, S. Saha, C. A. Coello, J. C. Bansal (Eds.), *Advances in Data-driven Computing and Intelligent Systems*. Springer Singapore. DOI: 10.1007/978-981-99-0981-0
4. Gupta, M., Kumar, A., Kumar, S. & Jat, M. K. (2022). A regional case study for flow of Lead (Pb) and Chromium (Cr) through solid waste management system. In B. Yadav, M. P. Mohanty, A. Pandey, V. P. Singh, R. D. Singh (Eds.), *Sustainability of Water Resources: Impacts and Management*. Springer Cham. DOI: 10.1007/978-3-031-13467-8
5. Bhavanam, A., Kumar, A., & Nikhil, G. N. (2022). Biological and Thermochemical Strategies for Building Biorefinery Platform. In J. K. Ratan, D. Sahu, N. N. Pandhare, & A. Bhavanam (Eds.), *Advances in Chemical, Bio and Environmental Engineering* (pp. 33–56). Springer Nature Switzerland AG. DOI: 10.1007/978-3-030-96554-9
6. Agarwal, A., Kumar, A., & Dangayach, S. (2021). Major Flows for Lead (Pb) Within an Academic Campus. In R. Al Khaddar, N. D. Kaushika, S. K. Singh, & R. K. Tomar (Eds.), *Advances in Energy and Environment Select Proceedings of TRACE 2020* (pp. 201–208). Springer Singapore. <https://doi.org/10.1007/978-981-33-6695-4>
7. **Kumar, A.**, Datta, M., Nema, A. K., 2019. Assessment of Air Contamination Potential from Waste Dumps in Developing Countries, In: Ghosh S. (eds) *Waste Management and Resource Efficiency*. Springer, Singapore, Pg 1133-1141. Online ISBN: 978-981-10-7290-1. DOI: 10.1007/978-981-10-7290-1_93. (*non-Scopus*)
8. Rani, S., **Kumar, A.**, Datta, M., Nema, A. K., 2019. Assessment of Additional Land Area Required for MSW Landfills/Dumps in Million Plus Cities of India: Two Scenarios, In: Ghosh S. (eds) *Waste Management and Resource Efficiency*. Springer, Singapore, Pg 495-503. Online ISBN: 978-981-10-7290-1. DOI: 10.1007/978-981-10-7290-1_42. (*non-Scopus*)
9. Katiyar, R., Kumar, A., Gurjar, B.R., 2017. Microalgae Based Biofuel: Challenges and Opportunities, in: Agarwal, A.K., Agarwal, R.A., Gupta, T., Gurjar, B.R. (Eds.), *Biofuels: Technology, Challenges and Prospects*. Springer Singapore, Singapore, pp. 157–175. doi:10.1007/978-981-10-3791-7_9. ISSN: 1865-3537
10. Datta, M., **Kumar, A.**, Bhowmik, R., 2017. Rehabilitation and Expansion of Operational Municipal Solid Waste (MSW) Dumps of India, in: Babu, G.L.S., Reddy, K.R., De, A., Datta, M. (Eds.), *Geoenvironmental Practices and Sustainability: Linkages and Directions*. Springer. ISBN: 978-981-10-4076-4. Pg 57-67. (*non-Scopus*)
11. **Kumar, A.**, Datta, M., Nema, A. K. and Rateria, G. (2016). Proposed Methodology for Evaluation of Alternatives for Remediation/Closure of Waste Dumps in Indian Cities. *Geo-Chicago – 2016*, Geotechnical Special Publication 273, ASCE: Pg 244-253. ISBN (PDF): 9780784480168
12. Datta, M. and **Kumar, A.** (2016). Waste Dumps and Contaminated Sites in India – Status and Framework for Remediation and Control. *Geo-Chicago – 2016*, Chicago, USA. *Geo-Chicago – 2016*, Geotechnical Special Publication 273, ASCE: Pg 664-673. ISBN (PDF): 9780784480168

Conference Proceedings

1. Kumar, A., Sankhla, J., Kumar, A. , Kumar, S., Kumar, N., Evaluation of litter and street cleanliness in an academic campus and a residential urban area: Case study of Jaipur. 4th International Conference On Waste Management . Recycle – 2023, April 18-19, 2023 IIT Guwahati.

