FUZZY CLUSTERING OF INTUITIONISTIC FUZZY DATA

S. MURUGANANDHAM AND D. KALAMANI

Abstract

Challenged by real-world clustering problems this paper proposes a novel fuzzy clustering scheme of datasets produced in the context of intuitionistic fuzzy set theory. More speci_cally, we introduce a variant of the Fuzzy C-Means (FCM) clustering algorithm that copes with uncertainty and a similarity measure between intuitionistic fuzzy sets, which is appropriately integrated in the clustering algorithm. We describe an intuitionistic fuzzi_cation of color digital images upon which we applied the proposed scheme. The experimental evaluation of the proposed scheme shows that it can be more e_cient and more e_ective than the well-established FCM algorithm, opening perspectives for various applications.