

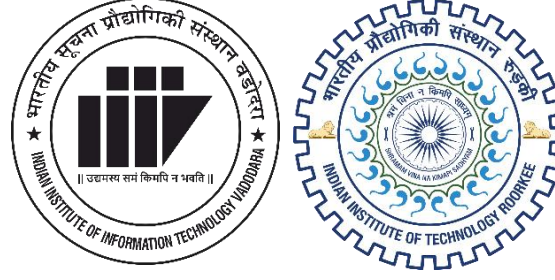
Workshop On
Impact of Artificial Intelligence on Circular Economy and Sustainable Waste Management
Organizing Institutions
Indian Institute of Information Technology Vadodara

and
Indian Institute of Technology Roorkee
Proposed Date: 1st July 2026
Venue: IIITV-ICD, Education Hub, Kevdi, Diu

From:
Dr. Vikas Kumar
Coordinator

Indian Institute of Information Technology Vadodara
IIIT Vadodara-International Campus Diu (Satellite campus of IIIT Vadodara)

Workshop On
Impact of Artificial Intelligence on Circular
Economy and Sustainable Waste Management



Organizing Institutions

Indian Institute of Information Technology
Vadodara
&
Indian Institute of Technology Roorkee
at
Venue: IIITV-ICD, Education Hub, Kevdi,
Diu

About the Institute

Indian Institute of Information Technology Vadodara (IIIT V) was established by the Ministry of Education (MoE), Government of India, under Public Private Partnership (PPP) as an Institute of National Importance to develop new knowledge in information technology and to provide manpower of global standards for the information technology industry and to provide for certain other matters connected with such institutions or incidental thereto. The partners in this project are Government of India, Government of Gujarat, Gujarat Energy Research and Management Institute, Gujarat State Fertilizers and Chemicals Ltd, and Tata Consultancy Services. The Institute was established in the year 2013. IIIT V operates from its temporary premises at Government Engineering College (Gandhinagar) until its new campus is operational at Vadodara, Gujarat. Indian Institute of Information Technology Vadodara International Campus Diu (IIITV-ICD) is a satellite campus of the Indian Institute of Information Technology Vadodara (IIIT Vadodara, an Institute of National Importance by an Act of Parliament). IIITV-ICD has been established at Education Hub, Kevdi-Diu, in partnership with the Government of Dadra & Nagar Haveli and Daman & Diu (UT Administration of DNH & DD) with the approval of the Board of Governors (BoG) wherein the Ministry of Education (earlier MHRD) is a member. Institute is proud to organize Workshop on Impact of Artificial Intelligence for Circular Economy and Sustainable Waste Management.

About the Workshop

The proposed Workshop on “Impact of Artificial Intelligence for Circular Economy and Sustainable Waste Management” will provide a timely platform for discussing innovative technological solutions to environmental challenges. By bringing together experts from academia, industry, and government, the Workshop will foster knowledge exchange, encourage collaborative research, and contribute to the advancement of sustainable and circular development practices in India.

Concept and Context of AI and Circular Economy

The term circular economy was first used in 1980 to describe a system of interrelationships between the economy and the environment. At present, the advantages of this model are aimed at a considerable reduction of carbon dioxide and waste to generate more sustainable business models by

improving the supply chain with the application of regenerative agriculture that captures more carbon. It is a new way of creating value, and ultimately prosperity. It works by extending product lifespan through improved design and servicing, and relocating waste from the end of the supply chain to the beginning in effect, using resources more efficiently by using them over and over, not only once. In a circular economy, however, products are designed for durability, reuse and recyclability, and materials for new products come from old products. As much as possible, everything is reused, remanufactured, recycled back into a raw material, used as a source of energy, or as a last resort, disposed of. However, effective implementation of circular economy principles requires innovative technological solutions capable of handling complex environmental and industrial challenges.

The growing importance of AI-enabled sustainability solutions, the proposed one-day Workshop aims to provide a multidisciplinary platform for researchers, academicians, industry professionals, policymakers, and students to discuss emerging trends, challenges, and opportunities at the intersection of Artificial Intelligence, Circular Economy, and Waste Management.

Scope of the Workshop

The proposed Workshop on “Impact of Artificial Intelligence for Circular Economy and Sustainable Waste Management” will provide a timely platform for discussing innovative technological solutions to environmental challenges. By bringing together experts from academia, industry, and government, the Workshop will foster knowledge exchange, encourage collaborative research, and contribute to the advancement of sustainable and circular development practices in India.

Objectives of the Workshop

- To explore the role of Artificial Intelligence in waste management, recycling, and resource recovery.
- To showcase recent technological developments and industrial applications of AI-driven sustainability solutions.
- To identify future research opportunities and collaborative initiatives in circular economy and sustainable manufacturing.

Topics of interest

Topics of interest of the Workshop include, but are not limited to, the following areas:

Circular Economy and Sustainability:

- Principles of Circular Economy,
- Resource Efficiency and Waste Reduction
- Sustainable Production and Consumption

AI in Waste Management

- AI based waste segregation and Sorting
- Computer Vision Application in Recycling
- Smart Waste Collection and Monitoring System
- AI for E waste Management

AI for Resource Recovery and Manufacturing

- Predictive Analytics for Resource Optimization
- AI-Assisted Sustainable Manufacturing
- Industrial Applications and Success Stories

Emerging Materials, Technologies and Future Directions

- Semiconductor recycling and recovery of critical materials
- Digital Platforms for Circular Supply Chains
- AI-Assisted Data Collection and Mapping
- Policy and Governance Perspectives

Expected Outcomes

- Enhanced understanding of AI-enabled circular economy solutions.
- Capacity building among students, researchers, and professionals.
- Development of academic and industry collaborations.
- Creation of a network of stakeholders working on circular economy and waste management.

Workshop Structure

- The Workshop will be organized through a combination of expert lectures and interactive discussions.

Tentative List of Speakers:

1. **Prof. K. K. Pant**, Director, IIT Roorkee
2. **Prof. Vimal Chandra Srivastava**, IIT Roorkee
3. **Dr. Bhaskar Jyoti Deka**, IIT Roorkee
4. **Dr. Komal Tripathi**, IIT Roorkee

5. **Dr. Smitirupa Biswal**, IIT Roorkee

6. **Dr. Vikas Kumar**, IIIT Vadodara

7. **Dr. Mukesh Kumar Thakur**, IIIT Vadodara

8. **Dr. Arohi Anand**, IIIT Vadodara

9. **Prof. Prasenjit Mondal**, IIT Roorkee (Virtual)

10. **Dr. Vikram Singh**, IIT Delhi (Virtual)

11. **Dr. Neha Shukla**, IIT Mandi (Virtual)

Workshop Chair/Patron

Prof. Dharmendra Singh Director,
IIIT Vadodara,
IIIT Vadodara - International Campus Diu

Organizing Committee

Dr. Vikas Kumar
Dr. Amal Tom
Dr. Mukesh Kumar Thakur
Dr. Suvam Singh
Dr. Uday Panwar

Venue & Time

Date and Time:

1st July, 2026 at 10:00 AM

Venue (Scan the QR code):

Education Hub,
IIIT Vadodara - International Campus Diu,
Kevdi, Diu, 362520



Accommodation

On request

Registration

- On-spot registration; there is no participation fee.

Correspondence

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