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From the loom to wear: tubular shapeable textiles for seamless fashion

There are varied approaches and challenges to textile research, which focus on how textile and fashion design process could improve sustainable issues of fabric wastage such as zero-wasted pattern cutting and whole garment knitting technology. Currently, fashion in its fleeting nature fuels an endless race for change, newness and variation (Chapman, 2014). Textiles and fashion industries are compelled to use cheap materials and labour to enable even more cycles within new collections. Such low-priced, short-term life cycle products are more likely to result in high levels of textiles waste both during the production and when products are withdrawn from sale (Joung, 2014).

This paper focuses on how woven textiles can reduce fabric wastage and enhance sustainability in garment making by integrating environmentally friendly materials while improving the products' lifespan. The paper will explore how 2D woven fabrics from the loom could be transformed into 3D fashion; especially using a tubular shapeable woven technique to show how it fits on the body without seams as well as how it can be worn in multiple ways.

Traditionally the most common method to make garments with woven fabrics is the 'cut and sew' method. However, this practice-led approach will introduce how a tubular shapeable woven technique could also demonstrate simple garment making by transforming the woven fabric directly from the loom to wear it as a fashion product. Such a hand woven technique of garment making will not only minimise the waste, but will also add to enable fabrics to be worn in many different ways. A tubular shapeable woven fabric can, for example, serve as a scarf, top or even a dress. The examples presented in this paper will therefore explore how the relationship between woven structures and materials affects the surface of fabrics as well as the shape of seamless garments when performed on the body. Several prototypes will be presented as a visual framework to explore how 2D contemporary woven textiles design can be transformed into 3D fashion.