

Dr. Harish Gupta

UGC-Assistant Professor

Dept. of Civil Engineering

University College of Engineering (A)

Osmania University, Hyderabad 500 007

harishgupta78@osmania.ac.in



Professional Profile

Dr. Harish Gupta is a distinguished academic and researcher in Earth and Environmental Sciences. With over two decades of academic and research experience, his work bridges geochemistry, water resources, environmental management, and disaster risk reduction. Dr. Gupta's cross-continental research expertise and leadership in teaching innovation are complemented by significant contributions to major research grants, curriculum development, consultancy for the mining sector, and e-learning initiatives. His research is widely published, with an h-index of 15 and over 1,100 citations on topics ranging from riverine geochemistry to urban flood mitigation and sustainable water management.

Research Interests

- Environmental geochemistry and water resource management
- River basin processes, sediment transport, and chemical weathering
- Urban flood mitigation and disaster risk reduction
- Geospatial applications in hydrology and environmental management
- Green infrastructure and climate adaptation strategies

Academic Credentials

- Ph.D. (Earth Sciences), IIT Roorkee (2006)
- M.Sc. (Geology), MDS University, Ajmer (2002)

Academic and Research Appointments

- UGC-Assistant Professor, Osmania University, India (2013–present)
- Research Scientist and Postdoctoral Fellow, Xiamen University, China (2008–2013)
- Postdoctoral Fellow, Academia Sinica, Taiwan (2007–2008)

Select Research Achievements

SCI Publications: 27 (aggregate impact factor 90+; h-index 15; i10-index 16)

Book chapters and conference papers: 16

Research Grant Leadership: PI/Co-PI for UGC, DST-SERB, MHRD-SPARC, and other funded projects totaling over ₹170 Lakhs since 2013

MOOCs/E-Content: 29 e-modules and 27 video lectures delivered for national platforms such as SWAYAM

SWAYAM MOOC Coordination: “Water Resources and Watershed Management” (completed 6 cycles) and “Disaster Risk Reduction and Management”

Invited Talks/Presentations/Guest Lectures: 50+

Academic Responsibilities: Coordinator IQAC OU; Coordinator Mining Engineering, Mentor, Board of Studies & NIRF Committee member

Student Supervision: Supervised 5 PhDs, mentored numerous ME, and BE students, with awardees now placed in academia, industries and research

Traning Program Coordinated/Conference Organized

- Online Short Term Course on “E-Content Development and MOOCs” organized by UGC-MMTTC Osmania University from 30.06.2025 to 05.07.2025
- Online Short Term Course on “MOOCs” organized by UGC-MMTTC Osmania University from 25.11.2024 to 30.11.2024
- Online Short Term Course on “MOOCs, E-Content Development, Online Pedagogy, and Open Educational Resources” organized by UGC- MMTTC Osmania University from 20.02.2023 to 25.02.2023
- Two-day Workshop on "Climate Change and Urbanization: Building Resilience in the Urban Water Sector" on Dec 16-17, 2019 at Dept. of Civil Engineering, UCE, OU (Prof Gopal Naik and Dr Harish Gupta); funded through MHRD-SPARC Project.
- World Water Day seminar at Dept of Civil Engineering, UCE, Osmania University on March 22, 2019
- One-day Conference on "Sustainable Industrial Development – Focusing on Environmental Challenges and Appropriate Solutions" on March 3, 2017, at FTAPCCI, Hyderabad.

Academic Excellence/Awards

- Recipient of **Vice-Chancellor Research Excellence Award (2022)**, Osmania University, Hyderabad
- Among the top 20% of CSIR NET awardees, invited to take **Shyama Prasad Mukherjee Fellowship** Test (2003).
- Qualified Council of Scientific & Industrial Research, India (CSIR) NET-JRF examination (June-2002).
- Qualified Council of Scientific & Industrial Research, India (CSIR) NET examination (Dec.-2001).
- MDS. University **Gold Medal** for standing first in order of merit in the M.Sc. Geology Examination of 2002.

