



FTC 2025

Book of Abstracts of the 4th International Conference
on Functional Textiles & Clothing

Edited by

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FTC is a biannual conference held at IIT Delhi, New Delhi, that brings leading scientists, researchers, designers, and the textile and apparel industry together, to enable exchanges on latest scientific findings, design developments, cutting edge technologies, innovations, trends, concerns, challenges, and opportunities in the field of Functional Textiles and Clothing. Three editions of FTC have been held in 2018, 2020 and 2023, each of which saw participation from nearly 80 universities across the world. Held only in the physical mode, FTC has proven to be a melting pot of ideas that provides fertile ground for networking between all stakeholders.

Functional Clothing comprises clothing that is designed to deliver specific functionalities to users, over and above their usual functions. Functional clothing items can be classified as Protective clothing, Sports clothing, Medical clothing, Vanity clothing and clothing for military applications that perform multiple functions. Smart clothing items equipped with sensors and processors for monitoring of body parameters are a fast growing segment of this market. The market for functional clothing is predicted to reach 244.6 billion US dollars by 2025.

Functional clothing is driven by developments in the field of textile materials as well as apparel production processes. Conductive textiles, composites and membranes, new fabrics, surface functionalization techniques, innovative finishes and coatings and nano-technology are the emerging areas. CAD CAM technologies including those for 3D and 4D body measurement, pattern design, fit testing and mass customization, clothing comfort, clothing for special groups and innovative fashion design are growing fields. Internet of things, artificial intelligence, deep learning and virtual reality tools are used to design clothing that is smart, responsive and closer to the needs of the user.

FTC is organised by IIT Delhi, a technology institute, in association with the World University of Design, a Design University to bring out the synergies between the fields of Technology & Design. IIT Delhi is ranked #1 engineering institution of India. Its Department of Textile and Fibre Engineering is a leader in Textile Education & Research in the country. The World University of Design, Haryana, is a QS I Gauge Platinum rated, premier design university.



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