

DR. VINAY KUMAR PANDEY

Flat no.704, Building no 8,
Solitire-2, Poonam Garden,
Mira- Bhayander Road,
Mira Road (East),
Dist. Thane;
Maharashtra. India- 401107

Mobile: +91-8879406062

vinay78pandey@gmail.com

vinay78pandey@rediffmail.com



Academics

- **Doctor of Science (D. Sc.-Earth Science)**, California Public University, USA in 2021.
- **Ph. D. (Geology)**, University of Lucknow, Lucknow, India, in 2012.
- **M. Sc. (Disaster Mitigation)**, Sikkim Manipal University, New Delhi, in 2009.
- **M. Sc. (Geology)**, University of Lucknow, Lucknow, India in 2000.
- **B. Sc. (Geology, Physics, Mathematics)**, University of Lucknow, Lucknow, India in 1998.

Research & Professional Experience

Research Experience:

> Title of the Thesis in D. Sc. – Earth Science: **‘Extreme Climate Condition On North - West India: Role Of Solar Activity & Atmospheric Disparity.’**

In D. Sc. thesis find out the variation in atmospheric factors due to Solar activity and its impact on North West India. It is also shown by data that variation in solar radiation and atmospheric pressure has impacted the temperature, precipitation pattern, wind events and frequency, humidity and Indian monsoon pattern and predicted the climate pattern for next 40 years.

- Title of the Thesis in Ph. D.- Geology: **‘Geo-Environmental Impact Analysis of Open cast Mining in Sonbhadra District, Uttar Pradesh, India.’**

In Ph. D. thesis find out the impact of mining on land use & Air pollution with the help of remote sensing data & topographical map. Also establish Geo-Environmental impact factor (Index method) with reference to land use & socio-economic data accordingly suggested mitigation measures.

- I always interested to contribute own knowledge in serve of humanity & nature and climate change is one of them. I tried to find-out the various aspects of climate change including causes, previous changes, impact in view of Geology, environment, ecosystem & social economic factors with mitigation measures. Also tried to correlate the impact on Hydro-meteorological disaster & atmospheric variation due to climate change and outcomes mentioned in very simple way. .

Professional Experience:

Engineering Geology & Geotechnical skilled in all phases of infrastructure projects i.e. Project Feasibility stage, Investigation and Construction stage for Underground Metro, Tunnel, Road, Bridge, Hydroelectric Project including Geotechnical & Geological investigation, mapping, planning and implementation of site work including site setup and Liaising work related to project. Embraces modern principles and practices of Geology & civil engineering infrastructure projects for finalize the best economical design skilled in complex data interpretation and risk assessment.

Membership, Awards, Extra Curriculum Activities and Editor Board Member

Life Time Member:

- Life time Member of International Society of Environmental Geotechnology (ISEG).
- Life time Member of International Association for Promoting Geoethics (IAPG).
- Fellow Member of International Science Community Association (ISCA).
- Fellow Member of Indian Society for Rock Mechanics and Tunneling Technology

(ISRMTT).

Awards:

- 'Best Researcher Award-2021' in the International Scientist Award on Engineering, Science and Medicine, India, organized by VDGOD Professional Association, May 2021.
- 'Indian Education Awards- 2019 under category Research in Education Award- Honors' by Techprolabz, Patna.
- 3rd South Asian Education Award-2018, Award for Excellence in Research- Official Spotlight (Earth Science), Awarded by Education Expo T.V. Noida at Hyderabad on March 2018.
- 5th Academic Achievement Award-2017, Special Achievement (Engineering Category), Awarded by EET-CRS at Mumbai on Sept 2017.

