TBIS

TBIS 2024
International Symposium
Daegu, Hybrid Conference

Textile Sustainability, Ecology and Health

Programme Book

The 17th Textile Bioengineering and Informatics Symposium
August 20-23, 2024

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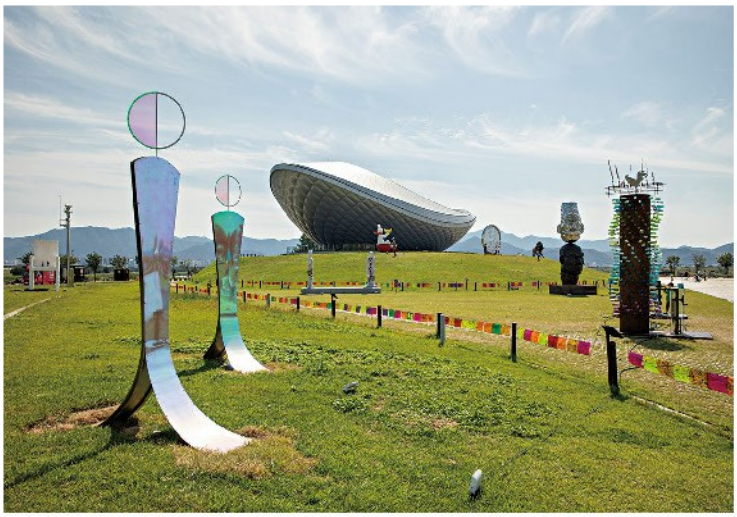
TBIS 2024 Welcoming Message



Emeritus Prof. Seung Kook An, Ph.D.
Conference Chair, TBIS 2024
Dept. of Organic Material Sci. and Engin.
Pusan National University

Welcome to TBIS 2024, Daegu

TBIS is a well-established international research forum with long tradition. Its main aim is to exchange scientific views and new technology developments as well as promote cross-disciplinary research from material sciences, nanotechnology, fiber sciences, textile engineering, eco technology, textile and clothing, with more emphasis on interactions of human and environment.

TBIS 2024 is the seventeenth in this conference series, and will aim to establish international interdisciplinary cooperation in various fields of science, research and economy that are linked by Textile Bioengineering and Informatics in its broad meaning.

Daegu is the third largest city in South Korea, and famous for textile industry. The two universities in Daegu, Yeungnam University and Kyungpook National University have the textile department. The Daegu Convention & Vistors Bureau was established in 2003, and it will support TBIS 2024. Daegu is famous city with dedicated convention events and international conferences in Korea.

We sincerely hope that all participants will have opportunities to visit the city of Daegu and enjoy our local fashion history and culture.

Seungkook An

Welcoming Message

Academician Professor Meifang Zhu
Honorary Chairman, TBIS International Executive Committee Member,
Member of the Chinese Academy of Sciences
Director, State Key Laboratory for Modification of Chemical Fibers and Polymer Materials
Dean, College of Materials Science and Engineering of Donghua University
Director, Innovation Base of Advanced Fabrication Technology of Fiber Materials

On behalf of the organizing committee, it is my great pleasure to welcome you to the 17th Textile Bioengineering and Informatics Symposium (TBIS), Daegu, Korea. TBIS is an international grand forum on textile bioengineering with human health and sustainability research. It is our great honor to support TBIS 2024, which is themed on Textile Sustainability, Ecology and Health.

As the director of the State Key Laboratory for Chemical Fiber and Polymer Materials (SKLFPM, Donghua University, China), I would like to invite your attention to fibers, which are the fundamental materials to not only the textile industry, but also to many other areas, including but not limited to the biomedical, sustainability, aerospace and military, energy, and environmental applications. Sustainable development is the key prerequisite for the high-quality development of the entire chemical fiber industry.

