Abstract

Based on a mathematical model of the human gait, a Matlab 2010a algorithm is presented to predict the reaction forces and moments in a particular point along the socket linked to the lower limb of a transfemoral amputee. The model takes the inertia developed due the swing of the limb during the gait into consideration. A validation of the results is made with the data obtained in a gait lab, and the model results are consistent with those obtained in the gait lab.

Keywords

Numerical model, transfemoral amputee, dynamic analysis, gait, algorithm.