

Dr. VIKAS KUMAR, CEngg(I), A.M. (IEI), L.M.(IGS), M.(DFI)

Assistant Professor

Department of Civil Engineering

Central University of Haryana, Mahendergarh

Email Id: vikask@cuh.ac.in, vikaskumarnitk@gmail.com

Mob. No. 9780973247

Address: G 129, 3rd floor, Naraina Vihar, New Delhi-110028

Profile Page: <https://cuh.irins.org/profile/139375>

<https://scholar.google.co.in/citations?user=cNc3MZgAAAAJ>

<https://www.researchgate.net/profile/Vikas-Kumar-57>



ACADEMIC BACKGROUND

- **Ph.D.** (*Civil Engineering*) from Department of Civil Engineering, National Institute of Technology, Jalandhar (Punjab).
- **M.Tech**, *Gold Medalist (Structural and Construction Engineering)* from Department of Civil Engineering, National Institute of Technology, Jalandhar (Punjab).
- **B.Tech** (*Civil Engineering*) from Department of Civil Engineering, National Institute of Technology, Kurukshetra (Haryana).

PROFESSIONAL EXPERIENCE

- Worked as Assistant Professor in Krishna Institute of Engineering and Technology, Ghaziabad, (U.P.) from July 19, 2012 to December 31, 2013.
- Worked as Assistant Professor in National Institute of Technology, Jalandhar, (Punjab) from January 08, 2014 to June 06, 2014.
- Worked as Assistant Professor in Madan Mohan Malaviya University of Technology, Gorakhpur, (U.P.) from July 04, 2016 to May 04, 2019.

AREAS OF INTEREST

- Concrete Structures: High Performance Concrete Structures, Material Characterization
- Soil Structure Interaction: Piled-Raft Foundation System, Earth Retaining Structures
- Modeling of Structure using ABACUS, PLAXIS 3D & Artificial Intelligence

List of Papers Published (International Journal)

1. Priyadarshree, A., Gupta, D., **Kumar, V. et al.** Comparative Study on Performance of Tire Crumbles with Fly Ash and Kaolin Clay. *Int. J. of Geosynth and Ground Eng.* **1**, 38 (2015). <https://doi.org/10.1007/s40891-015-0033-3>.
2. Srivastava, M., and **Kumar, V.** (2017). Smart Earthquake Resistant Structure by Low Cost Housing Technique .i-manager's Journal on Structural Engineering, 6(1), 7-15. <https://doi.org/10.26634/jste.6.1.13475>.
3. M. Srivastava, **V. Kumar**, The methods of using low cost housing techniques in India, Journal of Building Engineering 15 (2018) 102–108. <https://doi.org/10.1016/j.jobbe.2017.11.001>.
4. **Kumar, V.**, Kumar, A. An experimental study to analyse the behaviour of piled-raft foundation model under the application of vertical load. *Innov. Infrastruct. Solut.* **3**, 35 (2018). <https://doi.org/10.1007/s41062-018-0141-8>.
5. **KUMAR, V.**, & KUMAR, A. (2018). Predicting the Settlement in Raft and Piled-Raft Foundations using neural models. *International Journal of Advanced Structures & Geotechnical Engineering*, 6(4), 134–143. <https://doi.org/10.5281/zenodo.1288017>.
6. Verma, S., **Kumar, V.** & Priyadarshree, A. An experimental test study on ring footing resting on clay bed reinforced by stone column. *Innov. Infrastruct. Solut.* **3**, 64 (2018). <https://doi.org/10.1007/s41062-018-0169-9>.
7. **Kumar, V.**, Kumar, A. Predicting the Settlement of Raft Resting on Sand Reinforced with Planar and Geocell Using Generalized Regression Neural Networks (GRNN) and Back Propagated Neural Networks (BPNN). *Int. J. of Geosynth. and Ground Eng.* **4**, 30 (2018). <https://doi.org/10.1007/s40891-018-0148-4>.
8. Shankar, D., **Kumar, V.** (2018). A Comparative Study on Experimental and Theoretical Bearing Capacity of Ring Footings, i-manager's Journal on Structural Engineering, 7(2), 63-69. <https://doi.org/10.26634/jste.7.2.14486>.
9. **Kumar, V.**, Kumar, A. Studying the behavior of neural models under hybrid and reinforced foundations. *Innov. Infrastruct. Solut.* **4**, 19 (2019). <https://doi.org/10.1007/s41062-019-0208-1>.
10. Priyadarshree, A., Chandra, S., Gupta, D., **Kumar, V.** (2020). Neural Models for Unconfined Compressive Strength of Kaolin Clay Mixed with Pond Ash, Rice Husk Ash and Cement. *Journal of Soft Computing in Civil Engineering*, 4(2), 85-102. doi: 10.22115/scce.2020.223774.1189.
11. Priyadarshree, A., Chandra, S. & **Kumar, V.** Performance of grass ash with mix of black cotton soil and lime. *Innov. Infrastruct. Solut.* **6**, 150 (2021). <https://doi.org/10.1007/s41062-021-00518-9>.

