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Digital human body oriented ergonomic modeling and application to car design

The automobile is probably the most fascinating industrial product of all. There are various reasons for this. It may be fulfilled the basic need for mobility, individuality, driving pleasure, convenience, and comfort. Put simply, when it comes to personal attention to the auto, the design appeals to the “emotion” and the ergonomics to the “ratio”.

Digital human models (DMM) are virtual images of humans that simulate work-related relationships. Essential bases for this are anthropometry as a study of human dimensions, different, mostly physical ones loads and various human abilities that enable them to carry out processes and interact with products. For the design and analysis of mainly anthropometric relationships in product and Today's possible representation of man is now three-dimensional, so that and the geometric features of the body can be used for all design and production purposes, and so it could be programmed the resulting digital human models. Parallel to the new computer design system developed professional computer programs by using ergonomic design of a car or device, these digital human models were wholly integrated directly into CAD programs, so that now the desired human scale is available to the designer.

Industry 4.0 supports customization. All future designs will be arranged according to the body measurements of the people. For this reason, the digital body will be the future of car ergonomics. As a result, people should feel more comfortable in their cars.

Keywords:

Digital Human Body, Ergonomics, Anthropometry, Car Design

Biography:

Semih Dönmez is currently working as lecturer in the department of Marketing-Logistic at Anadolu University. He has good experience in the teaching field and his major researches were done in the field of automobile and Human body. His areas of interests are Digital Human Body, Ergonomics, Anthropometry, Car Design



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