Evaluation of EMG Features of Trunk Muscles During Flexed Postures

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Flexed postural tasks are frequently involved in daily activities, this paper evaluated a wide range of trunk muscle electromyogram (EMG) features to find the best feature spaces that discriminate among different trunk flexion angles. Using Davies-Bouldin index (DBI) and Calinski-Harabasz index (CHI) it was found that zero crossings, mean power frequency, median power frequency, and second order cumulants of extensor muscles' EMG, independent of holding load level and electrode location (right or left side of muscle) are the most sensitive features to trunk flexion angle variation.