

Curriculum Vitae



NAME	Dr. HEMANT KUMAR PANDEY
FATHER'S NAME	Late Raja Ram Pandey
MAILING ADDRESS	B-15, MNNIT Colony, Teliyanganj, Allahabad-211004 (U.P.) India Phone: 0532-2271318 (o) Mobile: 9415630591 Email: pandey_hk@rediffmail.com hkp@mnnit.ac.in
PERMANENT ADDRESS	Village: Jafarpura, Post: Baburi District: Mirzapur (U.P.), India
MARTIAL STATUS	Married
PRESENT EMPLOYMENT	Professor Department of Civil Engineering MNNIT, Allahabad (Prayagraj) India
PREVIOUS EMPLOYMENT	Scientist from Year 1997 to 2012 in Central Ground Water Board (CGWB), Ministry of Water Resources, Government of India.

EDUCATIONAL QUALIFICATIONS

DEGREE	SUBJECTS	UNIVERSITY	YEAR OF PASSING	DIVISION	MARKS (%)
B.Sc. (Hons)	Geology (Hons.)	Banaras Hindu University, Varanasi	1990	First	65.00
M.Sc.	Geology	Banaras Hindu University, Varanasi	1992	First	78.00
Ph.D.	Applied Geology	Indian School of Mines, Dhanbad	Awarded in year 2000	Geological setting, Ore Petrology and Metallogenesis of Cu-Mo sulfide deposit, district Malanjkhand (M.P.)	NA

AWARDS:

1. *La-Tauche Medal from Mining, Metallurgical & Geological Institute, Calcutta in 1993.*
2. *B.H.U. Gold Medal at M.Sc. level in 1993.*
3. *Prof. Rajnath Gold Medal at M.Sc. level in 1993. from Banaras Hindu University.*
4. *Letter of appreciation from the Director General of Police, Govt. of U.P and Ministry of Water Resources, Govt. of India in the year 2009.*

Ph.D Supervised:

S. No.	Topic	Name and Reg. No. of the Ph.D. Student	Co-Supervisor	Year of Registration	Year of Award
1.	Development of Web Based Spatial Decision Support System for Soil and Water Conservation Measures in Pairi Watershed, Chhattisgarh	Tarun Kumar (15325003)	Dr.D.C. Jharia	2015	2019
2	Geological and Geotechnical study of rock cut slope along SH-5 at Markundi Hill near Chopan, District- Sonbhadra (U.P.)	Saurav Kumar (2015RCE52)	-----	2015	2021

Ph. D Ongoing:

S. No.	Topic	Name and Reg. No. of the Ph.D. Student	Co-Supervisor	Year of Registration	Year of Award
1.	Soil loss estimation and watershed management in Mahoba District of Bundelkhand Region,U.P., India	Vishal Kumar Singh (2021RCE19)	-----	2021	NA
2	Runoff, soil loss estimation and identification of sites for artificial recharge structures in a watershed	Swapnil Kumar Sharma (2021RCE59)	-----	2021	NA

EXTERNALLY FUNDED R&D PROJECT(s):**Completed:**

- 1) Project on “Hydrogeological Evaluation of High Fluoride in Ground Water in parts of District Sonbhadra (U.P.) has been sanctioned by **National Academy of Science India (NASI)**.
- 2) Identification of Groundwater Prospect and Recharge Zones in District, Banda, U.P. sponsored by **NRDMS, DST New Delhi** for 2016-18 amounting to Rs.18.24 Lakh.
- 3) Mapping of Groundwater Quality Depleted area, Potential Groundwater Recharge Zones, and Evolving the Farmer’s need-based Groundwater Recharge structures in District Mahoba of Bundelkhand Region of Uttar Pradesh sponsored by **NRDMS, DST New Delhi** for 2020-22 amounting to Rs.15.00Lakh

Ongoing:

1) Land use/ Land cover change modeling and sustainable development of Water Resources in the Ghaghara River basin Sponsored by **SERB, DST New Delhi** for the year 2020-2023 amounting Rs.29.81 Lakh.

PUBLICATIONS:

BOOK: Authored one book entitled “Engineering Geology” published by Mc-Graw Hill in July 2014, ISBN No: 978-93-392-0461-7.

BOOK CHAPTER:

- 1) H.K. Pandey: The participatory approach of Groundwater Management in Padhori Watershed in Hamirpur District, Bundelkhand Region, U.P.- A case study published in Hydrology and Watershed book” published by Excellent Publisher in the year 2016.
- 2) HK Pandey, S K Srivastava, Prashant Pandey, Petrochemical analysis and their correlation for genesis of fluoride contamination (2017) published in a book entitled “Clean and sustainable Groundwater “ISBN 978-981-10-4552-3 Springer pp 61-79.
- 3) H.K.Pandey (2020) Introduction to Landslides published in a book entitled "Techniques for Disaster Risk Management and Mitigation" John Willey pp Online ISBN: 9781119359203Print ISBN: 9781119359180. <https://doi.org/10.1002/9781119359203.ch14>

RESEARCH PUBLICATIONS:

INTERNATIONAL JOURNAL:

1. Nirmal Kumar, Sudhir Kumar Singh, **H.K.Pandey** (2018), Drainage morphometric analysis using open access earth observation datasets in a drought affected part of Bundelkhand, India. **Applied Geomatics**, DOI:<https://doi.org/10.1007/s12518-018-0218-02>.
2. D.C.Jhariya, Tarun Kumar &**H.K.Pandey** (2018), Watershed prioritization based on soil and water hazard model using remote sensing, geographical information system and multi-criteria decision analysis approach. **Geocarto International** DOI:101080/10106049:20181510039.
3. Tarun Kumar D.C.Jhariya, &**H.K.Pandey**(2019), Comparative study of different models for soil erosion and sediment yield in Pairi Watershed, Chhattisgarh India. **Geocarto International** DOI:<https://doi.org/10.1080/10106049.2019.1576779>.
4. S. Kumar, **H. K. Pandey**, P. K Singh & K. Venkatesh (2019) Demarcation of probable failure zones based on SMR and kinematic analysis **Natural Hazards**, Vol.10(1) pp 1793-1804 DOI: 10.1080/19475705.2019.1618399.
5. D.C.Jhariya, Tarun Kumar, **H.K.Pandey** ,Sunil Kumar, Dharmendra Kumar, Amar Kant Gautam, Vindhyavashini Singh Baghel and Nawal Kishore (2019) Assessment of groundwater vulnerability to pollution by modified DRASTIC model and analytic hierarchy process. **Environmental Earth Sciences** DOI <https://doi.org/10.1007/s12665-019-8608-2>.
6. **H.K.Pandey**, Vivek Tiwari, Saurabh Kumar Ankit Yadav &S.K.Srivastava (2020) ,Groundwater quality assessment of Allahabad smart city using GIS and Water Quality Index.Sustainable Water Resources ManagementDOI: [10.1007/s40899-020-00375-x](https://doi.org/10.1007/s40899-020-00375-x)
7. Abhishek Kumar Chaurasia, **H. K. Pandey**, S. K. Tiwari, Prashant Pandey, Arjun Ram, (2021) Groundwater vulnerability assessment using water quality index (WQI) under geographic

