1.	Record Nr.	UNINA9910809171103321
	Autore	Fisher Michael <1962->
	Titolo	An introduction to practical formal methods using temporal logic / / Michael Fisher
	Pubbl/distr/stampa	Chichester, West Sussex, U.K. ; ; Hoboken, N.J., : Wiley, c2011
	ISBN	1-119-99146-3
		1-283-40534-2
		9786613405340
		1-119-99148-X
		1-119-99147-1
	Edizione	[1st edition]
	Descrizione fisica	1 online resource (710 p.)
	Disciplina	511.3
	Soggetti	Temporal automata
		Logic, Symbolic and mathematical
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Description based upon print version of record.
	Nota di bibliografia	Includes bibliographical references and index.
	Nota di contenuto	Cover; Title Page; Copyright; Preface; Chapter 1: Introduction; 1.1 Aims of the Book; 1.2 Why Temporal Logic?; 1.3 What is Temporal Logic?; 1.4 Structure of the Book; Chapter 2: Temporal Logic; 2.1 Intuition; 2.2 Syntactic Aspects; 2.3 Semantics; 2.4 Reactive System Properties; 2.5 What is Temporal Logic?; 2.6 Normal Form; 2.7 Buchi Automata and Temporal Logic; 2.8 Advanced Topics; 2.9 Final Exercises; Chapter 3: Specification; 3.1 Describing Simple Behaviours; 3.2 A Semantics of Imperative Programs; 3.3 Linking Specifications; 3.4 Advanced Topics; 3.5 Final Exercises; 3.6 Where to Next?
		Chapter 4: Deduction4.1 Temporal Proof; 4.2 Clausal Temporal Resolution; 4.3 The TSPASS System; 4.4 Advanced topics; 4.5 Final Exercises; Chapter 5: Model Checking; 5.1 Algorithmic Verification; 5.2 Automata-Theoretic Model Checking; 5.3 The Spin System; 5.4 Advanced Topics; 5.5 Final Exercises; Chapter 6: Execution; 6.1 From Specifications to Programs; 6.2 METATEM: Executing Temporal Formulae; 6.3 The Concurrent MetateM system; 6.4 Advanced Topics; Chapter 7: Selected Applications; 7.1 Model Checking Programs; 7.2 Security Protocol Analysis; 7.3 Recognizing Temporal Patterns

Sommario/riassunto	The name ""temporal logic"" may sound complex and daunting; but while they describe potentially complex scenarios, temporal logics are often based on a few simple, and fundamental, concepts - highlighted in this book. An Introduction to Practical Formal Methods Using Temporal Logic provides an introduction to formal methods based on temporal logic, for developing and testing complex computational systems. These methods are supported by many well-developed tools, techniques and results that can be applied to a wide range of systems. Fisher begins with a full introduction to the subject