



Dr. Balbir Kumar Pandey
Assistant Professor

Centre/School/Special Centre: *School of Studies in Engineering and Technology*

Department: *Civil Engineering*

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Personal Webpage Link: NA

Qualifications:

Course of Study	Board/University	Marks (%) / Grade	Year of Passing
Ph.D. (<i>Geotechnical Engg.</i>)	Indian Institute of Technology Kanpur, Kanpur, Uttar Pradesh	7.55	Dec, 2021
M.Tech (<i>Soil Mechanics & Foundation Engg.</i>)	S.V. National Institute of Technology, Surat, Gujarat	8.81	Aug, 2014
B.E (<i>Civil Engineering</i>)	Rewa Engineering College, Rewa, M.P.	70.34	May, 2011

Area of Interest/Specialization:

- Physical and Numerical Modelling of Geotechnical Problems
- Application of Geosynthetics and Ground Improvement
- Electrokinetics for Mining, Geotechnical and Geoenvironmental Issues
- Energy Geotechnics

Experience:

Organization/University	Position	Duration
<i>Guru Ghasidas Vishwavidyalaya, Bilaspur</i>	Assistant Professor	<i>Feb 2023- Present</i>
<i>Shri Mata Vaishno Devi University, Katra, J & K</i>	Assistant Professor	<i>Dec 2021- Jan 2023</i>
<i>Sharda University, Greater Noida, Uttar Pradesh</i>	Assistant Professor	<i>July 2021- Dec 2021</i>
<i>Indian Institute of Technology Kanpur, Kanpur</i>	Tutor and Teaching Assistant	<i>July 2015- July 2020</i>
<i>RK University, Rajkot, Gujarat</i>	Assistant Professor	<i>July 2014- July 2015</i>

SV National Institute of Technology, Surat, Gujarat

Teaching Assistant

July 2013- July 2014

DB Power Limited (Dainik Bhaskar Group),
Jangir, Champa, Chhattisgarh

Graduate Engineer Trainee
(GET-Civil)

July 2011- July 2012

Awards and Honors:

- **IGS – Chennai Chapter YGE Best Paper Biennial Award – 2021** for the best paper published in the field of “*Solutions of Problematic Soils*” Paper entitled “*Performance Enhancement of Encased Stone Column with Conductive Natural Geotextile under k_0 Stress Condition*” by **B.K. Pandey, S. Rajesh and S. Chandra** published in Geotextiles and Geomembranes (2021).
- **Springer Best Paper Award** for the paper titled, “*Influence of Conductive Jute Geotextile-Encased Stone Column in Soft Clay*” under the theme, “*Geosynthetics Application*” presented in the Indian Geotechnical Conference 2021- GEEO-INDIA, organized during Dec 16-18, 2021 by IGS Trichy Chapter and NIT Tiruchirappali-620015.
- Recipient of **ISSMGE Foundation Award 2020** of US Dollar 1300 to attend Geo-Congress 2020, in Minneapolis, MN, USA.
- Recipient of “*Ministry of Human Resource Development*” Govt. of India Scholarships during PhD (July, 2015 - July, 2020).
- Recipient of “*Ministry of Human Resource Development*” Govt. of India Scholarships during M. Tech. (July, 2012 - July, 2014).

Research Projects: *NIL*

International Collaboration/Consultancy: *NIL*

Best Peer Reviewed Publication (up-to 10):

List of Journal/Special Publications (Total = 08)

1. Shukla, C., Gupta, D., **Pandey, B.K.**, Bhakar, S.R. 2023. Suitability Assessment of different cladding materials for growing bell pepper under protected cultivation structure using multi-criteria decision-making technique. *Environment, Development and Sustainability* (**Accepted: ENVI-D-22-03234R1**) (**SCI; CiteScore:4.4**)
2. **Pandey, B. K.**, Rajesh, S., and Chandra, S. 2022. Time-Dependent Behaviour of Embankment on Clayey Soil improved using Stone Columns Encased by Geotextiles. *Transportation Geotechnics*, 36, 100809. (**SCI; CiteScore:4.9**)
3. **Pandey, B. K.**, Rajesh, S., and Chandra, S. 2022. Performance of Soft Clay Reinforced with Encased

Stone Column: A Systematic Review. *International Journal of Geosynthetics and Ground Engineering*, 8, <https://doi.org/10.1007/s40891-022-00387-x>(**Scopus; CiteScore:2.4**)