information system (GIS) framework in parts of Uttar Pradesh, India. **Sustainable Water Resources Management** 7:40 <https://doi.org/10.1007/s40899-021-00513-z>.

8. Arjun Ram, S. K. Tiwari, **H. K. Pandey**, Abhishek Kumar Chaurasi, Supriya Singh Y. V. Singh. (2021), Groundwater quality assessment using water quality index (WQI) under GIS framework. **Applied Water Science** 11:46 <https://doi.org/10.1007/s13201-021-013767>
9. Pandey, Prashant & Tiwari, S.K. & **Pandey, H. K.** & Chaurasia, Abhishek & Singh, Sachchidanand. (2021). Identification of Potential Recharge Zones in Drought Prone Area of Bundelkhand Region, India, Using SCS-CN and MIF Technique Under GIS-frame work. *Water Conservation Science and Engineering*. 6. 10.1007/s41101-021-00105-0.
10. **Pandey, H.K.**, Singh, V.K. & Singh, S.K. (2022), Multi-criteria decision making and Dempster-Shafer model-based delineation of groundwater prospect zones from a semi-arid environment. *Environ Sci Pollut Res*. <https://doi.org/10.1007/s11356-022-19211-0>
11. Digvijay Singh, P. K. Singh, A. Kainthola, **H. K. Pandey**, Saurabh Kumar & T. N. Singh, (2022). Analysis of failure pattern in cut slopes of bedded sandstone: a case study. *Environmental earth sciences*, 81, 398. doi: 10.1007/s12665-022-10528-0.
12. Kumar, S., **Pandey, H.K.** & Venkatesh, K. (2022), Stability analysis of rock cut slope near major fault using numerical simulation. *Arab J Geosci* 15, 1255 <https://doi.org/10.1007/s12517-022-10487-7>
13. Vishal Kumar Singh, **H.K. Pandey**, Sudhir Kumar Singh, (2022), Groundwater storage change estimation using GRACE data and Google Earth Engine: A basin scale study, *Physics and Chemistry of the Earth, Parts A/B/C*, Volume 129, 103297, ISSN 1474-7065, <https://doi.org/10.1016/j.pce.2022.103297>.
14. Nirmal Kumar, Sudhir Kumar Singh, Pushpendra K. Singh, Dilip Kumar Gautam, Pooja Patle, **H.K. Pandey**, Pankaj Chauhan, (2022), Water accounting of a trans-boundary river basin using satellite observations and WA+ framework, *Physics and Chemistry of the Earth, Parts A/B/C*, 103343, ISSN 1474-7065, <https://doi.org/10.1016/j.pce.2022.103343>.
15. Pandey, H. K., Kumar, S., Mondal, N. C., & Rawal, N. (2022). Chemical characterization of the Bicchari ash pond and its impact around the Renusagar thermal power plant, Sonbhadra district, Uttar Pradesh, India. *Environmental Quality Management*, 31(3), 403– 412. <https://doi.org/10.1002/tqem.21796>.
16. Hemant Kumar Pandey, Vishal Kumar Singh, Sudhir Kumar Singh , Swapnil Kumar Sharma (2023) Mapping and validation of groundwater dependent ecosystems (GDEs) in a drought-affected part of Bundelkhand region, India. *Groundwater for Sustainable Development* doi.org/10.1016/j.gsd.2023.100979.
17. Videshi Chaudhary, Saurabh Kumar, Sanjay Kumar Tiwari, Hemant Kumar Pandey (2023), Evaluation of engineering properties of KBH and KCH Kaimur Sandstone based on petrological analyses. *Arabian Journal of Geosciences*. doi.org/10.1007/s12517-023-11712-7
18. H. K. Pandey, Vishal Kumar Singh, Ram Pal Singh, Sudhir Kumar Singh (2023) Soil Loss Estimation Using RUSLE in Hard Rock Terrain: a Case Study of Bundelkhand, India. *Water Conservation Science and Engineering*. <https://doi.org/10.1007/s41101-023-00229-5>.
19. H. K. Pandey, Vishal Kumar Singh, Sudhir Kumar Srivastava, Ram Pal Singh (2023) Groundwater quality assessment using PCA and water quality index (WQI) in a drought-prone area. *Sustainable Water Resources Management*. <https://doi.org/10.1007/s40899-023-00963-7>

NATIONAL JOURNAL:

Pandey, H.K. (1997) :- Comments on the paper entitled Interstratified low Ti and high –Ti Volcanics in arc related Khariagarh Group of Central India, *Current Science*, Vol 72 No3 pp.13.