Extra Curriculum Activities:

- Achieved Ekikrit Scholarship by State Govt. in 1991.
- Awarded N. C. C. 'B' Certificate in 1995

Editor Board Member:

- 'International Journal of Engineering Technology and Innovative Engineering' ISSN: 2394-6598.
- 'International Journal of Current Research in Science and Technology' ISSN:2394-5745

Software

Auto Cad, Dip, RS02, Swedge, Unwedge, Plaxies, RocPlane, Midas, SlopeW

Publications

Book Publications:

- **Vinay Kumar Pandey** and Ajai Mishra (2021). 'Causes and Disaster Risk Reduction Measures for Hydrometeorological Disaster in Uttarakhand, India'. Emerging Challenges in Environment and Earth Science Vol.1 . Published by B P International. Pg 99-118. Print ISBN: 978-93-5547-098-0, eBook ISBN: 978-93-5547-099-7. DOI 10.9734/bpi/ecees/v1/1618A.
- **Vinay Kumar Pandey** and Ajai Mishra (2021). 'Investigating the Impact of Climate Change on Precipitation Pattern in Kinnaur District, Himachal Pradesh, India.' Emerging Challenges in Environment and Earth Science Vol.1 . Published by B P International. Pg 119-126. Print ISBN: 978-93-5547-098-0, eBook ISBN: 978-93-5547-099-7. DOI 10.9734/bpi/ecees/v1/1617A.
- **Vinay Kumar Pandey (2021)**. 'Determining the Atmospheric Variation and Future Climate Change: An Approach Based on Paleoclimate Studies'. Book Chapter Challenging Issues on Environment and Earth Science Vol. 7. Published by B P International. Pg no 44-52. DOI: 10.9734/bpi/ciees/v7/11774D. Print ISBN: 978-93-91473-26-6, eBook ISBN: 978-93-91473-34-1
- **Vinay Kumar Pandey & Ajai Mishra** (2017) 'Handbook of Engineering Geology'. Publication by CBS Publication, New Delhi. ISBN no 978-93-864-78-01-6.
- **Vinay Kumar Pandey, Ajai Mishra & Shashank Shekhar Mishra** (2016). 'Atmospheric Variation and Climate Change'. Bharat Book Publication, Lucknow. ISBN NO 978-81-7678-250-0.
- **Vinay Kumar Pandey & Ajai Mishra** (2015) 'Climate Change and Hydro Meteorological Disaster (Causes, Intensity & Mitigation Measures)'. Lambert Academic Publication, Germany. ISBN no 978-3-659-69589-6.

Paper Publications:

1. **Vinay Kumar Pandey (2021)**. 'Landslide mitigation in Himalaya'. Paper accepted for publish in Indian Society of Rock Mechanics and Tunneling Technology

