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Disciplina	511.3
Soggetti	Computer logic Mathematical logic Computers Software engineering Programming languages (Electronic computers) Logics and Meanings of Programs Mathematical Logic and Foundations Theory of Computation Software Engineering Mathematical Logic and Formal Languages Programming Languages, Compilers, Interpreters
Lingua di pubblicazione	Inglese
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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	Invited Papers -- Intra-step Interaction -- Closed-Loop Modeling and Related Problems of Embedded Control Systems in Engineering -- An ALGOL-View on Turbo ASM -- An ASM Specification of C# Threads and the .NET Memory Model -- Finite Cursor Machines in Database Query Processing -- Research Papers -- Formalizing Liveness-Enriched Sequence Diagrams Using ASMs -- Specification and Validation of the

Business Process Execution Language for Web Services -- Monodic ASMs and Temporal Verification -- Towards an Interchange Language for ASMs -- Specification and Implementation Problems for C# -- An ASM Semantics for SSA Intermediate Representations -- Observations on the Decidability of Transitions -- A Security Logic for Abstract State Machines -- Slicing Abstract State Machines -- The Cryptographic Abstract Machine -- Modeling Discretely Timed Systems Using Different Magnitudes of Non-standard Reals.

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Sommario/riassunto

Abstract state machines (ASM) sharpen the Church-Turing thesis by the consideration of bounded resources for computing devices. They view computations as an evolution of a state. It has been shown that all known models of computation can be expressed through specific abstract state machines. These models can be given in a representation-independent way. That is one advantage of transferring these models to ASM. The main advantage is, however, to provide a unifying theory to all of these models. At the same time ASM can be refined to other ASMs. Stepwise refinement supports separation of concern during software development and will support component-based construction of systems thus providing a foundation of new computational paradigms such as industrial programming, programming-in-the-large, and programming-in-the-world. ASM 2004 continued the success story of the ASM workshops. Previous workshops were held in the following European cities: Taormina, Italy (2003); Dagstuhl, Germany (2002); Las Palmas de Gran Canaria, Spain (2001); Monte Verita, Switzerland (2000); Toulouse, France (1999); Magdeburg, Germany (1998); Cannes, France (1998, 1997); Paderborn, Germany (1996); and Hildesheim, Germany (1994). The ASM workshops have had predecessors, e.g., the famous Lipari Summer School in 1993, whose influential outcome was the fundamental Lipari Guide.

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