



Publications Template

| # | Research Title | Field | Abstract | Year of Publication Publishing | Publishing Link "URL" |
|---|--|----------------------|--|--------------------------------|---|
| 1 | Employing Embroidery and Digital Printing Skills in the Production of Contemporary Artistic Paintings Inspired by Heritage | Fashion and Textiles | <p>We currently live in the era of globalization, where advanced modern technology is widespread, which has negatively affected Arab values and legacies. This has resulted in the replacement of Arab doctrine with foreign ones, which do not match our Arab personality and values. For this reason, there is much emphasis on reviving our heritage and producing sophisticated and aesthetical works of art using this technology. From this starting point, the researcher found that it is possible to combine digital printing and manual embroidery skills, by directing students to produce artistic paintings inspired by designs from our heritage, as well as contemporary modern trends. This approach can introduce new techniques for application, some of which have been taught to students during their years in university, linking them to society, encouraging innovation and creativity, and taking advantage of the skills they have acquired during their undergraduate years. Manual embroidery and digital printing are among the most important methods for decorating clothes and furnishings with different materials and techniques. Thus, combining these two methods can be an important form of artistic expression. This study aims to guide third-year students in the Fashion Design Department, at the Faculty of Arts and Design, Pharos University in Alexandria, to employ their embroidery and printing skills in a new and innovative manner, with the purpose of producing pieces of art with a distinguished aspect to revive our heritage. The produced paintings were evaluated</p> | June 2021 | https://journals.ekb.eg/article_186786.html |



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| | | | <p>by art specialists and artists for their aesthetic, functional, and innovative aspects. Furthermore, questionnaire results of the jury were statistically analyzed. Statistically significant differences were found between the produced artworks in achieving the desired aesthetic, functional, and creative aspects, according to the opinions of the judging specialists and artists. Correlations were also found between the opinions of the jury regarding the produced artwork in their ability to combine between the skills of manual embroidery and digital printing, to revive heritage and also fit contemporary trends.</p> | | |
| 2 | <p>A new method for measuring the static and dynamic fabric/garment drape using 3D printed mannequin</p> | Textiles | <p>The study aims to develop a cloth drapemeter using a three-dimensional (3 D) printed mannequin, where drape can be measured for both the static and dynamic states. The modification achieved in the new drapemeter gives researchers the ability to test the fabric and/or the garment for the static and dynamic drapes, using one instrument. Methodology: Other factors affecting the garment drape could also be tested at low fabric consumption since the mannequin is scaled (i.e. smaller than the size of the human body). Also, a comparison between the real and virtual skirts was performed, to test the effectiveness of the virtual method. Digital photos were taken for the actual fabric/garment on the drapemeter, as well as those of the virtually designed skirts. They were analyzed using an image processing software, to study the drape behavior and factors affecting it. Results: From this study, the increasing number of seam lines led to a reduction in the draped area, while increasing the angle of the skirt depending on its design raised it. Also, the draped area increased by the increment of the rotation speed of the disk of the drapemeter. It could be concluded that the developed apparatus is recommended to be commercially used in predicting the fabric and garment drape, in the static and dynamic cases. Another conclusion</p> | April 2021 | <p>https://www.tandfonline.com/doi/abs/10.1080/00405000.2021.1917803</p> |



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| | | | was that the virtually designed skirts were different from the actual skirts. | | |
| 3 | A System Dynamics Model of Apparel Supply Chain Under Mass Customization | Industrial Engineering | <p>Mass customization could be considered as a new trend in the apparel industry. Not only, the fashion industry has limitations of the short life cycle and low predictability market but its supply chain also faces many obstacles to achieve this customization with a high level of customer satisfaction and more flexibility at low cost. The present study aims to address the factors affecting the performance of supply chain. That's why a survey and individual interviews have held with apparel supply chain professionals in order to focus on these factors and construct the relationship among them through simulation and modeling using a system dynamic approach. The results have revealed that the product variety, lead time, return policy and quality levels affected dramatically the supply chain profit under mass customization. Moreover, some potential areas have been suggested for further studies in order to enhance the supply chain profitability whenever mass customization system is applied within the apparel industry.</p> | 2019 | https://www.tandfonline.com/doi/abs/10.1080/00405000.2021.1917803 |
| 4 | Microcellulose particles for surface modification to enhance moisture management properties of polyester, and polyester/cotton blend fabrics | Textiles | <p>In this work we studied the effect of surface treated fabric by applying Microcrystalline Cellulose (MCC) Particles using two different procedures. The first method was to dissolve MCC particles and form a MCC solution which further was blended with a textile binder to obtain the fabric coating. The second treatment was direct blending MCC particles with same textile binder in order to get the fabric finishing to be sprayed on the fabric surface. The percentage of MCC particles was chosen 6%, as this ratio can be considered the most appropriate one. The effect of these treatments on fabrics moisture wettability with varying percentage of coating was studied. It was concluded that the second method by spraying MCC Particles directly on the fabric surface gives superior</p> | 2015 | https://www.sciencedirect.com/science/article/pii/S110016815000150 |



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| | | | <p>improved fabric's wettability and moisture management than solving the MCC and coating the fabric surface. The morphological study using SEM confirmed the presence of MCC particles on the fabric surface; therefore, intensification fiber surface energy leads to increase the wicking properties and increase the rate of water absorption.</p> | | |
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