2. M., Nema, A. K. and Singh, R. K. (2022). Using a novel index to find the most appropriate aggregation function for composite hazard rating of a waste disposal site. Proceedings of International Conference on Contaminated Sites-2022, Senec, Slovakia. Oct 12 – 14th, 2022. Pg 45-48. ISBN: 978-80-8213-084-6.
3. Choudhary, A. Kumar A., Kumar A., Perumal V., Batencourt W., Singh R., and Gurian P. L. Risk assessment of waterborne pathogens for water reuse applications in Jaipur City, India. Society for Risk Analysis 2021 Annual Meeting, Dec. 5-9, 2021 (Accepted for lightning talk presentation)
4. Singh, R. Hill, C., Betancourt W., Kumar A., Perumal V., Kumar A., and Gurian P. L. Development of a Quantitative Microbial Risk Assessment Framework for Reclaimed Water from Wastewater Treatment Facilities in New Delhi, India. Society for Risk Analysis 2021 Annual Meeting, Dec. 5-9, 2021. (Accepted for lightning talk presentation)
5. **Kumar, A.**, Sharma, A., Dangyach, S. (2020). Heavy Metal Contamination in Soil of Jaipur City, in: Geoenvironment 2020: International Seminar on Contaminated Sites. IIT Delhi, New Delhi, India. Pg 98-104.
6. **Kumar, A.**, Tomar, R. K. (2018). A New Decision Support System for Assessing Bird-hit Hazard from municipal Waste Dumps, in: ASMMCE 2018. Jalandhar, India. Pg 261-265. ISBN: 978-93-5321-892-8.
7. **Kumar, A.**, Singh, S., Agnihotri, A. K. (2018). Natural treatment of domestic wastewater – Review on different media, in: ASMMCE 2018. Jalandhar, India. Pg 266-270. ISBN: 978-93-5321-892-8.
8. **Kumar, A.**, Gurjar, B. R., Strbova, K. (2017). Scenario Analysis for Various Municipal Solid Waste Processing Options: Case Study of a Mid-size Indian City, in: 3rd ICEM. Hyderabad, India. Pg 481-488. Vol II, ISBN: 978-93-86819-50-5.
9. Datta, M. and **Kumar, A.** (2015). Hazard Rating of MSW Dumps and Geo-environmental Measures for Closure. Proceedings of 50th Indian Geotechnical Conference (IGC – 2015), Pune, India. Dec 17-19, 2015. Pg. 1-18.
10. **Kumar, A.**, Datta, M., Nema, A. K. and Singh, R. K. (2015). Contaminated Sites in India: Challenges and Recent Initiatives for MSW disposal sites. Proceedings of International Conference on Contaminated Sites, Bratislava, Slovakia. May 27 - 29, 2015. Pg 151-156. ISBN: 978-80-89503-40-7.
11. **Kumar, A.**, Datta, M., Nema, A. K. and Singh, R. K. (2015). A new system for determining Odour Potential Hazard of old MSW landfills (waste dumps). Proceedings of International Conference on Solid Waste: Knowledge Transfer for Sustainable Resource Management, Hong Kong SAR, P.R. China. May 19-23, 2015. Pg 643-646.
12. **Kumar, A.**, Datta, M., Nema, A. K. and Singh, R. K. (2014). An improved Methane Gas Generation Rating for dumpsites in India. Proc. of International Conference on Advances in Civil And Mechanical Engineering Systems, Amravati, Maharashtra India. Dec 23-24, 2014. Pg 201 – 204.
13. **Kumar, A.**, Reinhart, D., Townsend, T. (2008). Temperature inside the Landfill: Effects of Liquid Injection and Ambient Temperature. Global Waste Management Symposium, Copper, CO, USA. Sep 7-10, 2008. (On CD). Pg 1-10
14. **Kumar, A.**, Nema, A.K., Ahluwalia, P.,(2006). Optimal Routing Of Bio-Medical Waste: A Case of South Delhi, India. ASCE-EWRI Conference, New Delhi, India. Dec 18-20, 2006. Pg 1-8.
15. Ahluwalia, P., Nema, A.K., **Kumar, A.**, (2006). A Proposed Framework for Analyzing Risks from Hazardous Materials and Wastes. AWMA Annual Conference, New Orleans, LA. USA. June 20-23, 2006. Pg 2596 – 2611.
16. Ahluwalia, P., Nema, A.K., **Kumar, A.**, (2006). A Reverse Logistics Systems Optimization Model for Integrated Computer Waste Management. International Conference on Solid Waste Technology and Management, Philadelphia, PA. USA. Mar 26-29, 2006. Pg 375 – 384.

Poster Presentation

1. Tsydenova, N., Ghanimeh, S., Gómez-Sanabria, A., **Kumar, A.**, Iossifidou, M. (2018). Municipal Solid Waste Management: Differing Cities with Similar Concerns. ISWA World Congress, Kuala Lumpur, Malaysia. Oct 22-24, 2018.

