1. Record Nr. UNINA9910144347603321

Titolo	Integration of Software Specification Techniques for Applications in Engineering : Priority Program SoftSpez of the German Research Foundation (DFG) Final Report / / edited by Hartmut Ehrig, Werner Damm, Jörg Desel, Martin Große-Rhode, Wolfgang Reif, Eckehard Schnieder, Engelbert Westkämper
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2004
ISBN	1-280-30792-7 9786610307920 3-540-27863-X
Edizione	[1st ed. 2004.]
Descrizione fisica	1 online resource (X, 630 p. 126 illus.)
Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 3147
Disciplina	005.10943
Soggetti	Software engineering Programming languages (Electronic computers) Computer logic Software Engineering Programming Languages, Compilers, Interpreters 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 at the end of each chapters and index.
Nota di contenuto	Integration of Software Specification Techniques for Applications in Engineering: Introduction and Overview of Results -- Integration of Software Specification Techniques for Applications in Engineering: Introduction and Overview of Results -- I: Reference Case Study Production Automation -- Basic Principles for Software Specification -- Challenges of Next Generation Manufacturing Systems -- Development of Hierarchical Broadcasting Software Architectures Using UML 2.0 -- An Engineer’s Workstation to Support Integrated Development of Flexible Production Control Systems -- A Formal Component Concept for the Specification of Industrial Control Systems -- II: Reference Case Study Traffic Control Systems -- Specification Methodology, Case

Studies, and Experiments – An Introduction to the Subject Area of Traffic Control Systems -- Reference Case Study “Traffic Control Systems” for Comparison and Validation of Formal Specifications Using a Railway Model Demonstrator -- Precise Definition of the Single-Track Level Crossing in Radio-Based Operation in UML Notation and Specification of Safety Requirements -- Executable HybridUML and Its Application to Train Control Systems -- The Use of UML for Development of a Railway Interlocking System -- III: Petri Nets and Related Approaches in Engineering -- Process Description Languages and Methods: Introduction to the Chapter Petri Nets and Related Approaches in Engineering -- Specification and Formal Verification of Temporal Properties of Production Automation Systems -- STOP – Specification Technique of Operational Processes -- Specification and Validation of an Edge Router Discovery Protocol for Mobile Ad Hoc Networks -- A Guide to Modelling and Control with Modules of Signal Nets -- Conceptual Design of an Engineering Model for Product and Plant Automation -- IV: Charts -- to Subject Area “Charts” -- The Rhapsody Semantics of Statecharts (or, On the Executable Core of the UML) -- Interactive Verification of Statecharts -- Live Sequence Charts -- A Unifying Semantics for Sequential Function Charts -- V: Verification -- to Subject Area “Verification” -- “UML–ising” Formal Techniques -- Model Based Formal Verification of Distributed Production Control Systems -- Combining Formal Methods and Safety Analysis – The ForMoSA Approach -- Formal Verification of LSCs in the Development Process -- Verification of PLC Programs Given as Sequential Function Charts -- Modeling and Formal Verification of Production Automation Systems -- VI: Integration Modeling -- On Model Integration and Integration Modelling -- On the Integration of Modular Heterogeneous Specifications -- Semantical Integration of Object-Oriented Viewpoint Specification Techniques.