



Dr. Kundan Meshram

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

Department: Civil Engineering

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Qualifications

- **PhD** (Civil Engineering), Maulana Azad National Institute of Technology, Bhopal
Thesis Title: *Swelling Behavior of Expansive Soils Reinforced with Granular Pile*
- **M. E.** (Transportation Engineering), S.G.S.I.T.S., Indore
Thesis Title: *Effect of Shape of Aggregate on Pavement Quality Concrete*
- **B.E.** (Civil Engineering), G.E.C., Rewa

Area of Interest: Transportation Geotechnics, Stone Column/Granular Pile, Pavement Performance Study, Road Safety

Experience: Presently working as an Assistant Professor in the Department of Civil Engineering, Guru Ghasidas Vishwavidyalaya from February 2020.

Awards and Honors:

- **International Innovative Researcher in Civil Engineering**, RULA Peace Award, 2019.
- **CPWD Medal and Award for Best Paper on Maintenance** for paper entitled 'Pavement Deterioration Modeling for Low Volume Roads' from Indian Road Congress, 2015.
- Received Fellowship by **COIR BOARD, Kochi** during Ph.D. in Maulana Azad National Institute of Technology, Bhopal (M.P.)

- **Best Project award** entitled, “Quantity of Mica in Water of Lamta” in M.P. State children’s Science Congress supported by National Council for Science & Technology Communication, DST Govt. of India, New Delhi, held from 28-30/11/2000 at Indore.

Research Projects: 01 (Submitted)

International Collaboration/Consultancy: NIL

List of Publication:

International Journals

1. Kundan Meshram(2022). “Estimation of field CBR from DCP for subgrade soils”. *Arab J Geosci* **15**, 898. <https://doi.org/10.1007/s12517-022-10048-y>
2. Kundan Meshram, Nitu Yana and P.K. Jain (2021), “Estimation of swelling characteristics of expansive soils with influence of clay mineralogy”, *Acta Agriculturae Scandinavica, Section B — Soil & Plant Science*, Vol.-71 ,Issue-3 , pp. 202-207. DOI: <https://doi.org/10.1080/09064710.2021.1872696>
3. H.S. Goliya, **Kundan Meshram**, and Suchetan Mahapatra (2020), “Measurement Of Traffic Congestion For Indore”, *Stavební obzor - Civil Engineering*, vol. 4-2020, pp. 500-506. DOI: <https://doi.org/10.14311/CEJ.2020.04.0043>
4. Ashish Nim and **Kundan Meshram** (2020), “Impact of Eco Friendly Blast Furnace Slag on Production of Building Blocks”, *Stavební obzor - Civil Engineering*, vol. 4-2020, pp. 573-582. DOI: <https://doi.org/10.14311/CEJ.2020.04.0049>
5. **Kundan Meshram** and P.K. Jain(2020), “Estimation of Swelling Pressure of Expansive Soils Reinforced with Granular Pile”, *Stavební obzor - Civil Engineering*, vol. 3-2020, pp. 315-323. DOI: <https://doi.org/10.14311/CEJ.2020.03.0028>
6. Sachin W. Manjarawal and **Kundan Meshram** (2020), “Effect of Soil structure Interaction on Multi Storied Framed Structure”, *ADALYA Journal*, Volume 9, Issue 6, pp.136 - 140.
7. Rekha Shinde and **Kundan Meshram** (2020), “Construction Defects Structural Forensic Analysis of Building”, *ADALYA Journal*, Volume 9, Issue 5, pp. 396-398.
8. Sachin W. Manjarawal and **Kundan Meshram** (2020), “Soil Structure Interaction for Engineering Buildings”, *ADALYA Journal*, Volume 9, Issue 5, pp. 83-86.

