

The Siren Song of Temporal Synthesis

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Abstract

One of the most significant developments in the area of design verification over the last three decade is the development of algorithmic methods for verifying temporal specification of finite-state designs. A frequent criticism against this approach, however, is that verification is done after significant resources have already been invested in the development of the design. Since designs invariably contains errors, verification simply becomes part of the debugging process. The critics argue that the desired goal is to use temporal specification in the design development process in order to guarantee the development of correct designs. This is called temporal synthesis. In this talk I will review 60 years of research on the temporal synthesis problem, describe the automata-theoretic approach developed to solve this problem, and describe both successes and failures of this research program [1, 2].

2012 ACM Subject Classification Software and its engineering

Keywords and phrases Formal Methods, Temporal Synthesis

Digital Object Identifier 10.4230/LIPIcs.CONCUR.2018.1

Category Invited Talk

References

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¹ Work supported in part by NSF Expeditions in Computing project “ExCAPE: Expeditions in Computer Augmented Program Engineering”.



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29th International Conference on Concurrency Theory (CONCUR 2018).

Editors: Sven Schewe and Lijun Zhang; Article No. 1; pp. 1:1–1:1

Leibniz International Proceedings in Informatics



LIPICs Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Dagstuhl Publishing, Germany