As the only state-level scientific research institution of fibers and textiles in China, SKLFPM has made great contributions to the development of chemical fiber industry in China. It was founded in 1992 under the approval of State Development Planning Commission and completed the national acceptance in 1996. It passed the national assessment 4 times since 2003 and in 2018, SKLFPM was rated as "Excellent State Key Laboratory". With a similar purpose to TBIS, SKLFPM has been organizing the International Conference on Advanced Fiber and Polymer Materials since 2002, with a hope of promoting international cooperation and scientific communication in the field of fiber materials. In 2019, we have launched a new journal, Advanced Fiber Materials, which aims to provide a platform for scientists, engineers and entrepreneurs all over the world to publish their latest developments on fibers and fiber-related technology. In 2023, we have worked together with TBIS to transform the International Digital Health and Intelligent Materials Alliance (IDHIMIA) to be the International Advanced Fiber Materials Society (IAFMS), which commits to promote interdisciplinary and transnational technological innovation. We sincerely invite you to join and actively contribute your expertise and networking resources for the benefit of the world and humanity through our conference, our journal, our society, as well as many of our platforms.
I sincerely hope you will enjoy the conference and have a great time in Daegu, Korea with your old friends, as well as new friends. Many thanks for your participation and contributions!

Welcoming Message

Academician Professor Wei Lin Xu
Honorary Chairman, TBIS International Executive Committee
Academician of Chinese Academy of Engineering
President of Wuhan Textile University
Vice President of China Textile Engineering Society
China

It is with great pleasure and honor to warmly welcome you to attend the 17th international TBIS symposium, to be held August 20-23, 2024 at Daegu, Korea.

With the theme of this year's symposium as "Textile Sustainability, Ecology and Health", it aims to create a world-class platform to bring together leading researchers in the related fields of materials, biology, textile science and engineering, computer science and informatics and life sciences; to identify key challenges and derive solutions and explore opportunities for setting up future development agendas to create and revolutionize high quality products and services for the protection, health, performance and comfort of the people from a variety of natural and human disasters.

We look forward to working and cooperating with you in creating a dynamic exposition to foster, promote and develop all aspects of science and technology in bioengineering of materials, fibers and textiles!
I wish the symposium a great success.

Welcoming Message

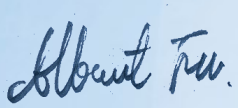
Professor Guangwei Fu
Chairman of China Textile Engineering Society
Deputy Secretary of the Party Committee of China Textile Information Center Director of CNTAC Testing Center
Chairman and General Manager of the National Textile Fabric Museum,
Director of CTES Textile Industry Research Institute
Deputy Director of Standardization Committee of CNTAC
China

Dear honorary speakers and delegates.

Please allow me to extend my gratitude to TBIS 2024 on behalf of the China Textile Engineering Society.

Even though COVID-19 pandemic has fade away, its negative impact on the economy and business activities, as well as sustainability on a global scale remains a critical issue. The pandemic has changed the working environment, lifestyles, economies, and business practices in the world. Digitalization has been accelerated, and sustainability measures to combat environmental changes and public health crisis have become the focus of science and technology innovation in textile industry.

I am delighted to see that TBIS 2024 continues to focus on the key challenges in "Textile Sustainability, Ecology and Health". The workshops on clean production and sustainability, as well as digital health are timely for discussing and debating the science and key technical problems in delivering technical solutions to the world. The international cooperation forum for establishing cross disciplinary project teams is an excellent initiative to promote collaborations between countries and continents in working together to create the new norm of a more sustainable and better world for all human beings in the post pandemic era. Thank you for your attention. I sincerely wish you have successful and fruitful conference.



Welcoming Message

Professor Yi Li
Chairman, TBIS 2024 International Scientific Committee
Chair of Textile Science and Engineering
Department of Materials, School of Natural Sciences
The University of Manchester
Manchester, UK

I am delighted to welcome TBIS 2024 delegates to Daegu, Korea. TBIS (Textile Bioengineering and Informatics Symposium) is a well-known international forum exploring the cross-disciplinary interfaces of materials, biology, textile science and engineering, computer science and informatics, design and life sciences. More and more world-class researchers from across the scientific community attend the meetings of the TBIS to present the outcomes of their latest research, to discuss unsolved scientific problems and social challenges, to identify opportunities and to establish future development agendas. I have great pleasure in hosting TBIS 2024 at Pusan National University, Daegu, Korea, from August 20-23, 2024.