9. Nilesh A. Ahire and **Kundan Meshram** (2020), "Study of Torsional, Flexural and Other Properties in Reinforced Concrete Structures Wrapped With FRP", ADALYA JOURNAL, Volume 9, Issue 5, pp. 353-358.
10. **Dr. Kundan Meshram** and Nilesh A. Ahire (2020), "Rotational Behaviour of Reinforced Concrete Beam Wrapped with Different Fibers", International Journal of Scientific & Technology Research, volume 9, issue 03, pp. 6037-6040.
11. Baswehwar S. Jirwankar and **Kundan Meshram** (2020), "Sustainable Smart City Planning By means of Land Use Models for Indian Cities", International Journal of Scientific & Technology Research, volume 9, issue 03, pp. 1553-1558.
12. Rekha Shinde and **Kundan Meshram** (2020), "Investigation of Building Failure using Structural Forensic Engineering", International Journal of Scientific & Technology Research, volume 9, issue 04, pp. 1876-1878.
13. Ashish Nim and **Kundan Meshram** (2019), "Development of Walling Materials Using Industrial Waste", International Journal of Architecture, Engineering and Construction, Vol. 8, No. 04, pp. 23-28.
14. Romesh Malviya, Sagar Jamle, and **Kundan Meshram** (2020), "Examination on Increasing Stability of Multistoried Building: A Theoretical Review", International Journal of Advanced Engineering Research and Science, , vol. 7, no. 1, pp. 162-164.
15. PrafullaThakre, Sagar Jamle, and **Kundan Meshram** (2019), "A Review on Opening Area with Respect to Wall Area in Shear Wall for Multistoried Building ", International Journal of Research and Analytical Reviews, , vol. 9, no. 3, pp. 156-161.
16. Shirish Kumar Kanungo, Sagar Jamle, and **Kundan Meshram** (2019), "An Informative Review on Underground Storage Reservoir System", International Journal of Research and Analytical Reviews, , vol. 6, no. 4, pp. 301-304.
17. Shirish Kumar Kanungo, Sagar Jamle, and **Kundan Meshram** (2019), "Determination of Stable USR system ", International Journal of Management, Technology And Engineering, , vol. 9, no. 11, pp. 143-151.
18. Sapan Chawla, Sagar Jamle, and **Kundan Meshram** (2020), "A Review on Economical Design of Intz Water Tank as per IS-875-III, for Wind Speed in India", International Journal of Advanced Engineering Research and Science, , vol. 7, no. 1, pp. 147-151.

19. Yash Joshi, Sagar Jamle, and **Kundan Meshram** (2019), "Dynamic Analysis of Dual Structural System", International Journal of Research and Analytical Reviews, , vol. 6, no. 2, pp. 518-523.
20. Rajesh Chouhan, Sagar Jamle, and **Kundan Meshram** (2019), "Dynamic Analysis of Tuned Mass Damper Steel Structure: A Review", International Journal of Management, Technology And Engineering, , vol. 9, no. 7, pp. 212-216.
21. Rajesh Chouhan, Sagar Jamle, and **Kundan Meshram** (2019), "Dynamic Analysis of Tuned Mass Damper on Steel Structure: A Technical Approach", International Journal of Research and Analytical Reviews, , vol. 6, no. 2, pp. 956-960.
22. **Kundan Meshram**, Hassan M. Rangwala, H.S. Goliya and Paresh Sawanliya (2016), "On-field Assessment of Sub-Grade Uniformity using DCP", Geotechnical Testing Journal, ASTM International, Vol. 39, No. 3, pp. 447-451.
23. **Kundan Meshram** and P.K. Jain(2015), "Swelling Behavior of Expansive Soil Using Granular Pile Technique", Global Journal Of Advanced Engineering Technologies & Sciences, Volume 2 Issue 7, pp. 90-93.
24. **Kundan Meshram** and P.K. Jain (2015), "Strength and Settlement Studies of Black Cotton Soil Reinforced With Granular Pile", International Journal of Engineering Sciences & Research Technology, Vol. 04, Issue 04, pp. 621-630.
25. **Kundan Meshram**, S.K. Mittal, P.K. Jain and P.K. Agarwal (2013), "Application of Coir Geotextile in Rural Roads Construction on BC Soil Subgrade", International Journal of Engineering and Innovative Technology, Volume 3, Issue 4, pp. 264-268.
26. **Kundan Meshram** and H.S. Goliya (2013), "Accident Analysis on National Highway-3 Between Indore to Dhamnod", International Journal of Application or Innovation in Engineering & Management, Volume 2, Issue 7, pp. 57-59. (Impact Factor 2.379) (**Citation: Google scholar- 06, Research Gate-01**)
27. **Kundan Meshram**, S.K. Mittal, P.K. Jain and P.K. Agarwal(2013), "Application of Coir Geotextile for Road Construction: Some Issues", Oriental International Journal of Innovation Engineering Research, Vol. 1, Issue 1, pp. 25-29.
28. **Kundan Meshram**, H.S. Goliya and Akhilesh Poddar (2013), "Stress Analysis and Determination of Effective k-value for Rigid Pavement", International Journal of Engineering Science and Technology, Vol. 5 No.03, pp. 468-474.

29. Vandana Tare, **Kundan Meshram** and B.P. Bourasi (2012), “Effect of Shape of Shape of Aggregate on Behavior of Dense Bituminous Macadam”, International Research Journal of Humanities, Engineering & Pharmaceutical Sciences, Vol. II, Issue III, pp. 103-113.
30. H.S. Goliya, **Kundan Meshram** and ParulMukherji (2012), “Pavement Shoulder Intersection on NH- 59 (km 61- km 136): A Case Study”, International Journal of Engineering Sciences & Management, Vol. 3, Issue 1, pp. 220-231.

