

2<sup>nd</sup> Annual Conference on

# 3D PRINTING & ADDITIVE MANUFACTURING

May 22-23, 2019 | Dubai, UAE

## 3D printing technology to revive traditional embroidery clothing

**Hind Mosfeer Saeed Al Gamdy**  
Cranfield University, UK

Three-dimensional printing (3DP) has been used in the global fashion industry since 2010; however, it has never been used to print traditional embroidery clothing. It is important to introduce new technology to revive traditional embroidery industry in Saudi Arabia because traditional methods do not match the need of fast fashion concept, demand for greater customer autonomy and customisation and value for money. This paper aims to test the potential of using 3D printing technology to produce embroidery designs. By using Ultimate 2+ 3D printing, various

designs of embroidery clothing samples are prepared. Three types of fabric such as plain cotton, shiny satin and nylon organza have been used to print embroidery designs. Thermoplastic polyurethane (TPU) was used to print embroidery designs. On all the samples similar test parameters such as 0.4mm nozzle size, 240C, 245C and 250C nozzle temperature, 70C bed temperature, 0.25mm, 0.50mm, and 1.00mm layer thickness were set. Results show that 3DP possess a real potential to help traditional embroidery clothing gaining its lost position in the Saudi fashion industry.

### Biography

Hind Mosfeer Saeed Al Gamdy is a lecturer at the Taif University in the Kingdom of Saudi Arabia teaching fabric clothing courses in the Home Economics Department. Currently, she is studying PhD at the Cranfield University on the topic of reviving traditional embroidery clothing in the western region of Saudi Arabia.

[reijo.lappalainen@uef.fi](mailto:reijo.lappalainen@uef.fi)