List of Papers Published (Conferences: International/National)

1. **Vikas kumar**, Arvind kumar Agnihotri, Deepak Gupta, (2013), “Use of construction concrete debris as vertical stone column”, IGC, IIT Roorkee 2013.
2. Nishant Kumar, **Vikas Kumar**, Akash Priyadarshee, Anil Kumar Chhotu, (2014), “Impact of Surkhi on GSB layer as replacement to the stone dust”, Geotechnical Engineering Practice and Sustainable Infrastructure Development (GEPSID), Ludhiana, Punjab.
3. Akash priyadarshee, Arvind Kumar Agnihotri, **Vikas Kumar**, Anil Kumar Chhotu, (2014), “Influence of rice husk ash on properties of soil: A review”, Geotechnical Engineering Practice and Sustainable Infrastructure Development (GEPSID), Ludhiana, Punjab.
4. **Vikas Kumar**, Anil Kumar Chhotu, K.Mani and Deepak Gupta (2014), “Use of waste material in construction work: step towards waste minimization”, Agriculture, Food Engineering and Environmental Sciences- Sustainable Approaches” (AFEESSA- 2014), Page No. 413-419.
5. **Vikas Kumar**, Anil Kumar Chhotu, Akash Priyadarshee, Nishant Kumar (2014), “Effect of Metakaolin clay, Silica Fume and Rice Husk Ash on strength characteristics of concrete”, International multi track conference on science engineering and technical innovations (IMTC14), Sponsored by Department of Science and Technology, Ministry of Science and Technology, CT University , Jalandhar.
6. Akash Priyadarshee, Anil Kumar Chhotu, **Vikas Kumar (2014)**, “Influence of soil properties on strength of Fiber Reinforced Soil: A Review” International multi track conference on science engineering and technical innovations (IMTC14), Sponsored by Department of Science and Technology, Ministry of Science and Technology, CT University Jalandhar.
7. Akash priyadarshee, Anil kumar Chhotu, **Vikas Kumar, (2014)**, “Effect of fiber properties on strength of fiber reinforced soil: A review, International Conference on Advances In Engineering And Technology - ICAET 2014, RIT, Roorkee, India. 10.15224/978-1-63248-028-6-03-75
8. Akash Priyadarshee, Anil Kumar Chhotu, Deepak Gupta, **Vikas Kumar**, Mohit Bhandari (2015), “Use of different ashes for civil engineering construction”, UKIERI (Concrete Research Driving Profit and Sustainability), Page No. 36
9. Mohit Bhandari Akash Priyadarshee, Anil Kumar Chhotu, **Vikas Kumar**, Deepak Gupta (2015), “Subgrade modulus of tire-chips reinforced sand foundation”, UKIERI (Concrete Research Driving Profit and Sustainability), Page No. 220
10. Deepak Gupta, Arvind Kumar, **Vikas Kumar**, Akash Priyadarshee, Vaibhav Sharma (2018), “Performance of Pond Ash and Rice Husk Ash in Clay: A Comparative Study” Environmental Geotechnology, Recycled Waste Materials And Sustainable Engineering, NIT Jalandhar and Department of Civil and Material Engineering, University of Illinois, Chicago, Page No. 80.
11. Akash Priyadarshee, Arvind Kumar, Vaibhav Sharma, **Vikas Kumar (2018)**, “A Study on

the Influence of Confining Pressure on the Behavior of Fiber Reinforced Soil”, International Conference on Environmental Geotechnology, Recycled Waste Materials And Sustainable Engineering, NIT Jalandhar and Department of Civil and Material Engineering, University of Illinois, Chicago, Page No. 96.

