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Nota di contenuto	Table of Contents; Title; Copyright; Preface; 1 Control, Servo- mechanisms and System Regulation; 1.1 -- Introduction; 1.2 -- Process control; 1.3 -- Some application exercises; 1.4 -- Some application exercises; 1.5 -- Application 1: stabilization of a rigid robot with pneumatic actuator; 1.6 -- Application 2: temperature control of an oven; 2 System Process Control; 2.1 -- Introduction; 2.2 -- Modeling; 2.3 -- Governability, controllability and observability; 2.4 -- State feedback, control by poles placement and stability; 2.5 -- Linear quadratic (LQ) control; 2.6 -- Optimal control (LQ). 2.7 -- Comprehension and application exercises -- 3 Actuators: Modeling and Analysis; 3.1 -- Introduction: electric, hydraulic and pneumatic actuators; 3.2 -- Transmission chains, actuators and sensors; 3.3 -- Pneumatic actuators; 3.4 -- Hydraulic actuators; 3.5 -- Application exercises; 4 Digital Control and Polynomial Approach; 4.1 -- Introduction to digital control; 4.2 -- PID controller synthesis and its equivalent digital RST; 4.3 -- Digital control by poles placement; 4.4 -- Diophantine, Bezout, greatest common divisor, least common multiple and division; 4.5 -- A few comprehension and application exercises. 5 NAO Robot5.1 -- Introduction; 5.2 -- Home care project; 5.3 --

Details of the various programs; 5.4 -- Conclusion; 6 Application Problems with Solutions; 6.1 -- Exercise 6.1: car suspension; 6.2 -- Exercise 6.2: electromechanical system; 6.3 -- Exercises: identification and state-space representation; 6.4 -- Exercises: observation and control of nonlinear systems; Bibliography; Index; End User License Agreement.