National Journal

31. H.S. Goliya, **Kundan Meshram** and Shravan Namdev (2020), “Comparative Analysis of Road Accident Scenario in Past Two Decade: A Case Study of Indore-Khalghat Road”, Indian Highways, Vol. 48, No. 7, pp. 20-28.
32. Vandana Tare, Diwaker Singh and **Kundan Meshram**(2018), “Stabilization of Black Cotton Soil with Sand and Non Woven Coir”, Indian Highways (IRC), Vol. 46, No. 2, pp. 39-44.
(Citation: Research Gate - 02)
33. **Kundan Meshram** and Dilip Singh Yadav (2016), “Bus Rapid Transit system for Indore City”, NICMAR-Journal of Construction Management, Vol. XXXI, No. I & II, pp. 39-48.
34. Vandana Tare, Sunil Kumar Pal and **Kundan Meshram**(2014), “Performance Characteristics of Bituminous Mixes Modified by LDPE, HDPE, and PP Granule”, Indian Highways (IRC), Vol. 42, No. 11, pp. 11-12.
35. **Kundan Meshram**, P.K. Jain, S.K. Mittal and P.K. Agarwal(2014), “CBR Improvement of Expansive Black Cotton Soil Using Coir Geotextile”, NICMAR-Journal of Construction Management, Vol. XXIX, No. III, pp. 45-50.
36. Vandana Tare, **Kundan Meshram** and Sipika Srivastava (2014), “Optimization of Transfer Time and Initial Waiting Time for a Bus Network Using Genetic Algorithm”, Indian Highways (IRC), Vol. 42, No. 8, pp. 48-53.
37. **Kundan Meshram**, Suneet Kaur and Vandana Tare (2014) “Performance Evaluation for Low Volume Roads in India using Soft Computational Approach”, NICMAR-Journal of Construction Management, Vol.-XXIX, No.- II, pp. 49-58.
38. Vandana Tare, H.S. Goliya, AtulBhatore and **Kundan Meshram** (2013), “Pavement Deterioration Modeling for Low Volume Roads”, **Journal of The Indian Roads Congress (IRC), vol.-73, No.-4, pp.67-81. (CPWD Medal and Award for Best Paper on Maintenance)**

39. **Kundan Meshram** and H.S. Goliya (2013), “Effect of Shape of Aggregate on Pavement Quality Concrete”, Indian Highways (IRC), Vol. 41, No. 3, pp. 41-48.

International Conference

1. Chatrabhuj and **Kundan Meshram** (2022), “An Empirical Study on Machine Learning Based Process for Continuous Sustainable Growth Development for Land Use Pattern”, International Conference on Civil Engineering Trends and Challenges for Sustainability (CTCS-2022) NMAM Institute of Technology, NITTE Karnataka.
2. **Kundan Meshram** (2020), “Urban Planning in India - Treasure out the challenges & solutions for Indian cities”, First International Conference on Challenges and Opportunities for Development of Smart Cities 2020 (ICCODS 2020).
3. **Kundan Meshram**, and P.K. Jain (2015), “Ground Improvement Techniques: Recent Advances”, International Conference on status of Science and Technology in Chhattisgarh State , 19-20 March 2015, held at Bhilai Institute of Technology, Durg (C.G.).

National Conference

1. **Kundan Meshram** and P.K. Jain (2015), “Prediction Of Swelling Pressure For Expansive Soils”, National Conference on “Strategic Perspectives and Advancements in Civil Engineering”, 13th April 2015, held at JIT Borawan, Khargone, pp. 46-48.
2. **Kundan Meshram**,Aparna, Rakesh Kumar and P.K. Jain (2014), “Swelling Behavior of Expansive Soil Reinforced with Granular Pile”, National Conference On Recent Advancements & Innovations In Civil Engineering held at T.I.T. (Excellence) Bhopal, on 27, 28 and 29 June 2014.
3. **Kundan Meshram**, S.K. Mittal, P.K. Jain and P.K. Agarwal(2013), “Application of Coir Geotextile in Rural Roads Construction on BC Soil Subgrade”, National Conference on Emerging Trend in Human Computer Interaction in Engineering held at Jawaharlal Institute of Technology Borawan, on 5 October 2013.
4. **Kundan Meshram**, S.K. Mittal, P.K. Jain and P.K. Agarwal(2013), “Application of Coir Geotextile for Road Construction: Some Issues”, National Conference on “Advances in Engineering Research & Applications” held at Oriental College of Technology, Bhopal on 14-16 March 2013, pp. 476-480.

Recent Books/Book Chapters/Monographs etc.

