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Nota di contenuto	A decade of TAPSOFT -- Theory and practice of software development -- Rational spaces and set constraints -- Formal methods and social context in software development -- Testing can be formal, too -- Anatomy of the Pentium bug -- Rational mechanics and natural mathematics -- First-order logic on finite trees -- Decidability of equivalence for deterministic synchronized tree automata -- The equivalence problem for letter-to-letter bottom-up tree transducers is solvable -- ?I: A symmetric calculus based on internal mobility -- Complete inference systems for weak bisimulation equivalences in the ? -calculus -- Reasoning about higher-order processes -- Confluence of

processes and systems of objects -- An algebraic approach to temporal logic -- On behavioural abstraction and behavioural satisfaction in higher-order logic -- Assumption/guarantee specifications in linear-time temporal logic (extended abstract) -- Fine hierarchy of regular ?-languages -- Computing the Wadge degree, the Lifschitz degree, and the Rabin index of a regular language of infinite words in polynomial time -- Semi-trace morphisms and rational transductions -- Nonfinite axiomatizability of shuffle inequalities -- On the category of Petri net computations -- High undecidability of weak bisimilarity for Petri nets -- Polynomial algorithms for the synthesis of bounded nets -- Semi-completeness of hierarchical and super-hierarchical combinations of term rewriting systems -- Lazy narrowing: Strong completeness and eager variable elimination (extended abstract) -- On the expressive power of algebraic graph grammars with application conditions -- Generated models and the ?-rule: The nondeterministic case -- CPO models for a class of GSOS languages -- Statecharts, transition structures and transformations -- An imperative object calculus -- A refinement of import/export declarations in modular logic programming and its semantics -- Strictness and totality analysis with conjunction -- Generic techniques for source-level debugging and dynamic program slicing -- Reasoning with executable specifications -- Calculating software generators from solution specifications -- Comparing flow-based binding-time analyses -- Can you trust your data -- Static and dynamic processor allocation for higher-order concurrent languages -- Mechanized inductive proof of properties of a simple code optimizer -- Describing a Signal Analyzer in the process algebra PMC — A case study -- A gentle introduction to specification engineering using a case study in telecommunications -- Precise interprocedural dataflow analysis with applications to constant propagation -- Formal specification and prototyping of a program specializer -- Proving the correctness of recursion-based automatic program transformations -- Reactive system specification and refinement -- Measuring concurrency of regular distributed computations -- Non-speculative and upward invocation of continuations in a parallel language -- A model inference system for generic specification with application to code sharing -- Relations as abstract datatypes: An institution to specify relations between algebras -- Performance-oriented formal specifications — the LotoTis approach -- Signal: A formal design environment for real-time systems -- The META-Frame: An environment for flexible tool management -- STeP: The Stanford Temporal Prover -- The HOL-UNITY verification system -- PLATO: A tool to assist programming as term rewriting and theorem proving -- LOFT: A tool for assisting selection of test data sets from algebraic specifications -- The SMoLCS ToolSet -- The Asf+Sdf Meta-environment documentation tools for free -- The B-Toolkit demonstration -- Object Oriented Semantics Directed Compiler Generation: A prototype.

Sommario/riassunto

This volume presents the proceedings of the Sixth International Joint Conference on the Theory and Practice of Software Engineering, TAPSOFT '95, held in Aarhus, Denmark in May 1995. TAPSOFT '95 celebrates the 10th anniversary of this conference series started in Berlin in 1985 to bring together theoretical computer scientists and software engineers (researchers and practitioners) with a view to discussing how formal methods can usefully be applied in software development. The volume contains seven invited papers, among them one by Vaugham Pratt on the recently revealed bug in the Pentium chip, and 44 revised full papers selected from a total of 147 submissions. In addition the TAPSOFT '95 proceedings contains 10 tool descriptions.