

Feature Extraction Methods for Analysis of SEMG Signals

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Abstract: *Electromyography (EMG) is used to measure and keep information of the electrical activity that produced by muscles during contract and relax. The electrical activity is detected with the help of EMG electrodes. Surface electromyography (sEMG) is one type of bioelectrical signal produced by the human body. sEMG contains meaningful information associated with muscle activity and has numerous applications in motor control and neuromuscular physiology. sEMG signals can be used to identify the movement intention and evaluate the function status of muscles. sEMG is also applied in virtual reality with the advances of technology development. During sEMG recording, there are some recognized noises and motion artifact which will affect sEMG signal. Hence, several of signal processing had been implemented to remove the noises and acquired the important signals which contain useful information. sEMG feature extraction is highlighted part in signal processing which extract features in sEMG signal. In this paper, several of sEMG feature extraction that applied any of three main domains which are time domain (TD), frequency domain (FD) and time-frequency domain (TFD) had been analyzed and studied to determine the good feature extraction method.*

Keywords: Electromyography

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