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Estimation and Optimization of the Performance of Polyhedral Process Networks

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Stellingen

behorende bij het proefschrift

Estimation and Optimization of the Performance of Polyhedral Process Networks

door Sven van Haastregt

1. To really solve a designer's problem, a system-level design tool should not only provide a forward synthesis flow, but also take design constraints into account [Chapter 1].
2. Reordering communication in a polyhedral process network was *mistakenly* believed to be prohibitively detrimental to the performance of a system, consequently excluding many transformations [Chapter 3, 5].
3. Synthesis of *Register Transfer Level (RTL)* implementations from sequential code is a preferable alternative to manual RTL design for streaming applications [Chapter 6].
4. Profiling is found to be a very cost-effective solution to a problem that is solvable analytically only with a lot of extra effort [Chapter 4].
5. If an academic researcher has the choice between an open-source and a closed-source solution, then the researcher should have a natural preference for the open-source solution.
6. Even if the semantics of a model of computation can be well understood by a 10-year-old, the implications of these semantics continue to baffle grown-up researchers from time to time.
7. No matter how carefully you construct the RTL specification of a system; you often end up reversing some reset signal polarity after the first (failed) prototype run.
8. Even the smartest compiler or design automation tool cannot repair the dumbest design decisions of a programmer or designer.
9. It is possible to complete a PhD programme without a single cup of coffee.
10. The world would be a more peaceful place if more people would appreciate extreme metal music.