

# Complexity and Categoricity of FST Injection structures

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**Abstract.** An injection structure  $\mathcal{A} = (A, f)$  is a set  $A$  together with a one-place one-to-one function  $f$ .  $\mathcal{A}$  is an FST injection structure if  $A$  is a regular set, that is, the set of words accepted by some finite automaton, and  $f$  is realized by a finite-state transducer. We study the complexity of the character of an FST injection structure. We also examine the effective categoricity of such structures.

**Keywords:** computability theory, injection structures, automatic structures, finite state automata, finite state transducers.