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Titolo	Supervisory Control of Discrete-Event Systems / / by W. Murray Wonham, Kai Cai
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Disciplina	003.83
Soggetti	Automatic control System theory Production management Control and Systems Theory Systems Theory, Control Operations Management
Lingua di pubblicazione	Inglese
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Nota di contenuto	Introduction -- TCT: General Information -- Chapter 1. Algebraic Preliminaries -- Chapter 2. Linguistic Preliminaries -- Chapter 3. Supervision of Discrete-Event Systems: Basics -- Chapter 4. Decentralized and Distributed Supervision of Discrete-Event Systems -- Chapter 5. Hierarchical Supervision of Discrete-Event Systems -- Chapter 6. Supervisory Control With Partial Observations -- Chapter 7. State-Based Control of Discrete-Event Systems -- Chapter 8. Supervision of Vector Discrete-Event Systems -- Chapter 9. Supervisory Control of Timed Discrete-Event Systems -- Bibliography -- Appendix: Supervisory Control of a Mine Pump -- Index.
Sommario/riassunto	This book shows how supervisory control theory (SCT) supports the formulation of various control problems of standard types, like the synthesis of controlled dynamic invariants by state feedback, and the resolution of such problems in terms of naturally definable control-theoretic concepts and properties, like reachability, controllability and observability. It exploits a simple, abstract model of controlled discrete-event systems (DES) that has proved to be tractable, appealing

to control specialists, and expressive of a range of control-theoretic ideas. It allows readers to choose between automaton-based and dually language-based forms of SCT, depending on whether their preference is for an internal-structural or external-behavioral description of the problem. The monograph begins with two chapters on algebraic and linguistic preliminaries and the fundamental concepts and results of SCT are introduced. To handle complexity caused by system scale, architectural approaches—the horizontal modularity of decentralized and distributed supervision and the vertical modularity of hierarchical supervision—are introduced. Supervisory control under partial observation and state-based supervisory control are also addressed; in the latter, a vector DES model that exploits internal regularity of algebraic structure is proposed. Finally SCT is generalized to deal with timed DES by incorporating temporal features in addition to logical ones. Researchers and graduate students working with the control of discrete-event systems or who are interested in the development of supervisory control methods will find this book an invaluable aid in their studies. The text will also be of assistance to researchers in manufacturing, logistics, communications and transportation, areas which provide plentiful examples of the class of systems being discussed.

2. Record Nr.	UNINA9910957775603321
Titolo	Elementary-particle physics / / Elementary-Particle Physics Panel, Physics Survey Committee, Board on Physics and Astronomy, Commission on Physical Sciences, Mathematics, and Resources, National Research Council
Pubbl/distr/stampa	Washington, D.C., : National Academy Press, 1986
ISBN	9786610222391 9781280222399 1280222395 9780309534666 0309534666 9780585085098 0585085099
Edizione	[1st ed.]
Descrizione fisica	1 online resource (248 p.)
Collana	Physics through the 1990s
Disciplina	539.7/2
Soggetti	Particles (Nuclear physics) Nuclear physics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
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Note generali	Includes index.
Nota di contenuto	Physics Through the 1990s -- Copyright -- Preface -- Contents -- Executive Summary -- THE REVOLUTION IN PARTICLE PHYSICS -- WHAT WE WANT TO KNOW -- THE TOOLS OF ELEMENTARY-PARTICLE PHYSICS -- THE FUTURE OF ELEMENTARY-PARTICLE PHYSICS IN THE UNITED STATES -- RECOMMENDATIONS FOR UNIVERSITY-BASED RESEARCH GROUPS AND USE OF EXISTING FACILITIES IN THE UNITED STATES -- RECOMMENDATIONS FOR NEW ACCELERATOR FACILITIES IN THE UNITED STATES -- RECOMMENDATIONS FOR ACCELERATOR RESEARCH AND DEVELOPMENT -- RECOMMENDATIONS FOR THEORETICAL RESEARCH IN PARTICLE PHYSICS -- RECOMMENDATIONS FOR NONACCELERATOR PHYSICS EXPERIMENTS -- RECOMMENDATIONS FOR INTERNATIONAL COOPERATION IN ELEMENTARY-PARTICLE PHYSICS -- CONCLUSION -- 1 Introduction -- ELEMENTARY-PARTICLE PHYSICS -- WHAT WE KNOW -- WHAT WE WANT TO KNOW -- THE TOOLS OF

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 AND FUNDAMENTAL PARTICLES -- The Four Basic Forces -- The Known
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 -- COLLISIONS AND DECAYS -- Collisions of Particles -- Collision
 Diagrams -- Collisions and Interactions -- Spontaneous Disintegration
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 Are Conservation Laws? -- Symmetry and Invariance -- Symmetry
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Sommario/riassunto

Part of the Physics in a New Era series of assessments of the various branches of the field, Elementary-Particle Physics reviews progress in the field over the past 10 years and recommends actions needed to address the key questions that remain unanswered. It explains in simple terms the present picture of how matter is constructed. As physicists have probed ever deeper into the structure of matter, they have begun to explore one of the most fundamental questions that one

can ask about the universe: What gives matter its mass? A new international accelerator to be built at the European laboratory CERN will begin to explore some of the mechanisms proposed to give matter its heft. The committee recommends full U.S. participation in this project as well as various other experiments and studies to be carried out now and in the longer term.