SPONSORED RESEARCH PROJECTS

Role as PI:

- “Assessment of bio-methanation potential for the state of Rajasthan”. Funded by Department of self-government (Municipal Corporation Jaipur Heritage). Rs. 8.05 Lacs. (Oct 2023 – Oct 2026). (*on-going*)
- “Assessment for legacy waste remediation at Sewapura Site”. Role: PI. Funded by Department of self-government Municipal Corporation Jaipur Greater. Rs. 6.6 Lacs. (Apr 2023 – Apr 2025). (*on-going*)
- “Community based Managed Aquifer recharge (CoMAR) in rural cluster: A tool for sustainable and safe drinking water supply.’ Funded by Jal Jeevan Mission. Government of India. Rs 10.83 Lacs. (Total of Rs 27.72 Lacs in collaboration with IIT Roorkee). (Jan 2023 – Mar 2024). (*on-going*)
- “Resource recovery from municipal solid waste in Sujangarh municipality”. Funded by Department of Local self-government, Rajasthan (Sujangarh Municipality). Rs 5.00 Lacs. (Dec 2022 – Mar 2024)(*on-going*)
- “Protecting Public Health with Novel Microbial Indicators to Monitor the Performance of Water Reuse Systems in India”, Funded by US Department of State (DOS) under Partnerships 2020 program. (Joint proposal among MNIT Jaipur, IIT Delhi, Drexel University and University of Arizona). Rs. 42.5 Lac (US\$ 59,697) (MNIT share – US\$3508 or INR 2.6 Lacs). (Mar 2020 - Jun 2022) (*Completed*)
- “Ranking System for Alternatives of Control Measures at MSW Dumps”. Funded by Science and Engineering Research Board, Government of India. Rs. 19.22 Lacs. (July 2016 – Dec 2017) (*Completed*).
- “Assessing the feasibility of energy production from remaining portions of recyclable MSW using gasification”, Submitted to Rajasthan State Pollution Control Board. Rs. 196.0 Lacs. (Nov 2023). (*Submitted*)
- “Development of a Framework for Treated Wastewater Reuse in Irrigation and Groundwater Recharge using Agricultural-Based Modified Soil Aquifer Treatment (Ag-MSAT)”, Submitted under DST-WTC call for proposal. Rs. 83.21 Lac. (Sep 2023). (*Submitted*)
- “In-situ remediation of Fluoride contamination in managed aquifer recharge (Chauka system): material selection and field testing”. Submitted to Jal Jeevan Mission, Government of India (Collaborating agency: IIT Roorkee). Rs. 84.4 Lacs. Role: PI (MNIT Jaipur). (Aug 2023). (*Submitted*)
- “Material flow analysis for heavy metals through composting of municipal solid waste”. Submitted to Rajasthan State Pollution Control Board. Rs. 50.3 Lacs. (Mar 2023). (*Submitted*)

Role as Co-PI:

- “Research Study of Udaipur Smart City Infrastructure Projects of under SAAR Compendium 2.0”. Funded by Smart City Udaipur. Rs. 4.8 Lacs. (Aug 2023 – Dec 2023). PI: Dr. Nand Kumar, MNIT Jaipur. (*On-going*).
- “Preparation of District Environment management Plan for Sikar”. Funded by Department of Forest & Environment, Government of Rajasthan. (Feb 2021- Feb 2024). PI: Dr. Nand Kumar, MNIT Jaipur. (*On-going*).
- “Preparation of District Environment management Plan for Hanumangarh”. Funded by Department of Forest & Environment, Government of Rajasthan. (Feb 2021- Feb 2024). PI: Dr. Nand Kumar, MNIT Jaipur. (*On-going*).
- “Investigation and Remediation of Soil Contamination in Jaipur City”, Funded by TEQIP-III. PI: Dr Sanyam Dangayach, MNIT Jaipur. Rs. 4 Lac. (Sep 2019 – Dec 202). PI: Dr. Sanyam Dangayach, MNIT Jaipur. (*Completed*).
- “Assessing Water and Soil Pollution from Deep Toilet Soak Pits: Implications for Sanitation Sustainability and Environmental Management”. Submitted to Directorate of Swachh Bharat Mission (Grameen), Rajasthan. Rs. 35.2 Lacs. (Jun 2023). PI: Prof. Mahesh Jat, MNIT Jaipur (*Submitted*)

