

Dr. Bhagyashri A. Lanjewar



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Academic Credentials

Degree	Specialization	Academic Year	Institution/ University	Remarks
Ph.D.	Civil Engineering	2022-2025	Visvesvaraya National Institute of Technology, Nagpur, Maharashtra	Awarded
M. Tech	Structural Engineering	2018-2020	Rashtrasant Tukadoji Maharaj Nagpur University	7.78 (CGPA)
B.E	Civil Engineering	2012-2016	Rashtrasant Tukadoji Maharaj Nagpur University	7.84 (CGPA)

Career Highlights

- Proficient in experimental investigation and performance evaluation of cementitious materials.
- Experienced in life cycle assessment (LCA) and sustainability analysis of construction materials.
- Skilled in scientific writing, technical documentation, and research publication.
- Practical exposure to field-based construction practices and real-world application

Industrial Experience

- **Apple Chemie India Pvt. Ltd., Nagpur**
 - Conducted full-scale experimental trials of alkali-activated concrete in collaboration with the industry team.
 - Optimized mix proportions, tested workability and strength parameters, and validated the adaptability of research findings under industrial production conditions.

- **Zeal Pavers and Tiles, Nagpur**

- Contributed to the development and manufacturing of alkali-activated prefabricated panels.
- Actively participated in batching, casting, curing, and finishing processes while ensuring dimensional accuracy, surface quality, and durability standards comparable to conventional products.

- **Reckon Concretes Pvt. Ltd., Nagpur**

- Assisted in the end-to-end process of fabricating prototype 3D volumetric pods, including formwork assembly, reinforcement placement, mix casting, curing, and quality inspection.
- Gained practical exposure to modular construction workflows and successfully demonstrated sustainable concrete application at a prototype scale.

Teaching/ Research Experience

1. **ASSISTANT PROFESSOR** - Department of Civil Engineering, Maharashtra Institute of Technology (MIT), Chhatrapati Sambhajinagar, Maharashtra (January 2026 to Present)
2. **PROJECT ASSOCIATE** - Department of Civil Engineering, VNIT Nagpur (03 July 2025 to 01 January 2026)
Project Title: Recycling Coal Mine Overburden to Reuse as a Value-Added Building Material, Ministry of Coal (R&D)
3. **TEACHING ASSISTANTSHIP** - Department of Civil Engineering, VNIT Nagpur (2022-2025)

Sponsored Research Participated

- **Recycling Coal Mine Overburden to Reuse as a Value-Added Building Material**, Sponsor: Ministry of Coal (R&D), Grant No.: 34012/03/2023-CCT
- **Agro-Industrial Alkali-Activated Composites for Prefabricated Elements & 3D Volumetric Construction**, Sponsor: Ministry of Housing & Urban Affairs, GoI (Incubation), Grant No.: N- 11019/5/2019-HFA-V-UD (FTS-9058698)
- **Design & Development of Sustainable Construction Materials from Industry Rejects**, Sponsor: Truform Techno Products Ltd., Nagpur (R&D)

Current Research Areas

- Rheology and fresh-state behaviour of alkali-activated concrete
- Durability of sustainable cementitious materials
- Industrial and agro-waste utilization in concrete
- Life cycle assessment of low-carbon construction materials

Project Guided

Undergraduate Project Guidance

1. Performance Assessment of Eco-Friendly Concrete (Ongoing)
2. Environmental and Economic Benefits of Green Buildings (Ongoing)
3. Influence of Mineral Admixtures on Rheological Properties of Self-Compacting Concrete (Ongoing)
4. Effect of Fibers on Mechanical and Durability Properties of Alkali-Activated Concrete (Ongoing)

STTP/FDP/Industrial Training/Seminar/Workshop/Conference Organized

1. GIAN Course: Supported coordination of **"Role of Data, Digital Tools, and Standards in Decarbonizing Infrastructure"**, VNIT Nagpur, 12th–16th May 2025.
2. International Conference: Participated in the organizing team for **"Water and Sustainable Development"**, VNIT & CSIR-NEERI, 8th–9th November 2024.
3. Short Term Training Program (STTP): Assisted in organizing **"Value Addition in Aggregates Sourced from Industry Rejects for Sustainable Construction"**, VNIT Nagpur, 24th–28th June 2024.
4. Karyashala Workshop: Contributed to **organizing "Innovative Solutions for Sustainable Construction using Local Materials"**, VNIT Nagpur, 11th–16th March 2024.
5. International Conclave (Virtual): Assisted in **"Adoption of Green Construction Practices with Focus on Water Resource"**, VNIT & CSIR-NEERI, 11th–12th February 2022.

STTP/FDP/Industrial Training/Seminar/Workshop/Conference Attended

Conference Papers Presented

1. *Computational Analysis of Walling Materials for Designing Net Zero Buildings* – **International Conference on Sustainable Technology (ICST-2025)**, National Institute of Technology Mysuru, Mysuru, India, February 19–20, 2025.
2. *Evaluation of Developed Alkali-Activated Concrete for Energy-Efficient Building Material* – **International Conference on Material Science and Engineering, Coalesce Research Group, Rome, Italy**, April 11–12, 2024.

