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Disciplina	004
Soggetti	Machine theory Computer science Software engineering Compilers (Computer programs) Formal Languages and Automata Theory Computer Science Logic and Foundations of Programming Theory of Computation Software Engineering Compilers and Interpreters
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di contenuto	Modeling Distributed Algorithms by Abstract State Machines Compared to Petri Nets -- A Universal Control Construct for Abstract State Machines -- Encoding TLA+ into Many-Sorted First-Order Logic -- Proving Determinacy of PharOS in TLA+ -- A Rigorous Correctness Proof for Pastry -- Enabling Analysis for B and Event-B -- A Compact Encoding of Sequential ASMs in Event-B -- Proof Assisted Symbolic Model Checking for B and Event-B -- On Component-based Reuse for Event-B -- Using B and ProB for Data Validation Projects -- Generating Event-B Specifications from Algorithm Descriptions -- Formal Proofs of Termination Detection for Local Computations by Refinement-Based Compositions -- How to Select the Suitable Formal Method for an Industrial Application: A Survey -- Unified Syntax for Abstract State

Machines -- A Relational Encoding for a Clash-Free Subset of ASMs --
Towards an ASM Thesis for Reflective Sequential Algorithms -- A
Model-based Transformation Approach to Reuse and Retarget CASM
Specifications -- Modeling a Discrete Wet-Dry Algorithm for Hurricane
Storm Surge in Alloy -- 'The Tinker' for Rodin -- A Graphical Tool for
Event Refinement Structures in Event-B -- Rodin Platform Why3 plug-in
-- Semi-Automated Design Space Exploration for Formal Modelling --
Handling Continuous Functions in Hybrid Systems Reconfigurations: A
Formal Event-B Development -- UC-B: Use Case Modelling with Event-
B -- Interactive Model Repair by Synthesis -- SysML2B: Automatic Tool
for B Project Graphical Architecture Design using SysML -- Mechanized
Refinement of Communication Models with TLA+ -- A Super Industrial
Application of PSGraph -- The Hemodialysis Machine Case Study --
How to Assure Correctness and Safety of Medical Software: The
Hemodialysis Machine Case Study -- Validating the Requirements and
Design of a Hemodialysis Machine Using iUML-B, BMotionStudio, and
Co-simulation -- Hemodialysis Machine in Hybrid Event-B -- Modeling
a Hemodialysis Machine using Algebraic State-Transition Diagrams and
B-like Methods -- Modelling the Haemodialysis Machine with Circus.

Sommario/riassunto

This book constitutes the refereed proceedings of the 5th International Conference on Abstract State Machines, Alloy, B, TLA, VDM, and Z, ABZ 2016, held in Linz, Austria, in May 2016. The 17 full and 15 short papers presented in this volume were carefully reviewed and selected from 61 submissions. They record the latest research developments in state-based formal methods Abstract State Machines, Alloy, B, Circus, Event-B, TLS+, VDM and Z.
