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	Nota di contenuto	Consistency Models for Replicated Data -- Replication Techniques for Availability -- Modular Approach to Replication for Availability -- Stumbling over Consensus Research: Misunderstandings and Issues -- Replicating for Performance: Case Studies -- A History of the Virtual Synchrony Replication Model -- From Viewstamped Replication to Byzantine Fault Tolerance -- Implementing Trustworthy Services Using Replicated State Machines -- State Machine Replication with Byzantine Faults -- Selected Results from the Latest Decade of Quorum Systems

Research -- From Object Replication to Database Replication --
Database Replication: A Tutorial -- Practical Database Replication.

Sommario/riassunto

Replication is a topic of interest in the distributed computing, distributed systems, and database communities. Although these communities have traditionally looked at replication from different viewpoints and with different goals (e.g., performance versus fault tolerance), recent developments have led to a convergence of these different goals. The objective of this state-of-the-art survey is not to speculate about the future of replication, but rather to understand the present, to make an assessment of approximately 30 years of research on replication, and to present a comprehensive view of the achievements made during this period of time. This book is the outcome of the seminar entitled A 30-Year Perspective on Replication, which was held at Monte Verità, Ascona, Switzerland, in November 2007. The book is organized in 13 self-contained chapters written by most of the people who have contributed to developing state-of-the-art replication techniques. It presents a comprehensive view of existing solutions, from a theoretical as well as from a practical point of view. It covers replication of processes/objects and of databases; replication for fault tolerance and replication for performance - benign faults and malicious (Byzantine) faults - thus forming a basis for both professionals and students of distributed computing, distributed systems, and databases.