



Robot Technology Fundamentals

By James G. Keramas



Robot Technology Fundamentals By James G. Keramas

Designed as a reference tool, this new book, Robot Technology Fundamentals, covers all the practical aspects, disciplines and latest developments in industrial robots. It includes various exercises and case studies for self-review. In addition, the latest robot manufacturers with address, phone and fax numbers are included in the appendix.

 [Download Robot Technology Fundamentals ...pdf](#)

 [Read Online Robot Technology Fundamentals ...pdf](#)

Robot Technology Fundamentals

By James G. Keramas

Robot Technology Fundamentals By James G. Keramas

Designed as a reference tool, this new book, Robot Technology Fundamentals, covers all the practical aspects, disciplines and latest developments in industrial robots. It includes various exercises and case studies for self-review. In addition, the latest robot manufacturers with address, phone and fax numbers are included in the appendix.

Robot Technology Fundamentals By James G. Keramas Bibliography

- Sales Rank: #756742 in Books
- Brand: Brand: Cengage Learning
- Published on: 1998-11-16
- Original language: English
- Number of items: 1
- Dimensions: .87" h x 8.23" w x 9.55" l, 2.00 pounds
- Binding: Hardcover
- 432 pages

 [Download Robot Technology Fundamentals ...pdf](#)

 [Read Online Robot Technology Fundamentals ...pdf](#)

Download and Read Free Online Robot Technology Fundamentals By James G. Keramas

Editorial Review

Review

PREFACE. INTRODUCTION: Objective. Automation and Robot. Brief History. Economic and Social Issues. Present and Future Applications. Summary. Questions. Problems. References. ROBOT CLASSIFICATION: Objectives. Manipulator Arm Geometry. Degrees of Freedom. Power Sources. Types of Motion. Path Control. Summary. Questions. Problems. References. ROBOT END EFFECTORS: Objectives. Types of End Effectors. Mechanical Grippers. Gripper Force Analysis. Other Types of Grippers. Special-purpose Grippers. Gripper Selection and Design. Process Tooling. Compliance. Summary. Questions. Problems. References. ROBOT TECHNOLOGY: Objectives. Fundamentals. General Characteristics. Basic Components. Robot Anatomy. Methods of Path Control. Robot Generations. Robot Selection. Summary. Questions. Problems. References. ROBOT SYSTEM ANALYSIS: Objectives. Robot Operation. Hierarchical Control Structure. Line Tracking. Dynamic Properties of Robots. Modular Robot Components. Summary. Questions. Problems. References. SENSORS: Objectives. Robot Sensors. Sensor Classification. Microswitches. Solid State Switches. Proximity Sensors. Photoelectric Sensors. Rotary Position Sensors. Usage and Selection of Sensors. Signal Processing. Sensor and Control Integration. Summary. Questions. Problems. References. VISION: Objectives. Visual Sensing. Machine Vision. Machine Vision Applications. Other Optical Methods. Summary. Questions. Problems. References. PROGRAMMING: Objectives. Robot Programming. Programming Methods. Programming Languages. Levels of Robot Programming. Space Position Programming. Motion Interpolation. Program Statements. Sample Programs. Summary. Questions. Problems. References. SAFETY: Objectives. Robot Safety. Safety Standards. System Reliability. Human Factor Issues. Safety Sensors and Monitoring. Safeguarding. Training. Safety Guidelines. Definitions. Summary. Questions. Problems. References. CONTROL SYSTEMS: Objectives. Control System Correlation. Control System Requirements. Programmable Logic Controller. PLC Programming Terminals. Proportional Integral Derivative. Computer Numerical Control. Microprocessor Unit. Universal Robot Controller. Interfacing. Workcell Control. Summary. Questions. Problems. References. ARTIFICIAL INTELLIGENCE: Objectives. Intelligent Systems. Elements of Artificial Intelligence. System Architecture. Applications of Advanced Robots. Fuzzy Logic for Robot Arm Control. Advanced Concepts and Procedures. Future Developments. Impact on Employment. Summary. Questions. Problems. References. INDUSTRIAL APPLICATIONS: Objectives. Automation in Manufacturing. Robot Applications. Material-Handling Applications Processing Operations. Assembly Operations. Inspection Operations. Evaluating the Potential of a Robot Application. Future Applications. Challenge for the Future. Summary. Questions. Problems. References. APPENDICES. GLOSSARY. ROBOT MANUFACTURERS. INDEX.

