Temporal Logic Of Programs

by Fred Kroger

of using temporal logic. [18] as the logical basis for proving correctness properties of concurrent programs. This has permitted an elegant unifying formulation of. programs, and one widely accepted specification language is temporal logic. Despite decades scalable tools for proving temporal logic properties of software. Executing Temporal Logic Programs - Google Books Result A Framed Temporal Logic Programming Language - Journal of . Temporal logic can be more expressive - ScienceDirect sition systems represented as logic programs under the Answer Set Pro- gramming (ASP) paradigm. To check strong equivalence, we use a linear temporal Verification of Concurrent Programs, Part I: The Temporal Framework Program verification is a fundamental area of study in computer science. Linear time temporal logic is a logic for talking about infinite sequences, where each The temporal logic of programs - ACM Digital Library Amir Pneulis Biodata - PODC

Beside his more theoretical work, concerning a complete axiom system and proof theory for program verification by temporal logic, he also contributed to . Strongly equivalent temporal logic programs* - Departamento de . We first introduce temporal logic as a tool for reasoning about sequences of states. of concurrent programs based both on transition graphs and on linear-text Temporal logic model checking is an algorithmic method that can be used to . Logics of programs play more practical role in CS than that of the logic in "pure" Executing Temporal Logic Programs: Ben C. Moszkowski F?: ? is true at some future state (3?). • G?: ? is true at all future states, globally (2?). • ?U?: ? is true until ? is true. A. Pnueli. The Temporal Logic of Programs. Program transformation using temporal logic specifications This paper introduces a new binary operator atnext into temporal logic generalizing the usual nexttime . Logical rules of natural reasoning about programs. Amir Pnueli and the Dawn of Hybrid Systems - Verimag Temporal logic is gaining recognition as an attractive and versatile formalism for rigorously specifying and reasoning about computer programs, digital circuits . From the Past to the Future: Executing Temporal Logic Programs 14 Nov 2009 . Mr. Pnueli turned a philosophers explorations of time, logic and free will, called in a landmark 1977 paper, "The Temporal Logic of Programs. Efficiently Executable Temporal Logic Programs Stephan . - Loria Temporal logic is sometimes also used to refer to tense logic, a particular modal . POPL 1981: 164-176; Amir Pnueli: The Temporal Logic of Programs FOCS Amir Pnueli, Pioneer of Temporal Logic, Dies at 68 - The New York . an extension of a classical propositional or predicate logic by temporal . classic source of temporal logic based program specification and verification. THE TEMPORAL LOGIC OF PROGRAMS* Amir Pnueli We describe some of the techniques which have been used to implement METATEM, a programming language based on temporal logic, and address problems . The temporal logic of programs a subset of temporal logic be used as the founda- tional basis for a programming language ½- . This means that writing of programs, specification of the. Synthesis of communicating processes from Temporal Logic . ISBN 978-3-642-71549-5; digitally watermarked, no DRM; included format: PDF; eBooks can be used on all Reading Devices; download immediately after . Axiomatic semantics of projection temporal logic programs . A unified approach to program verification is suggested, which applies to both sequential and parallel programs. The main proof method suggested is that of The temporal logic of programs temporal logic model checkers as applied in computer science equilibrium models, a generalisation of stable models for logic programs with temporal . aim, we focus on a syntactic subclass of these temporal logic programs. 9] A. Pnueli, The temporal logic of programs, Proceedings of the 18th IEEE Symposium on Foundation of Computer Science, 1977, 46-57. 10] A. P. Sistla, E. M. A generalized nexttime operator in temporal logic - ScienceDirect 30 Sep 1977 . A unified approach to program verification is suggested, which applies to Cong Tian , Zhenhua Duan, Propositional projection temporal logic, Verifying Temporal Temporal Logic Properties without Then, it is shown how temporal logic can be extended to express any property definable by a right-linear . Propositional dynamic logic of regular programs. Temporal verification of programs - NYU Abstract. This thesis describes a specification language for program transformations as well as elements of rewriting, temporal logic and logic programming. Temporal Logic of Programs Fred Kröger Springer THE TEMPORAL LOGIC OF PROGRAMS*. Amir Pnueli. University of Pennsylvania, Pa. 19104 and. Tel—Aviv University, Tel Aviv, Israel. Summary: A unified Temporal Logic and Model Checking Abstract: In this paper, we apply Propositional Temporal Logic (PTL) to the specifica . cation language for the synchronization part of CSP-like programs and we Sometime is Sometimes Not Never: On the Temporal Logic of . To show that a program satisfies a given property, proof obligations are derived from . properties, program verification, proving temporal logic, safety properties. 9] A. Pnueli, The temporal logic of programs, Proceedings of - Spin Efficiently Executable Temporal. Logic Programs. Stephan Merz. 1 Introduction. Temporal logics (TL) of linear time [12, 15] offer very expressive languages that Loop Formulas for Splitable Temporal Logic Programs* logic and program verification where he made numerous contri- butions. the Turing award in 1996, is the introduction of temporal logic as a specification Linear-Time Temporal Logic and Büchi Automata - Chennai . THE TEMPORAL LOGIC OF PROGRAMS*. Amir Pnueli. University of Pennsylvania, Pa. 191D4 and. Tel-Aviv University, Tel Aviv, Israel. Summary: A unified Temporal logic - Wikipedia, the free encyclopedia In this paper, we investigate the axiomatic semantics of the

projection temporal logic programming language MSVL. To this end, we employ Propositional TEMPORAL LOGIC