About Conference

The International Conference on Artificial Intelligence based Digital Systems and its Applications in Industry 4.0, themed “Empowering Industry 4.0 through Intelligent Digital Transformation”, aims to provide a global platform for researchers, academicians, industry experts, entrepreneurs, and policymakers to come together and explore the transformative role of AI in the industrial era of digitalization. The conference seeks to highlight innovations that drive Industry 4.0 by showcasing the latest research, technologies, and case studies in smart manufacturing, automation, and industrial transformation. It encourages collaboration among diverse stakeholders to foster knowledge exchange, share insights, and develop joint initiatives that promote sustainable and intelligent industrial solutions.

By addressing the technical, ethical, and organizational challenges of digital transformation, the conference emphasizes the importance of safe and scalable AI deployment through global standards and best practices. In addition, the event supports interdisciplinary research and innovation by encouraging cross-domain collaboration among fields such as computer science, engineering, manufacturing, data science, and management. It also serves as a platform for emerging researchers and start-ups to present pioneering ideas, receive valuable feedback, and inspire the development of next-generation industrial applications.

A key focus of the conference is on understanding the impact of AI on workforce transformation and skills development, particularly in preparing professionals for the future of work in Industry 4.0. By bridging the gap between academic advancements and real-world industrial applications through demos, prototypes, and industry-led sessions, the conference aims to translate research into practice. Ultimately, the benefits of Industry 4.0, such as increased productivity and efficiency, reduced operational costs, enhanced flexibility and customization, improved quality and precision, better decision-making through real-time insights, and safer working environments, will be at the core of discussions. This international gathering aspires to empower industries through intelligent digital transformation, creating a sustainable, innovative, and future-ready industrial ecosystem.

All the accepted papers in IC-AIDSA-26 will be published in Scopus, Springer,UGC approved and Google Scholar indexed Journals depending on the quality of the Paper.

Tracks

Computer Science & Engineering & Allied Branches

- **Track A:** Data Sciences & Business Intelligence, Machine Learning and Deep learning, Cloud Computing, Image Processing, Pervasive Computing, Generative AI, AR/VR
- **Track B:** Robotics, IoT, and Edge Computing for Smart Manufacturing, Robotics, IoT, and Edge Computing for Smart Manufacturing, Wireless Sensor Network & Security, Quantum Computing
- **Track C:** AI Algorithms and Machine Learning in Industry, Digital Transformation Case Studies from Industry Partners, AI Algorithms and Machine Learning in Industry, Digital Transformation Case Studies from Industry Partners

Electrical Engineering & Electronics & Telecommunication

Electrical Engineering

- **Power Systems:** Generation, transmission, distribution, load management
- **Power Electronics:** Converters, inverters, electric drives, HVDC
- **Electrical Machines:** Transformers, motors, generators, control systems
- **Control Systems:** Automation, PID control, feedback systems
- **Renewable Energy Systems:** Solar, wind, smart grids, energy storage
- **Embedded Systems:** Microcontrollers, real-time systems, IoT integration
- **Electrical Safety & Standards:** Protection systems, earthing, codes
- **Smart Grid & Energy Management:** Grid modernization, demand response
- **Signal Processing:** Analog/digital signal analysis, filter design
- **AI & Machine Learning in Power Systems:** Predictive control, fault detection.

Electronics & Telecommunication

- **Communication Systems:** Analog & digital communication, modulation, 5G
- **Signal & Image Processing:** Audio, video, biomedical signals, computer vision
- **VLSI & Embedded Systems:** IC design, FPGA, microcontrollers, SoC
- **Wireless & Mobile Communication:** 4G/5G, IoT, satellite, MIMO
- **Microwave & Antenna Design:** Radar, RF systems, waveguides
- **Digital Electronics:** Logic design, CPLD/FPGA, sequential circuits
- **IoT & Sensor Networks:** Smart devices, remote monitoring, LPWAN
- **Robotics & Automation:** Controllers, actuators, autonomous systems
- **AI & Machine Learning in E&TC:** Signal prediction, adaptive systems
- **Networking & Cybersecurity:** Protocols, network security, encryption

Mechanical Engineering & Civil Engineering

Mechanical Engineering

- **Thermal Engineering:** Heat transfer, IC engines, refrigeration, power plants
- **Design Engineering:** Machine design, CAD/CAE, vibration analysis
- **Manufacturing Engineering:** CNC, additive manufacturing (3D printing), automation
- **Materials and Metallurgy:** Composites, alloys, material testing
- **Mechatronics & Robotics:** Sensors, actuators, embedded systems, control
- **Automobile Engineering:** Vehicle dynamics, EVs, engine tech
- **Fluid Mechanics & Hydraulic Machines:** Pumps, turbines, fluid systems
- **Renewable Energy:** Solar, wind, bioenergy, sustainable systems
- **Industrial & Production Engineering:** Lean manufacturing, operations management
- **AI & IoT in Mechanical Systems:** Smart manufacturing, predictive maintenance

Tracks

Civil Engineering

- **Structural Engineering:** Design of buildings, bridges, and earthquake-resistant structures
- **Geotechnical Engineering:** Soil, foundations, and slope stability
- **Transportation Engineering:** Roads, traffic systems, and urban mobility
- **Water Resources Engineering:** Irrigation, drainage, and flood control
- **Environmental Engineering:** Water treatment, waste management, pollution control
- **Construction Management:** Project planning, safety, and cost control
- **Urban & Regional Planning:** Smart cities, zoning, and land use
- **Construction Materials:** Concrete, composites, and sustainable materials
- **Surveying & GIS:** Mapping, GPS, remote sensing
- **Disaster Management:** Risk mitigation and resilient infrastructure
- **AI and Machine Learning** in Civil Engineering
- **Sustainable and Green Infrastructure**
- **Climate Resilient Design**
- **Smart Construction Technology**
- **3D Printing in Construction**

Applied Sciences & Management

Applied Sciences

- General Theory of Relativity
- Boundary value problem
- OR and Mathematical Modeling
- Number Theory
- Green Chemistry
- Material Synthesis and Applications
- Advanced Instrumental techniques
- Non Conventional Energy Resources
- Nanotechnology
- Material Science
- Solar Cells
- Luminescence

Management

- Business Innovation
- Green HRM
- Knowledge Management
- Demonetization
- Talent Management
- Digital Marketing

Fire Engineering

- **Fire Safety Engineering:** Risk assessment, fire prevention, safety audits
- **Fire Dynamics:** Fire behavior, combustion science, heat transfer
- **Fire Detection & Alarm Systems:** Smoke detectors, sensors, alert systems
- **Fire Suppression Systems:** Sprinklers, extinguishers, gas-based systems
- **Structural Fire Protection:** Fire-resistant materials, passive protection
- **Emergency Evacuation Planning:** Human behavior, escape route design
- **Industrial Fire Safety:** Fire hazards in factories, oil & gas, chemical plants
- **Forensic Fire Investigation:** Cause analysis, evidence handling
- **Building Codes & Standards:** NFPA, IS codes, international regulations
- **Disaster Management & Rescue Operations:** Firefighting tactics, crisis response