

EMG Analysis and its Application on Arm Movement

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To investigate the command pattern and corresponding strategy in human movement, we study the relationship between the arm movement and measured electromyography(EMG).The independent component analysis technique is employed analyze the EMG signals exhibited during human forearm bending with different speeds. Based on the analysis, proper features are identified are used to arm movement study. A motion classifier is then developed to recognize arm movements of different speeds. The research can serve as a basis for the control of the robotic arm and prosthesis in the future.