Membership in Professional Societies

1. Fellow of Telangana Academy of Sciences
2. Indian Society of Applied Geochemists (ISAG)

Teaching: Courses Offered

Level & Specialization	Course Title	Dept. & College
Pre-PhD Course-work	• Research Methodology • Research Methodology in Civil Eng. • Research Methodology in Elect Eng.	Dept. of Applied Geochemistry, UCS, OU Dept. of Civil Engineering, UCE, OU Dept. of Electrical Engineering, UCE, OU
MSc Environmental Science	• Geo-Environment • Air & Noise Pollution • Remote Sensing and GIS • Environmental Impact Assessment	Dept. of Environmental Sciences, UCS, OU
ME Geo-Technical Engineering	• Rock Mechanics • Advanced Engineering Geology	Dept. of Civil Engineering, UCE, OU
ME Mining Engineering (Regular and PTPG)	• Mining Economics and Investment • Applied Mining Geology • Geo-environmental Lab	Dept. of Mining Engineering, UCE, OU
ME(Allregular and PTPG specializations)	• Research Methodology in Civil Eng. • Disaster Mitigation and Management	Dept. of Civil Engineering, UCE, OU Open Elective for UCE
BE	• Engineering Geology • Disaster Risk Management (PE) • Disaster Management (OE) • Engineering Geology Lab	Dept. of Civil Engineering, UCE, OU Dept. of Civil Engineering, UCE, OU CSE, AI&ML, ECE, EEE, Mechanical, Mining, UCE Dept. of Civil Engineering, UCE, OU

• Soil Mechanics Lab	Dept. of Civil Engineering, UCE, OU
• Geology for Mining Engineers	Dept. of Mining Engineering, UCE, OU
• Mining Geology Lab	Dept. of Mining Engineering, UCE, OU
• Environmental Sciences	BME/CSE/ECE/EEE/ Mech. Eng.

List of Publications

Journal Publications

1. P Attri, DM Tiwari, M. Satyanarayanan DV Reddy, D Kumar, **H Gupta** (2025) Source apportionment, enrichment, and inhalation risk assessment of aerosols (PM 10) at urban/industrial city of Hyderabad in Southern India Environmental Monitoring and Assessment, (**Impact factor: 2.513**) Accepted
2. S. Kiran Kumar Reddy, **Harish Gupta**, Dhananjay Pandya, SmitaChhag (2025) Per Capita Water Availability and an Overview on the Influencing Factors in a Semi-Arid Region Journal of Geological Society of India, Volume 101, Issue 10 (1443-1586)(**Impact factor: 1.2**).
3. Aadhi, N., Bharadwaj, R., Naik, M. G., **Gupta, H.**, Jaber, F. H., & Ale, S. (2025) Optimization of parameters for the HEC-HMS model based on real-time flow monitoring data: a case study of Hyderabad metropolitan area, India Modeling, Earth Systems and Environment, 11(5), 351(2025) (**Impact factor: 2.9**).
4. M Chiluka, V Gandla, KK Reddy, **H Gupta**, DV Reddy, B Upendra (2024) Irrigation suitability assessment of urban wastewater for sustainable agriculture: a case study of Musi river, IndiaDiscover Water 4, 1-16
5. V. Balaram, M. Santosh, M. Satyanarayanan, N. Srinivas, **Harish Gupta** (2024) Lithium: A review of applications, occurrence, exploration, extraction, recycling, analysis, and environmental impact.Geoscience Frontiers (**Impact factor: 8.9**).
6. S. Kiran Kumar Reddy, **Harish Gupta***, Vamshi Krishna Gandla, D. Venkat Reddy, Rama Mohan Kurakalva, Devender Kumar (2024) Nutrient Dynamics in Small West-Flowing Tropical Mountainous Rivers of India. Applied Geochemistry 169, 106035 (**Impact factor: 3.4**).
7. Ravalibharadwaj TR, **Harish Gupta*** (2023) Impact of Land-use and Land-cover Change Dynamics on Flooding: A Case Study of Safilguda and RamakrishnaPuram Lake Watersheds of Hyderabad Metropolitan. International Research Journal of Engineering and Technology (IRJET) Volume 10, Issue 4
8. VamshiKrishnaGandla, MounikaChiluka, **Harish Gupta**, Sukesh Narayan Sinha, Paromita Chakraborty (2023) Sediment-water partitioning and risk assessment of organochlorine pesticides along the urban, peri-urban and rural transects of Krishna River Basin, Peninsular India. Science of the Total Environment 874, 162360 (**Impact factor: 10.743**).
9. **Harish Gupta**, Neeraj Pant, Ravi Kumar Saini, M. Satish Kumar, MS VenkataRamaiah, NVK Srinivas (2022) Tracing Inrush Water Seepage Source using Hydrochemistry and Stable Isotopes: Preliminary Investigation of AdriyalaLongwall Project of SCCL, India, Journal of Mines, Metals & Fuels-Special Volume on Recent Trends in Mineral Industry Vol70, No.12(A)
10. Reddy, S. K. K., **Gupta, H***, Badimela, U., Reddy, D. V., Kurakalva, R. M., & Kumar, D. (2021). Export of particulate organic carbon by the mountainous tropical rivers of Western Ghats, India: Variations and controls. Science of The Total Environment, 751, 142115 (**Impact factor: 10.743**).
11. **HarishGupta***, Kiran Kumar Reddy, VamshikrishnaGandla, LingarajuParidula, MounikaChiluka, BhumikaVashistha (2021). Freshwater discharge from the large and coastal peninsular rivers of India: A reassessment for sustainable water management. Environmental Science and Pollution Research, 1-18 (**Impact factor: 5.190**).
12. Reddy, S. K. K., **Gupta, H***, Reddy, D. V., & Kumar, D. (2021). The suitability of surface waters from small west-flowing rivers for drinking, irrigation, and aquatic life from a global biodiversity hotspot (Western Ghats, India). Environmental Science and Pollution Research, 1-16 (**Impact factor: 5.190**).
13. **Gupta, H***, Reddy, S. K. K., Chiluka, M., & Gandla, V. (2021). Nutrient retention behind a tropical megadam: a case study of the SardarSarovar Dam, India. SN Applied Sciences, 3(1), 1-13.
14. Peketi, A., Mazumdar, A., Pillutla, S. P. K., Sawant, B., & **Gupta, H.** (2021). Climatic and tectonic control on the Bengal Fan sedimentation since the Pliocene. Geochemistry, Geophysics, Geosystems, 22(3), e2020GC009448 (**Impact factor: 4.48**).

