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Investigation of Garment Fit Using Virtual Try-On Technology

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Abstract : Virtual garment fitting has gotten considerable attention for researchers currently. Virtual try-on technologies provide the opportunity to check garment fit using various fabrics and sizes. Differences in fabric mechanical properties produce differences in garment fit. This research aimed to investigate the virtual garment fit concerning the fabric's mechanical properties by determining distance ease between the body and the garment. In this research, virtual women mannequin was covered with straight fit virtual dress stitched in Modaris 3D (CAD Lectra). Garment fitting was investigated using seven cotton/cotton blended plain weave fabrics. Ease allowance value at bust, waist and hip girths in 2D basic patterns was changed uniformly from 0 cm to 8 cm. The values of distance ease in 3D virtual garments at the three main girths were investigated. Distance ease distribution in the virtual garment was investigated also. It was defined that by increasing of 2D patterns ease allowance, 3D garment distance ease changes proportionally but differently using various fabrics. Correlation analysis between 3D garment ease and mechanical properties showed that tensile strain in weft direction had the strongest relation.

Keywords : 3D CAD, distance ease, fabric, garment fit, virtual try-on
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