4. **Pandey, B.K.**, Rajesh, S., Chandra, S., 2021. Performance enhancement of encased stone column with conductive natural geotextile under k_0 stress condition. *Geotextiles and Geomembranes*, 49 (5), 1095-1106. (**SCI; CiteScore:8.4**)
5. **Pandey, B.K.**, Rajesh, S., Chandra, S., 2020. Numerical evaluation of geogrid-encased stone columns in soft soil under embankment loading. *Geotechnical Special Publication 315*, ASCE, pp. 543-551. (**Scopus; CiteScore:0.8**)
6. Somen, D., Sharma, R.R.K., **Pandey, B.K.**, 2019. Relationship of manufacturing flexibility with organizational strategy. *Global Journal of Flexible System and Management*, 20:237–256. (**Scopus; CiteScore:8.5**)
7. **Pandey, B. K.**, and Rajesh, S., 2019. Enhanced engineering characteristics of soils by electro- osmotic treatment: An overview. *Geotechnical and Geological Engineering* 37(6), 4649–4673. (**Scopus; CiteScore:2.9**)
8. Kumar, S., Solanki, C.H., **Pandey, B.K.**, 2015. Behaviour of prestressed geotextile-reinforced fine sand bed supporting an embedded square footing. *International Journal of GEOMATE* 8 (2):1257–1262. (**Scopus; CiteScore:1.7**)

List of Conference/Book Chapters Publication (Total = 09)

1. **Pandey, B. K.**, Rajesh, S., Chandra, S., and Dogra, V.K. 2022. Effect of Construction Parameters on the Behaviour of Embankment Resting Over Soft Soil Improved with ESC. *Indian Geotechnical Conference 2022 (Published with paper id: TH-8-4)*
2. Shukla, C. and **Pandey, B.K.** 2022. A systematic Review on Application of Electrokinetics in Treatment of Problematic Soils. *Indian Geotechnical Conference 2022 (Published with paper id: TH-9-54)*
3. **Pandey, B.K.**, Rajesh S., and Chandra S., 2022. Numerical analysis of soft soil reinforced with geogrid encased stone column. In *Proceedings of the 7th Indian Young Geotechnical Engineers Conference, Lecture Notes in Civil Engineering* 195, https://doi.org/10.1007/978-981-16-6456-4_8 (**Scopus; CiteScore:0.5**)
4. **Pandey, B. K.**, Rajesh, S., and Chandra, S. 2023. Influence of Conductive Jute Geotextile -Encased Stone Column in Soft Clay. In: *Muthukkumaran, K., Rathod, D., Sujatha, E.R., Muthukumar, M. (eds) Transportation and Environmental Geotechnics. IGC 2021. Lecture Notes in Civil Engineering, vol 298. Springer, Singapore. https://doi.org/10.1007/978-981-19-6774-0_5 (Scopus; CiteScore:0.5)*
5. **Pandey, B. K.**, Rajesh, S., and Chandra, S. 2023. A State-of-The-Art Review on Electro-Osmotic Treatment for Stabilization of Soft Soils. In: *Muthukkumaran, K., Sathiyamoorthy, R., Moghal, A.A.B., Jayapriya, S.P. (eds) Ground Improvement Techniques. IGC 2021. Lecture Notes in Civil Engineering, vol 297. Springer, Singapore. https://doi.org/10.1007/978-981-19-6727-6_20 (Scopus; CiteScore:0.5)*

6. **Pandey, B.K.**, Das, S.K., Kumar, S., 2021. Study of prestressed geotextile reinforced sand Supporting an embedded square footing. In: Patel S., Solanki C.H., Reddy K.R., Shukla S.K. (eds.) *Proceedings of Indian Geotechnical Conference 2019. Lecture Notes in Civil Engineering*, Vol 137. Springer, Singapore. https://doi.org/10.1007/978-981-33-6466-0_20 (**Scopus; CiteScore:0.5**)
7. **Pandey, B.K.**, Rajesh, S., Chandra, S., 2020. 3-D finite element study of embankment resting on soft soil reinforced with encased stone column. In: Latha Gali M., Raghuvveer Rao P. (eds.) *Problematic Soils and Geoenvironmental Concerns. Lecture Notes in Civil Engineering*, Vol 88. Springer, Singapore. https://doi.org/10.1007/978-981-15-6237-2_38 (**Scopus; CiteScore:0.5**)
8. **Pandey, B.K.**, Bajaj, K., Singh, A.P., 2013. Soil stabilization using pozzolanic material and jute fibre. In: *Proceedings of Indian Geotechnical Conference. Roorkee, India*, pp 1–6
9. Chandrakar, N., **Pandey, B.K.**, Sahu, S., 2013. Impact of global cities on architecture and it's challenges : Case study of Dubai. In: *Proceedings of International Conference on Advance Trends in Engineering and Technology*. pp 1–5

