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Nota di contenuto	Analysis and Control of Linear Systems; Table of Contents; Preface; Part 1. System Analysis; Chapter 1. Transfer Functions and Spectral Models; 1.1. System representation; 1.2. Signal models; 1.2.1. Unit-step function or Heaviside step function U(t); 1.2.2. Impulse; 1.2.3. Sine-wave signal; 1.3. Characteristics of continuous systems; 1.4. Modeling of linear time-invariant systems; 1.4.1. Temporal model, convolution, impulse response and unit-step response; 1.4.2. Causality; 1.4.3. Unit-step response; 1.4.4. Stability; 1.4.5. Transfer function; 1.4.6. Causality, stability and transfer function 1.4.7. Frequency response and harmonic analysis1.5. Main models; 1.5.1. Integrator; 1.5.2. First order system; 1.5.3. Second order system; 1.6. A few reminders on Fourier and Laplace transforms; 1.6.1. Fourier transform; 1.6.2. Laplace transform; 1.6.3. Properties; 1.6.4. Laplace transforms of ordinary causal signals; 1.6.5. Ordinary Fourier transforms; 1.7. Bibliography; Chapter 2. State Space Representation; 2.1. Reminders on the systems; 2.1.1. Internal representation of determinist systems: the concept of state; 2.1.2. Equations of state and equations of measurement for continuous systems

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3.4.5. The problem of sub-sampling

Sommario/riassunto

Automation of linear systems is a fundamental and essential theory. This book deals with the theory of continuous-state automated systems.