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Titolo	Specifying Message Passing and Time-Critical Systems with Temporal Logic [[electronic resource] /] / by Ron Koymans
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Soggetti	Computers Architecture, Computer Applied mathematics Engineering mathematics Computer logic Mathematical logic Theory of Computation Computer System Implementation Applications of Mathematics Logics and Meanings of Programs Mathematical Logic and Formal Languages
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Nota di contenuto	How to specify -- A review of modal and temporal logic -- Polymodal logics with inequality -- Message passing systems -- Time-critical systems -- Summary and concluding remarks.
Sommario/riassunto	This monograph is concerned with the application of temporal logic to the areas of message passing and time-critical systems. Apart from the practicaluse of temporal logic for these two application domains, the book also incorporates pure fundamental studies on temporal logic. The motivation to study message passing and time critical systems stems from their importance in practice. Message passing is one of the most important means of interprocess communication in distributed systems, either on a high level, as in telecommunications applications,

or on a lower level, as in implementations of languages like Ada. As for time-critical systems, among the growing number of real-time applications there are some highly critical systems such as computer controlled chemical plants and nuclear power stations. The monograph shows how standard temporal logic can be used for the specification of message passing systems, and develops a special temporal logic for reasoning about quantitative temporal properties.The main application area is that of distributed real-time systems.