1. **Kundan Meshram** (2021), “Design of an adaptive & flexible green computing architecture for multi-domain social applications via artificial intelligence”, In: Sanjay Kumar, Rohit Raja, Alok Kumar Singh Kushwaha, Saurabh Kumar, Raj Kumar Patra (eds) Green Computing and its Applications. Nova Science Publisher (Scopus Index). <https://doi.org/10.52305/ENYH6923> (ISBN: 978-1-68507-357-2)
2. **Kundan Meshram, N. Gangadhar Reddy** (2022), “Development of a Machine Learning-Based Drone System for Management of Construction Sites”. In: Reddy K.R., Pancharathi R.K., Reddy N.G., Arukala S.R. (eds) Advances in Sustainable Materials and Resilient Infrastructure. Springer Transactions in Civil and Environmental Engineering. Springer, Singapore. https://doi.org/10.1007/978-981-16-9744-9_5 (ISBN: 978-981-16-9743-2)
3. **Dr Kundan Meshram** (2022), “Design of Optimum Construction Site Management Architecture: A Quality Perspective Using Machine Learning Approach”. In: Mahmood, M.R., Raja, R., Kaur, H., Kumar, S. and Nagwanshi, K.K. (eds.) Ambient Intelligence and Internet Of Things: Convergent Technologies. John Wiley & Sons (ISBN: 978-1-119-82123-6). [Ambient Intelligence and Internet Of Things: Convergent Technologies | Wiley](#)

Research Supervision

Ph.D. Guided : 01(Ongoing)

M.Tech. Guided: 09(Awarded), 01(Ongoing)

Administrative Responsibilities

Working in committees at Department, School and University level in GGV, Bilaspur

Additional Information

PROFESSIONAL MEMBERSHIP

1. Institute of Urban Transport (IUT) – M1556
2. Indian Roads Congress (IRC) – LM 33906
3. Indian Geotechnical Society (IGS) – LM3873

PATENT

(a) International Patent

S.N.	Name of Inventor(s)	Title of the Patent	Country	Year	Status	Patent No.
1.	Dr. Kundan Meshram	Tracking and Alerting Traffic Management System Using IoT For Smart City	USA	2021	Granted	US 11,288,954
2.	Dr. Dolly Thankachan and Kundan Meshram	A system for effectively predicting yield from plant leaf imagery	South Africa	2022	Granted	2022/07783
3	Kundan Meshram	A Device and Method to Improve the Efficiency of Construction Sites Using IoT Enabled Digital Twins	Australia	2021	Granted	2021102807

(b) National Patent

S.N.	Name of Inventor(s)	Title of the Patent	Country	Year	Status	Patent No.
3.	Kundan Meshram and Pradeep Kumar Jain	Method of Reducing the Swelling Pressure of the Expansive Soils by Reinforcing it with the Granular Pile	India	2018	Granted	293046
4.	Kundan Meshram and Sunil Kumar Ahirwar	Cellular Reinforcement Supported on Expansive Soil	India	2018	Published	-
5.	Kundan Meshram	Method of Reducing the Swelling of Expansive Soils Reinforced with the Granular Pile	India	2018	Published	-

SHORT TERM TRAINING PROGRAMME/WORKSHOP etc. ORGANIZED

1. Online National Workshop on “**Intellectual Property Rights (IPR) - Patent & Designs Process**” organized by Department of Civil Engineering, Guru Ghasidas Vishwavidyalaya Bilaspur (C.G.) in association with RGNIPM Nagpur (M.H.) under National Intellectual Property Awareness Mission on 09/02/2022.

2. Online Webinar on “**Strategies of Cracking Gate for Civil Engineering**” organized by Department of Civil Engineering, Guru Ghasidas Vishwavidyalaya Bilaspur (C.G.) on 27/01/2022.
3. National Workshop on “**Scheme for Facilitation Intellectual Property Protection**” Organized by GGU, Bilaspur, (CG.) India, October 18- 23, 2021.
4. National Workshop on “**Skill Development In Technology Transfer**” Organized by GGU, Bilaspur, (CG.) India, September 13-18, 2021.
5. National Workshop on “**Intellectual Property Rights**” Organized by GGU, Bilaspur, (C.G.) India, November 28, 2020.
6. One day workshop on “**Conceptual Framework of Intellectual Property Rights**”, held at Oriental University, Indore on 12th October, 2019.
7. STTP on “**Application of SPSS in Multidisciplinary Research**”, January 6-10, 2016 at M.A.N.I.T. Bhopal.
8. STTP on “**IPR Issues: Patent Drafting & Processing of Patent Application**”, March 14-18, 2015, at M.A.N.I.T. Bhopal.
9. STTP on “**Research Methodology and Applications of SPSS in Multidisciplinary Research**”, January 04-08, 2015, at M.A.N.I.T. Bhopal.

FDP/FIP/MOOCs/STTP/WORKSHOP/WEBINAR etc. ATTENDED : 113

(Dr. Kundan Meshram)