Parallelizing dynamic sequential programs using polyhedral process networks

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Propositions (Stellingen)

by Dmitry Nadezhkin, author of

Parallelizing Dynamic Sequential Programs using Polyhedral Process Networks

1. Techniques and methods used in deriving Polyhedral Process Networks from static programs cannot be used for the derivation of Polyhedral Process Networks from dynamic programs. New techniques should be developed. *(This dissertation)*

2. Uncertainties inherent to a dynamic program can be overcome by approximation and parameterization. *(This dissertation)*

3. Similar to static programs, it is possible to automatically reveal all available task-level parallelism in dynamic affine nested loop programs. *(This dissertation)*

4. In contrast to Polyhedral Process Networks derived from static programs, in Polyhedral Process Networks derived from dynamic programs some overhead is introduced due to control FIFO channels. *(This dissertation)*

5. Converting a nested loop program, the behavior of which is not precisely known at compile time due to the presence of data-dependent constructs, to an input-output equivalent Polyhedral Process Network can be accomplished in a systematic and automated way. *(This dissertation)*

6. A Ph.D. studentship is a perfect therapy to learn how to reflect on your own true values in life.

7. Do not try to change other people. It is impossible. The only thing one can change is himself.

8. Be optimistic in setting your goals, be pessimistic in planning activities.

9. The ultimate goal of writing or presenting your work is to ease the comprehension for the reader to the maximum.

10. Do not start to convey an idea until it is completely clear to yourself.