CONSULTANCY PROJECTS***Role as PI:***

- "Preparation of a SEMP report for the work - Reclamation of storage capacity of Bisalpur Dam by Desilting in District Tonk, Rajasthan" , N G Gadhiya, Rs. 3.54 Lacs, (04/10/2023- 04/10/2023)
- "Third party assessment of legacy waste remediation at Keer Khera Sanganer Dumpsite" , Municipal Council Bhilwara , Rs. 7.0 Lacs, (05/09/2023- 05/09/2023)
- "Preparation of Site Env Mgmt plan- Reclamation of Storage Capacity of Som Kamla Amba Dam by Desilting of Reservoir , District Dungarpur" , N G Gadhiya , Rs. 4.13 Lacs, (06/02/2023- 06/02/2023)
- "Vetting of design and drawings of Pawai Byrma Group Water Supply Scheme of Panna District of Madhya Pradesh State." , Unipro Techno Infrastructure Pvt. Ltd., Rs. 5.31 Lacs, (04/26/2023- 07/25/2023)
- "Vetting of FSTP DPR (Anta, Gulabpura, Niwai and Rajakhera)", Project Director RUDSICO (Housing) Jaipur , Rs. 3.54 Lacs, (08/22/2023- 08/30/2023)
- "Workshop on Legacy Waste Management: Challenges and Opportunities" , MNIT Jaipur & others , Rs. 0.95 Lacs, (10/18/2023- 11/10/2023)
- "Design of SLF at Moradabad" , GG WASTECH PRIVATE LIMITED , Rs. 4.13 Lacs, (08/16/2022- 08/16/2022)
- "Regarding services for testing of domestic wastewater in Vishwakarma Industrial Area" , RIICO, Rs. 0.80 Lacs, (09/28/2022- 09/28/2022)

- "Third Party assessment for bio-minning work at Jaipur Heritage Mathuradaspora Dump site" , SAURASHTRA ENVIRO PROJECTS PVT. LTD. , Rs. 3.44 Lacs, (03/22/2023- 03/22/2023)
- "Third party inspection for solid waste management plant, Agyaya Dam, Alwar" , Municipal Council Alwar , Rs. 1.00 Lacs, (09/24/2021- 11/18/2021)

Role as Co-PI:

- "Regarding approval of Technical Specification of FSTP of capacity 15, 20, 25 & 35 KLD Plant.", The Superintending Engineer (Project), Panchayati Raj Department, Jaipur , Rs. 1.18 Lacs, (10/11/2023- 10/13/2023)
- "Vetting of FSTP DPR (Rawatsar, Kesarisinghpur, Bijaynagar, Asind and Bedasar)" , Project Director RUDSICO (Housing) Jaipur , Rs. 3.54 Lacs, (10/12/2023- 10/19/2023)
- "Ash disposal audit of J K Laxmi Cement Ltd" , J K Laxmi Cement Ltd. , Rs. 1.77 Lacs, (10/19/2023- 10/19/2023)
- "Consultancy services for preparation of Zonal Master Plan for Eco-sensitive zones of Nahargarh wildlife sanctuary and Jamwaramgarh Sanctuary, Jaipur" , Deputy Conservator of Forest, Wildlife, Zoo Jaipur , Rs. 38.0 Lacs, (04/13/2022- 10/19/2022)
- "Training of DWDSO officials on GIS-based PMKSY Project Monitoring" , DWDSO, Govt of Rajasthan , Rs. 4.79 Lacs, (10/27/2022- 10/29/2022)
- "Vetting of DPR for waste water , rainwater and drainage system of Deedwana city" , Nagar Palika Deedwana , Rs. 5.31 Lacs, (03/20/2023- 03/20/2023)
- "Vetting of architecture and structure design for STP of 500KLD at CRPF, Palri Khichiyar, Jodhpur" , M/s Mohammed Bux Shoket Ali , Rs. 1.18 Lacs, (07/20/2020- 09/07/2020)
- "Preparation of Initial Environmental Examination (IEE) report including Environmental Management Plan for the project of Development of Residential colony for affected persons of village Pur, Bhilwara" , Urban Improvement Trust Bhilwara , Rs. 6.89 Lacs, (01/28/2021- 01/28/2021)
- "Vetting of designs" , Mr. Saurabh Varshney, CEO, BLG Const. Services P. Ltd. Jodhpur , Rs. 2.36 Lacs, (08/05/2019- 08/20/2019)
- "Preparation of Action Plan for Critically Polluted Industrial Clusters of Pali and Jodhpur" , Rajasthan State Pollution Control Board Jaipur , Rs. 14.16 Lacs, (04/08/2019- 09/30/2019)
- "Training program on various aspects of Civil Engineering" , RICCO, Govt. of Rajasthan , Rs. 19.765 Lacs, (02/28/2020- 04/30/2020)

