

Electrocardiogram Signal Denoising Using a Hybrid Technique

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Abstract : This paper presents an efficient method of electrocardiogram signal denoising based on a hybrid approach. Two techniques are brought together to create an efficient denoising process. The first is an Adaptive Dual Threshold Filter (ADTF) and the second is the Discrete Wavelet Transform (DWT). The presented approach is based on three steps of denoising, the DWT decomposition, the ADTF step and the highest peaks correction step. This paper presents some application of the approach on some electrocardiogram signals of the MIT-BIH database. The results of these applications are promising compared to other recently published techniques.

Keywords : hybrid technique, ADTF, DWT, thresholding, ECG signal

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