

Quantitative Analysis of Involuntary Movements as Test of Comfort of a Car Seat: A Study of Man-Machine Interface

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ABSTRACT Using quantitative analysis of involuntary movements, comfort/discomfort of a car seat, adjusted in three seat positions - based primarily on the backrest angle has been evaluated. The medial position (back rest angle 115 degree) has been found to be the most comfortable position followed by the backward inclined position (back rest angle 124-125 degree) and the forward inclined position (back rest angle 108-109 degree) respectively. Individuals of different stature percentiles showed differences in comfort/discomfort with respect to the forward the medial and the backward inclined position, but all of them, irrespective of their stature percentiles, found the medial position to be the most comfortable. Involuntary movements increased in all the three seat positions during prolonged sitting. Application of the method has also been briefly discussed in other work situations.