15. Pal, A., Kulkarni, M. B., **Gupta, H.**, Ponnalagu, R. N., Dubey, S. K., &Goel, S. (2021). Portable and Autonomous Device for Real-time Colorimetric Detection: Validation for Phosphorous and Nitrite Detection. *Sensors and Actuators A: Physical*, 112896 (**Impact factor: 4.291**).
16. Reddy, S. K. K., K. Sravan Kumar, **Gupta, H***. (2021) Role of climate and topography on hydrological characteristics of the Bharathapuzha basin in the tectonically quiescent Western Ghats, India, *Journal of the Geological Society of India*, V. 97 (**Impact factor:1.466**)
17. Reddy, S. K. K., **Gupta, H***,& Reddy, D. V. (2019). Dissolved inorganic carbon export by mountainous tropical rivers of the Western Ghats, India. *Chemical Geology*, 530, 119316(**Impact factor: 4.685**)
18. S. Kiran Kumar Reddy, Dinesh Kumar Sahadevan, **Harish Gupta***, DontireddyVenkat Reddy (2019) "GIS based Prediction of Groundwater Fluoride Contamination Zones in Telangana State, India", *Journal of Earth System Science* (**Impact factor: 1.912**).
19. NibeditaBisoyi, **Harish Gupta***, Narayan Prasad Padhy, Govind Joseph Chakrapani (2018) "Prediction of daily sediment discharge using a back propagation neural network training algorithm: A case study of the Narmada River, India", *International Journal of Sediment Research* (**Impact factor: 3.259**).
20. N Khandelwal and **Harish Gupta** (2017) Watershed Management through Four Waters Concept: A Key to Sustainable Rural Development, *Gujarat Journal of Extension Education (GJEE)* Vol.28 Issue I&II
21. N Khandelwal, **Harish Gupta** (2014) Constraints Faced by Farm Women in Soil and Water Resource Conservation: A Case Study, *Indian Journal of Applied Research* 4 (8), 318-321
22. **Harish Gupta***, S-J Kao, Minhan Dai (2012) The Role of mega dams in reducing sediment fluxes: A case study of large Asian rivers, *Journal of Hydrology Volumes 464–465*, Pages 447–458 (**Impact factor: 6.708**).
23. **Harish Gupta***, GJ Chakrapani, K. Selvaraj, S-J Kao (2011). The fluvial geochemistry, contributions of silicate, carbonate and saline-alkaline components to chemical weathering flux and controlling parameters: Narmada River (Deccan Traps), India, *GeochimicaetCosmochimicaActa*, Volume: 75, Page: 800-824 (**Impact factor: 5.921**).
24. CK Jain, **Harish Gupta** and GJ Chakrapani (2008) "Enrichment and fractionation of heavy metals in bed sediments of River Narmada, India", *Environmental Monitoring and Assessment*, Volume: 141, Issue 1-3, Pages: 35-47. (**Impact factor: 2.513**).
25. RK Saini, S Swain, A Patra, GJ Khanday, **Harish Gupta**, P Purushothaman, GJ Chakrapani (2008) "Water chemistry of three Himalayan Lakes: Dal (Jammu & Kashmir), Khajjiar (Himachal Pradesh) and Nainital (Uttarakhand)", *Himalayan Geology*, Volume 29 Issue 1, Pages: 63-72 (**Impact factor: 1.293**)
26. **Harish Gupta** and GJ Chakrapani (2007) "Temporal and spatial variations in water flow and sediment in Narmada River Basin," *Current Sciences*, Volume 92, Issue 5, Pages: 679-684 (**Impact factor: 1.102**)
27. **Harish Gupta** and GJ Chakrapani (2005). "Temporal and spatial variations in water flow and sediment in Narmada River Basin: Natural and man-made factors", *Environmental Geology*, Volume 48, Pages: 579-589 (**Impact factor: 1.445**)

