

Jumping Finite Automata: New Results

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Abstract

Jumping finite automaton (JFA) was introduced by Meduna and Zemek in 2012. In the last few years, several studies were held also by other teams to solve the stated open problems and to investigate some new derived variants.

The talk will consist of two parts. First, we briefly recall the basic definition and results, we show the close relation to permutation and shuffle language operations, and we give an overview of new results concerning closure properties and computational complexity.

Second, we will present new variants of JFAs such as n -parallel, double, and one-way JFAs. These newly studied models combine the benefits of continuous and discontinuous reading—something that is not possible in purely continuous finite automata and purely discontinuous JFAs.

Keywords

Discontinuous processing, closure properties, computational complexity, variants of jumping finite automata