

[Savateev, Yury](#)**Lambek grammars with one division are decidable in polynomial time.** (English)[Zbl 1142.68415](#)

Hirsch, Edward A. (ed.) et al., Computer science – theory and applications. Third international computer science symposium in Russia, CSR 2008 Moscow, Russia, June 7–12, 2008. Proceedings. Berlin: Springer (ISBN 978-3-540-79708-1/pbk). Lecture Notes in Computer Science 5010, 273-282 (2008).

Summary: Lambek grammars provide a useful tool for studying formal and natural languages. The generative power of unidirectional Lambek grammars equals that of context-free grammars. However, no feasible algorithm was known for deciding membership in the corresponding formal languages. In this paper we present a polynomial algorithm for deciding whether a given word belongs to a language generated by a given unidirectional Lambek grammar.

For the entire collection see [[Zbl 1136.68005](#)].

MSC:

- [68Q42](#) Grammars and rewriting systems
- [03B25](#) Decidability of theories and sets of sentences
- [03B65](#) Logic of natural languages

Cited in **5** Documents

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