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Titolo	Formal Development of Reactive Systems [[electronic resource]] : Case Study Production Cell / / edited by Claus Lewerentz, Thomas Lindner
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Descrizione fisica	1 online resource (XII, 400 p.)
Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 891
Disciplina	670.42/7
Soggetti	Software engineering Special purpose computers Computer programming Programming languages (Electronic computers) Computer-aided engineering Control engineering Robotics Mechatronics Software Engineering Special Purpose and Application-Based Systems Programming Techniques Programming Languages, Compilers, Interpreters Computer-Aided Engineering (CAD, CAE) and Design Control, Robotics, Mechatronics
Lingua di pubblicazione	Inglese
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Nota di contenuto	Task description -- Comparative survey -- CSL -- Esterel -- Lustre -- Signal -- Statecharts -- TLT -- SDL -- Focus -- Spectrum -- KIV -- Tatzelwurm -- HTTDs and HOL -- Raise -- Deductive synthesis -- Symbolic Timing Diagrams -- LCM and MCM -- Modula-3 -- TROLL light -- Simulation.
Sommario/riassunto	This book is based upon work done under the project "Correct Software through Formal Methods" supported by the German Ministry of Research and Technology. As a case-study report on the practice of

formal software development, this book systematically presents and compares 18 different approaches to the control of a real-world production cell. Mathematically precise, formal methods play an increasingly important role in software development, particularly in areas where failure of software would result in injury to people or, at best, significant loss of money. By analyzing the benefits and explaining the use and limitations of formal methods on a sample basis, this book provides a roadmap for the selection and application of appropriate approaches and thus helps in putting formal methods into industrial use.