With continuous success and enthusiastic support from authors and experts around the world, TBIS has been recognized internationally as a brand characterized by high-quality conferences with vision, creativity, excitement and global networks. Meanwhile, TBIS proceedings have been indexed by renowned worldwide scientific and academic databases such as EI Compendex, Scopus and CPCI/1S1 Web of Science. Since 2008, TBIS has published 2,280 research papers, contributed by 380 organizations from 31 countries/regions and supported by 445 funding agencies/466 grants, thus becoming a leading academic conference organizer and publisher.

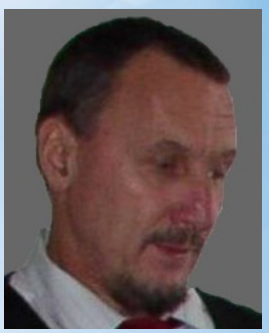
TBIS has established an effective platform for academic institutions and individual scholars, researchers and students to publish their research and communicate with peers and experts in the field to receive recognition for their work and increase its impact. TBIS is a peer-reviewed conference with the aim to provide a unique global platform for researchers and industrialists working in the whole supply chain from materials, fibers, textiles and apparel and technical textiles to services such as the medicine, healthcare, fashion, sports, firefighting and home textiles, who have the common interests in providing high-quality products and services for human populations living in various environments and exposed to various natural and human disasters. The cross-disciplinary feature of TBIS has created a unique platform to discuss, debate and promote globalized sustainable supply chains ecosystems for textile industry from advanced materials, smart manufacturing to digitalized services in big data economy. As the EU parliament has approved the ESG and Ecodesign legislations recently, Textile Sustainability, Ecology and Health are the key themes for this year of TBIS annual conference.

On behalf of the International Scientific Committee, we cordially welcome you to TBIS 2024 in Daegu and look forward to your active participation.

Welcoming Message

TECHNICAL UNIVERSITY OF LIBEREC
Faculty of Textile Engineering

Professor Jiri Militky
Vice Chairmen, TBIS International Executive Committee
Textile Faculty
Technical University of Liberec
Czech Republic



Welcome to TBIS 2024.

Currently, development in fields using fibrous structures is focused on the comprehensive investigation of processes, methods and materials for the production of textiles, the use of fibrous structures and their disposal with regard to the sustainable development of society and ensuring the quality of the environment. This requires fastening mutual connections in the areas of textile design, selection of new fibrous materials, development of new production technologies, characterization of fiber material focused on chemical and physical mechanical properties, comfort, end use properties, and waste processing in the range from nano to macro scale. Due to their multidisciplinary character, the TBIS conference is a suitable platform for the development of these links between specialists from different fields. This year conference has as basic themes: Textile Sustainability, Ecology and Health, which also correspond to the focus of the host organization, which is The Institute of Pusan National University, Daegu, Korea (INF&MP).

INF&MP is an excellent interdisciplinary research Centre with international standing, involved in complex research on obtaining and processing of fibrous and herbal raw materials. Textile related activities of this institute are focused on application of biotechnology in textile branch, processing technologies of natural fibers, development of functional materials, including pro-healthy and medical products based on natural raw materials, technologies of fire- and bio-retardants preparation, complex research on biologically active substances and aspects of environmental protection in natural fibers processing.
The research conducted at this Institute covers development of functionalization of textiles made of natural fibers and blends to meet needs of their multifacetal application, utilization of polluted land by cultivation of non-food crops, use of co-products from processing of textile raw materials and modern composite materials based on textile raw materials. Nanotechnology (including nano-fibres from natural resources and nano-modifiers for intumescent fire-retardant systems) are investigated as well.

On behalf of the organizing committee, warm welcome to TBIS 2024.

Welcoming Message

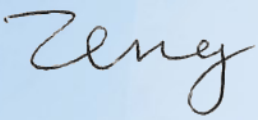
Professor Xianyi Zeng
Deputy Chair, TBIS International Executive Committee
Ecole Nationale Supérieure des Arts et
Industries Textiles (ENSAIT)
Roubaix, France

Welcome to TBIS 2024.

Textile Bioengineering and Informatics Symposium (TBIS) is a well-established international research forum to exchange scientific views and new technology developments, as well as in promoting cross-disciplinary research collaboration in material sciences, nanotechnology, fiber sciences, textile engineering, eco technology, textile, and clothing CAD, with more emphasis on interactions of human/material/environment.

