Workshop 1: SMDTex: Sustainability Management and Design for Textiles – A European Joint Doctorate Training Program

July 7, 2021

https://zoom.us/j/91229596034
Password: 730699

TARGET AUDIENCE:

Sector: Fashion business, Garment designers and manufacturers, fabric dying and finishers, fabric manufacturers, fashion textile supply chain managers, fashion e-Commerce, marketing professionals, LCA professionals and environment evaluators, sustainable material developers

Type: textile and fashion researchers, fashion and textile professionals, fashion marketing and business managers, fashion designers, environment-related services, product developers, academics, fashion and textile research students and Mater students

CONTEXT

Funded by European Erasmus Mundus Program, the SMDTex joint doctorate program aims at training PhD students from Europe and other parts of the world by carrying out international research cooperation on sustainable development oriented textile management and textile design. The research activities of this project will enable to optimize the existing production organization of textile enterprises, the worldwide textile/clothing supply chain, the transaction and design of textile products, with respect to the criteria of environment, society and human factors. New organizational solutions will be proposed to the related textile/clothing companies.

The consortium of this doctorate programme is composed of five textile universities in Europe and Asia, including 1) ENSAIT (Ecole Nationale Supérieure des Arts et Industries Textiles) from France; 2) University of Boras from Sweden; 3) Technical University of Iasi from Romania; 4) Politecnico di Torino from Italy; 5) Soochow University from China.

Since 2013, the SMDTex program has trained 33 PhD students from 16 countries through 5 editions. They were recruited from Master degree holders specialized in textile technology, management engineering, information technology, industrial engineering and design, and chemical engineering. Each PhD student studied at two European universities (three years, Erasmus Mundus funding) and one Chinese university (one year, CSC scholarship) under co-supervision for four years on one of the following research themes:

Theme 1: Risk/safety and resilience in the textile value chain

Life cycle assessment (LCA), risk evaluation (environment, society, human), product tracking system for safety

Theme 2: New organization models for sustainable textile processes and supply chain

Demand driven production, sourcing and marketing, green supply chain management, new production model, new supply chain model

Theme 3: Sustainability policies and sustainable consumption around the textile supply chain

Reverse supply chain management, sustainable production strategy, sustainable fashion consumption model, sustainable brand strategy

Theme 4: Sustainable and innovative design processes and materials

New environmental friendly fibers, source-reduction of the textile chain, less material but more consumer value

Theme 5: Sustainable quality inspection and management in the textile supply chain

New international quality management model, quality tracking model
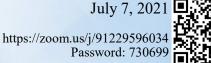
Theme 6: Personalized and virtual reality-assisted textile design

3D virtual reality assisted design, co-design process, fitting processes, fashion knowledge base, recommendation, fashion big data

During the SMDTex Workshop, Audiences will have the opportunities to learn about the latest technological innovation results obtained from this project and how to develop your business with new sustainable materials and innovative design and management solutions.

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Workshop Plan

The SMDTex Workshop will be implemented in the 14th Textile Bioengineering and Informatics Symposium (TBIS 2021). TBIS 2021 is a peer-reviewed conference, serving as a global platform for exchange in the field of Bioengineering Materials, Fibers and Textiles in the post pandemic era, and to ensure the safety of all our participants, TBIS2021 will be both online and offline. The conference is planned to be hosted by ENSAIT, Roubaix, France and will also be available to access via the Zoom network video webinar platform (adjustments will be made accordingly with the local epidemic situation). The goals of the workshop is to formally and openly disseminate the results of the SMDTex project to fashion-related companies and their global partners and exploit future collaboration and development opportunities in an internationally recognized conference to generate higher social impact. In the workshop, TBIS will assist the SMDTex Coordination Committee to establish an open communication and dissemination platform by:

- Organizing a special workshop to disseminate the project results with in-depth lectures, which will be recorded and available online and open to European fashion textiles companies.
- Publishing the research papers presented in the workshop in the conference proceedings, which will be indexed in Scopus, Web of Science to generate long impact.
- Publishing a special issue on SMDTex at internationally peer reviewed journals with open access to generate academic and industrial impact.
- Inviting European fashion and textile industrial companies and associations and their global partners to further explore potential collaborations based on the presented SMDTex results.

