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	Nota di contenuto	Introduction -- Stabilization of NCSs via Discontinuous Lyapunov Functionals -- Wirtinger's Inequality and Sampled-data Control -- Networked Control under Round-Robin Protocol -- NCSs in the Presence of TOD and Round-Robin Protocols -- Networked Control with Stochastic Protocol -- Decentralized NCSs with Local Networks under TOD/Round-Robin Protocol -- Dynamic Quantization of Uncertain Linear NCSs -- Discrete-time Network-based Control under Scheduling and Actuator Constraints -- Quantized Control under Round-Robin Protocol -- Improved Stability Conditions for Discrete-time Systems under Dynamic Protocols -- Decentralized Networked Control of Discrete-time Systems with Local Networks.
	Sommario/riassunto	This book presents a time-delay approach to the analysis and synthesis of networked control systems (NCSs) under communication constraints. Differently from other approaches, the time-delay approach to NCSs allows communication delays to be larger than the sampling intervals in the presence of scheduling protocols. The book starts from a comprehensive introduction to three main approaches to sampled-data and networked control. It then focuses on time-delay approach, and the modelling of the closed-loop systems in the form of time-delay system. It presents discontinuous (in time) Lyapunov functional

constructions that are efficient for NCSs in the presence of communications delays. Further, it highlights time-delay approaches developed to model and analyze NCSs under communication constraints, with a particular focus on dynamic quantization, round-robin, try-once-discard and stochastic protocols. The results are first presented for the continuous-time NCSs and then extended to discrete-time NCSs. Discussing recent developments in Lyapunov-based analysis of NCSs under communication constraints, the book is a valuable resource for researchers interested in sampled-data and networked control, and time-delay systems, as well as for graduate students in automatic control and systems theory.