TBIS 2024 is the Seventeenth in this conference series. It was planned to be held in Daegu, Korea.

Founded in 1881, ENSAIT is a fashion and technology-oriented French higher education and research institution for training engineers at a master level. Its research activities cover MTC (Mechanics and Textile Composites), MTP (Multifunctional Textiles and Processes) and HCD (Human Centred Design). ENSAIT has been working with various European and national projects on textile sustainable development (bio- sourced materials, recycling, LCA, traceability, etc.), smart textile and wearable system development for various applications (health, security, sport, etc.), textile product and supply chain digitalization and intelligentization. Most of the themes proposed in TBIS 2024 are consistent with the research activities of ENSAIT. With the experiences and competences acquired through past research activities, we can effectively contribute to technological innovations in the textile industry.



Welcoming Message

SHINSHU UNIVERSITY | Faculty of Textile Science and Technology

Dr. Kanji Kajiwara
Advisor, TBIS International Executive Committee
Research Fellow
Faculty of Textile Science and Technology
Shinshu University
Ueda, Japan

We learned from the COVIT-19 pandemic how fragile our society is with regard to its global sustainability and that we need more collaboration rather than competition to create a sustainable and safe society. This year, TBIS2024 provides an open platform to foster a dialogue on “Textile Sustainability, Ecology and Health”, which will play a key role for restructuring a sustainable and safe society in the next generation.

DX (digital transformation) is now inevitable and will connect the world throughout. It may be destructive and require a new business model with new technologies, which should accelerate GX (green transformation) by synergistically linking together in order to minimize carbon/water footprint. TBIS is a first symposium launched to emphasize the transformation of the global society through the bioengineering and informatics. The human activity has resulted in the catastrophic environment. We are now in the middle of a new geological era of Anthropocene which is characterized by deposited materials made by us. We need to act immediately to deaccelerate the drastic change of the socio-economy and the global environment in these 50 years to recover a sustainable earth. TBIS2024 will give an opportunity to share this critical feeling and collaborative action for next generation.

Kanji Kajiwara

Welcoming Message

Professor Juming Yao
Conference Chairman, TBIS 2025
Vice President of Zhejiang Sci-Tech University
Hangzhou, China

On behalf of the organizing committee of Textile Bioengineering and Informatics Symposium (TBIS) 2025, I would like to extend my warmest welcome to all scientists, researchers and friends around the world to Zhejiang Sci-Tech University for TBIS 2025, the 18th in its conference series.

TBIS is a well-established international academic platform for scientists and researchers to share innovative research ideas, findings and latest trends and development in cross-disciplinary fields of materials, biology, textile science and engineering, computer science and informatics, design and life sciences. Over the years, TBIS has inspired numerous innovative achievements, and we believe it will continue to foster possibilities, opportunities and collaborations in research and development.

Zhejiang Sci-Tech University (ZSTU) has a history of 127 years and is recognized now as one of the key universities in Zhejiang Province. With a coordinated development approach across various disciplines including sciences, engineering, arts, economics, management, law, fine arts, and education, ZSTU maintains a focus on engineering and boasts distinct characteristics and advantages in textiles. Disciplines of material sciences, chemistry and engineering rank among the global top 3‰ and 2‰ by ESI. ZSTU offers a comprehensive talent cultivation system of doctoral, master's, and bachelor's degree programs. Additionally, ZSTU owns a great number of national-level talents and research teams, who have been striving to enhance scientific and technological innovation for serving the major needs of national and regional development. In recent years, a number of high-level scientific research platforms has been established, and remarkable research achievements have been made, providing long-term benefits for society and resulting in 19 national awards of technological progress and innovation.

ZSTU is situated in Hangzhou, a city renowned for its cultural heritage and technological innovation. It is a tourist destination in China, celebrated for its natural beauty and historical landmarks including West Lake, Lingyin Temple, and the Grand Canal. It is also a pioneer in digital economy, being home to e-commerce giant Alibaba.

We look forward to hosting a successful conference and hope that all participants will enjoy and benefit from both the event and the charms of Hangzhou.