12. **Vikas Kumar**, Sunayana and Sneha Gupta (2018) “An Approach towards Sustainable Construction by using waste material” 12th Asian Congress of Oral and Maxillofacial Radiology And 5th International Green Health Conference organized and supported by Ministry of Culture, Govt. of India, National Council of Science Museums, Green Health Foundation, Council of Scientific and Industrial Research, National Environment Engineering Research Institute Nagpur, Maharashtra University of Health Science, Swachah Bharat Abhiyan, Govt. of India during September 6-9, 2018 at Nehru Science Centre, Auditorium, Dr E. Moses Road, Mumbai-400018.
13. Sunayana, Tuhin Banerji and **Vikas Kumar** (2018) “An Approach towards Sustainable Construction by using waste material” 12th Asian Congress of Oral and Maxillofacial Radiology And 5th International Green Health Conference organized and supported by Ministry of Culture, Govt. of India, National Council of Science Museums, Green Health Foundation, Council of Scientific and Industrial Research, National Environment Engineering Research Institute Nagpur, Maharashtra University of Health Science, Swachah Bharat Abhiyan, Govt. of India during September 6-9, 2018 at Nehru Science Centre, Auditorium, Dr E. Moses Road, Mumbai-400018.
14. Manjesh Srivastava, Kuldeep Sharma, **Vikas Kumar** and Sunayana, (2018), “To study the effect of by-products of industrial waste on construction industry”, ASMMCE 2018, Paper ID: G311.
15. Manjesh Srivastava, Kuldeep Sharma, **Vikas Kumar**, Sunayana (2019), “To Study the Effect of Bamboo and Steel as Reinforcement on Structure”, UKIERI Concrete Congress.

Book Chapter's

1. Deepak Gupta, Arvind Kumar, **Vikas Kumar**, Akash Priyadarshie, Vaibhav Sharma (2019), “Performance of Pond Ash and Rice Husk Ash in Clay: A Comparative Study”, Recycled Waste Materials, Lecture Notes in Civil Engineering, Springer Singapore, https://doi.org/10.1007/978-981-13-7017-5_17.
2. Akash Priyadarshie, Arvind Kumar, Vaibhav Sharma, **Vikas Kumar** (2019), “A Study on the Influence of Confining Pressure on the Behavior of Fiber-Reinforced Soil”, Sustainable Engineering, Lecture Notes in Civil Engineering, Springer Singapore, https://doi.org/10.1007/978-981-13-6717-5_28.
3. **Vikas Kumar** and Arvind Kumar (2020), “Using Neural Model for Mimicking the Behavior of Hybrid Foundation”, Lecture Notes in Civil Engineering, Springer Cham, https://doi.org/10.1007/978-3-030-51354-2_33.
4. Sunayana, **Vikas Kumar**, and Komal Kalawapudi (2020), “Comparison of Geostatistical Technique to Assess the Safe Zones of Water Storage”, Lecture Notes in Civil Engineering, Springer Singapore https://doi.org/10.1007/978-981-15-6090-3_50.

Short Term Course / Faculty Development Programme organized

1. Organize One week Short Term Course on “*Strategies for Sustainable Development: Goals and Issues*”, at Civil Engineering Department, MMMUT, Gorakhpur, from February 19-25, 2018.
2. Organize Webinar on “Sustainable Future”, at Civil Engineering. Department, Central University of Haryana on March 08, 2021.
3. Organize One Day Workshop on “Progressive Construction technologies” at Civil Engineering. Department, Central University of Haryana on April 10, 2021.
4. Organize Webinar on “Experience from mechanics of geo-bio and Meta materials: Academic research and social needs” at Civil Engineering. Department, Central University of Haryana on May 07, 2021.
5. Organize Webinar on “Dry Mix Mortar Technology: An innovation in Today’s Construction”, Department of Civil Engineering and Student Chapter of Institution of Engineers (India) Central University of Haryana, in association with JK Cement Ltd.
6. Work as a coordinator for “World Environment Day 2021 (Ecosystem Restoration)”, School of Engineering and Technology and Department of Environmental Studies in association with IWRS on June 05, 2021.

Special Lecture / Invited talk delivered

- Delivered a Talk on “Geotechnical Consideration of Earthquake Resistant Design of structure” during a short term course titled Earthquake Resistant design of Structure at Civil Engineering Department, MMMUT, Gorakhpur.
- Delivered a Talk on “Geo Polymer Concrete: Eco Friendly Construction Material” during a short term course titled Emerging Trends In Civil Engineering at Civil Engineering Department, MMMUT, Gorakhpur.
- Delivered a Talk on “A Review on Green Concrete” during a short term course titled *Strategies for Sustainable Development: Goals and Issues* at Civil Engineering Department, MMMUT, Gorakhpur from February 19-25, 2018.

Membership of Professional Bodies/ Societies

- Life Member of Indian Geotechnical Society (IGS).
- Associate Member of Institute of Engineers, Kolkata (India)
- Member in Deep Foundation of India
- Associate Member of IRED (Institute of Research Engineers and Doctors)

(Vikas Kumar)