

Rewriting Over Word Monoids

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In their book, Meduna and Zemek introduce grammars over monoids. These grammars can significantly increase the generative power of context-free grammars.

First, we will briefly introduce basic definitions related to context-free grammars over monoids. We will talk about the generative power of WM-grammars with various degrees and put these grammars into context with generally known types of grammar. Next, we introduce the regulation of grammatical parallelism and parallel derivations over free monoids that result in an increase of the generative power of those mentioned grammars. Finally, we show their generative power.