The SMDTex workshop will be organized 1: Risk/safety and resilience in the textile value chain; Session 2: Organizational solutions for sustainable consumption and supply chain management; Session 3: Sustainable material development; Session 4: Sustainable product design and quality management.

ERASMUS MUNDUS

TBIS 2021-Workshop 1
July 7, 2021 (Webinar)

SMDTex: Sustainability Management and Design for Textiles

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Co-organized by: ensait

Whatsapp We-chat Room B (Password: 730699)

www.tbisociety.org (Click *Symposium*) Email: tbis@tbisociety.org

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Session B-Workhshop - Chaired by Prof. Xianyi Zeng		
SMDTex: Sustainability Management and Design for Textiles – A European Joint Doctorate Training Program		
Time Slot	**Author Name**	**Paper Tittle**
13:00-13:15 (PARIS TIME) 19:00-19:15 (BEIJING TIME)	**Xianyi Zeng** (France)	A Summary of the SMDTex International Doctorate Program
13:15-13:30 (PARIS TIME) 19:15-19:30 (BEIJING TIME)	**Ada Ferri** (Italy)	SMD-Tex Erasmus Mundus Joint Doctorate Programme: the Italian perspective
13:30-13:45 (PARIS TIME) 19:30-19:45 (BEIJING TIME)	**Vincent Nierstrasz** (Sweden)	Overview of experiences and key outcomes at University of Borås Sweden of the Erasmus Mundus PhD program SMDTex (Sustainable Management and Design in Textiles), 2012-2021.
13:45-14:00 (PARIS TIME) 19:45-20:00 (BEIJING TIME)	**Carmen Loghin** (Romania)	SMDTex - TUIASI's experience
14:00-14:15 (PARIS TIME) 20:00-20:15 (BEIJING TIME)	**Yan Chen** (China)	Cooperation, Interaction and Innovation of the Graduation Training Practice- SMDTex in Soochow University
14:15-14:30 (PARIS TIME) 20:15-20:30 (BEIJING TIME)	**Petchprakai Sirilertsuwan**, Sébastien Thomassey, Xianyi Zeng, Yan Chen (France, China)	Beyond Organizational and Supplier Inclusion: How Living Wages Influence Manufacturing Locations
14:30-14:45 (PARIS TIME) 20:30-20:45 (BEIJING TIME)	**Mulat Alubel Abtew,** Pascal Bruniaux, François Boussu, Carmen Loghin, Irina Cristian, Yan Chen, Li-Chaun Wang (France, Romania, China)	Pattern Engineering for Customized Women Seamless Ballistic protection Vest on 3D Virtual Mannequin
14:45-15:00 (PARIS TIME) 20:45-21:00 (BEIJING TIME)	**Vijay Kumar** (Sweden)	Traceability in Textile Supply Chain-Learnings from Doctoral Project
15:00-15:15 (PARIS TIME) 21:00-21:15 (BEIJING TIME)	**Chandadevi Giri**, Xianyi Zeng, Yan Chen (France, China)	Data Driven Demand Forecasting for Sustainable Fashion Apparel Retail Industry
15:15-15:30 (PARIS TIME) 21:15-21:30 (BEIJING TIME)	**Yan Hong,** Xianyi Zeng, Pascal Bruniaux, Antonela Curteza, Yan Chen (France, Romania, China)	Development of an Intelligent Knowledge-Based Personalized Garment Design Support System for People with Atypical Morphology
15:30-15:45 (PARIS TIME) 21:30-21:45 (BEIJING TIME)	**Prisca Aude Eutionnat-Diffo**, Yan Chen, Jin-Ping Guan, Aurelie Cayla, Xian-Yi Zeng, Christine Campagne, Vincent Nierstrasz (Sweden, France, China)	Functional Textile Development Through 3D Printing onto Textiles
15:45-16:00 (PARIS TIME) 21:45-22:00 (BEIJING TIME)	**Sweta Iyer,** Vincent Nierstrasz, Nemeshwaree Behary (France, Sweden)	The Emerging use of Bioluminescence: An Overview and its Research for Application in the Field of Textiles
16:00-16:15 (PARIS TIME) 22:00-22:15 (BEIJING TIME)	**Ajinkya Powar,** Anne Perwuelz, Nemeshwaree Behary, Le Vinh Hoang, Thierry Aussenac, Carmen Loghin, Stelian Sergiu Maier, Jin-Ping Guan, Guo-Qiang Chen (France, Romania, China)	Decolorization of the Reactive Dyed Cotton Fabrics with the use of Ozone Assisted Eco-technology
16:15-16:30 (PARIS TIME) 22:15-22:30 (BEIJING TIME)	**Mohammad Neaz Morshed**, Nemeshwaree Behary, Jin-Ping Guan, Guo-Qiang Chen, Vincent A. Nierstrasz (France, Sweden, China)	Inorganic and Bio-catalyst Immobilization on Textile for Environment Remediation Application
16:30-16:45 (PARIS TIME) 22:30-22:45 (BEIJING TIME)	**Tarun Kumar Agrawal** (Sweden)	Towards Development of a Secured Traceability System for Textile Supply Chain - A Reflection and Summery of my Doctoral Thesis
16:45-17:00 (PARIS TIME) 22:45-23:00 (BEIJING TIME)	**May Kahoush**, Nemeshwaree Behary, Jin-Ping Guan, Aurélie Cayla, Vincent Nierstrasz (France, Sweden, China)	Eco-Technologies for Immobilizing Redox Enzymes on Conductive Textiles, for Sustainable Development
17:00-17:15(PARIS TIME) 23:00-23:15 (BEIJING TIME)	**Molla Tadesse Abate**, Ada Ferri, Jin-Ping Guan, Guo-Qiang Chen, Vincent Nierstrasz (Italy, Sweden, China)	Supercritical CO2 Technology in Resource-effective Production of Functional and Smart Textiles
17:15-17:30 (PARIS TIME) 23:15-23:30 (BEIJING TIME)	Round table discussion - conclusion	