AWARDS

- IconSWM 2016 Excellent Paper Award (Nov 2016)
6th Icon SWM Conference, Jadavpur University, Kolkata
- ISWA Austria Scholarship for Summer School

Technische Universität Wien, Vienna, Austria (Sep 2016)

- National Post-Doctoral Fellowship
Science and Engineering Research Board, Govt. of India (July 2016 – July 2018)
- Presidential Fellowship
University of Central Florida, Orlando, USA (Aug 2005 – Sep 2007)
- Graduate Travel Award
University of Central Florida, Orlando, USA (Feb 2006)
- GATE Scholarship
Ministry of Human Resource Development, Govt. of India, Delhi, India (Jul 2003 – Jun 2005)

SEMINAR/SHORT TERM COURSE/WORKSHOP ATTENDED

- Closing Symposium 'Partnership-2020' by University of Nebraska, Omaha at Leela Palace, New Delhi (Aug 02-Aug 03, 2022)
- GIAN programme on "Internet of things: solutions for real-world problems", Department of ECE, MNIT Jaipur (June 06-11, 2022)
- Webinar on "Indo-German Bilateral Funding Programmes for Advanced Industrial Research", (by Dr. P V Lalitha, Senior Scientific Officer, IGSTC) organized by NIT Jalandhar (26-06-2020)
- Workshop on "Environmental Safeguards", SGSITS Indore (Jan 11, 2019)
- TEQIP-III Sponsored Faculty Development Program "Pedagogical Skills for Teachers", NIT Jalandhar (Jul 22-23, 2018)
- Workshop on "Project Management, Methodology Maintenance and Vigilance Awareness", NIT Jalandhar, (Aug 25th 2018)
- TEQIP-III Sponsored Orientation Workshop for Young Faculty of Mentor and Mentee Institute, NIT Jalandhar (Feb 03-04, 2018)
- Training Workshop "Enhancement of Environmental Sustainability: The New Horizon of Circular Economy & Organizational Improvement", IIT Bombay (Sep 11 – 12 , 2017)
- GIAN course on "Green Water Infrastructure II – Innovative and Sustainable Wastewater Management", IIT Roorkee, Roorkee, India (May 29 – June 09, 2017)
- Short Term Training Program on "Advanced Engineering Optimization through Intelligent Techniques (AEOTIT)", SVNIT, Surat, Gujarat, India, (Feb 6-10, 2017)
- One day Workshop "EARNOVER-2017: Establishing a Research Network on vehicular emission reduction", CRRI, New Delhi, Jan 23rd, 2017.
- One day Workshop "EARNOVER-2016: Establishing a Research Network on vehicular emission reduction", CRRi, New Delhi, Nov 30th, 2016.

- Summer School on Material Flow Analysis and Solid Waste Management, Institute for Water Quality, Resource and Waste Management, Vienna University of Technology, Vienna, Austria. Sep 5th – 16th 2016.

ADMINISTRATIVE RESPONSIBILITIES

- Program advisor, MTech. (Environmental Engineering), Civil Engineering Department, MNIT Jaipur (Jun 2023 – Present).
- In-charge, Public Health Engineering Lab, Civil Engineering Department, MNIT Jaipur (Mar 2023 – Present).
- Industry coordinator, Department of Civil Engineering, Industry Institute Interaction Cell, MNIT Jaipur (Feb 28th, 2023 – Present)
- In-charge, Computer Lab, Civil Engineering Department, MNIT Jaipur (Jul 2020 – Mar 2023).
- Program advisor, 2nd year, Civil Engineering Department, MNIT Jaipur (Jul 2020 – June 2022).
- Faculty coordinator, SCEM, Civil Engineering Department, MNIT Jaipur (Apr 2019 – Present).
- Innovation Ambassador, MHRD Innovation council (Oct 2020 – Present)
- Secretary, Board of Studies, Department of Civil Engineering, Dr B R Ambedkar National Institute of Technology Jalandhar, Jalandhar, India (Jan 25th, 2018 – Mar 18th, 2019)
- Co-coordinator, Environmental Engineering Laboratory, Department of Civil Engineering, Dr B R Ambedkar National Institute of Technology Jalandhar, Jalandhar, India (Jan 25th, 2018 – Mar 18th, 2019)
- Environmental Coordinator, TEQIP-III, NIT Jalandhar (Jan 10th, 2019 – Mar 18th, 2019)
- Vice-President, Toastmasters Club, Cape Coral Chapter, Cape Coral USA, (Mar 2008 – Feb 2009)
- Chair, University of Central Florida Chapter, Air and Waste Management Association, (Nov 2006 – April 2007)