1. Rai. K.L., **Pandey, H.K.** (2001) : “ Comments on Anatomy of a Porphyry Copper Deposit, Malanjhand, Madhya Pradesh, *Jour. Of Geol. Soc. of India*, Vol-57, pp551-554

2. Rai, K.L., **Pandey, H.K.**, Venkatesh, A.S., Dash, S.K., Agrawal S. and Diwan, P. (2004), Granotoids, their altered variants and associated rocks from Malanjkhanda, Central India. Geological Setting, Geochemistry, Evolution and Petrogenesis, Journal of Economic Geology and GeoresourceManagement , Vol.1, No2, pp235-277.
3. **Pandey, H.K.** and Rai, K.L. (2006) ,Granite magmatism and metallogenesis in Malanjkhanda region of Kotri rift zone, Central India: A geochemical reappraisal . Indian Journal of Geochemistry Vol. No 21 (2) pp283-312
4. Singh, S., Samaddar, A.B., Srivastava, R.K., **Pandey, H.K.** (2009), Artificial Recharge of Ground Water- A case study of Allahabad City’’ International Journal of Earth Sciences and Engineering.Vol.02, No 06, pp-556-560.
5. Saumya Singhi, A. B. Samaddar, R. K. Srivastava, **H.K.Pandey** (2014) Ground Water Recharge in Urban Areas – Experience of Rain Water Harvesting, Journal Geological Society of India, Vol.83,pp295-302 (SCI Impact factor:0.596)
6. Poonam Dubey, M.M.Singh, **H.K.Pandey** (2014) Aquifer Parameterization in an Alluvial Area:Varanasi District, Uttar Pradesh, India- A Case Study, International Journal of Innovative Research in Science, Engineering and Technology, Vol.3.,Issue-1. Pp-9015-9033
7. **H.K.Pandey**, S.K.Duggal, Ajit Jamatia (2015) Fluoride contamination of ground water and its hydrogeological evolution in District Sonbhadra (U.P.), Proceeding of National Academy of Sciences, (Springer) India, Vol.86(1) pp-81-93(SCI Impact Factor:0.38).
8. Abhishek Kumar Chourasia, **H.K.Pandey**, H.C.Nainwal, Jitendra Singh, S.K.Tiwari(2017), Stability analysis of rock slopes along Gangadarshan, Pauri, Garhwal, Uttarakhand, Journal of Geological Society of India,Vol.89, pp 689-696. (SCI- Impact factor:0.596). IF: 1.33
9. Abhishek Kumar Chourasia, **H.K.Pandey**, S.K.Tiwari, Ram Prakash, Prashant Pandey and Arjun Ram (2018), Groundwater Quality Assessment using Water Quality Index (WQI) in parts of Varanasi District,Uttar Pradesh India , Journal of Geological Society of India,Vol.92, pp 76-82. (SCI- Impact factor:0.596). IF 1.33
10. **H.K.Pandey**, Shivam Dwivedi and Kamlesh Kumar (2018), Flood frequency analysis of Betwa River,Madhya Pradesh India. Journal of Geological Society of India,Vol.92, pp 286 290. (SCI- Impact factor:0.596). IF: 1.33
11. NekRam Rawal ,Chaitanya Nidhi, **H.K.Pandey**(2019) Rapid Impact Assessment Matrix (RIAM)-Based Approach for selection of Solid Waste Disposal Site. National Academy Science Letter <https://doi.org/10.1007/s40009-018-0765-4>. IF 0.788
12. A Ram, SK Tiwari, **H K Pandey**, AK Churasia, SK Choudhary (2020) Assessment of Groundwaterbehaviour in Kulpahar Watershed, District Mahoa, Uttar Pradesh, India. IOP Conference Series Earth and Environmental Sciences 597(2020) 012014 doi:10.1088/1755-1315/597/1/012014. IF: 0.45
13. Abhishek Kumar Churasia, **H K Pandey** and SK Tiwari (2020) Groundwater Resource Assessment of an alluvial aquifer in parts of Varanasi and Sant Ravidas Nagar Districts, Uttar Pradesh, India using GRE-2015. IOP Conference Series Earth and Environmental Sciences 597 (2020) 012004doi:10.1088/1755-1315/597/1/012004. IF 0.45
14. Saurabh Kumar and **Hemant Kumar Pandey** (2021), Slope Stability Analysis Based on Rock Mass Rating, Geological Strength Index and Kinematic Analysis in Vindhyan Rock Formation. JOURNAL GEOLOGICAL SOCIETY OF INDIA Vol.97, pp.145-150. IF: 1.641
15. Abhishek Kumar Chaurasia, **H. K. Pandey**, S. K. Tiwari , Prashant Pandey,(2021) Arjun Ram. Groundwater Stress Analysis using GIS in Parts of Varanasi District, Uttar Pradesh, India. Proc. Natl. Acad. Sci., India, Sect. A Phys. Sci. <https://doi.org/10.1007/s40010-021-00735-y>. IF: 1.276

16. Ghosh, S., Kumar, S., Khare, S.K. & Pandey, H.K Stability Assessment of Siwalik Rock Slopes — A Case Study from Dehradun Area, Uttarakhand, India. J Geol Soc India 98, 1737–1744 (2022). <https://doi.org/10.1007/s12594-022-2245-1>
17. Nikhil Kumar Pandey, Kumar Venkatesh, Hemant Kumar Pandey, Sundaram Srivastava (2023) Numerical Modeling and Analysis of Rock Slope in Markundi Hills, Sonbhadra. Indian Geotech Jdoi.org/10.1007/s40098-023-00730-7

INTERNATIONAL CONFERENCE:

1. Pandey, H.K. (2014), Ground Water Scenario and Management options in Allahabad and Varanasi city 9U.P.), India - An Analysis in International academic conference held at Venice, Italy during June 30,2014 to July 03,2014.
2. HK Pandey, SK Srivastava Geo-environmental assessment at Bichhari ash pond, District Sonbhadra, UP India International Groundwater Conference-2017, Dec.11- 13,2017 held at New Delhi organized by National Institute of Hydrology, Roorkee.
3. Abhishek Kumar Chaurasia, HK Pandey, SK Tiwari, Prashant Pandey, Arjun Ram Hydrogeological condition and groundwater management options in Araziline Block, District Varanasi, U.P., India International Groundwater Conference-2017, Dec.11- 13,2017 held at New Delhi organized by National Institute of Hydrology, Roorkee.
4. Arjun Ram, SK Tiwari HK Pandey, Abhishek Kumar Chaurasia,,Ravi Shanker Patel , Groundwater behavior and scope of recharge in the District Mahoba, Bundelkhand U.P.India International Groundwater Conference-2017, Dec.11-13,2017 held at New Delhi organized by National Institute of Hydrology, Roorkee.
5. Prashant Pandey,HKPandey,SK Tiwari, Abhishek Chaurasia, Morphometric analysis and its applications in targeting in Yamuna sub-basin, District Banda, UP India International Groundwater Conference-2017, Dec.11-13,2017 held at New Delhi organized by National Institute of Hydrology, Roorkee.