2. **Vinay Kumar Pandey (2021).** ‘Hill Slope Failure during The Development Of Infrastructure Projects In Himalaya: Case Study of Udhampur- Ramban National Highway, Jammu and Kashmir, India.’ South Florida Journal of Development, Miami, USA. Vol. 2 No. 5. Pg 7679-7699. ISSN 2675-5459. DOI: 10.46932/sfjdv2n5-101.
3. Renu Kulkarni and **Vinay Kumar Pandey (2021).** ‘Selection of geological parameters for design of footings on basaltic rock.’ *Research Journal of Engineering Sciences*. Vol. 10(3), Pg 43-47. ISSN 2278 – 9472.
4. **Vinay Kumar Pandey (2021).** ‘Infrastructure Projects and Geotechnical Challenges in Himalaya, India’. International Research Journal of Modernization in Engineering Technology & Science. Volume 3 Issue 9. Pg 130-135. e-ISSN: 2582-5208
5. **Vinay Kumar Pandey & N K Tiwari (2021).** ‘Angle of Repose and Slope Stabilization in Himalaya’. International Research Journal of Modernization in Engineering Technology & Science. Volume 3 Issue 9. Pg 169-178. e-ISSN: 2582-5208
6. **Vinay Kumar Pandey, KL Srinivasan, U V Kulkarni (2021).** ‘Landslide challenges during National Highway 44 road widening project, Udhampur to Chenani Section, J&K, India’ Published in Disaster and Development Journal Vol 8 no 1 & 2. Pg 84-96
7. **Vinay Kumar Pandey (2020).** ‘Multipurpose Large Diameter Tunnel: Future of Indian Urban Development.’ Indian Society of Rock Mechanics and Tunnelling Technology (ISRMTT) News Letter. Pg 6-8
8. **Satya Praksh & Vinay Kumar Pandey (2020),** ‘Associated Risk and Rectification during TBM Tunneling.’ Published in Journal of Rock Mechanics and Tunnelling Technology. Volume: 26 Issue: 02 | PP 93-108.
9. **Vinay Kumar Pandey (2020).** ‘Geotechnical challenges for Infrastructure projects in Himalaya’. Abstract published and presented in Online International Conference on ‘Recent development in Earth and Environment Science, Natural Resources management and Climate Change with special focus on Eastern Himalaya’ on Oct 8-9, 2020. Organized by Dept of Geology Sikkim University, Sikkim, India. P 116.
10. **Vinay Kumar Pandey (2020).** ‘Role of Atmospheric Wind Pattern in Extreme Weather Pattern’. Abstract published and presented in International Virtual Conference on ‘Earth’s Changing Climate: Past, Present & Future.’ on Oct 15-17, 2020. Organized by The Society of Earth Scientists, India. P 37.
11. **Vinay Kumar Pandey (2020),** ‘Disaster Risk Managment during Cyclone Nisarga in Mumbai, India.’ Published in International Journal of Scientific Research in Engineering and Management. Volume: 04 Issue: 08 | August -2020, PP 1-5. ISSN: 2582-3930
12. **Vinay Kumar Pandey & Satya Praksh (2020),** ‘Optimization of efficiency of rock breaker using Geological data: Reference to Mumbai, Maharashtra, India.’ Published in International Journal of Scientific Research in Engineering and Management. Volume: 04 Issue: 06 | June -2020, PP 1-6. **ISSN: 2582-3930**
13. **Vinay Kumar Pandey, KL Srinivasan, U V Kulkarni (2019),** Abstract ‘Landslide challenges during National Highway 44 road widening project, Udhampur to Chenani Section, J&K, India’ Published during 1st International Conference on Landslide Risk Reduction and Resilience, New Delhi organized by National Institute of Disaster Mitigation, Govt of India. Nov 28, 2019. P 37.
14. **Vinay Kumar Pandey & Satya Praksh (2019),** ‘High Water Ingress during TBM Tunnelling under Andheri Kurla Road, Marol Naka, Mumbai, India.’ Published in

