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Predicting Texture Image of Covering Fabric for Car Seat by Physical Properties

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Abstract: The textures of nine covering fabrics for car seat were evaluated by male students in their twenties and male experts in their fifties using only human tactile sensation, and physical properties of those fabrics were measured. We examined the correlations between the subjective evaluations of the texture image and the physical properties of covering fabrics. It was determined that image adjectives had correlations with physical adjectives, and physical adjectives had correlations with physical properties in both of the test groups. We developed objective evaluation equations for predicting a texture image by multiple regression analysis using the principal component of physical properties as explanatory variables and the mean preference scores of image adjectives as criterion variables. And it was confirmed that the texture image was predicted by the physical properties of covering fabrics.

Key Words: Covering fabrics, Texture, Car seat, Subjective measurement