Holger Hermanns - DTU Orbit (12/08/2016)

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Organisations

Visiting Professor, Department of Applied Mathematics and Computer Science
04/06/2013 → 31/01/2014 Former
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VIP

Language-Based Technology
18/06/2013 → 10/04/2014 Former
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Publications:

Deciding bisimilarities on distributions
Probabilistic automata (PA) are a prominent compositional concurrency model. As a way to justify property-preserving abstractions, in the last years, bisimulation relations over probability distributions have been proposed both in the strong and the weak setting. Different to the usual bisimulation relations, which are defined over states, an algorithmic treatment of these relations is inherently hard, as their carrier set is uncountable, even for finite PAs. The coarsest of these relation, weak distribution bisimulation, stands out from the others in that no equivalent state-based characterisation is known so far. This paper presents an equivalent state-based reformulation for weak distribution bisimulation, rendering it amenable for algorithmic treatment. Then, decision procedures for the probability distribution-based bisimulation relations are presented.

General information
State: Published
Organisations: Department of Applied Mathematics and Computer Science , Language-Based Technology, Saarland University
Authors: Eisentraut, C. (Ekstern), Hermanns, H. (Intern), Krämer, J. (Ekstern), Turrini, A. (Ekstern), Zhang, L. (Intern)
Pages: 72-88
Publication date: 2013

Host publication information
Title of host publication: Quantitative Evaluation of Systems : 10th International Conference, QEST 2013, Buenos Aires, Argentina, August 27-30, 2013. Proceedings
Publisher: Springer
ISBN (Print): 978-3-642-40195-4
ISBN (Electronic): 978-3-642-40196-1

Series: Lecture Notes in Computer Science
Volume: 8054
ISSN: 0302-9743
Main Research Area: Technical/natural sciences
Conference: 10th International Conference on Quantitative Evaluation of SysTems (QEST 2013) , Buenos Aires, Argentina, 27/08/2013 - 27/08/2013
DOIs:
10.1007/978-3-642-40196-1_6
Source: dtu
Source-ID: n::oai:DTIC-ART:compendex/391053125::31544
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Projects:

Verification of Stochastic Process Calculi

Department of Informatics and Mathematical Modeling
Period: 01/09/2007 → 22/06/2011
Number of participants: 7
Phd Student:
Skrypnyuk, Nataliya (Intern)

Supervisor:
Nielson, Hanne Riis (Intern)
Seidl, Helmut (Ekstern)
Main Supervisor:
Nielson, Flemming (Intern)
Examiner:
Probst, Christian W. (Intern)
Hankin, Chris (Ekstern)
Hermanns, Holger (Intern)

Financing sources
Source: Internal funding (public)
Name of research programme: Forskningsrådsfinansiering
Project: PhD