Juming Yao

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Daegu Metropotan City

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Donghua University

State Key Laboratory of New Textile Materials and Advanced Processing Technologies
Wuhan Textile University

Beijing Institute of Fashion Technology

Zhongyuan University of Technology

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Global Science Press

Plenary Medal Lectures - Wednesday, August 21, 2024

Topic of the Speech:
Is Recycling Doing a Good Job for Our Sustainable Future?

Professor Kanji Kajiwara
Shinshu University
Japan

Prof. Kanji Kajiwara is now a Special Project Professor for Fiber Innovation Incubator of Shinshu University. He has started his carrier as a polymer physicist at Kyoto University, special-ized in the field of dilute solution properties of synthetic and bio-polymers including critically branched polymers. A natural extension of this study led to the structural characterization of gels, where a small-angle X-ray scattering method has been fully explored by the use of synchrotron radiation. In 1988, he joined Kyoto Institute of Technology and was engaged more in fiber and textile sci-ence, and served as a Governmental adviser in the policy making committee for the fiber/textile technology strategy. He moved to Otsuma Women University in 2002 in order to refurbish the education system for female talents in the textile and apparel field. Professor Kanji Kajiwara is now a Research Fellow at Fii (Fiber Innovation Incubator) of Shinshu University and an AREC (Asama Research Extension Center) Coordinator.

Topic of the Speech:
Textile Sustainability ?Past, Present and Future

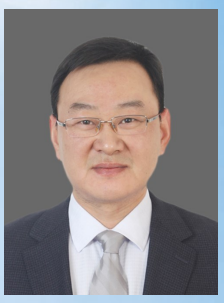
Professor Xugai Wang
The Hong Kong Polytechnic University
HongKong, China

Prof. Xungai Wang is a Global STEM Scholar and Chair Professor of Fiber Science and Technology at the Hong Kong Polytechnic University. He previously served as the Pro Vice-Chancellor (Future Fibers) at Deakin University, Australia. Professor Wang is the current Editor-in-Chief for the Journal of the Textile Institute. He is a recipient of the Fiber Society Distinguished Achievement Award and the H&M Foundation Global Change Award. Professor Wang's research interests are in natural fibers, yarn technology, sustainable and functional textiles, as well as clean processing technologies.

Plenary Medal Lectures - Wednesday, August 21, 2024

Topic of the Speech:
Ionogel Electroactive Materials and Wearable Devices

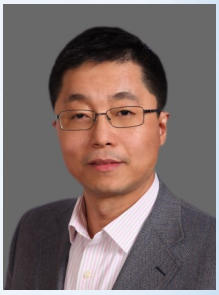
Professor Wei Chen
Zhejiang Sci-Tech University
China



Prof. Wei Chen is now a Professor and National High-Level Talent at Zhejiang Sci-Tech University. He obtained PhD in Condensed Matter Physics from Chinese Academy of Sciences in 2001. From 2001 to 2006, he worked as Postdoc at University of Science and Technology of China, and The Hong Kong Polytechnic University respectively. From 2006 to 2018, he was a Professor at Suzhou Institute of Nano-tech and Nano-bionics, Chinese Academy of Sciences. From 2018 to 2023, he worked as a Full Professor at The Hong Kong Polytechnic University. In June 2023, Professor Chen joined Zhejiang Sci-Tech University. He is internationally recognized for his leading research in nanotechnology based smart materials and devices. He has published more than 150 papers in high-impact journals including Nat. Commun., Adv. Mater., Angew. Chem. Int. Ed., Mater. Sci. Eng. R: Rep., Prog. Polym. Sci., etc. All papers have been cited more than 15,000 times, h-index is 59.

Topic of the Speech:
Fighting the Long-Term Health Impact: Cancer and Hazardous Substance Exposure in Firefighters and Understanding

Professor Guowen Song
College of Human Science
Iowa State University
United States



Prof. Guowen Song is the Professor and the Noma Scott Lloyd Chair in the Department of Apparel, Event and Hospitality Management at Iowa State University's College of Human Sciences. He received his Ph.D. degree in Textile Engineering, Chemistry and Science, at North Carolina State University's College of Textiles in Raleigh, North Carolina. Song's academic interest is functional textiles and protective clothing for human safety and health. His interdisciplinary research team applies a combined modeling and lab simulation approach to the study of PPE. The research covers novel textile materials, system design, the simulation of hazards, PPE contamination, the analysis and prediction of clothing performance, as well as the development of new methods and standards. Dr. Song has published over 130 scientific papers in peer-reviewed journals and conference proceedings. He has authored four books and contributed a dozen chapters to books in his field of study.

