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Watson-crick context-free grammars: Grammar simplifications and a parsing algorithm (Article)

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Abstract

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A Watson-Crick (WK) context-free grammar, a context-free grammar with productions whose right-hand sides contain nonterminals and double-stranded terminal strings, generates complete double-stranded strings under Watson-Crick complementarity. In this paper, we investigate the simplification processes of Watson-Crick context-free grammars, which lead to defining Chomskylike normal form for Watson-Crick context-free grammars. The main result of the paper is a modified CYK (Cocke-Younger-Kasami) algorithm for Watson-Crick context-free grammars in WK-Chomsky normal form, allowing to parse double-stranded strings in $O(n^6)$ time. © The British Computer Society 2018. All rights reserved.

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Closure properties of Watson-Crick grammars

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(2015) *AIP Conference Proceedings*

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