

Controlling of Robotic ARM

Event Name: EXPERT LECTURE ON “Controlling of Robotic ARM”

Date:03/10/2024

Venue/ Mode: Dr. S&S S. Gandhi Government Engineering College, Surat, Seminar Hall, Admin Building / offline

No of Participants: - 33

Speakers Name: Abhishek Tiwari

About Event: The expert was from well known diamond machine manufacturing industry, STPL, Surat. He had more than decade experience in automation of diamond cutting, polishing, sawing machine. The expert delivered talk on different types of robotic arm. He discussed on following topic in depth

- Overview of robotic arm functionality.
- Brief on different control methodologies (manual, semi-automated, fully automated).
- Components of a robotic arm: actuators, joints, and end-effectors.
- Control systems overview: microcontrollers, PLCs, and industrial PCs.
- Forward and inverse kinematics for arm positioning.
- Path planning algorithms and trajectory generation.
- Feedback mechanisms using sensors (e.g., encoders, force sensors).

The session successfully equipped participants with the knowledge and skills required for effective robotic arm control.

Outcome of Event:

Emphasis on inverse kinematics and real-time feedback systems provided participants with tools to enhance accuracy in complex tasks.

The session highlighted the importance of addressing mechanical constraints and environmental factors during implementation.

Participants explored the potential of AI and vision systems to elevate robotic arm functionality beyond pre-programmed operations.

Event Photos

