

Title: "A software tool for modeling Fuzzy Cognitive Maps"

Fuzzy Cognitive Maps (FCMs) are a suitable knowledge based methodology for modeling and simulating dynamic systems. From the structural perspective, an FCM can be understood as a fuzzy digraph that describes the behavior of a physical system in terms of concepts (i.e., states, variables or entities). Such concepts involve a precise meaning for the physical system and are connected by signed and weighted causal relationships.

In spite of the theoretical advances reported in FCM literature, there is a lack of real software tools for modeling and simulating FCM-based systems. On the other hand, existing software tools fail in providing advanced options to adjust the parameters that define the modeling behavior. The gap between the theoretical advances and the development of accurate and mathematically sound FCM-based systems advocates for the implementations of software tools with more complete experimentation features.

This talk is devoted to presenting a software tool for designing, learning and simulating FCM-based models. The advantages of this tool rely on the inclusion of numerous simulation facilities and machine learning algorithms, which are supported by a friendly visual interface. As far as is known, there is no software tool for developing FCM-based systems with such flexibility.



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