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Nota di contenuto	1. Introduction -- PART I 2. Model-Based Control Systems: Stability -- 3. Model-Based Control Systems: Output Feedback and Delays -- 4. Model-Based Control Systems with Intermittent Feedback -- 5. Time-Varying and Stochastic Feedback Updates -- 6. Event-Triggered Feedback Updates -- 7. Model-Based Nonlinear Control Systems -- 8. Quantization Analysis and Design -- PART II 9. Optimal Control of Model-Based Event-Triggered Systems -- 10. Performance Analysis using Lifting Techniques -- 11. Reference Input Tracking -- 12. Adaptive Stabilization of Networked Control Systems -- 13. Multirate Model-Based Systems -- 14. Distributed Control Systems -- Appendix -- Index -- References.
Sommario/riassunto	This monograph introduces a class of networked control systems (NCS) called model-based networked control systems (MB-NCS) and presents various architectures and control strategies designed to improve the performance of NCS. The overall performance of NCS considers the appropriate use of network resources, particularly network bandwidth, in conjunction with the desired response of the system being controlled. The book begins with a detailed description of the basic MB-NCS architecture that provides stability conditions in terms of state feedback updates . It also covers typical problems in NCS such as network delays, network scheduling, and data quantization, as well as

more general control problems such as output feedback control, nonlinear systems stabilization, and tracking control. Key features and topics include: Time-triggered and event-triggered feedback updates Stabilization of uncertain systems subject to time delays, quantization, and extended absence of feedback Optimal control analysis and design of model-based networked systems Parameter identification and adaptive stabilization of systems controlled over networks The MB-NCS approach to decentralized control of distributed systems Model-Based Control of Networked Systems will appeal to researchers, practitioners, and graduate students interested in the control of networked systems, distributed systems, and systems with limited feedback.

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