ACTIVITIES

- Editor, Recent Advances in Sustainable Waste Management Practices, Proceedings of SWMP 2023, National Conference on Sustainable Waste Management Practices (SWMP – 2023). SVNIT Surat (Jan 27-28th, 2023).
- Session chair, National Conference on Sustainable Waste Management Practices (SWMP – 2023). SVNIT Surat (Jan 27-28th, 2023).
- Program committee member and Reviewer, TRACE-2022, Amity University Noida (Oct 18-19th, 2022).
- Session co-chair, International e-Conference on Water Source Sustainability (June 18-20, 2021), Department of Water Resources Development and Management, IIT Roorkee (June 19, 2021; 9:00-11:30).
- M Tech Viva (Mr. Charanjit Singh - Roll No. 1805809), Guru Nanak Dev Engineering College, Ludhiana, PB (Dec 18th, 2020).
- Session chair, International Conference on Industrial and Manufacturing Systems (CIMS - 2020), NIT Jalandhar (Oct 10th, 2020)

- Session chair, TRACE 2020, Amity University Uttar Pradesh, India (Aug 21st, 2020).
- Conducted laboratory viva for B. Tech. (Civil Engineering) Students – Environmental Engineering-II, Poornima University, Jaipur (May 31st, 2019)
- Editor, Conference Proceedings, National Conference on “Advanced Structures, Materials and Methodology in Civil Engineering (ASMMCE-2018)”, November 3-4, 2018, NIT Jalandhar, India, ISBN: 978-93-5321-892-8 (Editors: K. Senthil, Rajiv Kumar, S. Rupali, Amit Kumar) .
- Conducted viva for M. Tech. (Environmental Engineering) Students, Lovely Professional University, Aug 04th, 2018.

EVENTS ORGANIZED

- Organizing Secretary, National workshop (1-day) “Legacy waste management: challenges and opportunities”, Oct 30th, 2023.
- Organizing Coordinator, Expert lecture on “Improving Water Quality in Buildings Through Meta-analyses: Promises and Pitfalls” by Dr. Patrick Gurian, Professor & Head (Environmental Engineering Program), Department of Civil, Architectural and Environmental Engineering, Drexel university, USA at the Department of Civil Engineering, MNIT Jaipur, Jaipur India (Aug 18th, 2023)
- Organizing Coordinator, Expert lecture on “Critical R & D areas Waste management” by Dr. Sunil Kumar, Head, Waste Re-processing Division, CSIR – NEERI, Maharashtra, India at the Department of Civil Engineering, MNIT Jaipur, Jaipur India (July 07th, 2023)
- Organizing Coordinator, Expert lecture on “Role of geosynthetics in sustainable infrastructure development” and academic interaction by Dr. Riya Bhowmik, Assistant Professor, IIT Jammu at the Department of Civil Engineering, Malaviya National Institute of Technology, Jaipur India (Dec 20th, 2022)
- Organizing Coordinator, Expert lecture on “Solid Waste Classification and Scientific Approach towards Domestic Hazardous Waste” by Dr. Anupam Singhal, Professor, BITS Pilani at the Department of Civil Engineering, Malaviya National Institute of Technology, Jaipur India (Sep 2nd, 2022)
- Organizing Coordinator, Expert lecture on “Research in environmental risk assessment” by Dr. Arun Kumar, Professor, IIT Delhi at the Department of Civil Engineering, MNIT Jaipur, Jaipur India (Jun 15th, 2022)
- Organizing Coordinator, StartUp Talks at MNIT Jaipur (Dec 14-15th, 2021)
- Organizing Coordinator, Expert lecture (“Innovation and Entrepreneurship in Environmental Engineering” by Mr. Rajesh Kumar, Head, Technology Advisory Practice (Chemicals and Materials), Aranca, Mumbai), Department of Civil Engineering, Malaviya National Institute of Technology, Jaipur India (Mar 23rd, 2021)
- Organizing Coordinator, Expert lecture (“Water Supply in Jaipur & Pumps and machinery in water supply network” by Mr. Satish Jain, Superintendent Engineer, Public Health Engineering Department,

Government of Rajasthan), Department of Civil Engineering, Malaviya National Institute of Technology, Jaipur India (Feb 11th, 2020)