3. *A Step Towards Decarbonization of the Building Sector – International Conference on Advancing Sustainable Futures (ICASF-2023)*, 2023.
4. *Prediction of Construction Materials for Conventional and Alkali-Activated 3D Concrete Printing – International Conference on Advancing Sustainable Futures (ICASF-2023)*, 2023.
5. *Effect of Cupola Slag as a Coarse Aggregate on Compressive Strength of Concrete – Second International Conference on Construction Materials and Structures (ICCMS-2022)*, 2022.
6. *Application of Sustainable Prefab Walling Panels in Erection of a Toilet Unit at a Rural Village – Second International Conference on Construction Materials and Structures (ICCMS-2022)*, 2022.

Awards and Recognition

- **Winner of RISE 2024 award** conducted by Leeds Beckett University and UWE, Bristol, Sponsored by The Chartered Institute of Building.
- **Best Paper Award** at Second International Conference on Construction Materials and Structures (ICCMS2022), NIT Calicut, India.

Patent

1“An Alkali Activated Sustainable Concrete And Method of Preparation Thereof”

Patent No. 579878 | Granted on 03/02/2026

2. “Composition for M30 Grade Alkali Activated Concrete Prepared Using Agro-Industrial Wastes”

Patent No. 470442 | Granted on 20/11/2023

3. “A Composition of Sustainable Bricks and Method of Preparation Thereof”

Patent No. 425597 | Granted on 17/03/2023

List of Research Publications /Books

Research outputs:

Google Scholar:

<https://scholar.google.com/citations?hl=en&user=ECMkTHEAAAJ>

Scopus Id:

<https://www.scopus.com/authid/detail.uri?authorId=58069148600>

Papers in International Journal

1. **Bhagyashri Lanjewar**, Shubham Powar, Manoj Wankhede, Sanchita Nawale, Rahul Ralegaonkar, "Evaluation of one part alkali-activated self-compacting concrete with mining residue". *Proceedings of the Institution of Civil Engineers - Construction Materials*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1680/jcoma.25.00119> **2026** (Scopus)
2. **Bhagyashri Lanjewar**, Abhilasha Kumbalwar, Hindavi Gavali, Vaidehi Dakwale, & Rahul Ralegaonkar "Design and development of self-compacting alkali-activated concrete for energy- efficient building material" *Frontiers in Built Environment*, Vol 11 **2025** <https://doi.org/10.3389/fbuil.2025.1451710> (ESCI - Q2)
3. **Bhagyashri Lanjewar**, Ravijanya Chippagiri, Vaidehi Dakwale, Rahul Ralegaonkar, "Application of Alkali-Activated Sustainable Materials: A Step towards Net Zero Binder," *Energies*; vol. 16, no. 969, **2023**. <https://doi.org/10.3390/en16020969>. (SCIE - Q1)
4. **Bhagyashri Lanjewar**, Ravijanya Chippagiri, Vaidehi Dakwale, Rahul Ralegaonkar (2023) "Development of Bio-based blended ash and fly ash based alkali activated concrete", Magazine of Concrete Research, ICE; <https://doi.org/10.1680/jmacr.22.00251> (SCIE - Q2)
5. Manideep Samudrala, Syed Mujeeb, **Bhagyashri A Lanjewar**, Ravijanya Chippagiri, Muralidhar Kamath and Rahul V Ralegaonkar (2023) "3D-Printable Concrete for Energy-Efficient Buildings", MDPI, *Energies*, **2023**, 16(10), 4234; <https://doi.org/10.3390/en16104234>. (SCIE - Q1)
6. Syed Mujeeb, Manideep Samudrala, **Bhagyashri A Lanjewar**, Ravijanya Chippagiri, Muralidhar Kamath and Rahul V Ralegaonkar (2023) "Development of Alkali Activated 3D Printable Concrete: A Review", MDPI, *Energies*, **2023**, 16(10), 4181; <https://doi.org/10.3390/en16104181> (SCIE - Q1)

Papers in International Conference Proceedings

1. **Bhagyashri A. Lanjewar**, Manoj Wankhede, Manish Kewalramani, Anil Sawhney, Rahul V. Ralegaonkar, "A Step towards decarbonization of building Sector" in International Conference on Advancing Sustainable Futures (ICASF 2023), 2023.
2. Ravijanya Chippagiri, **Bhagyashri Lanjewar**, Muralidhar Kamath, and Rahul Ralegaonkar, "Prediction of Construction Materials for Conventional and Alkali-activated 3D Concrete Printing" in International Conference on Advancing Sustainable Futures

(ICASF 2023), 2023.

3. **Bhagyashri Lanjewar**, Nissi Jayan, Ankita Chaware, Shashwat Kondawar, Ravijanya Chippagiri, Vaidehi Dakwale, Rahul Ralegaonkar, Effect of cupola slag as a coarse aggregate on compressive strength of concrete, Materials Today Proceedings, <https://doi.org/10.1016/j.matpr.2023.04.214> (**Scopus**)
4. Ravijanya Chippagiri, **Bhagyashri Lanjewar**, Ana Bras, Vaidehi Dakwale, Rahul Ralegaonkar Application of sustainable prefab walling panels in erection of a toilet unit at a rural village, Materials Today Proceedings. <https://doi.org/10.1016/j.matpr.2023.04.064> (**Scopus**)

Personal Details

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