

# Segmentation of Brain Tissue Using Particle Swarm Optimization

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**Abstract:** *In preclinical studies of magnetic resonance imaging (MRI) in analysis of several brain dementias, the use of tissue segmentation for its subsequent analysis and / or recording with other imaging modalities is common. This process is usually performed manually, so a large amount of time is often used depending on the study. This paper proposes a method of segmentation on MRI images of the human brain using Fuzzy c-means (FCM). A PSO (Particle Swarm Optimization) based clustering approach is used for the segmentation of brain tissues.*

**Keywords/Phrases:** EM, FCM, MRI, NMR, PSO

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