Computer Methods in Biomechanics and Biomedical Engineering > Volume 7, 2004 - Issue 1

Volume 7, Issue 1 ► Genetically-designed Neural Networks for ....

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# Genetically-designed Neural Networks for Error Reduction in an Optimized Biomechanical Model of the Human Elbow Joint Complex

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# **Abstract**

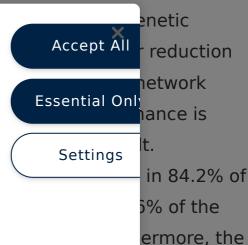
A real time dynamic biomechanical model of the human elbow joint has been used as the first step in the process of calculating time varying joint position from the electromyograms (EMGs) of eight muscles crossing the joint. Since calculation of

position algorithi in the d struct rankl Experim the data

data set

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GA networks reduced the error standard deviation across all subjects, showing that progress in error reduction was made evenly across all data sets.

Q Keywords: Biomechanics Elbow joint Genetic algorithm Neural network Optimization

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