A FAST METHOD OF SEPARATION OF THE NOISY BACKGROUND FROM THE HEAD-CROSS SECTION IN THE SEQUENCE OF MRI SCANS

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Abstract

The paper presents a new method of removing the noisy background from the sequence of magnetic resonance imaging (MRl) scans. The sequence of scans is required in order to monitor a passage of a contrast agent through the brain tissue. The scans contain the noisy head-cross data and also the noisy background data. The latter has to be removed and excluded from a further analysis. It is achieved by applying some basic morphological operations to the previously binarized MRl scans. The results of separating the background from the sequence of scans are presented in the paper. The scans binarization method is described and compared with the widely used Otsu method. The proposed method of the noisy background separation is easily applicable, efficient and does not need any sophisticated calculations.

Keywords: DSC-MRI brain measurements, MRI images binarization, background separation