NATIONAL CONFERENCE/SEMINAR

1. Pandey, H.K. (1995) Remote Sensing and its utility in Mineral Exploration, in National Seminar on “Utility of Remote Sensing and other methods in Geological studies pp-10 at Bhopal.
2. Pandey, H.K. (1995) National Mineral Policy and Mineral based industries, in National Seminar on “ Earth Resources, Industrial Development and Environmental Issue : pp-15 at Jaipur.
3. Pandey, H.K. (1995), Industrial Mineral Potential and its development – an improved approach for mineral resource evaluation in Minex 95 (prod.) pp 119-121.
4. Pandey, H.K. (1995), Geological Constraints and hazards of surface Mining in the Himalaya and adjoining Regions, pp 25 at W.I.HG., Dehradun.
5. Pandey, H.K. and Rai, K.L. (1995), Rare Earth Elements Geochemistry of Malanjkhand Granitoid, Central India in xth Convention of Indian Geological Congress pp.20 at Dhanbad
6. Rai, K.L. and Pandey, H.K., (1996), Deposit Model of Proterozoic Cu-Mo, Mineralisation at Malanjkhand, Central India in XthConvention of Indian Geological Congress pp 6 at Dhanbad.
7. Rai, K.L. and Pandey, H.K., (1996), Meallogenic aspects of Precambrian Superlarge Copper Deposit of Malanjkhand in Central India in International Geological Congress pp. at Beijing China.
8. Nag, S., Pandey, H.K. and Rai, K.L. (1996), Geological Setting and Depositional Environment of Gold Mineralisation in Sonakhan Schist Belt, Raipur, M.P. in National Seminar on Proterozoic Basins of Central India pp.46 at Rewa.
9. Pandey, H.K. and Mishra, A.K. (1998) “ Scope of Artificial Recharge in Kandi belt of Outer Himalaya of Jammu Province (J&K) – A case Study” in a National Seminar pp 27 held at Banaras Hindu University (B.H.U.).

10. Pandey, H.K. and Pandey, K.S. (2003), Artificial Recharge Studies of Ground Water in and around Allahabad (U.P.) – A case Study”, in Procs. of Tenth National Convention of National Water Development Agency held at Bhubaneswar, 5-7 Nov. 2003 pp232-236.
11. Pandey, H.K. (2006) Ground Water Regime and its impact on Interlinking of Rivers. Souvenir of IIIrd M.P. Science Congress at Bhopal, pp18-19
12. Pandey, H.K.(2009) Impact of liquid waste on Ground water Quality in Alluvial area: A case Study as abstract in National Conference on “ Recent Advances in Waste Management held during Feb: 20-21, 2009, pp30 at BHU, Varanasi.
13. Pandey, H.K.(2009), Ground water scenario, problems and it’s management in Eastern Uttar Pradesh in National Symposium on “The Planet Earth: Its Finite Resources and Human Civilization during March 17-19, at BHU, Varanasi.
14. Pandey, H.K.(2010), Groundwater scenario and it’s management in Bundelkhand region of Uttar Pradesh in National Symposium on “Geology and Mineral Resources of Bundelkhand Craton held during October 08-10 at Bundelkhand University, Jhansi (U.P.), pp-101.
15. Pandey, H.K., Ramji Singh, A.K.Bhargava and J.P.Gautam (2011), Groundwater Stress in Allahabad and Varanasi city and its Management-An Analysis in Regional workshop on “Management Techniques in Ground Water Stressed Urban areas held on Feb.09,2011, pp .78-81
16. Pandey, H.K. (2014), GroundWater Scenario in BundelkhandmegaWatershed of Uttar Pradesh and Management options presented in National Seminar held at Govt. Science College, Rewa(M.P) during Feb.15-16, 2014, pp32.
17. Abhishek Chourasia, S.K.Tiwari , H.K. Pandey (2015), Ancient River Sarasvati- A Palaeochannel, pp29-32 in Workshop on “Groundwater Prospect of Palaeochannels' ' held on 06.10.2015 organized by CGWB at Allahabad.
18. Pandey, H.K. (2015), Ground Water Stress in Ganga Flood Plain: Case study of Allahabad City (U.P.), pp23 in Workshop on “Groundwater Prospect of Palaeochannels” held on 06.10.2015 organised by CGWB at Allahabad.
19. Rakesh Singh, M.N.Khan, J.P.Gautam and H.K.Pandey (2015) Significance of Urban Hydrogeology in the Gangetic Alluvial Plains-A case study of Allahabad High Court Building pp21-22 in Workshop on “Groundwater Prospect of Palaeochannels” held on 06.10.2015 organized by CGWB at Allahabad
20. Pandey, H.K., Pandey Prashant (2016) Scope and Dimensions of Ground Water Recharge in Allahabad city, published in proceedings of conference on “GroundWater Resource of U.P.- challenges and mitigation “ pp-82-91 on 30.03.2016
21. Abhishek Chourasia, H.K. Pandey, Prashant Pandey, Arun Ram, S.K.Tiwari (2016) Groundwater Scenario of Araziline block, District Varanasi, published in proceedings of conference on “GroundWater Resource of U.P.- challenges and mitigation “ pp-101-108 on 30.03.2016 10
22. Pandey, H.K. Srivastava Sudhir, Pandey Prashant, Chourasia Abhishek, Tiwari, S.K. (2016), Petrochemical characterisation of fluoride contamination of groundwater in parts of District, Sonbhadra(U.P.) published in proceedings of conference on “Ground Water Resource of U.P.- challenges and mitigation “ pp-117-129 on 30.03.2016.

PROFESSIONAL EXPERIENCE:

- 1) Hydrogeological Reappraisal Survey of District Kinnaur (H.P.) during 1998-99
- 2) Artificial Recharge Studies including Roof Top Rain Water Harvesting in Jammu & Kashmir and Uttar Pradesh.
- 3) Pollution Studies in the Industrial Area of Jammu.