Plenary Medal Lectures - Wednesday, August 21, 2024

Topic of the Speech:
Supercritical Fluid Technology-based Decellularized Extracellular Matrix for Biomedical Application

Professor Aizheng Chen
Huaqiao University
China

Prof. Aizheng Chen received his Ph.D. degree in Biomedical Engineering from Sichuan University in 2007. After postdoctoral research at The Hong Kong Polytechnic University for two years, he joined Huaqiao University, where he is now a professor and vice dean of College of Chemical Engineering, and director of Institute of Biomaterials and Tissue Engineering. He also serves as a committee member of Chinese Society for Biomaterials, and the secretary-general of Chinese Society for Biomaterial-Composite Materials Branch. He was a visiting research professor for a year in Prof. Ali Khademhosseini Lab at Harvard medical school. He has been granted 9 National projects, and has published more than 150 peer-reviewed publications; His research interests are the application of biomaterials for drug delivery systems using supercritical fluid technology, tissue engineering and regenerative medicine. He was listed in 2020 National Hundred, Thousand and Ten Thousand Talent Project and awarded with an honorary title "Young and mid-aged expert with outstanding contribution".

Topic of the Speech:
Electrostatic Spray Coating Technology for Thermoplastic Composites

Professor Apurba Das
Department of Textile & Fibre Engineering
Indian Institute of Technology Delhi
India

Prof. Apurba Das is a Professor in the Department of Textile and Fibre Engineering; and an Institute Chair Professor at the Indian Institute of Technology, New Delhi, India. He has guided many Ph.D., M. Tech., B. Tech. students and presently guiding several students. He has published more than 350 research papers, edited/ written several books/monographs, and written many chapters in books. He has completed more than 60 research projects from government funding agencies and carried out many consultancy projects for industries. He has developed several instruments for the characterization of textile materials and filed 18 patent applications. His main areas of teaching and research interest are fibre-reinforced composites, clothing comfort, sports textiles, nonwovens and technical textiles, protective textiles, etc. He is the recipient of the Teaching Excellence Award. He has international research collaborations with universities from different countries like Germany, Poland, Hungary, Slovenia, Italy, Portugal, China, South Korea, UK, Hong Kong, Croatia etc.

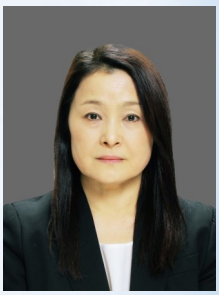
Plenary Medal Lectures - Wednesday, August 21, 2024

Topic of the Speech:
Key Technologies and Applications in the Research and Development of High-Performance Clothing for Winter Olympic Training Competitions

Professor Li Liu
Beijing Institute of Fashion Technology
China

Prof. Li Liu is affiliated with Beijing Institute of Fashion Technology and holds advisory and part-time doctoral supervisor roles at Tianjin Polytechnic University. She serves as a key scientist in the General Administration of Sport's preparation for the 2022 Beijing Winter Olympics, holding the title of "China Ice and Snow Scientist." Additionally, Professor Liu is the Director of the Fashion Technology Research Institute at Beijing Institute of Fashion Technology. Over the past five years, she has published over 80 papers and successfully completed more than 50 projects. In 2019, she led the National Key R&D Program project, focusing on the development of high-performance clothing for winter sports and training competitions. This initiative contributed to the research and development of training and competition attire for nine national sports teams, resulting in 5 gold, 2 silver, and 2 bronze medals for the Chinese sports delegation at the 2022 Winter Olympics.