Workshop 2: Fashion Big Data Technology Platform –Textile Supply Chain Digitization and Industry 4.0

Internet, Big Data and Artificial Intelligence constitute the key technology drive for the future of fashion textile industry, permitting to create new business models for the whole supply chain in the era of Industry 4.0.

In this workshop report a novel fashion big data technology platform linking consumers' needs for fashion textile products and global fashion market demands with the garment design and textile manufacturing processes. This platform enables the development of new business models for retailers (B2C) and business partners in the supply chain (B2B), providing data-based services

The textile and clothing industry still occupy a crucial position in the manufacturing sector in Europe. However, this industrial manufacturing sector was challenged by a drastic reduction in Europe due to relocation to countries outside the EU with cheaper labour costs, leading to the reduction of manufacturing in Europe and leaving facilities as well as data and knowledge unexploited.

Supply chains in the EU are still too weak when facing international competition due to low levels of communication and cooperation between the concerned actors and lack of efficient tools for quick access to their target consumers.

Existing digital platforms can only process relatively simple interactions at the interfaces between consumers and retailers, in which B2B (interactions among the manufacturers in the supply chain) and B2C (interactions between consumers and retailers) models have not been systematically integrated.

The FBD_BModel project, funded by the European Commission, created a digital technology platform for enabling small series innovative high value fashion and functional garments manufacturing and e-commerce, through a fully connected and data-driven local supply chain in the EU, to meet consumer's personalized needs in terms of fashion, sensory and functional performances.

FBD_Foundation will meet academic and industrial stakeholders, to showcase the project results and their future exploitation, for the development of novel supply chains supporting innovative data services in fashion industry digitization.

This workshop will be organized in three special sessions to provide in-depth knowledge disseminations and product results exploitation in three areas, including fashion apparel digitization platform, functional apparel digitization platform and Digital supply chain management platform. Detailed programmes are shown below for each special workshop.

Workshop 2: Fashion Big Data Technology Platform –Textile Supply Chain Digitization and Industry 4.0