- 4) Ground Water Management Studies of District Mahoba (U.P.)
- 5) Groundwater Management Studies of District Gazipur (U.P.)
- Ground Water Management Studies of District Banda (U.P.)
- Ground Water Management Studies of District Allahabad (U.P.)
- 6) Ground Water Management Studies of District Pratapgarh (U.P.)

ADMINISTRATIVE EXPERIENCE:

- 1) Worked as Head of Office during 2009 in Central Ground Water Board, Allahabad.
- 2) Worked as O.C. Geology Lab, Department of Civil Engineering, MNNIT
- 3) Worked as O.C. Time Table, Department of Civil Engineering, MNNIT

RESEARCH EXPERIENCE:

- 1) Detailed Liho- Geochemical Mapping around Malanjkhanda in 1994.
- 2) Geochemical analysis (Major, Minor/ trace, and rare earth elements) of Rock samples.
- 3) Fluid Inclusion Geothermobarometry.
- 4) Genetic Studies of Almora Magnesite Deposit from Sept. 1993 to Oct. 1994.
- 5) Ore Petrology and Metallogenesis of Cu- Mo sulfide deposit around Malanjkhanda (M.P.) from Nov. 1994 to July 1998 as part of the Ph.D. thesis.

PROJECTS HANDLED IN CGWB:

- 1) Roof Top Rain Water Harvesting cum Check Dam at Jawaharlal Navodaya Vidyalaya, Meja Khas, Allahabad.
- 2) Roof Top Rain Water Harvesting at P.W.D. building Panama Chouk, J&K.
- 3) Sub-Surface Dyke Cum Check Dam at Village Dewal, Basholi, District. Kathua, (J&K).
- 4) Roof Top Rain Water Harvesting at Ambedkar Vihar Chouphataka, Allahabad.
- 5) Roof Top Rain Water Harvesting at Vikas Bhawan, Allahabad
- 6) Roof Top Rain Water Harvesting at Indira Bhawan, Civil Line Allahabad
- 7) Roof Top Rain Water Harvesting at Transit Hostel, BIDA, Bhadohi
- 8) Roof Top Rain Water Harvesting at Niryat Bhawan, BIDA, Bhadohi
- 9) Check Dams across minor streams at three different places in hard rock area in Allahabad District.

CONSULTANCY PROJECT (completed/Ongoing):

Sl. No.	Details	Period	Organisation	Amount [in lakhs]	Co-Investigator[s], if any	Role
1	Master Plan for Groundwater Recharge in Allahabad and Pratapgarh City	2013-14	GWD, U.P. Allahabad	1.35	Dr.R.P.Singh	P.I.
2	Master Plan for Groundwater Recharge in Kanpur City	2013-14	GWD, U.P.,	0.97	Dr.R.P.Singh	P.I.

			Kanpur			
3	Proposal for Rainwater Harvesting in Old Cannt. Allahabad	2013-14	MES, Allahabad	0.28	No	P.I.
4	Preparation of Rainwater Harvesting Plan in Amauli Block, Fatehpur District	2014-15	GWD, U.P. Allahabad	0.49	Dr.R.P.Singh	P.I.
5	Testing of rock samples	2014-15	CPWD, Allahabad	0.18	No	PI
6	Preparation of Rainwater Harvesting Plan in Araziline Block, Varanasi District	2014-15	GWD, U.P. Varanasi	0.49	No	P.I.
7	Hydrogeology of the area to asses the impact of ash pond near Renusagar, Sonbhadra District	2014-15	Hindalco Industries, Renusagar	1.26	Dr.D. Basu	P.I.
8	Proposal for Rainwater Harvesting in Cannt. Varanasi	2014-15	MES, Varanasi	0.56	No	P.I.
9	Hydrogeological Report and Rainwater Harvesting Proposal at Shankargarh, Allahabad	2015-16	M/s Venkey India Pvt. Ltd	0.39	No	P.I
10	Hydrogeological and Rainwater Harvesting Report for NOC from CGWA	2017-18	M/s GE&TD Limited	1.66	Dr.N.R.Rawal	P.I.
11	Water leakage detection at Hindalco ,Renukoot	2017-18	M/s Hindalco Industries Ltd. Renukkot	4.95	Dr.R.P.Singh	P.I.
12	Feasibility report for Recharge Shaft at Airport, Bamrauli,	2017-18	MES Air Force, Bamrauli	0.90		P.I.
13	Material Testing	2017-18	UPRNN Saifai	1.26		P.I.
14	Review of Ghat Development and Landscape Up gradation at Gopalganj Bihar	2018-19	NMCG, New Delhi	1.78	No	P.I.
15	Review of Ghat Development and Rehabilitation of Ghats in Gazipur District, U.P.	2018-19	NMCG, New Delhi	1.82	No	P.I.
16	Hydrogeological Appraisal of Fly Ash Pond at Renusagar, Sonbhadra	2018-19	M/s Hindalco Industry Renusagar	1.47	No	P.I.
17	Proof Checking Works of Khorda Dhenkanal Water Supply Project	2019	JMC-JWIL Joint Venture Mumbai	22.42		Co-P.I.
18	Geotechnical Investigation at Anpara Power Plant, Anpara (U.P.)	2018	EE Civil Maintenance Anpara	5.42		Co-P.I.

19	Third Party Inspection and Material Test of UPRNN works at AFUU Liuchow.	2019	EE, UPRNN	7.08		Co-P.I.
20	Third Party Inspection and Material Test of UPRNN works at Chitrakoot.	2018	EE, UPRNN	7.493		Co-P.I.
21	Proof Checking Works of Nabrangpur Water Supply Project	2019	JMC-JWIL Joint Venture Mumbai	23.60		Co-P.I.
22	Technical Evaluation of Saryu Canal Project Ayodhya.	2019	CE, Saryu Canal Project Ayodhya	36.934		Co-P.I.
23	Design of RainWater Harvesting System at Hindalco Renukoot.	2019	Hindalco Industries Renukoot	1.18		Co-P.I.
24.	Preparation of Hydrological Report to Obtain NOC from GWD	2020-2021	GET&D	1.71		PI
25.	Design of rainwater harvesting system in G.C. CRPS Campus Chakia, Dist. Chandauli	2021-2022	CPWD	1.35		PI
26.	Assessment and analysis of Landfill site at Ranchi	2021-2022	M/s Aditya Construction	3.71		Co-PI
27	Feasibility of Groundwater at MNNIT Campus	2021-2022	CPWD	0.97		PI
28	Hydrogeological studies around Dala stone quarry, District Sonbhadra	2022-23	Hindalco Industries Renukoot	1.475		Co-PI
29	Petrographic analysis of Rocks	2022-23	Meja Urja Nigam (P) Ltd.	0.20		Co-PI
30	Assessment of load carrying capacity of well foundation and physical properties of rocks	2023-24	U.P.Bridge Corporation Ltd., Mirzapur	2.95		Co-PI
31	Detail Management Plan for Run-off inside the Plant area at Mahan Aluminum Plant	2023-24	Hindalco Industries Ltd. Mahan Singrauli.	5.90		PI

