

Effect of- Islamic motif sizes and filament types- for 3D printing fabrics on drapeability properties

Prof. Ghada Abdullah EL-Kholy

Professor, Apparel Design and Technology Department, Faculty of Applied Arts- Helwan University

Ghada_elkholy@hotmail.com

Assist. Prof. Dr. Wedian Talaat Madian

Assistant Professor, Apparel Design and Technology Department, Faculty of Applied Arts - Helwan University

Wedian_Madian@a-arts.helwan.edu.eg

Assist. Lect. Mohammed Hamid Youssef Khafagi

Assistant Lecturer, Fashion Department, Higher Institute of Applied Arts - 6th of October

mojakhafagi@gmail.com

Abstract:

This study focuses on the great development in 3D printing materials and the possibility of using them in fabrics that can be employed in the field of fashion, which leads to the search for the effectiveness of these materials in terms of function. This research examines the drape ability of materials created by 3D printing with TPU filament with varying degrees of elasticity, and comes to work and benefit from previous experiences in this field and the search for its applicability to suit the functional aspect of fashion, which gives the ease of movement of the body, and thus feel comfortable.

the motifs used is inspired by Islamic art with varying sizes on tulle in order to know the material with the highest drape ability based on the size of units and the type of filaments used in 3D printing.

During the research 6 materials were created using the difference of size, TPU filament, and inspired by Islamic motif which were printed using 3D printing techniques which were printed at the Kyoto Design Lab, Kyoto Institute of Technology (KIT), Japan.

Keywords:

Fabric drapeability, 3d printing, Islamic motif