Topic of the Speech:
Heat Retention of Fabrics Composed of Moisture-absorbing Heat-generating Fibers and Wear Comfort



Professor Chiyomi Mizutani
Otsuma Women's University
Japan

Prof. Chiyomi Mizutani received Ph.D. degree from Shinshu University in Textile Engineering. She is a professor in department of clothing and Textile at Otsuma Women's University in Japan. She is interested in the effects of functional fibers on the human body, related to odors and deodorant fibers, antibacterial fibers and itchy of skin, etc.

Plenary Medal Lectures - Wednesday, August 21, 2024

Topic of the Speech:
Developing a Green Development Evaluation System for Ethiopian Textile and Garment Industrial Parks

Professor Xuemei Ding
College of Fashion and Design
Donghua University
China

Prof. Xuemei Ding is a Professor in College of Fashion and Design, Donghua University. Her main teaching and research interests include Sustainable development in textile industry, as well as Fabric care theory & technology, which are supported/sponsored by National Natural Science Foundation of China (NSFC), World Wide Fund For Nature (WWF), Ministry of Science and Technology of China (MOST), Science and Technology Commission of Shanghai Municipality (STCSM), Clothing Industry Training Authority of Hong Kong (CITA), Procter & Gamble Co. (P&G), Unilever Co., Invista Textile Co. (INVISTA), BSH Electrical Appliances Co., Ltd. (BSH), HAIER Group, MIDEA Group, Jide Group, Esquel Group, Panasonic Co., Arcelik Group and so on. She has been invited as keynote speakers and/or session chairs over 40 industrial or academic conferences. She has made numerous contributions including more than 400 academic journal papers, conference papers and book chapters, more than 30 Chinese Patents as well as 16 textile industrial standards.

Topic of the Speech:
Comparison of Subjective and Objective Assessments of Japanese People's Feeling of 'Out of Place' with Their Clothing

Professor Tamaki Takada Mitsuno
Shinshu University
Japan

Prof. Tamaki Takada Mitsuno received her Ph.D. degree in human life science, Specialist, at clothing physiology from Graduate school of Kyoritsu Women's University. Tokyo, Japan in 1996. She is currently a project professor, former head of the Home Economics course in Faculty of Education and in Graduate School of Medicine, Science and Technology (Doctor's Program). Her research interests include clothing wearing comfort, clothing pressure and its pressure sense, and supported wear for burning body fat and reducing swelling. So far, she has published over 70 peer reviewed journal articles. Currently, she is a Member of the Asian Regional Association for Home Economics, The Society of Fiber Science and Technology, Japan, The Japan Research Association for textile end-uses.

Plenary Medal Lectures - Wednesday, August 21, 2024

Topic of the Speech:
Wireless Temperature Sensing Yarn with UHF RFID Helix Dipole Hybrid Antenna for Respiratory Monitoring

Professor Jiyong Hu
Donghua University
China

Prof. Jiyong Hu, received his Ph.D. in textile engineering from Donghua University in 2008, and as a visiting student studied in ENSAIT, France between 2006-2007. Prior to joining the Donghua university faculty in 2011, he was a postdoctoral researcher in the Hong Kong polytechnic university. He has been engaged in the research and development of functional textiles, especially in flexible fiber/textile electronics and weaving technology of technical fabric. His researches are financially funded by the national key research and development project, the NSFC, NSFC of Shanghai, China post-doctoral science foundation and enterprise joint projects. He has won the science and technology progress award of the textile industry federation and the textile teaching reform achievement award. He has published more than 200 peer-reviewed papers, owned more than 40 invention patents, and published a monograph supported by the national publishing foundation and two textbooks.

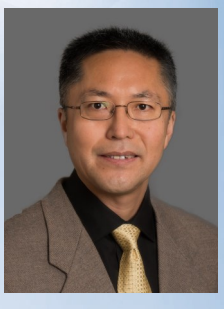
Topic of the Speech:
Methodology and Parameters Affecting the Clothing Comfort

Professor Seung Kook An
Pusan National University
Korea

Prof. Seung Kook An obtained his Ph.D. at the Fiber and Polymer Science Program, North Carolina State University in 1992. After working at National Industrial Research Institute for two years, he had been a professor of the department of Organic Material Science and Engineering at Pusan National University until 2020. He served as a director of Research Institute of Industrial Technology from 2011 to 2013, and was the director of RIS in textile material for transportation vehicle from 2011 to 2021. He has been the chairman of Korea Association of Tech Textile Industry (KATTI) from 2017. He served as the Korean delegate for ISO TC94/ SC13 and ISO TC94/ SC14 for 20 years. He served as a Vice President of Korean Fiber Society in 2010 and 2018. His research areas are protective clothing, physical properties of industrial textile products, comfort properties of industrial fabrics.