COURSES/ WORKSHOP ORGANISED:

- 1) Two days Workshop on “Ganga and Groundwater Contamination and its mitigation were organized at B.H.U. as Convener during Sept.17-18, 2009.
- 2) Four weeks training cum refresher course on “Groundwater Studies in Soft Rock formation” was organized from 02.01.2012 to 27.01.2012, as course director.
- 3) As coordinator, a one-week short-term course on “Rainwater Harvesting” was organized during Nov.24-28, 2014.
- 4) One-week short-term course on “Water Pollution and Wastewater Treatment” was organized during Jan.27-31, 2015 as coordinator.
- 5) Short Term Training on Hydrological, Geotechnical and Geological Investigations for Dam from May22 to 26, 2019. Sponsored by CWC, New Delhi.
- 6) Three Week Training Programme on Geospatial Technologies, from May10- 30, 2019, sponsored by NRDMS, DST.
- 7) Short Term Training on Water Quality Assessment, River Sedimentation & Risk Remedial Measures, from Sept. 25-29, 2019. sponsored by CWC, New Delhi.
- 8) Short Term Training on New Materials and Instrumentation for Rehabilitation of Dams, from Nov.25-29,2019. sponsored by CWC, New Delhi.
- 9) Short Term Training on Risk Uncertainty & Management Information System, from Dec.18-22, 2019, sponsored by CWC, New Delhi.
- 10) Short Term Course on Drought & Flood analysis and their Management, from April.14-18, 2022, sponsored by NIDM, New Delhi, organized at MNNIT Allahabad.
- 11) Short Term Course on Satellite Earth Observation and artificial Intelligence Role in Development of Disaster Resilient Infrastructure, from Nov.11-13, 2022, sponsored by NIDM, New Delhi, organized at MNNIT Allahabad.
- 12) Short Term Course on Flood estimation and Hydraulic Structures- New approach for Risk Reduction during April29-May03,2024 sponsored by NIDM, New Delhi, organized at MNNIT Allahabad

THESIS SUPERVISED AT UG AND PG LEVEL:

M.TECH THESIS SUPERVISED:

S.No	Research Topic	Name of Student	Completion/Registration Year
1	Ground Water Quality Problem in Parts of Kon Sub Basin of District- Sonbhadra(U.P.)	Chandan Kumar Mishra	2010
2	Ground Water Quality Problem in Parts of Kachnarawa	Neeraj Kumar Gupta	2010

	Watershed of District- Sonbhadra(U.P.)		
3	Ground Water Quality Problem in Parts of Panda River Sub-basin of District- Sonbhadra (U.P)	Vijay Bhudraj	2010
4	Ground Water Exploration, Well Construction, Design, Development and GroundWater Management in Alluvial Area	Poonam Dubey (-)	2011
5	Aquifer Parameters Evaluation and selection of Water Pumps in ChhokraWatershed, Raipur	Ekta Verma (211106010)	2012
6	Long Term Rainfall Analysis and Water Resources of Betwa Basin	Kamlesh Kumar (2010EN16)	2014
7	Hydrogeological Evaluation of Fluoride Contamination of Groundwater in District Sonbhadra(U.P.)	Ajit Jamatia (2012EN14)	2014
	Groundwater Stress Analysis and Management Options in Allahabad City, UP	Varsha Pandey (-)	2014
8	Geoenvironmental Problem in Silica Sand Mines of Shankargarh area of Allahabad District	Anil Kumar (2011PTEN06)	2014
9	Geo-Environmental assessment at BicchariAshpondRenusagar, District Sonbhadra (U.P.)	Suraj Kumar (2013EN04)	2015
10	Flood Frequency Analysis of Betwa River	Shivam Dwivedi (2014EN10)	2016
11	Groundwater Mapping of Allahabad City using GIS	Vivek Kumar Tripathi (2015EN02)	2017
12	Groundwater Quality Assessment of Allahabad City	Aniket Yadav (2015EN04)	2017
13	Sanitation and Assessment of Groundwater Contamination in ShankargarhBlock , District Allahabad .U.P.	Ajay Kumar (2016EN11)	2018
14	Groundwater Quality Assessment and Identification of potential Recharge zones in parts of Naraini Block, District Banda (U.P.)	Manveer Singh (2016EN09)	2018
15	Groundwater Study of Varanasi City using GIS Technique	Gulshan Kumar (2017GI02)	2019
16	GPS and glonass combined kinematic precise point positioning	Dhananjay Kumar (2018GI06)	2020
17	Numerical Modeling and Analysis of rock slope in Markundi Hills	Nikhil Kumar Pandey (2020GE11)	2022
18	Delineation of Groundwater Potential Zones using Analytical Hierarchy Process in TransYamuna Region of District Prayagraj, Uttar Pradesh India	Ramanand Mishra (2020EN16)	2022
19	Hydrological evaluation of Ramgarh lake basin in Gorakhpur, Uttar Pradesh, India	Kundan Mehta (2021EN05)	2023

B.TECH THESIS SUPERVISED:

