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Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 3049
Disciplina	005.115
Soggetti	Artificial intelligence Computer logic Computer programming Mathematical logic Software engineering Programming languages (Electronic computers) Artificial Intelligence Logics and Meanings of Programs Programming Techniques Mathematical Logic and Formal Languages Software Engineering Programming Languages, Compilers, Interpreters
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Specification and Synthesis -- Specifying Compositional Units for Correct Program Development in Computational Logic -- Synthesis of Programs in Computational Logic -- Developing Logic Programs from Specifications Using Stepwise Refinement -- Semantics -- Declarative Semantics of Input Consuming Logic Programs -- On the Semantics of Logic Program Composition -- Analysis -- Analysing Logic Programs

by Reasoning Backwards -- Binding-Time Analysis for Mercury -- A Generic Framework for Context-Sensitive Analysis of Modular Programs -- Transformation and Specialisation -- Unfold/Fold Transformations for Automated Verification of Parameterized Concurrent Systems -- Transformation Rules for Locally Stratified Constraint Logic Programs -- Specialising Interpreters Using Offline Partial Deduction -- Termination -- Characterisations of Termination in Logic Programming -- On the Inference of Natural Level Mappings -- Proving Termination for Logic Programs by the Query-Mapping Pairs Approach -- Systems -- Herbrand Constraints in HAL.

Sommario/riassunto

1 The tenth anniversary of the LOPSTR symposium provided the incentive for this volume. LOPSTR started in 1991 as a workshop on logic program synthesis and transformation, but later it broadened its scope to logic-based program development in general, that is, program development in computational logic, and hence the title of this volume. The motivating force behind LOPSTR has been the belief that declarative paradigms such as logic programming are better suited to program development tasks than traditional non-declarative ones such as the imperative paradigm. Specification, synthesis, transformation or specialization, analysis, debugging and verification can all be given logical foundations, thus providing a unifying framework for the whole development process. In the past 10 years or so, such a theoretical framework has indeed begun to emerge. Even tools have been implemented for analysis, verification and specification. However, it is fair to say that so far the focus has largely been on programming-in-the-small. So the future challenge is to apply or extend these techniques to programming-in-the-large, in order to tackle software engineering in the real world. Returning to this volume, our aim is to present a collection of papers that reflect significant research efforts over the past 10 years. These papers cover the whole development process: specification, synthesis, analysis, transformation and specialization, as well as semantics and systems.
