

INDUSTRY INSTITUTE COLLABORATION CELL (IICC)

**Department of Civil Engineering
National Institute of Technology Raipur**

Report of Expert Lecture Series

1. Title of the Expert Lecture Series

Building Information Modelling (BIM): Digital Transformation in Civil Engineering

Lecture 1: BIM Fundamentals: Transforming Civil Engineering Design

Lecture 2: Digital Modelling Tools: Building Smarter with BIM

Lecture 3: BIM – Built Environment Projects

Lecture 4: Future of Construction: BIM, Innovation, and Digital Twins

2. Date of Activity

08 April 2026

- Lecture 1: BIM Fundamentals: Transforming Civil Engineering Design
- Lecture 2: Digital Modelling Tools: Building Smarter with BIM

09 April 2026

- Lecture 3: BIM – Built Environment Projects
 - Lecture 4: Future of Construction: BIM, Innovation, and Digital Twins
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3. Name and Designation of Expert

Mr. Vinay Fulambarkar

Manager / Senior BIM Engineer – BIM Services

NIPPON KOEI INDIA Pvt. Ltd., Mumbai

4. Venue

F-05 Classroom, First Floor

Department of Civil Engineering

National Institute of Technology Raipur

5. Time: 09:50 AM to 12:30 PM

6. Number of Participants

Faculty Members: 02

Research Scholars: 04

B.Tech/M.Tech Students: 69

Total Participants: 75

7. Brief Profile of the Expert

Mr. Vinay Fulambarkar is a Civil Engineer and BIM professional with over 14 years of experience in infrastructure, commercial, industrial, and residential projects. He is currently serving as Manager / Senior BIM Engineer – BIM Services at NIPPON KOEI INDIA Pvt. Ltd., Mumbai. He possesses extensive expertise in Building Information Modelling (BIM), digital construction workflows, project management, BIM coordination, clash detection, Common Data Environments (CDE), and Digital Twin technologies. He has contributed to several prestigious infrastructure projects, including airport developments and the Versova–Bandra Sea Link Project, one of India's largest coastal transportation initiatives. He is proficient in advanced BIM platforms such as Revit, Navisworks, Bentley ProjectWise, Autodesk Construction Cloud (ACC), BIM 360, Dynamo, and Digital Twin applications.

8. Brief Summary of the Activity

The Department of Civil Engineering, National Institute of Technology Raipur, organized a two-day **Expert Lecture Series on Building Information Modelling (BIM)** under the aegis of the **Industry Institute Collaboration Cell (IICC)** on 08–09 April 2026. The objective of the lecture series was to familiarize students, research scholars, and faculty members with the latest developments in BIM and its growing significance in modern civil engineering practice.

Lecture 1: BIM Fundamentals: Transforming Civil Engineering Design

The first lecture introduced the fundamental concepts of Building Information Modelling and highlighted how BIM is transforming conventional design methodologies. The expert explained the evolution of BIM from traditional CAD-based practices to intelligent data-rich digital models that facilitate collaboration among architects, engineers, contractors, and project owners. The session emphasized the role of BIM in improving design accuracy, reducing errors, and enhancing project efficiency throughout the infrastructure lifecycle.

Lecture 2: Digital Modelling Tools: Building Smarter with BIM

The second lecture focused on industry-standard BIM software and digital modelling tools. Participants were introduced to software platforms such as Revit, Navisworks, Bentley applications, and cloud-based collaboration environments. The expert demonstrated how digital modelling tools enable visualization, coordination, clash detection, quantity extraction, and

project monitoring. Real-world examples were presented to illustrate the advantages of BIM-enabled project delivery.

Lecture 3: BIM – Built Environment Projects

The third lecture showcased practical implementation of BIM in large-scale infrastructure and built environment projects. Through detailed case studies from airports, transportation infrastructure, commercial developments, and urban projects, participants gained insights into multidisciplinary coordination, BIM execution planning, common data environments, and project lifecycle management. The expert discussed the challenges encountered during project execution and the solutions enabled through BIM technologies.

Lecture 4: Future of Construction: BIM, Innovation, and Digital Twins

The concluding lecture explored emerging trends shaping the future of the construction industry. The expert discussed integration of BIM with Artificial Intelligence, automation, IoT-enabled monitoring systems, cloud collaboration platforms, and Digital Twin technologies. The session highlighted how data-driven decision-making and digital transformation are revolutionizing infrastructure planning, construction, operation, and maintenance. Students were encouraged to develop BIM competencies to meet future industry requirements and improve employability in the rapidly evolving construction sector.

The lecture series concluded with an interactive discussion session where participants actively engaged with the expert on career opportunities, industry expectations, software proficiency, BIM implementation challenges, and future research directions in digital construction technologies.

9. Key Learning Outcomes

1. Understanding of the fundamental principles and workflow of Building Information Modelling (BIM).
2. Exposure to industry-standard BIM software and digital modelling platforms.
3. Knowledge of BIM applications in infrastructure and built environment projects.
4. Understanding of clash detection, project coordination, and collaborative project delivery.
5. Familiarity with Common Data Environments (CDE) and BIM Execution Planning (BEP).
6. Awareness of emerging technologies such as Digital Twins, AI-assisted design, and smart construction systems.
7. Enhanced understanding of the role of digital transformation in improving project efficiency, sustainability, and lifecycle management.
8. Exposure to career opportunities and industry expectations related to BIM and digital engineering.

10. Feedback and Impact

The lecture series received an enthusiastic response from students, research scholars, and faculty members. Participants appreciated the practical insights, real-world case studies, software demonstrations, and industry-oriented discussions. The sessions successfully bridged the gap between academic learning and professional practice by introducing participants to advanced digital technologies currently being adopted by the global construction industry.

11. Photographs



Photo 1: Expert delivering Lecture.



Photo 2: Students/Scholars attending the Lecture



Photo 3: Interactive discussion with students and faculty members.

12. Coordinator Details

Dr. Ritesh S. Ingale

IICC Coordinator

Department of Civil Engineering

National Institute of Technology Raipur



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National Institute of Technology Raipur

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Date: 02/04/2026

NOTICE

The Department of Civil Engineering is pleased to organise an **Expert Lecture Series** on *Building Information Modelling (BIM)* under the aegis of the Industry Institute Collaboration Cell (IICC). This lecture series is designed to provide participants with a comprehensive understanding of Building Information Modelling (BIM) and its transformative role in modern civil engineering practices. The sessions will cover fundamental concepts of BIM, its application in digital design and construction workflows, and the use of advanced modeling tools for efficient project execution.

Faculty, staff, and students are requested to take note of the information and necessary participation.

Details	
Name of the Expert	Mr. Vinay Fulambarkar
Designation	Manager/ Senior BIM Engineer – BIM Services NIPPON KOEI INDIA PVT LTD, Mumbai
Department	Civil Engineering
Title of lecture	Lecture 1: "BIM Fundamentals: Transforming Civil Engineering Design" Lecture 2: "Digital Modelling Tools: Building Smarter with BIM" Lecture 3: "BIM - Built Environment Projects" Lecture 4: "Future of Construction: BIM, Innovation, and Digital Twins"
Date	8 th April 2026 (Lecture 1 & 2) 9 th April 2026 (Lecture 3 & 4)
Venue	F-05 Classroom, First Floor, Dept. of Civil Engg., NIT Raipur
Time	09:50 AM to 12:30 PM

Prof. (Dr) Laxmikant Yadu

Professor and Head

Dept. of Civil Engineering

NIT Raipur

Head of Department, Civil Engineering

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