

Microspace Transmorpho

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Design concept and purpose. This dress is inspired from the space transformation in the interaction views of fashion design and architecture, areas for creating spaces micro- and macro-spaces for human. The multidisciplinary approaches of fabrication techniques and materials were applied to visualize such as 3D printing, computer-aided design (CAD) software, laser cutting, thermoplastic, acrylic, and patternmaking for transformable design. Garments are the closest objects that contact our skin or surround our body. These garments create microspaces between the garments and the human body. In the integration of characteristics of buildings and clothes, macro- and micro- spaces, the dress can change the silhouette, length, and the surface of the dress. With the transformable design, the dress changes the amount of space that occupies in micro and macro spaces changes. When the dress is mini style with constructive surface is out, the dress is close to the body but makes the body to be further from the buildings, and vice versa. This symbolizes the interactions of garment with human body and buildings as two spaces that we live.

Process, techniques, and execution. This dress explored various techniques and materials in fashion design and architectural approaches considering spaces around the human body. The transformative dress design allows flexibility in aesthetics and functions of the dress by providing opportunities to wearers for designing their micro- and macro-environments. Also, the dress can be changed into two different styles, there is possibilities to be worn more frequently in different contexts and extend the use phase in the clothing lifecycle. Triangle pieces were made of acrylic and explored different techniques to create the architectural shapes: a) shapes and textures were designed by CAD and 3D printed using thermoplastics, b) a molding case was 3D printed, melted thermoplastic liquids were poured; c) created a molding case using a clay for molds and poured melted thermoplastic liquids; and d) acrylic plates were laser cut using CAD software. Small holes were created alongside the edges of the stiff triangle pieces to connect the pieces to mimic fabrics. The dress was made of many layers and seams to mimic stiff and structured building lines and constructions. The dress can be a high and low unique dress when the hemline is connected to the neckline and the dress becomes a long formal dress when disconnect the hemline and the neckline.



Figure 1. Microspace Transmorpho: front, back, and other view (from left to right).