- Organizing Coordinator, Expert lecture “Application of Virtual Reality to analyze pedestrian behavior on mid-block crosswalk” by Dr. Anurag Pande, Professor, California Polytechnic State University, Department of Civil Engineering, Malaviya National Institute of Technology, Jaipur India (Jan 03rd, 2020)
- Organizing Coordinator, Expert lecture (“Obtaining experimental observations for conducting exposure assessment of mixture of nanoparticles from water” by Dr. Arun Kumar, Associate Professor, IIT Delhi), Department of Civil Engineering, Malaviya National Institute of Technology, Jaipur India (Nov 15th, 2019)
- Organizing Secretary, TEQIP sponsored National Conference on “Advanced Structures, Materials and Methodology in Civil Engineering” (ASMMCE 2018), NIT Jalandhar (Nov 3-4th, 2018)
- Organizing Coordinator, Seminar by Dr. Patrick Gurian, Drexel University USA, Department of Civil Engineering, Dr. B. R. Ambedkar National Institute of Technology, Jalandhar India (Sep 5th, 2018)
- Organizing Secretary, “LANDFILLS-2014” Workshop, IIT Delhi, New Delhi, India. March 2014.
- Organizer, National Conference on Trends & Recent Advances in Civil Engineering, Amity University, Noida. Sep 27, 2012.
- Organizing Coordinator, AEESP Lecture -2007, University of Central Florida, Mar 2007

LECTURE DELIVERED

- Invited lecture on “Old waste dumps in India: challenges and opportunities” in National Seminar on "Environmental Sustainability and Pollution Prevention" organized by Department of Civil Engineering, Vivekananda Global University, Jaipur, (October 28, 2023).
- Invited lecture on “Solid waste management in urban areas: An overview” in Workshop series on “Segregation and processing of municipal solid waste”, for divisional municipalities held at Govind Bhawan, Local Self Government Department, Jaipur (under Swachh Bharat Mission). (Aug 22nd, 2023).
- Invited Lecture on “Cleanliness assessment in urban areas” in Swacchta Pakhwada Celebration at NIT Silchar (Sep 02nd, 2022).
- Lecture on “Application of AI/ML in the management of municipal waste/wastewater” in FDP on “Computer Diligence in Civil Engineering and its Applications for Sustainable Development” JUIT Wagnaghat, HP (July 14th, 2022)
- Invited lecture on “Industrial water management and Water audit”, in RIICO-sponsored Training on “Water Management”, at MNIT Jaipur (June 19th, 2022).
- Lecture on “Material Flow Analysis: Implications for sustainable development”, in FDP titled “Recent Trends and Advancements for Sustainable Development” at University College of Engineering, Banswara (Mar 11th, 2022)

- Lecture on “Machine learning in waste management”, FDP on Waste Management for Sustainable Development, JUIT Wahnaghat, HP (Jan 7th, 2021).
- Invited Lecture on “Solid Waste Management – Engineering perspective”, MIT Muzaffarpur (Oct 9th, 2020).
- Lecture on “Waste Dumps in Developing Countries: Where do we start? “, in FDP on “Sustainable Environment-An Engineering Perspective (SEEP: 2020)”, organized by Department of Civil Engineering, Assam Engineering College Guwahati. (July 14th 2020).
- Lecture on “Material Flow Analysis in Environmental Engineering - (Part I & II)”, in FDP on “Sustainable Environment-An Engineering Perspective (SEEP: 2020)”, organized by Department of Civil Engineering, Assam Engineering College Guwahati. (July 15th 2020).
- Lecture on “Sewage Treatment”, Poornima University, Jaipur (Feb 29th, 2020).
- Lecture – “Biodiesel: Production and sustainability assessment”, STC on “The Challenges of Strengthening Green Technology Entrepreneurship” in Department of Chemical Engineering, MNIT Jaipur (January 6th - 17th, 2020)
- Lecture – “Material Flow Analysis in Environmental Engineering”, STC on “Experimental Methods in Environmental: Engineering Testing and analysis”, Department of Civil Engineering, Govt. Engineering College, Banswara, RJ (Aug 19th - 23rd, 2019)
- Keynote Lecture – “Solid Waste Management: Hazard Assessment from Waste Dumps in Developing Countries”, All India Seminar of IEI (Environmental Engineering Division Board) on the theme “Environmental Pollution Issues”, (July 06th - 07th 2019)
- Resource person, 3-days training program on “Integrated Urban Water System Management - Arunachal Pradesh” at Itanagar conducted by IIPA, New Delhi (July 02nd-04th, 2019)
- Lecture – “Life Cycle Assessment: Biofuels”, STC on “Life Cycle Analysis for Sustainability” in Department of Mechanical Engineering, MNIT Jaipur (January 10th - 14th, 2019)
- Expert lecture on “Decision support systems for remediation of contaminated sites”, Networking Workshop on “Contaminated Sites: Subsurface Investigations and Remediation, organized by MOEFCC and IIT Delhi (July 12-13, 2018).
- Invited Speaker, “Hazard Rating of Landfills in India”, Geoenvironment-2017 Workshop: Landfills and Waste to Resources. Indian Institute of Technology (IIT) Delhi, New Delhi. Apr 19, 2017.
- Lecture, Ishan Vikas Scheme for School kids sponsored by MHRD India, IIT Delhi, Dec 2015
- Lecture, “Hazard Rating and Selection of Closure Method”, TEQIP-II Sponsored Short Course on Geotechnical and Environmental Aspects of Closure/Remediation of Waste Dumps and Contaminated Sites. Indian Institute of Technology (IIT) Delhi, New Delhi. Nov 3-5, 2015.
- Lecture on Municipal Solid Waste: Generation-to-Disposal, Department of Civil Engineering, Aliah University, Kolkata, India. April 12, 2015.