Book Chapters/Conference Papers

28. Ganga Periyasamy, **Harish Gupta**, Sourav Chatterjee, Bishwajit Paul (2024) Expounding Conflicts of Interest in Scientific Publishing Ecosystem: An Author-Editors: Dr. Payal B. Joshi, Prathamesh P. Churi, Dr. Manoj Pandey-Reviewer Axis
29. **Harish Gupta**, Kiran Kumar Reddy S and Vamshi Krishna Gandla (2023), Temporal Trends in Water Discharge of the Large Peninsular Rivers: Assessing the Role of Climatic and Anthropogenic Factors in Earth's Changing Climate: Past, Present & Future, published by Society of Earth Scientists(pp. 321-331). Cham: Springer International Publishing.https://doi.org/10.1007/978-3-031-13119-6_19.
30. K. Lavanya, L. Edukondalu, M. Mohan Raju, Aadhi. Naresh, Dinesh. C. S. Bisht and Harish Gupta(2022) Temperature and air velocity distribution in ripening chamber of fruits by CFD model
31. M. Harini Reddy, N. Mani Kumari, M. Mohan Raju, Dinesh. C. S. Bisht, A. Naresh, **Harish Gupta**, M. Gopal Naik (2022). Neural Networks Analysis of Suspended Sediment Transport Time Series Modeling in A River System in Computational Intelligence based Time Series Analysis Edited By Dinesh C. S. Bisht, Mangey Ram to be published by River Publishers,Denmark
32. A. Naresh, Ravalibharadwaj, M. Gopal Naik, **Harish Gupta**, M. Mohan Raju, Dinesh. C. S. Bisht (2021) A Comprehensive Review on Urban Floods and its Modeling Techniques (Chapter 10 in Time Series

- Forecasting, Edited By Dinesh C. S. Bisht, Mangey Ram, published by CRC Press (Taylor & Francis Group), e-book ISBN:9781003102281
33. M. Mohan Raju, Dinesh.C. S. Bisht, A. Naresh, **Harish Gupta**, M. Gopal Naik, Anil Kumar, Archana Sarkar (2021) Artificial Neural Networks (ANNs) and their Application in Soil and Water Resources Engineering in Time Series Forecasting (chapter 12), Edited By Dinesh C. S. Bisht, Mangey Ram, published by CRC Press (Taylor & Francis Group), e-book ISBN:9781003102281
 34. N Khandelwal, **H Gupta** (2020), Indian Education System and Current Status of Education in India (Sustainable Development Goal 4: Quality Education), published in Sustainable Development Goals in Indian Context: Interventions and Schemes, edited by Ragini Ranawat, Jyoti Meena, Kesar Chayaland Lalita Vatta, published by Pustak Sansar (ISBN: 9789381737927)
 35. **H Gupta**, N Khandelwal (2020), Protecting the Diversity of Life on Land (Sustainable Development Goal 15: Life on Land) published in Sustainable Development Goals in Indian Context: Interventions and Schemes, edited by Ragini Ranawat, Jyoti Meena, Kesar Chayaland Lalita Vatta, published by Pustak Sansar (ISBN: 9789381737927)
 36. SKK Reddy, **H Gupta**, Neeta Khandelwal, (2019) India's Water Challenge. Proceedings of HYDRO-2019 International Conference
 37. SKK Reddy, **H Gupta** (2019), Water Availability Assessment for Million-plus Cities of India. Proceedings of HYDRO-2019 International Conference
 38. A. Naresh, M. Mohan Raju, M. Gopal Naik, **Harish Gupta**, Anil Kumar, Archana Sarkar (2019) Sediment Transport Modeling And Hysteresis Study For Pranahita Sub-Basin Of Godavari River System In India. Proceedings of HYDRO-2019 International Conference
 39. B Santhosha, C Sarala, A Naresh, MG Naik, **Harish Gupta**, MM Raju, (2019) GIS and SPI Based Spatio-Temporal Drought Analysis of Mahaboobnagar District of Telangana State in India, Proceedings of HYDRO-2019 International Conference
 40. A Naresh, **Harish Gupta** and Prof M Gopal Naik (2019) Water Sensitive Urban Design as Way Forward to Sustainable Water Management for Hyderabad City. Proceedings of All India Seminar on "Water and Sanitation Management", March 2019 IEI India
 41. **Harish Gupta** (2016) Temporal Variation in the Sediment Load of Major Peninsular Rivers and Influence of Human Activities, Proceeding of Hutton India Conference 2016
 42. **Harish Gupta** and GJ Chakrapani (2004). Variations in daily sediment loads of Narmada river, In: Water Quality- Monitoring, Modeling and Prediction, Proceedings, 11th National Symposium on Hydrology, National Institute of Hydrology Roorkee.