Sl No.	Research Topic	Name of Students	Completion/Registration Year
1	Groundwater problems and management in MNNIT campus, Allahabad (U.P.) completed in the year 2014	Gopal Vats Varma (20101047), Ghanshyam Meena (20102044), Vaibhav Kumar Singh (20101075), Vivek Kumar (20091074)	2014
2	Geological Investigations in and around Bara thermal power plant, Allahabad District (U.P.)	Shashwat Singh (20128031), Rahul Kumar(20121029), Mohd. Aziz Khan (20121048)	2015
3	Optical Mineralogical characteristic of local rock aggregates and their importance in building construction	Sayam Anjum (20116053), Devvrat Tripathi (20111091), Ajay Singh (20119054), Ravi Pratap Gond (20091042)	2016
4	Water Well design using Electrical Logging Data	Keshav Kaushal (20131044), Ankur Avinash Shingh (20121117), Kumar Satyam Jeet (20131041), Satyam Soni (20121051), Rohit Singh(20111020)	2017
5	Slope Stability Analysis Using Rock Mass Rating	Abhishek Kumar(20141092), Shubham Srivas (20141024), Ajay Kumar Meena (20141030)	2018
6	Soil Profile Mapping of MNNIT Campus using Resistivity Meter	Kaushal Yadav (20151057), Nishant Singh (20151063), Acdhesh Kumar Meena (20151048), Rahul Kumar Meena (20151081)	2019
7	Experimental study for estimation of soil infiltration and groundwater recharge rate in MNNIT Allahabad Campus	Veer Pratap Singh (20161010), Monu Raj(20161063), Hitesh (20151050)	2020
8	Slope Stability Analysis of Rock Cut Slope A case study in Chopan Valley, Sonbhadra(U.P.)	Abhishek Rai (20171005), Sushant Yadav(20171038), Aditya Garg(20171007), Abdul Aziz Raofi(20151103)	2021
9	Development of 3D Aquifer Model for Ground Water using GIS and remote sensing	Sagar Sharma (20181004), Prajjwal Singh (20181098), Pankaj kumar (20181016), Divyanshu Kumar (20181046)	2022
10	Drought analysis for Bundelkhand region	Shatrunjay Srivastava (20191009), Harshit Chopra (20191012), Aditi Kalita (20191067), Aishwary Tripathi (20191105), Amlesh Meena (20191054)	2023

11	Numerical Modeling of Rihand Dam Site	Jai Tiwari (20201055), Deepti Pandey (20201088),Kajal Shahi (Jai Tiwari (20201056) Rishav Raj Sah (Jai Tiwari (20201055)	2024
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INVITED LECTURES:

1. Delivered lecture on “Groundwater Problems and Management” on World Water Day (22nd March,2010) at Institution of Engineers, Allahabad.
2. Two lectures delivered on “Concept of Artificial Recharge and different Techniques” during September, 2010 at Academic Staff College, BHU Varanasi
3. Two lectures delivered on Concept of Water Conservation in year2011 in the Inspire Programme of D.S.T, at B.H.U, Varanasi.
4. Lecture delivered on “Groundwater Problems and their Management” during June,2012 at Academic Staff College, BHU, Varanasi.
5. Lectures delivered on “Water Resources” in the Inspire Programme hosted by BBS Engineering College, Allahabad in 2012.
6. Delivered a lecture on “Water Resource problems and Management” on 29.01.2015 at BBS Engineering College, Allahabad in Inspire programme of DST, Govt. of India.
7. Delivered a lecture on “Water Resource Management “on 13.02.2015 at U.P. College, Varanasi under DBT programme of DST, Govt. of India.
8. Delivered a lecture on “Sanitaion and Ground Water on 17.10.2014 and Rain Water Harvesting “on 18.10.2014, at Academic Staff College, BHU, Varanasi.
9. Delivered a lecture on “Groundwater Exploration in Aquifer Management” on 26.03.2015 organised by Central Ground Water Board, Ministry of Water Resources, Govt. of India at BHU, Varanasi.
10. Delivered a lecture on “Concept and Techniques of Rainwater Harvesting” on 18.11.2015 at NASI, Allahabad organised by the National Academy of Sciences, India.
11. Delivered a lecture on “GroundWater Issues and Options” on 21.12.2015 at Academic Staff College, BHU, Varanasi in Orientation Course on Environment.
12. Delivered two lectures on “Causes and Control of Landslides” and Drought and its mitigation in Bundelkhand Region- A case study on 13.01.2016 and 16.01.2016 organised by UGC Human Resource Centre, University of Allahabad.

13. Delivered an expert lecture on “Scope and Dimensions of Ground water recharge in BHU Campus” on 29.03.2016 at Department of Civil Engineering, IIT, BHU, Varanasi.
14. Delivered two expert lectures on “GroundWater Issues and Management Options” and “Ground Water Quality-Basic Protocol for Analysis on 15.09.2016 at, UGC Human Resource Centre, BHU, Varanasi during August 30-September 26, 2016.
15. Delivered expert lecture on “**Groundwater Problem and Management**” on 28.07.2018 at UGC -Human Resource Development Centre, University of Allahabad.
16. Delivered expert lecture on “**Topographical Survey using Total Station**” on 27.10.2018 under "SWAYAM PLATFORM" at National Resource Centre, Earth Science UGC -Human Resource Development Centre, Banaras Hindu University, Varanasi.
17. Delivered expert lecture on “**Groundwater Contamination, assessment and Health hazards** ”on 08.01.2019 at UGC -Human Resource Development Centre, University of Allahabad.
18. Delivered expert lectures on “**Groundwater quality analysis using Field Kit and Concept and techniques of Artificial Recharge** ”on **06.03.2019 and 07.03.2019** at UGC -Human Resource Development Centre, Banaras Hindu University, Varanasi.
19. Delivered expert lecture on “**Water Quality and health hazards and Water Resource Problems and Management Options**” on 26.04.2019 at Prayag Institute of Technology & Management Allahabad under *INSPIRE* Programme.
20. Delivered expert lecture on “**Water Conservation -An approach for Smart City, Prayagraj**” at Sangam Palace Prayagraj on 09.11.2019 organized by Allahabad Management Association Prayagraj.
21. Delivered expert lecture on “**Causes and Control of landslides and Groundwater Quality Analysis Using Field Kit**” on 30.11.2019 in Refresher course on Environmental Awareness and Disaster Management at UGC -Human Resource Development Centre, University of Allahabad.
22. Delivered expert lecture on “Groundwater Management in District Sonbhadra with special reference to the District Sonbhadra” on 19.12.2019 at Myorpur block, District Sonbhadra in one tire training programme organized by CGWB, Ministry of Jal Shakti, Govt. of India.
23. A lecture was delivered by Dr. Hemant Kumar Pandey at 5th National geo research scholar meet 2021, WIHG Dehradun on 22/07/2021 entitled Groundwater issues and options.
24. A lecture was delivered by Dr. Hemant Kumar Pandey at Short Term Course on recent approaches in wastewater treatment, Department of Chemical Engineering, MNNIT Allahabad on 01/02/2022 entitled Groundwater quality assessment and its management.

