1.	Record Nr.	UNISA996465624203316
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	Titolo	Concurrent Reactive Plans [[electronic resource]] : Anticipating and Forestalling Execution Failures / / by Michael Beetz
	Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2000
	ISBN	3-540-46436-0
	Edizione	[1st ed. 2000.]
	Descrizione fisica	1 online resource (XVI, 220 p.)
	Collana	Lecture Notes in Artificial Intelligence ; ; 1772
	Disciplina	629.8/92
	Soggetti	Artificial intelligence
		Computer communication systems
		Computer logic
		Artificial Intelligence
		Computer Communication Networks
		Logics and Meanings of Programs
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Bibliographic Level Mode of Issuance: Monograph
	Nota di bibliografia	Includes bibliographical references.
	Nota di contenuto	Reactivity -- Planning -- Transparent Reactive Plans -- Representing Plan Revisions -- Forestalling Behavior Flaws -- Planning Ongoing Activities -- Evaluation -- Conclusion.
	Sommario/riassunto	In this book, the author presents a new computational model of forestalling common flaws in autonomous robot behavior. To this end, robots are equipped with structured reactive plans (SRPs) which are concurrent control programs that can not only be interpreted but also be reasoned about and manipulated. The author develops a representation for SRPs in which declarative statements for goals, perceptions, and beliefs make the structure and purpose of SRPs explicit and thereby simplify and speed up reasoning about SRPs and their projections; furthermore a notation is introduced allowing for transforming and manipulating SRPs. Using this notation, a planning system can diagnose and forestall common flaws in robot plans that cannot be dealt with in other planning representations. Finally the language for writing SRPs is extended into a high-level language that can handle both planning and execution actions.