



# نهمین گنجره مشترک سیستم های فازی و هوشمند ایران

۱۱-۱۳ اسفندماه ۱۴۰۰، مجمع آموزش عالی بزم

9th Joint Congress on Fuzzy and Intelligent Systems  
(CFIS2022)

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**Special session title: Fuzzy automata**

## **Abstract:**

Automata are the prime example of general computational systems over discrete spaces. Among the conventional spectrum of automata (i.e. Deterministic Finite-state Automata (DFA), Non-deterministic Finite-state Automata (NFA), Probabilistic (stochastic) Automata (PA), and Fuzzy-Finite-state Automata (FFA)), DFA have been the most applied automata to different areas. The concept of 'fuzzy' together with a number of some other notions in mathematics and other areas were fuzzified by Zadeh. Within this real, among the first investigations was the concept of fuzzy automaton suggested by Wee and Santos. All transitions of a DFA and NFA have an implied weight of 1, while the weights of transitions in a PA and FFA belong to  $(0, 1]$ . However, in all types of conventional automata, a zero-weight transition means no transition, while in our approach to fuzzy automata, a zero-weight transition does not necessarily imply no transition. That is why we will use  $[0, 1]$  as the fuzzy interval. In 2005, Doostfateme and Kramer's developed the concept of fuzzy automata and introduced the concept of general fuzzy automata. After that, Abolpour, Zahedi, Hori and Shamsizadeh have many scientific researches in this field.

**Keywords:** Fuzzy Automata, Transition, Membership value.