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Nota di contenuto	Introduction -- Observer-Based Event-Triggered Control for Switched Linear Systems -- Improved Event-Triggered Control for Switched Linear Systems -- Event-Triggered Control for Switched Linear Delay Systems -- Event-Triggered Control of Switched Linear Neutral Systems -- Periodic Sampled-Data Control for Switched Linear Neutral Systems -- Hysteresis Switching Control for Switched Linear Neutral Systems -- Reliable Control for a Class of Switched Nonlinear Systems -- Fault-Tolerant Control for a Class of Uncertain Switched Nonlinear Systems -- Conclusions.
Sommario/riassunto	This text will be replaced by This book approaches its subject matter in a way that provides Lyapunov function analysis and event-triggered design methods for switched dynamic systems in terms of sampled-data control, hysteresis switching control, and fault-tolerant control. This book presents several novel design methods on event-triggered control of switched linear systems, in which the events inclusively consist of not only switching itself but events occurring as the switched systems evolve. The features of our approaches lie in threefold: i) In the framework of sampled-data control, a bond between the sampling period and the average dwell time of the asynchronous switched linear neutral systems is revealed, with which stabilization conditions are

derived for periodic sampling and event-triggered sampling mechanisms, respectively. ii) New event-triggered control strategies are proposed for switched linear systems and switched delay systems including switched neutral systems. The Zeno phenomenon can be excluded easily since the constant threshold can guarantee the existence of minimum positive lower bound between two continuous sampling intervals. iii). Two new fault-tolerant control methods are presented for switched cascade systems, with structural uncertainties existing in both system matrices and input matrices of the linear subsystems, by using the average dwell-time techniques. The proposed control design works on both the switched systems with actuator faults and its nominal systems (i.e., without actuator faults) without necessarily changing any structures and/or parameters of the proposed controllers. This book presents several systematical analysis and design methods for event-triggered control of switched systems in terms of the Lyapunov-based stability. It is of great significance to theoretical research and practical applications for switched systems. The book provides a unified framework of sampled-data control, including periodic sampled-data control and event-triggered control, and fault-tolerant control of switched systems. It serves as a useful book for researchers and graduate students who are interested in knowing the state of the art of analysis and synthesis of switched systems. In addition, it is also a useful source of up-to-date design methods for researchers who study switched dynamic systems and graduate students of control theory and control engineering.
