1. Record Nr. UNINA9910480679603321

Autore	Kraft Roger <1956->
Titolo	Intersections of thick Cantor sets / / Roger Kraft
Pubbl/distr/stampa	Providence, Rhode Island : , : American Mathematical Society, , 1992 ©1992
ISBN	1-4704-0894-5
Descrizione fisica	1 online resource (130 p.)
Collana	Memoirs of the American Mathematical Society, , 0065-9266 ; ; Volume 97, Number 468
Disciplina	515/.352
Soggetti	Cantor sets Difference sets Bifurcation theory Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"May 1992, Volume 97, Number 468 (second of 3 numbers)."
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	""Table Of Contents""; ""Introduction""; ""1. Theorems and Examples""; ""2. Cantor Sets and Thickness""; ""3. Proof of Theorem 1.2""; ""4. Third Kind of Overlapped Point""; ""5. Second Kind of Overlapped Point""; ""6. First Kind of Overlapped Point""; ""7. The Dynamics of I?[sub(rr')]""; ""8. Results About The Geometric Process""; ""9. Proof of Theorem 6.1(1)""; ""10. The Boundary Between a?[sub(1)]anda?[sub(2)]""; ""11. Proof of Theorem 1.1""; ""Appendix 1""; ""Appendix 2""; ""References""

2.

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Autore	Frigeni Fabrizio
Titolo	Industrial Robotics Control : Mathematical Models, Software Architecture, and Electronics Design / / by Fabrizio Frigeni
Pubbl/distr/stampa	Berkeley, CA : , : Apress : , : Imprint : Apress, , 2023
ISBN	9781484289891 1484289897
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (638 pages)
Collana	Maker Innovations Series, , 2948-2550
Disciplina	016.6201123
Soggetti	Automatic control Robotics Automation Control, Robotics, Automation Robotic Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Chapter 1 Industrial Robots -- Part I: Robot Geometry -- Chapter 3 Forward Kinematics -- Chapter 4 Inverse Kinematics -- Part II: Robot Movements -- Chapter 5 Path Planning -- Chapter 6 Workspace Monitoring -- Chapter 7 Trajectory Generator -- Chapter 8 Statics and Dynamics -- Part III: Robot Software -- Chapter 9 Firmware -- Chapter 10 Calibration -- Chapter 11 Commissioning -- Chapter 12 Simulation -- Chapter 13 Machine Vision -- Part IV: Robot Hardware -- Chapter 14 Motors -- Chapter 15 Encoders -- Chapter 16 Servo Drives -- Chapter 17 Power Management -- Chapter 18 Main Controller -- Chapter 19 Fabrication -- Appendix: Kinematic Models.
Sommario/riassunto	Build a complete control system for industrial robots, learning all the theory and practical tips from the perspective of an automation engineer. Explore the details of kinematics, trajectories, and motion control, and then create your own circuit board to drive the electric motors and move the robot. After covering the theory, readers can put what they’ve learned in practice by programming a control firmware for the robot. Each software component is described in detail, from the HMI and the interpreter of motion commands, to the servo loop

controller at the core of each servo drive. In particular, the author presents the commutation algorithm and the servo loop controller for brushless synchronous motors, which are typically employed in robotics applications. Readers will also learn how to calibrate the robot, commission it to the end-user, and design a digital twin to test and monitor the entire workcell in a safe simulated environment. Finally, the book delves into hardware, covering how to select and use electric motors and encoders, how to build servo drives and motion controllers, and how to design your own PCBs. Different electronic components and their application circuits are analyzed, showing the advantages and drawbacks of each. By the end of the book you should be able to design and build electronic boards and write their core firmware to control any kind of industrial robot for all sorts of different practical applications. What you'll learn Solve kinematics models of robots Generate safe paths and optimal motion trajectories Create a digital twin of your robot to test and monitor its movements Master the electronic commutation and closed-loop control of brushless motors Design electronics circuit boards for motion applications Who This Book Is For Robotics engineers (and students) who want to understand the theory behind the control of robotics arms, from the kinematic models of their axes to the electronic commutation of their motors. Some basic calculus and linear algebra is required for the understanding of the geometrical framework, while some electronics foundations are helpful to grasp the details of the circuits design.