

Decidability Questions For Petri Nets

Michel Hack

Petri Nets and Regular Processes - Department of Computer Science Petri nets. A set P of places. A set T of transitions. Flow relation $F: P \times T \rightarrow \mathbb{N} \times \mathbb{N}$. All these questions are decidable for "normal" Petri nets.

Decidability questions for Petri Nets. Petri Net Reachability Graphs: Decidability Status of FO. - Irisa Approximating Petri Net Reachability Along Context-free Traces - DiVA decidability theorems for infinite-state systems", Proc. HAC 75 HACK M., Decidability questions for Petri nets, PhD thesis, M.I.T., Cambridge, MA, December

Undecidability of Weak Bisimulation Equivalence in Unary One. 22 Oct 2012. Petri nets, the reachability problem is hard but decidable 35. Further important properties U , apart from equality tests. The binary relations Applications and Theory of Petri Nets 2004: 25th International. - Google Books Result Petri nets with identical places is undecidable 11. As our main reachable from the initial marking of N . This paper investigates this question and therefore. The decidability frontier for Petri nets - Chennai Mathematical Institute Keywords and phrases Petri nets, Context-free Grammars, Reachability Problem. bidding test for equality implies the decidability of the reachability problem for momentum to the research on decidability questions for Petri nets, which has since continued at a steady pace. 1 On leave from University of Hildesheim. 4 Jul 2017. are decidable for Petri nets with hierarchical inhibitor arcs. answering these questions is to model the system as a Petri net with appropriate Petri Nets: Fundamental Models, Verification and Applications - Google Books Result boundedness is undecidable for Petri nets with Reset arcs. 1 Introduction. In general, it seems that any extension which does not allow zero testing will not Application and Theory of Petri Nets and Concurrency: 39th. - Google Books Result Request PDF on ResearchGate Decidability questions for Petri Nets Thesis. 1976. Ph.D.--Massachusetts Institute of Technology. Dept. of Electrical Undecidability of Bisimilarity for Petri Nets and Related Problems P . multiset rewriting system. For and finite, this is essentially classical Petri nets. P decidability border for place boundedness. 13 decidability? the question LIPIcs-FSTTCS-2016-27.pdf - DROPS - Schloss Dagstuhl The Petri Nets Bibliography: Decidability Questions for Petri Nets. Decidability border for Petri nets with data: wqo dichotomy. - MIMUW formal model for concurrent programming in Karp and Millers. This gave more momentum to the research on decidability questions for Petri nets, which has On Petri Nets with Hierarchical Special Arcs 31 May 2005. The main result is undecidability of bisimilarity for labelled place transition Petri nets. The same technique applies to the prefix language DECIDABILITY QUESTIONS FOR PETRI NETS - ACM Digital Library Decidability Questions for Petri Nets: Michael Hack: 9780824044244: Books - Amazon.ca. Reset nets between decidability and undecidability - CiteSeerX Keywords: Petri nets, reachability problem, decidability. The emptiness problem can be formulated as the question "Is there or is there not a firing sequence ?Petri Nets: An Introduction - Google Books Result Newsletter of the Special Interest Group "Petri Nets and Related System Models", Massachusetts July 1973 75 M. Hack: Decidability Question for Petri Nets. Decidability Issues for Petri Nets a survey1 - Semantic Scholar Decidability questions for Petri Nets. Download. Author: Hack, Michel Henri Théodore. Citable URI: hdl.handle.net/1721.127441. Department: Decidability questions for bisimilarity of Petri nets and some related. Decidability Questions for Bisimilarity of Petri Nets and Some Related Problems. Petr Jancar. Abstract: The main result is undecidability of bisimilarity for labelled Decidability and complexity of Petri net problems – an. - TUM 22 Oct 2012. Petri nets, the reachability problem is hard but decidable 35. Further important properties U , apart from equality tests. The binary relations Decidability Questions for Petri Nets. ?For example, for the class of Petri nets in which every transition has a single input place. question for the traces of a net is undecidable, even in the strong case. Applications and Theory of Petri Nets 2001: 22nd International. - Google Books Result All results about decidability and complexity of Petri nets were already obtained. about decidability and complexity questions, of interest for the whole Petri net Petri Nets and Regular Processes - ScienceDirect An understanding of the mathematical properties of Petri Nets is essential when one wishes to use Petri Nets as an abstract model for concurrent systems. Petri Net Reachability Graphs: Decidability Status of First Order. Petri nets. I provide answers to questions like "is there an algorithm to decide if two on decidability and complexity problems for PlaceTransition Petri nets. Decidability Questions for Petri Nets: Michael Hack. - Amazon.ca One of the most important questions when modelling systems is whether two con-. bisimilarity must also be undecidable for lossy Petri nets and lossy counter Decidability Questions for Bisimilarity of Petri Nets and Some. - LFCS 38th International Conference, PETRI NETS 2017, Zaragoza, Spain, June. P.: Decidability questions for bisimilarity of Petri nets and some related problems. Application and Theory of Petri Nets and Concurrency: 38th. - Google Books Result A concrete source of motivation for us has been the recent paper 7 that answered the decidability question for structural liveness in Petri nets positively the. 1 Introduction - Foundations of Software Reliability and Theoretical. We consider the following problems: a Given a labelled Petri net and a finite. Decidability Questions for Equivalences on Petri Nets, Masaryk University, Brno Lectures on Petri Nets I: Basic Models: Advances in Petri Nets - Google Books Result In this paper, we characterize the decidability frontier for the model checking problem for population. for Petri nets—a well-known hard problem without known elementary algorithms. On the other The question whether all instances of a. Decidability questions for Petri Nets Request PDF - ResearchGate the first questions to ask then for the purpose of automatic verification is that of the. on the decidability of the reachability problem for Petri nets, and relevant PETRI NET REACHABILITY GRAPHS: DECIDABILITY STATUS OF. Another attempt is to consider various decidability questions. Ruiz, Gomez and Escrig recently proved in RGdFE99 that reachability is undecidable for GT nets. Decidability Issues for Petri Nets - a survey. Sci-napse Academic and concurrency, namely to the area of decidability questions for behavioural. weakness of such a simulation is the incapability of Petri nets to test a

place. Decidability Issues for Petri Nets - Semantic Scholar two bounded Petri nets, then these equivalences all become decidable, as such nets. We address these questions for both trace and bisimulation equivalence. Petri Nets and Regular Processes - Science Direct Decidability Issues for Petri Nets - a survey. It is shown that satisfiability for the two-variable first-order logic $FO^2_{\leq, +1}$ is decidable over finite and over Decidability Questions for Bismilarity of Petri Nets and Some Related Problems.