15. **Vinay Kumar Pandey** (2019), 'Atmospheric Variation and Future Climate Change: Based on Paleoclimate Studies.' Publication in 'International Research Journal of Earth Science' Volume 7(3), PP 23-28, ISSN 2321-2527
16. **Vinay Kumar Pandey** (2019), 'Use of Underground Space for Future Needs of Mumbai, India.' Publication in 'Research Journal of Engineering Science' in May 2019 Volume 8(2), PP 23-28; ISSN 2278 – 9472.
17. **Ajai Mishra & Vinay Kumar Pandey** (2019), 'Atmospheric Variation and Natural Disaster' Abstract published in National conference on Role of Remote Sensing and GIS in Natural Hazard Assessment for Sustainable Development: Present Scenario and Future Prospects. 15 March 2019, PP 34-35. at Dept. of Geology, Lucknow University, Lucknow, India.
18. **Vinay Kumar Pandey** (2018), 'Geological & Geotechnical Challenges In Road Widening, National Highway- 44:- Jammu-Udhampur-Banihal- Qazigund, J&K, India'. International Research Journal of Earth Science. Vol. 6(12), 22-28.
19. **Vinay Kumar Pandey & Ajai Mishra** (2018), 'Trends of Hydro-meteorological Disaster in Uttarakhand, India.' International Journal of Current Research in Science and Technology (IJCRST), vol 4(12), PP 1-7. ISSN: 2394-5745.
20. **Vinay Kumar Pandey & Ajai Mishra** (2016), 'Importance of Geology in finalization of Project components: A case study of Rangit II hydroelectric Project, Sikkim' Published in International Journal of Emerging Technology and Innovative Engineering, vol 2(6), PP 339-343. ISSN: 2394 – 6598.
21. **A K Arya, V K Pandey, Antara Gupta & Ajai Mishra** (2016), 'Seismological Trends in Indian Subcontinent.' Presented at 5th International Science Congress, 8th-9th Dec 2015 at Tribhuvan University, Kathmandu, Nepal & Publication in International Research Journal of Earth Science, Vol 4(5), PP 11-17.
22. **Vinay Kumar Pandey & Ajai Mishra** (2015), 'Impact of Climate Change on Precipitation Pattern in Kinnaur District, Himachal Pradesh, India.' Published in International Journal of Engineering Science & Management Research, vol 2(7), PP 43-49. ISSN: 2349-6193.
23. **Vinay Kumar Pandey & Ajai Mishra** (2015), 'Geo-environmental impact of Gorkha Earthquake, Nepal: April-May, 2015.' Published in International Journal of Engineering Science & Management Research, vol 2(7), PP 50-57. ISSN: 2349-6193.
24. **Vinay Kumar Pandey, Shashank Shekhar Mishra & Ajai Mishra** (2015), 'Climate Change, Natural Disaster and Hydro Electric Projects in Satluj Basin, Kinnaur district, Himachal Pradesh, India.' Published in Journal of Research in Environment and Life Science, vol 8(2), May 2015, PP 137-142. ISSN: 0974-4908.
25. **Vinod Kumar, Jitendra Patil & Vinay Kumar Pandey** (2015), 'Restoration of Tunnel failure during construction.' Published in Proceeding in Tunneling Asia-2015: Underground space development for better Environment and Safety: Issues and Challenges' April 15-16, 2015, PP 87-94, ISSN: 2394-5745.
26. **Vinay Kumar Pandey & Ajai Mishra** (2015), 'Solar Variation and Climate Change-in reference to Indian Rainfall Pattern.' Published in International Journal of Current Research in Science and Technology (IJCRST), vol 1(3), PP 1-14. ISSN: 2394-5745.
27. **Vinay Kumar Pandey & Ajai Mishra** (2015), 'Facts & trend of Climate Change-with reference to Geological time frame'. Published in International Journal of Current Research in Science and Technology (IJCRST), vol 1(3), PP 43-60. ISSN: 2394-5745.
28. **Vinay Kumar Pandey & Ajai Mishra** (2015), 'Causes and disaster Risk Reduction measures for Hydrometeorological disaster in Uttarakhand, India: An Overview'. Published in International Journal of Current Research in Science and Technology (IJCRST), vol 1(3), PP 61-80.
29. **Vinay Kumar Pandey, Ajai Mishra & Shashank Shekhar Mishra** (2015), 'Climate Change and Mitigation Measures for The Hydrometeorological Disaster in Himachal Pradesh, India- In light Of Dams.' Publication in International Journal of Scientific &

- 30. Vinay Kumar Pandey**, Ajai Mishra & Shashank Shekhar Mishra (2014), 'Solar Variation and Climatic Changes'. Abstract publish and presented in 'Expert Meet and Conference on Climate change and Environment Sub-stability: Records from Poles to Tropics,' 9-10 September 2014 at Dept of Geology, Lucknow University, Lucknow, India.
- 31. Vinay Kumar Pandey**, Ajai Mishra & Shashank Shekhar Mishra (2013), 'Geo-environmental impact of Open cast mining in Sonbhadra dist, U.P., India- in reference to Land use.' Journal of Research in Environment and Life Science, vol 6(4), PP 147-153.
- 32. Ajai Mishra & Vinay Kumar Pandey**, (2013), 'Quantitative environmental impact assessment of the Open cast mining in Sonbhadra district, Uttar Pradesh, India.' Journal of Applied and Natural Science, vol. 5(2), PP 361-368.
-

