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Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Business Process Management Demystified: A Tutorial on Models, Systems and Standards for Workflow Management -- InterPlay: Horizontal Scale-up and Transition to Design in Scenario-Based Programming -- Timed Automata: Semantics, Algorithms and Tools -- Petri Nets and Dependability -- Process Algebra -- A Coloured Petri Net Approach to Protocol Verification -- Extending the Zero-Safe Approach to Coloured, Reconfigurable and Dynamic Nets -- A Survey on Non-interference with Petri Nets -- Synthesis of Asynchronous Hardware from Petri Nets -- Teaching Coloured Petri Nets: Examples of Courses and Lessons Learned -- Unbounded Petri Net Synthesis --

Petri Nets and Software Engineering -- Model Validation in Controller Design -- Graph Grammars and Petri Net Transformations -- Message Sequence Charts -- Model-Based Development of Executable Business Processes for Web Services -- Modelling and Control with Modules of Signal Nets -- Application of Coloured Petri Nets in System Development -- Bigraphs for Petri Nets -- Notes on Timed Concurrent Constraint Programming -- Petri Nets and Manufacturing Systems: An Examples-Driven Tour -- Communicating Transaction Processes: An MSC-Based Model of Computation for Reactive Embedded Systems -- Object Petri Nets.

Sommario/riassunto

The very ?rst model of concurrent and distributed systems was introduced by C.A. Petri in his seminal Ph.D. thesis in 1964. Petri nets has remained a central model for concurrentsystemsfor40 years, andthey areoften usedasa yardstick for other models of concurrency. As a matter of fact, many other models have been developed since then, and this research area is ?ourishing today. The goal of the 4th Advanced Course on Petri Nets held in Eichsta ¨tt, Germany in September 2003 was to present applications and the theory of Petri Nets in the context of a whole range of other models. We believe that in this way the participants of the course received a broad and in-depth picture of research in concurrent and distributed systems. It is also the goal of this volume to convey this picture. The volume is based on lectures given at the Advanced Course, but in order to provide a balanced p- sentation of the ?eld, some of the lectures are not included, and some material not presented in Eichst¨ att is covered here. In particular, a series of introductory lectures was not included in this volume, as the material they covered is well - tablishedby now, andwellpresentedelsewhere (e.g.,inW. ReisigandG. Roz- berg, eds., "Lectures on Petri Nets," LNCS 1491, 1492, Springer-Verlag, 1997 - these two volumes are based on the 3rd Advanced Course on Petri Nets).