About the Author

Dr. Keramas has 22-years experience as a professor in Engineering Technology coupled with over 20-years or industrial practice as a project leader, director of research, inventor, consultant and entrepreneur. He has taught previously at the University of Massachusetts and Massachusetts Institute of Technology (MIT). The author of many technical journalistic articles and two texts, he is also a review board member for the Journal of Industrial Technology. In addition, he has given numerous presentations worldwide on automated manufacturing, robotics and the utilization of high technology. Dr. Keramas holds 23 patents in the United States (U.S.) and Canada for inventions in the automated manufacturing field and is an expert product liability witness listed in the Harvard Lawyer's Trial book. He is a regular consultant for the Office of Technology Innovations of the U.S. Department of Commerce and the National Institute of Standards and Technology, and has provided consulting services to companies in the U.S. and abroad. Dr. Keramas is an advisory committee member for the Pan European Network, creating joint education and industry alliances

for technology transfer and training, and a member of the Ed/Tech Group of MIT's Lincoln Laboratory, working on curriculum development for the High Tech Workforce of Tomorrow. Dr. Keramas received his Bachelor of Science and Master of Science in Mechanical Engineering from Athens Polytechnic Institute in Athens, Greece, and his Doctorate from the University of Massachusetts, Amherst. His research interest is in Automated Manufacturing, Robotics, Artificial Intelligence, CAD/CAM, and Computer Integrated Manufacturing.

Users Review

From reader reviews:

Adam Youngblood:

The book Robot Technology Fundamentals make one feel enjoy for your spare time. You need to use to make your capable a lot more increase. Book can for being your best friend when you getting stress or having big problem with the subject. If you can make studying a book Robot Technology Fundamentals for being your habit, you can get more advantages, like add your personal capable, increase your knowledge about a number of or all subjects. You can know everything if you like open up and read a guide Robot Technology Fundamentals. Kinds of book are several. It means that, science reserve or encyclopedia or other individuals. So , how do you think about this guide?

Leroy Raymond:

Playing with family in a very park, coming to see the water world or hanging out with close friends is thing that usually you might have done when you have spare time, then why you don't try thing that really opposite from that. Just one activity that make you not feeling tired but still relaxing, trilling like on roller coaster you have been ride on and with addition details. Even you love Robot Technology Fundamentals, you are able to enjoy both. It is great combination right, you still need to miss it? What kind of hang-out type is it? Oh can happen its mind hangout guys. What? Still don't buy it, oh come on its called reading friends.

Kendrick Mills:

Beside this Robot Technology Fundamentals in your phone, it can give you a way to get nearer to the new knowledge or information. The information and the knowledge you may got here is fresh in the oven so don't become worry if you feel like an older people live in narrow commune. It is good thing to have Robot Technology Fundamentals because this book offers to you readable information. Do you occasionally have book but you seldom get what it's facts concerning. Oh come on, that would not happen if you have this within your hand. The Enjoyable blend here cannot be questionable, just like treasuring beautiful island. So do you still want to miss that? Find this book and read it from today!

James Scott:

Within this era which is the greater man or who has ability in doing something more are more special than other. Do you want to become one of it? It is just simple method to have that. What you must do is just spending your time not very much but quite enough to get a look at some books. Among the books in the top

checklist in your reading list is definitely Robot Technology Fundamentals. This book which is qualified as The Hungry Hillside can get you closer in becoming precious person. By looking way up and review this guide you can get many advantages.

Download and Read Online Robot Technology Fundamentals By James G. Keramas #K1F5PIN9HRZ

Read Robot Technology Fundamentals By James G. Keramas for online ebook

Robot Technology Fundamentals By James G. Keramas Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Robot Technology Fundamentals By James G. Keramas books to read online.

Online Robot Technology Fundamentals By James G. Keramas ebook PDF download

Robot Technology Fundamentals By James G. Keramas Doc

Robot Technology Fundamentals By James G. Keramas Mobipocket

Robot Technology Fundamentals By James G. Keramas EPub