

# Jumping Finite Automata: New Results

Radim Kocman and Zbyněk Krivka

Faculty of Information Technology, Brno University of Technology

`{ikocman,krivka}@fit.vutbr.cz`

## Abstract

The notion of a jumping finite automaton (JFA) was introduced by Meduna and Zemek in 2012. Since then, several studies have been published on this topic.

The present talk continues with this vivid topic. It consists 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 present new variants of JFAs, such as  $n$ -parallel JFAs, double-JFAs, and one-way JFAs. These newly studied models combine the advantages of continuous and discontinuous reading, which cannot be based upon purely continuous finite automata or purely discontinuous JFAs.

## Keywords

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