Recent Books/Book Chapters/Monographs etc.: *NIL*

Research Supervision:

- **Ph.D. Thesis:** Nil
- **M.Tech Thesis:** Nil
- **UG Major Project:** 04

Administrative Responsibilities: *NIL*

Additional Information:

➤ **Participation in Workshops/Seminars/Conferences/Short Term Course**

- Participated in International Workshop on “BIOGEOTECHNICS” organized by IIT-ISM Dhanbad and University of Queensland, Australia, under 3rd edition of AGERP (Lecture Series on Advancements in Geotechnical Engineering: from Research to Practice) during 24 - 26 Feb, 2022.
- Attended three days *Indian Geotechnical Conference* organized by NIT Trichy and IGS Trichy local chapter during December 16-18, 2021
- Participated in Indo-Canadian Workshop on “Interactive Design in Geotechnical Engineering: Theory to Practice” organized by NIT Surathkal, IGS Surathkal Chapter and IIT Kanpur, India, TC 206 of ISSMGE and University of Ottawa during 24 Sep- 2 Oct, 2020.

- Attended International Conference (Geo-Congress 2020) held at Minneapolis, Minnesota, the USA, from February 25-28, 2020 organized by GI Institute, ASCE, USA.
- Attended three days *Indian Geotechnical Conference* organized by SVNIT Surat and IGS Surat local chapter during 19-21 Dec 2019.
- Attended three days *Indian Geotechnical Conference* organized by IISc. Bangalore and IGS Bangalore local chapter during 13th -15th Dec, 2018.
- Actively worked and attended workshop on “*Sustainable Geotechnique*” Organized by IIT Kanpur and IGS Kanpur local chapter, Kanpur. During 13th -14th Oct 2017.
- Attended TEQIP –II sponsored workshop on “*Ground Improvement Techniques*” organized by AMD, SVNIT Surat during 11-12 Feb 2014.
- Attended three days IGC on “*Geotechnical Advances and Novel Geotechnical Applications (GANGA)*” Organized by IGC Roorkee chapter in association with IIT Roorkee and CSIR-CBRI Roorkee during Dec 22-24, 2013.
- Attended two days international conferences on “*Advance Trends in Engineering and Technology (ICATET) 2013*” organized by Arya college of Engg & I.T. during 19-20 Dec 2013.
- Attended seminar on “*Recent Trends in Industrial Engineering (RTIE 2013)*” organized by MED, SVNIT, Surat and IIIE, Surat Chapter on 6 April 2013.
- Attended Two Days National Seminar on “*Advances in Geotechnical Engineering (AGE-2013)*” Organized by Applied Mechanics Department of SVNIT, Surat & IGS, Surat Chapter, during 8th -9th June 2013
- Attended five days STTP on “*Geotechnical Investigations, Interpretations and Improvements (GIII -13)*” organized by AMD, SVNIT, Surat during 18th -22 Oct 2013.
- Actively worked and attended 8th biennial conference on “*Structural Engineering Convention- 2012*” Organized by Applied Mechanics Department SVNIT, Surat. During 19th -21st Dec 2012.
- Attended workshop on “*Concrete Mix Design*” Organized by Ambuja Cement Limited on 18th may 2012, at Raigarh.

➤ **Technical/Software Skills**

- Operating System: Windows (all version)
- Data Analysis and Graphing Software: Origin Pro
- Core Software Packages: Plaxis 2D and 3D, COMSOL Multiphysics, MDI Jade and SVOFFICE 5

- Image Processing Software: ImageJ
- VOSviewer: Software tool for constructing and visualizing bibliometric networks
- Advanced Instruments: JEOL's JSM-6010 SEM and EDX, Eutech-Ion 2700, **Thermo Scientific™ iCAP Q ICP-MS and Two-Circle Diffractometer (Rigaku MiniFlex 600)**
- Sensors: Pore Pressure, Soil Moisture, Water Potential and Earth Pressure Cells

➤ **Reviewer in Journal/Conferences**

- Reviewer for International Journal of Geosynthetics and Ground Engineering, Springer.
- Reviewer for 7YIGEC 2019 Conference Proceedings
- Reviewer for National Conference on Resilient Infrastructure (NCRI 2020) Conference Proceedings
- Reviewer for IGC 2021 Conference Proceedings

➤ **Hobbies**

- Adventure activities like Running, Mountain cycling, trekking, hiking etc.
- I have completed Manali to Leh (Khardungla) cycling expedition in 2019.
- Love to travel new places and travelled to almost all the States and UTs of India.

(Dr. Balbir K. Pandey)