پژوهشگاه دانش‌های بنیادی
پژوهشکده علوم کامپیوتر

# سخنرانی علمی

# Interpretable Fuzzy Classifiers for Boosting Explainability of Big Data Applications

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**Abstract**

Extracting knowledge from Big Data becomes a very interesting and challenging effort. Design of new scalable algorithms to handle large amounts of data is not a straightforward task and may bring out complex systems that affect understanding of the system behavior. This issue contradicts the objectives of the new resurgence of Artificial Intelligence known as eXplainable Artificial Intelligence (XAI). In this regard, the paradigms designed based on fuzzy rules are suitable solutions to stress the system interpretability and making the system behavior more transparent for the human cognition. Focusing on big data analytics, although fuzzy systems also show excellent properties, they may comprise an excessive number of rules and/or linguistic labels that not only may cause losing the system performance but also may affect the system semantic as well as the system interpretability. In this session, we talk about these challenges and how we can make a good use of distributed big data frameworks like Apache Spark to provide more explainable yet scalable fuzzy classifiers.

**Biography**

Fatemeh Aghaeipoor received her B.Sc. degree in Computer Engineering from Iran University of Science & Technology (IUST), and her M.Sc. and Ph.D. in Artificial Intelligence from Shahid Bahonar University of Kerman. She was working as a researcher at the University of Granada, Spain, in 2020. Her main areas of interest are Machine Learning, XAI, Big Data, fuzzy logic, and evolutionary fuzzy systems.

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