Session B-Workshop		
FBD Workshop: Fashion Big Data Business Model		
Session Chairs	Prof. Prof. Xiani Zeng (France)	Prof. Henry Yi Li (UK)
Time Slot	**Author Name**	**Paper Title**
12:30-13:00 (PARIS TIME) 18:30-19:00 (BEIJING TIME)	**Introductiony:** Host-UoM/ENSAIT	Inroduction and Welcome message, ENSAIT and UoM
13:00-13:30 (PARIS TIME) 19:00-19:30 (BEIJING TIME)	Prof. Xianyi Zeng (ENSAIT, France)	An Overview of FBD_BModel: Innovations Towards Textile Industry 4.0 via Digitalization and Intelligentization
Fashion Cloud Computational Interative Design System (Fashion CC_IDS)		
13:30-14:00 (PARIS TIME) 19:30-20:00 (BEIJING TIME)	Prof. Xianyi Zeng (ENSAIT, France)	Introduction to FBD Fashion CC_IDS
14:00-14:15 (PARIS TIME) 20:00-20:15 (BEIJING TIME)	Shukla Sharma, Ludovic Koehl, Pascal Bruniaux, Xianyi Zeng (ENSAIT, France)	Intelligent Interactive Fashion Design System for Customized Garments: Recommendation, 3D Garment Visualization, Adjustment
14:15-14:30 (PARIS TIME) 20:15-20:30 (BEIJING TIME)	Zhujun Wang, Shukla Sharma, Ludovic Koehl, Pascal Bruniaux, Xianyi Zeng (ENSAIT, France)	Intelligent Interactive Fashion Design System for customized garments: 3D garment fitting, design knowledge base
Functional Cloud Computational Interative Design System (Functional CC_IDS)		
14:30-15:00 (PARIS TIME) 20:30-21:00 (BEIJING TIME)	Prof. Henry Yi Li (UoM, UK)	Cloud Computational Interactive Design Systems –Linking Consumers with Fashion Supply Chain Business Partners Directly and Digitally
15:00-15:15 (PARIS TIME) 21:00-21:15 (BEIJING TIME)	**Kuo Cao**, Zhangchi Liu, Tim Jun Li, Yi Lin (UK)	IT Architecture and Technology Platform for Digital Fashion Business Model in Bigdata Era
15:15-15:30 (PARIS TIME) 21:15-21:30 (BEIJING TIME)	**Zhangchi Liu**, Kuo Cao, Tim Jun Li, Yi Li (UK)	Data Services and Digital Fashion Business Model in Big data Era
15:30-15:45 (PARIS TIME) 21:30-21:45 (BEIJING TIME)	**Tim Jun Li**, Kuo Cao, Zhangchi Liu, Zhaoyang Yuan, Yi Li (HK, China)	API Design and Data Service Function for Digital Fashion Business Model in Bigdata Era
15:45-16:00 (PARIS TIME) 21:45-22:00 (BEIJING TIME)	**Fengzhi Li**,Yi Li (China)	Prediction of Human Thermal Physiological Response Based on Wiggers Diagram of the Cardiac Cycles
16:00-16:15 (PARIS TIME) 22:00-22:15 (BEIJING TIME)	**Lihuan Zhao**, Zhangchi Liu, Kuo Cao, Tim Jun Li, Yi Li (China)	Effect of Fabric Moisture Management Properties on Thermal Functional Performance of Men's Business Shirts
16:15-16:30 (PARIS TIME) 22:15-22:30 (BEIJING TIME)	**Tianyu Kou**, Zhangchi Liu, Kuo Cao, Tim Jun Li, Yi Li (UK)	Predicting Comfort Performance of Business Shirts in Different Wear Situation
16:30-16:45 (PARIS TIME) 22:30-22:45 (BEIJING TIME)	**Xueying Liu**, Zhangchi Liu, Kuo Cao, Tim Jun Li, Yi Li (UK)	The Effect of Membrane Position on Thermal Comfort of Men's Jacket
16:45-17:00 (PARIS TIME) 22:45-23:00 (BEIJING TIME)	**Ranyi Tao**, Zhangchi Liu, Kuo Cao, Tim Jun Li, Yi Li (UK)	The Effect of Garment Style on Thermal Comfort of Women's Coat
17:00-17:15 (PARIS TIME) 23:00-23:15 (BEIJING TIME)	**Francesca Whitaker,** Zhangchi Liu, Kuo Cao, Tim Jun Li, Yi Li (UK)	Exploring the Effect of Fabric Structure and Moisture Management Properties on the Thermal Comfort of Sportswear
17:15-17:30 (PARIS TIME) 23:15-23:30 (BEIJING TIME)	**Qing-hong Huang**, Zhangchi Liu, Tim Jun Li, Yi Li (UK)	Influence of Fabric Properties on Clothing Thermal Comfort under Different Environmental Temperatures