

*Abstract*

## **Determinization of Conditional Term Rewriting Systems for Program Generation**

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Functional programs can be represented as deterministic conditional term rewriting systems (deterministic CTRSs, for short), where “deterministic” means that the values of extra variables of rewrite rules are determined when evaluating the conditional parts. On the other hand, non-deterministic CTRSs are also useful as a specification framework of functional programs. In this presentation, we propose a rule-based approach to transform a non-deterministic CTRS into a deterministic one that simulates rewrite sequences of the original one. For this purpose, we give several transformation rules and prove their simulation-completeness. It means the transformation rules can be used for program generation. We also show some transformation examples.

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