Book Description

This hallmark text on Industrial Robotics offers an in-depth analysis of fundamentals of robotics and industrial applications of robots. It focuses on technology, programming and applications of industrial robots which helps the readers in transition from classroom and lab environment into the applied and practical world of industry. The objective of this Special Indian Edition is to include the latest trends in the field of Industrial Robotics and enhance the coverage on the subject area. Plenty of real life images and use of simple language makes this text more useful for the readers.

Table of Contents

Part 1 Fundamentals of Robotics

- 1. Introduction
- 2. Fundamentals of Robot Technology, Programming, and Applications

Part 2 Robot Technology: The Robot and its Peripherals

- 3. Control Systems and Components
- 4. Robot Motion Analysis and Control
- 5. Robot End Effectors
- 6. Sensors in Robotics
- 7. Machine Vision

Part 3 Robot Programming and Languages

- 8. Robot Programming
- 9. Robot Languages
- 10. Artificial Intelligence

Part 4 Applications Engineering for Manufacturing

- 11. Robot Cell Design and Control
- 12. Economic Analysis for Robotics

Part 5 Robot Applications in Manufacturing

- 13. Material Transfer and Machine Loading/Unloading
- 14. Processing Operations
- 15. Assembly and Inspection

Part 6 Implementation Principles and Issues

- 16. An Approach for Implementing Robotics
- 17. Safety, Training, Maintenance, And Quality

Part 7 Social Issues and the Future of Robotics

- 18. Social and Labor Issues
- 19. Robotics Technology of the Future
- 20. Future Applications

Subject: Mechanical

Term: 7th and 2nd Semester

Author: Mikell P Groover

Specialization:

Mechanical Engineering, Production Engineering, Biotechnology, Mechanical Engineering, Information Technology Engineering, Computer Science Engineering, Civil Engineering, Chemical Engineering, Electronics and Communication Engineering, Electrical Engineering, Aeronautical Engineering