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Nota di contenuto	Time-delay Systems: H-infinity Control and General-type Filtering -- Reduced-order H-infinity Output-feedback Control -- Tracking Control with Preview -- H-infinity Control and Estimation of Retarded Linear Discrete-time Systems -- H-infinity-like Control for Nonlinear Stochastic Systems -- Nonlinear Systems: H-infinity-type Filtering -- Nonlinear Systems: Measurement Output-feedback Control -- l2-gain and Robust State-feedback Control of Discrete-time Nonlinear Stochastic Systems -- H-infinity Output-feedback Control of Discrete-time Systems -- H-infinity Control of Stochastic Switched Systems with Dwell Time -- Robust L-infinity-induced Control and Filtering -- Applications.
Sommario/riassunto	Advanced Topics in Control and Estimation of State-Multiplicative Noisy Systems begins with an introduction and extensive literature survey. The text proceeds to cover solutions of measurement-feedback control and state problems and the formulation of the Bounded Real Lemma for both continuous- and discrete-time systems. The continuous-time reduced-order and stochastic-tracking control problems for delayed systems are then treated. Ideas of nonlinear stability are introduced for

infinite-horizon systems, again, in both the continuous- and discrete-time cases. The reader is introduced to six practical examples of noisy state-multiplicative control and filtering associated with various fields of control engineering. The book is rounded out by a three-part appendix containing stochastic tools necessary for a proper appreciation of the text: a basic introduction to nonlinear stochastic differential equations and aspects of switched systems and peak to peak optimal control and filtering. Advanced Topics in Control and Estimation of State-Multiplicative Noisy Systems will be of interest to engineers engaged in control systems research and development to graduate students specializing in stochastic control theory and to applied mathematicians interested in control problems. The reader is expected to have some acquaintance with stochastic control theory and state-space-based optimal control theory and methods for linear and nonlinear systems.