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	Nota di contenuto	Part I: Switched and Sampled-Data Systems -- Chapter 1. Minimal and Reduced Order Models for Aperiodic Sampled Data Systems -- Chapter 2. Stabilizability and Control Co-Design for Discrete-Time Switched Linear Systems -- Chapter 3. Stability Analysis of Singularly Perturbed Switched Linear Systems -- Chapter 4. Stability of LTI Systems with Distributed Sensors and Aperiodic Sampling -- Chapter 5. Template Complex Zonotope Based Stability Verication -- Chapter 6. Timing Contracts for Multi-core Embedded Control Systems -- Part II: Event-Triggered Architectures -- Chapter 7. Time-regularized and Periodic Event-Triggered Control for Linear Systems -- Chapter 8. Event-triggered State-feedback via Dynamic High-Gain Scaling for Non Linearly Bounded Upper Triangular Dynamics -- Chapter 9. Insights on Event-Triggered Control for Linear Systems Subject to Norm-Bounded Uncertainty -- Chapter 10. Abstracted Models for Scheduling of Event-Triggered Control Data Trafc -- Chapter 11. Resilient Self-Triggered Network Synchronization -- Part III: Distributed Control of Cyber-

Physical Systems -- Chapter 12. Distributed Hybrid Control Synthesis for Multi-Agent Systems from High-Level Specications -- Chapter 13. Modeling and Co-design of Control Tasks Over Wireless Networking Protocols -- Chapter 14. Discontinuities, Generalized Solutions and (Dis)Agreement in Opinion Dynamics -- Chapter 15. Information Constraints in Multiple Agent Problems with i.i.d. States -- Chapter 16. Networked Hybrid Dynamical Systems: Models, Specications, and Tools -- Chapter 17. Stabilization of Linear Hyperbolic Systems Of Balance Laws with Measurement Errors.

Sommario/riassunto	This book provides a broad overview of the current problems, challenges and solutions in the field of control theory, communication theory and computational resources management. Recent results on dynamical systems, which open new opportunities for research and challenges to be addressed in the future, are proposed in the context of computational and communication constraints. In order to take into the account complex phenomena, such as nonlinearities, time-varying parameters and limited availability of information, the book proposes new approaches for open problems with both theoretical and practical significance. The contributors' research is centred on robust stability and performance of control loops that are subject to computational and communication constraints. A particular focus is placed on the presence of constraints in communication and computation, which is a critical issue in networked control systems and cyber-physical systems. The contributions, which rely on the development of novel paradigms are provided are by leading experts in the field from all over the world, thus providing readers with the most accurate solutions for the constraints. Control subject to Computational and Communication Constraints highlights many problems encountered by control researchers, while also informing graduate students of the many interesting ideas at the frontier between control theory, information theory and computational theory. The book is also a useful point of reference for engineers and practitioners, and the survey chapters will assist instructors in lecture preparation.