PROFESSIONAL EXPERIENCE

Project Working/done

- Approve as Independent Geotechnical Consultant for monitoring of NATM works (1200 m approx. Including 42 Cross passages, 430 m long Scissor Cross over, NATM Station Excavation, 350 m Excess tunnel) Mumbai Metro Underground line -03, for package -03, 05 & 06 (International Airport T-2 to Dharavi Station and Mahalaxmi to Worli station); Mumbai.
 - Mumbai Metro -03, Underground Package 07, Mumbai, India.
 - Udampur- Ramban 4 Lane highway Project NH-44, J & K, India.
 - Road & tunnel alignment work for NH-75, Rewa, MP.
 - Tidong-II Hydro Electric Project (60 MW), Kinnure Dist, Himachal Pradesh, India
 - Rangit-II Hydro Electric Project (66 MW), West Sikkim Dist, Sikkim, India.
 - Yongthang Khab Hydro Electric Project (261 MW), Kinnure Dist, Himachal Pradesh, India.
 - Rangit-IV Hydro Electric Project (120 MW), West Sikkim Dist, Sikkim, India.
 - Soil Investigation work at Delhi Metro Railway Cor Ltd., New Delhi
 - Geotechnical investigation work at Susan Ultra Mega Power Project (5X800MW). M.P, India.
 - Soil Investigation at DLF Mall, Gurgaon
 - Geotechnical investigation in NTPC Dari, Noida
-

Work Experience

Geosystems Infrastructure, Mumbai

Oct 2018 to Till Date

Designation: **Asst General Manager- Projects**

- Approved Independent Geotechnical Engineer for monitoring the NATM Tunnel work in package 03, 05 & 06 in Mumbai Metro Underground line-03, Mumbai.
- Reviewing all NATM tunnel activities such as cross passage, Domestic subway, Crossover at Sahar station and Science Museum Station, tunneling underneath the Mithi river.
- Reviewing and suggest support system as per rock condition and construction activities in NATM.
- Independent handling Business development, tendering, Client discussion, Technical reports & Project execution.
- Independently handling Geotechnical, Geological and project development work.
- NATM Tunnel- design & construction activities
- Ground Improvement, Foundation protection, Station Excavation Geological & Geotechnical studies & monitoring.
- Slope protection, landslide protection works

L&T- STEC JV, Mumbai**Oct 2017 to Oct 2018**Designation: **Construction Manager- Civil & Geotechnical**

- Responsible for Geological, Geotechnical, Instrumentation & Monitoring, building condition Survey)
- TBM & NATM Tunnel- Geotechnical & Geological works
- Station Excavation Geological & Geotechnical studies & monitoring

Gammon India Ltd., Mumbai**Nov 2009 to Oct 2017**Designation: **Manager- Geologist**

- Tunnel alignment, tunnel construction & design, bridge foundation, slope protection works for Udhampur- Ramban 4 Lane highway Project NH-44, J & K, India.
- DPR review with site investigation work including geological & geotechnical investigation for finalize the project component, Tunnel/Underground construction activities on NATM method (HRT, Drift, Adit, River diversion, Surge Shaft excavation) for 66 MW hydroelectric project in Sikkim.
- Independently handling Project Development works for preparation of PFR & DRP for two hydroelectric project (Tidong-II HE Project- 60 MW & Yongthang Khab Hydro Electric Project -261 MW) in Himachal Pradesh.

Gremace Infrastructure Equipment's & Projects Ltd, Mumbai**August 2008 to Oct 2009**Designation: **Manager (Geology)**

- Worked on Exploration work for mining green field (Coal, Iron Ore and Lime stone).
- Business development for acquisition of mines in India as well as Latin American countries.

Jal Power Corporation Limited, Sikkim**April 2007 to July 2008**Designation: **Resident Geologist**

- Done DPR and Construction work activities including geological, geotechnical & hydrological investigation for 120 MW hydroelectric project in Sikkim
- Tunnel/Underground construction activities (HRT, Drift, Adit, River diversion, Surge Shaft excavation)

Ground Engineering Ltd, New Delhi**April 2006 to March 2007**Designation: **Geologist**

- Geological & Geotechnical investigation works, report preparation & Soil and rock laboratory test for Susan Ultra Mega Power Project, NTPC Datary, Delhi Metro, DLF project.

BSNV PG College, Lucknow**March 2003 to Feb 2006**Designation: **Lecturer**

- Taken lecture (B. Sc.) – Physical Geology, Structural Geology, Mining Geology, Remote Sensing, Applied Geology and Practical classes.

