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Nota di contenuto	Contents; 2.4 Linearization; 1. Justification for feedback control; 1.1 Tracking; 1.2 Exercises; 2. Plant descriptions; 2.1 Mathematical preliminaries; 2.2 Plant modeling in the frequency domain; 2.3 Plant modeling in the time domain; 2.5 System identification; 2.6 Exercises; 3. Feedback; 3.1 Feedback; 3.2 Sensitivity; 3.3 Bode sensitivity integral; 3.4 Bandwidth limitations; 3.5 Exercises; 4. Feedforward; 4.1 Command feedforward; 4.2 Prefilter; 4.3 Exercises; 5. Stability; 5.1 Bounded-input, bounded-output stability; 5.2 Zero input stability; 5.3 Nyquist Stability Criterion 5.4 Relative stability5.5 Internal stability; 5.6 Generalized Nyquist Stability Criterion; 5.7 Gershgorin analysis; 5.8 Lyapunov method; 5.9 Direct method; 5.10 Case study: set point control of a parallel robot; 5.11 Kinematic set point control; 5.12 Absolute stability; 5.13 Exercises; 6. Feedback design - linear; 6.1 The Bode loop response; 6.2 Phase stabilization; 6.3 Nyquist-stable system; 6.4 Two-input, single-output control; 6.5 Single-input, two-output control; 6.6 Exercises; 7. Feedback design - nonlinear; 7.1 Anti-windup; 7.2 Nonlinear dynamic compensation 7.3 Multipurpose nonlinear dynamic compensation7.4 Variable gain for

Sommario/riassunto

One of the few books that focuses on practical control theory for high performance systems, succinctly presented for ease of consumption, with illustrative examples using data from actual control designs.This book serves as a practical guide for the control engineer, and attempts to bridge the gap between industrial and academic control theory. Frequency domain techniques rooted in classical control theory are presented with new approaches in nonlinear compensation that result in robust, high performance closed loop systems.