25. A lecture was delivered by Dr. Hemant Kumar Pandey at AAWRM-2022, Government Engineering College, Sonbhadra on 10/03/2022 entitled Water resource and its sustainable development.
26. A lecture was delivered by Dr. Hemant Kumar Pandey at Webinar on World Water Day, Aliah University, Kolkatta on 22/03/2022, entitled Tackling the issues related to groundwater and exploring the options.
27. A lecture entitled “Groundwater issues and options” was delivered by Dr. Hemant Kumar Pandey in **Fifth Faculty Induction Programme through virtual mode** organized by UGC -Human Resource Development Centre, Banaras Hindu University, Varanasi on July 17, 2022.
28. A lecture entitled “Concept and techniques of Rainwater Harvesting System ‘was delivered by Dr. Hemant Kumar Pandey in **Fifth Faculty Induction Programme through virtual mode** organized by UGC -Human Resource Development Centre, Banaras Hindu University, Varanasi on July 22, 2022
29. A lecture entitled Groundwater quality assessment and its management was delivered by Dr. Hemant Kumar Pandey in one day three tier training programme organized by CGWB, Ministry of Jal Shakti, Govt. of India, Allahabad at Harhua Block, District Varanasi on December 28, 2022
30. A lecture entitled “Water Resources -Issues and Scope for Sustainable Development” was delivered by Dr. Hemant Kumar Pandey in Eleventh Faculty Induction Programme through virtual mode organized by UGC -Human Resource Development Centre, University of Allahabad, Prayagraj on Feb.20, 2023
31. A lecture entitled “Concept and Design of RainWater Harvesting System” was delivered by Dr. Hemant Kumar Pandey in Refresher Course on Sustainable Development and Climate Change through virtual mode organized by UGC -Human Resource Development Centre, University of Allahabad, Prayagraj on Feb.27, 2023
32. A lecture entitled “Groundwater Problems and Management Options” was delivered by Dr. Hemant Kumar Pandey in 8th&9th Faculty Induction Programme through virtual mode organized by UGC -Human Resource Development Centre, Banaras Hindu University, Varanasi on March 15, 2023.
33. A lecture entitled “Groundwater and its sustainable development” was delivered by Prof. Hemant Kumar Pandey in 10th&11th Faculty Induction Programme through virtual mode organized by UGC -Human Resource Development Centre, Banaras Hindu University, Varanasi on August 26, 2023.
34. A lecture entitled “Groundwater Quality analysis with field Kit” was delivered by Prof. Hemant Kumar Pandey in 10th&11th Faculty Induction Programme through virtual mode organized by

UGC -Human Resource Development Centre, Banaras Hindu University, Varanasi on August 29, 2023.

35. A lecture entitled “Concept and techniques of Rainwater Harvesting” was delivered by Prof. Hemant Kumar Pandey in 12th&13th Faculty Induction Programme organized by UGC -Human Resource Development Centre, Banaras Hindu University, Varanasi on September 29, 2023.

36. A lecture entitled “Concept and Design of RainWater Harvesting System” was delivered by Prof. Hemant Kumar Pandey in 14th Faculty Induction Program through virtual mode organized by UGC - Human Resource Development Centre, University of Allahabad, Prayagraj on October 19, 2023

37. A lecture entitled “Water Quality analysis with field Kit” was delivered by Prof. Hemant Kumar Pandey in 14th Faculty Induction Program through virtual mode organized by UGC -Human Resource Development Centre, University of Allahabad, Prayagraj on October 19, 2023.

38. A lecture entitled “ Water Resources- Issues and options for sustainable Development” was delivered by Prof. Hemant Kumar Pandey in 16th Faculty Induction Program through virtual mode organized by UGC -Human Resource Development Centre, University of Allahabad, Prayagraj on Feb.03,2024.

39. A Key note lecture entitled “Causes and Classification and its mitigations” was delivered by Prof. Hemant Kumar Pandey in National Conference on Disaster Mitigation & Management [ncdmm-2024] through virtual mode at NIT, Raipur on Jan.24,2024.

40. A lecture entitled “Groundwater Quality and health hazards under Climate Change” was delivered by Prof. Hemant Kumar Pandey in UGC-MMTTC Refresher Course on Climate Change and Human Health organized by the KBCAOS, University of Allahabad. Prayagraj on Jan.11.01.24.

Overseas Assignments:

Visited AIT Bangkok, Thailand from 28th September to 04th October, 2013 to attend a training and study tour programme and for interaction & collaboration work between AIT Bangkok & MNNIT Allahabad.

Reviewer for Transactions / Journal / Conferences:

Reviewed the manuscripts for the Journal of Geological Society of India, Sustainable Water Resource Mangement and Physics Chemistry of the Earth.

Other Significant Achievements:

Member of a committee setup by DG (forest), Ministry of Environment and Forest & Climate Change.

Evaluated the Ph.D. thesis of Department of Geology, B.H.U., Varanasi and conducted the Viva Voce examination of Mr. Arjun Ram and Prashant Pandey during year 2022, 23 respectively.

Acted as Expert member of the Selection Committee of faculty member at NIT, Raipur during the year 2023.

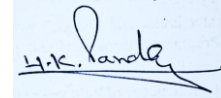
Acted as Expert member of the Juri Committee for selection of Young Scientist award jointly organized by CGCOST and NIT Raipur at NIT, Raipur during Feb26-27,2024

DECLARATION:

I do hereby, declare that the information provided here are true and correct in my knowledge.

Date: **01-Jan-2024**

Place: **Prayagraj**

A handwritten signature in black ink on a light blue rectangular background. The signature appears to be 'H.K. Pandey'.

(H.K. PANDEY)

Professor,
Department of Civil Engineering,
MNNIT Allahabad

