World Academy of Science, Engineering and Technology
International Journal of Biomedical and Biological Engineering
Vol:13, No:11, 2019

Heart Murmurs and Heart Sounds Extraction Using an Algorithm Process Separation

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Abstract : The phonocardiogram signal (PCG) is a physiological signal that reflects heart mechanical activity, is a promising tool for curious researchers in this field because it is full of indications and useful information for medical diagnosis. PCG segmentation is a basic step to benefit from this signal. Therefore, this paper presents an algorithm that serves the separation of heart sounds and heart murmurs in case they exist in order to use them in several applications and heart sounds analysis. The separation process presents here is founded on three essential steps filtering, envelope detection, and heart sounds segmentation. The algorithm separates the PCG signal into S1 and S2 and extract cardiac murmurs.

Keywords : phonocardiogram signal, filtering, Envelope, Detection, murmurs, heart sounds
Conference Title : ICBEBA 2019 : International Conference on Biomechanical Engineering and Biomedical Applications
Conference Location : Paris, France
Conference Dates : November 20-21, 2019