- Workshop Lecture, “Municipal Waste Dumps in Million-plus Cities of India”, Landfills 2014, Indian Institute of Technology (IIT) Delhi, New Delhi. Mar 6-7, 2014.

PROFESSIONAL MEMBERSHIP

- Member, Association of Environmental Engineering and Science Professors (2017- 2019)
- Member, International Solid Waste Association, (2023 – 2024)
- Life member, Indian Geotechnical Society Delhi Chapter (Oct 2014 – Present)
- Life member, National Solid Waste Association of India (2011-Present)
- Life member, Indian Water Works Association (2010-Present)

Ph.D. Thesis

- Ayushi Choudhary. (2020-). “Microplastics in municipal wastewater”. MNIT Jaipur.
- Ashwani Kumar. (2021 -). “Litter assessment and management in urban areas”. MNIT Jaipur.
- Shubham Rana. (2022 -). “Legacy waste mining: efficiency improvement and management”. MNIT Jaipur.

M. Tech. Dissertations

1. Yas Rohit Nagar (2022PCE5203) (2023-24). Gasification of municipal solid waste at community level. (*On-going*).
2. Kumud Kumar (2022PCE5206) (2023-24). Assessment of material and energy flow in mining of legacy waste. (*On-going*).
3. Chandan Prajapati (2022PCE5205) (2023-24). Efficiency improvement in processing of legacy waste. (*On-going*).
4. Jasram Meena (2022PCE5204) (2023-24). Ranking of Municipal waste Landfills in Rajasthan using GIS. MNIT Jaipur. (*On-going*).
5. Lakka Boyina Naga Sudarshan (2021PCE5221) (2022-23). Managed aquifer recharge: Water quality monitoring and analysis. MNIT Jaipur. (*Completed*).
6. Ajay Kumar Singh (2021PCE5227) (2022-23). Characterization of legacy waste: Investigations from Jaipur city. MNIT Jaipur. (*Completed*).
7. Yash Choudhary (2020PCE5152) (2021-22). Microplastics in Wastewater Treatment Plant: Abundance, Characterization and Removal. MNIT Jaipur. (*Completed*).
8. Shubham Jain (2020PCE5581) (2021-22). Prediction of influent and effluent parameters for a wastewater treatment plant. MNIT Jaipur. (*Completed*).
9. Mohit Jain (2020PCE5589) (2021-22). Plastic waste management tin Sikar city, Rajasthan: Analysis of material flows and recycling scheme. MNIT Jaipur. (*Completed*).

10. Joginder Sankhla (2020PCE5158) (2021-22). Litter and cleanliness analysis: A case study for urban streets in Jaipur. MNIT Jaipur. *(Completed)*.
11. Vipul Singh (2020PCD5172) (2021-22). Decision support system for sustainability of solid waste services in a municipality. MNIT Jaipur. *(Completed)*.
12. Shubham (2019PCE5469). (2020-21). Substance flow analysis for a nutrient in a system. MNIT Jaipur. *(Completed)*.
13. Ashwani Kumar (2019PCE5103). (2020-21). Litter assessment in urban areas: Cleanliness indices and behavioral analysis. MNIT Jaipur. *(Completed)*.
14. Amit Kumar Meena (2019PCE5377). (2020-21). Field analysis of litter in urban areas status. MNIT Jaipur. *(Completed)*.
15. Mayank Gupta (2019PCE5088). (2020-21). Study of Material Flow Analysis for Heavy Metals. MNIT Jaipur. *(Completed)*.
16. Aditya Sharma. (2019-20). "Heavy metal contamination in soils of Jaipur". MNIT Jaipur. *(Completed)*.
17. Saurabh Yadav. (2019-20). "Heavy Metals in Waste-Water of MNIT: Treatment Efficiency and soil Contamination" MNIT Jaipur. *(Completed)*.