Hi-Point Consultant, Lucknow**Oct 2001 to Dec 2002**Designation: **Geologist**

- Worked based on Preparation of Mining reports and approval from Government department.

Training Programs:

- Completed 4 Online courses Thematic course on ‘Climate Change and Disaster Risk Managment’, Community Based Disaster Risk Managment’, ‘Earthquake Risk

Reduction’ and ‘Safe Cities’ from 15 July to 12 August 2020 conducted by Global Facility for Disaster Reduction and Recovery, World Bank and National Institute of Disaster Management, India.

- Online – Three Day National Level training program on ‘Climate change and disaster risk reduction’ from 18 to 20 August 2020 conducted by National Institute of Disaster Management, India and O P Jindal University, Raigarh.
- On-line webinar program on ‘Landslide risk reduction and resilience’, 18th August 2020, conducted by National Institute of Disaster Management, India.
- One week online TEQIP Faculty Development program on ‘Disaster Management, Mitigation and Responses’ from 10 to 14 August 2020 conducted by Assam Engineering College, Guwahati, India.
- On-line webinar program on ‘Earthquake monitoring and Management’, 11th August 2020, conducted by National Institute of Disaster Management, India
- Online – Three Day training program on ‘Climate change, Landslides and Safe Hill Area Development’ from 5 to 7 August 2020 conducted by National Institute of Disaster Management, India.
- On-line webinar program on ‘Climate Change and Extreme weather events’, 04th August 2020, conducted by National Institute of Disaster Management, India
- On-line webinar program on ‘Cyclone and Storm Surges’, 28th July 2020, conducted by National Institute of Disaster Management, India
- On-line webinar program on ‘Cloudburst and flooding’, 21st July 2020, conducted by National Institute of Disaster Management, India
- On-line webinar program on ‘Thunderstorm and lightning’, 14th July 2020, conducted by National Institute of Disaster Management, India
- Online – Three Day National Level training program on ‘Coastal Disaster Risk Reduction & Resilience’ from 17 to 19 June 2020 conducted by National Institute of Disaster Management, India.
- On-line course on ‘Comprehensive Disaster Risk Management Framework’, 20th May to 1st July 2020, conducted by National Institute of Disaster Management, India.
- Attended ‘1st International (Virtual) Symposium on Geoethics’, 14th June 2020 organised by International Association Promotion of Geoethics India Chapter, National Institute of Disaster Management, India and Amity University, Haryana.
- International training program on ‘Crisis and Disaster Management’ from 9th-11th July 2020 conducted by National Institute of Disaster Management, India.
- Short term course on ‘Numerical Solutions to Geotechnical Challenges’ from May 28-June 12, 2020.
- Webinar on ‘Engineering Preparedness for Earthquake Disaster Mitigation’ organized by Indian Society for Earthquake Technology, IIT Roorke by Prof T G Sitaram, Director IIT Guwahati on June 03, 2020.
- Online Course in ‘Rock Slope Engineering’ from April 25 to May 04, 2020
- Online GeoStudio (Slope/W) course for Session 1-6 in April- May 2020.
- Short term course on ‘Tunneling (Numerical modeling and analysis) (Session 1-6) in month of April 20- May 01, 2020.
- Attended Webinar on ‘Digital Tunnel 4.0’ on April 30, 2020 organized by Amberg Engineering.
- Attended Webinar on ‘Slide2 Webinar Series Part 1- New Features & Applications’ on April 29, 2020 organized by Rocscience.
- Training on ‘Entrapment Development Program on Solar Energy’ by Khadi & Village Industries commission, MOMSME, Govt of India, Mumbai in Jan 23-24, 2016.
- Training on ‘Environment, Health and Safety Management in Power Plants’ at National Institute of Oceanography, Goa, India in June 5-7, 2008.

- Training on 'Rain Water Harvesting (Artificial recharge)' at Central Ground Water Board, Northern Region, Lucknow, India in March 17-18, 2004.
- Two-week training program of 'Remote Sensing and GIS applied in Natural hazard and Natural resources' at UPRSAC, Lucknow, India in Feb 10-22, 2003.

VINAY KUMAR PANDEY