UCA Universidad de Cádiz

Facultad de Ciencias

Máster en Matemáticas - Departamento de Matemáticas

Actividad Formativa del Programa de Doctorado en Matemáticas

ANUNCIO DE CONFERENCIA

DYNAMICS OF FUZZY COGNITIVE MAPS

a cargo de

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Resumen: Fuzzy Cognitive Maps (FCMs) merge the properties of Artificial Neural Networks (NN) and fuzzy systems. They are bipolar directed fuzzy graphs that consist of concepts (nodes) assigned fuzzy membership degrees expressing the intensity of the property associated with the given concept, and of directed edges which have a sign expressing whether the influence is positive or negative and a fuzzy membership degree of the intensity of the influence. Because of the NN-type behaviour of FCMs, they may be used for simulating a system that changes in time, and possibly converges to a steady state called fixed-point attractor, but other types of behaviour, namely limit cycles and chaotic patterns may also show up. In this lecture, the problem of the existence and number of fixed-point attractors (sustainable state of the system to be modelled) will be discussed. In real-life problems, the causal interconnections of the FCMs may carry uncertainties that can be expressed by intervals or fuzzy sets. The problem of fixed points will be discussed for these cases, too.

Día y hora: Martes, 28 de mayo de 2019, a las 12h00'.
Lugar: Sala Académica Antonio Aizpuru, Puerto Real.

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