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Topic of the Speech:

DigitalFashion: A Technology Platform for Digital Fashion Training Through Digitalization of Fabrics, Garments and Human Bodies and Fashion Design Elements

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Professor Xianyi Zeng is a full professor (exceptional class) in ENSAIT Textile Engineer School – University of Lille, France, Director of the GEMTEX National Laboratory, and also a guest professor of Donghua University, Soochow University, Nankai University and Wuhan Textile University. He has the French National Knight's title in the Order of the Academic Palms and was holder of the Innovation R&D Award from France-China Committee in 2021.

In ENSAIT, he is head of the Department of Design, Distribution and Management and the Research Group for Human-Centered Design. His main research interests include artificial intelligence applied to textiles, fashion and textile digitalization, sensory analysis, intelligent wearable systems, computerized garment design and customized production management.

He has published more than 160 papers in peer-reviewed international journals and presented more than 250 papers at international conferences, and supervised more than 40 PhD students. In addition, as project coordinator, he was coordinator of three European projects (Asia-Link, SMDTex – European Joint Doctorate Program on Textile Sustainable Design and Management (Erasmus Mundus Program), FBD_BModel – Fashion big data and business model (H2020 Program)) and a number of national and regional research projects such as PRTH (French National Research Program for Textile and Clothing), IOTFetMov (ANR Program), Camille 3D (FUI Program), SUCRE (ARCIR Program) and industrial projects in cooperation with international groups in France and Europe.

ABSTRACT SUBMISSION
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DigitalFashion: A Technology Platform for Digital Fashion Training Through Digitalization of Fabrics, Garments and Human Bodies and Fashion Design Elements

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ABSTRACT (NO MORE THAN 500 WORDS:)

This presentation gives the general concept, architecture and related digitalization processes of an EU-funded technology platform, enabling fashion designers to quickly learn digital fashion design techniques from associated design resouces integrated into a relatively complete digital environment (databases, design knowledge bases, interfaces). This platform has been developed based on the results of FBD_BModel, a former European project realized in the frame of H2020 Program (2017-2021). Apart from the implemented platform structure and its associated design resources, the processes of fabric digitalization and 3D garment generation, playing a key role in digital fashion design, are also presented and integrated into this platform. These processes will enable to digitalize a real fabric by using the associated Lectra digital fabric database and intelligent computation of drape properties and weight, and generate a 3D garment and its fitting effect on a specific 3D human model. The current platform will constitute the foundation of the digital fashion design process, and advanced AI-based functions, such as intelligent searching engine for design recommendation.