

A paradigm for the 21st century considering fuzzy logic

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Abstract

This paper presents some considerations about how uncertainty has been treated in the last 25 centuries, pointing out the vision of some philosophers of the ancient, middle, modern, and contemporary periods.

Fuzzy logic is presented as a possibility for approaching the uncertainties that characterise the world around us.

Based on the treatment of uncertainty, the transdisciplinary view of Complex Thought, and some postmodern philosophical currents, the paper generates reflections to the establishment of a scientific paradigm adapted to the beginning of the 21st century.

Four adaptations are proposed in the current paradigm: the realism becomes relative realism, the materialism is considered regarding representativeness and methodology, the dichotomization of the reality migrates to a monistic model, and the determinism is seen in a probabilistic way.

Keywords: uncertainty, fuzzy sets, fuzzy logic, postmodern paradigm.