Plenary Medal Lectures - Thursday, August 22, 2024

Topic of the Speech:
Can Photoelectric Conversion Efficiency of Solar Cells Be Doubled?



Professor Bingqing Wei
University of Delaware
USA

Prof. Bingqing Wei is a Professor in the Department of Mechanical Engineering at the University of Delaware, USA. He received his Ph.D. degree in 1992 from Tsinghua University in Beijing, China. Dr. Wei was a faculty member at Louisiana State University from 2003 to 2007 and at Tsinghua University from 1992 to 2001. He was a Research Scientist at Rensselaer Polytechnic Institute from 2000 to 2003, and a visiting scientist at Max-Planck-Institut für Metallforschung, Stuttgart, Germany in 1998 and 1999. Dr. Wei is among Highly Cited Researchers from Clarivate for his research on nanomaterials that enable energy conversion and storage.

Topic of the Speech:
Impact of Cosmetic Hairspray on Fabric Flammability

Professor Uwe Reischl
Boise State University
USA

Prof. Uwe Reischl is a Professor in the Department of Public Health and Populations Science at Boise State University, USA. Dr. Uwe Reischl is a public health physician with research interests in occupational health, ergonomics and human factors. He received his undergraduate and graduate training at the University of California at Berkeley obtaining the Ph.D. degree in Environmental Health Sciences from the School of Public Health. He received his medical training at the University of Ulm in Germany where he obtained the M.D/ Ph.D. degrees in clinical medicine. Professor Uwe Reischl's current international research collaborations include projects with the University of Zagreb in Croatia and Khalifa University in Abu Dhabi, United Arab Emirates.

Plenary Medal Lectures - Thursday, August 22, 2024

Topic of the Speech:
Synthesis and Large-Scale Assembly of Piezoelectric Biomaterials and Devices

Professor Xudong Wang
Department of Materials Science and Engineering
University of Wisconsin-Madison
USA

Prof. Xudong Wang is the Grainger Institute for Engineering Professor in the department of Materials Science and Engineering at University of Wisconsin – Madison, and the Energy & Sustainability thrust Leader at the Grainger Institute for Engineering. Dr. Wang received his PhD degree in Materials Science and Engineering from Georgia Tech in 2005. His current research interests include developing advanced nanomaterials and nanodevices for mechanical energy harvesting from human activities for biomedical applications; and understanding the coupling effect between piezoelectric polarization and semiconductor functionalities. He has won number of prestigious national and international awards, including PECASE, NSF CAREER Award, DARPA Young Faculty Award, etc. He has published more than 170 papers on peer-reviewed journals, including Science, Nature, Nature Energy, etc. His current h-index is 75.

Topic of the Speech:
Structure Formation, Theoretical Analysis and Application of a Series of Auxetic Textiles

Professor Zhaoqun Du
College of Textiles
Donghua University
China

Prof. Zhaoqun Du obtained his Ph.D. from Donghua University and B.S. from Zhongyuan University of Technology. He has undertaken and completed over 10 projects from National Natural Science Foundation of China, Fok Ying Tung Education Foundation, and Ministry of Education of China. By acquiring substantial research funding support from government funding bodies and industry, he presented Structure foramtion and theoretical analysis of a series of Auxetic textiles (yarns, fabrics and composites), Comprehensive Handle Evaluation System For Fabrics and Yarns, Theoretical Analysis of Mechanical and Heat/Mass Transferring Behavior of Fiber Assembly, Finite Element Analysis and Simulation of Textile Products, Characterization and Modeling of Structure and Behavior of Textile Materials, and Design and Characterization of Functional and Smart Textiles. He has published over 100 papers and been authorized over 100 patents. Some of the achievements are awarded by National Key Research and Development Program of China and China National Textile Industry Association. He has taught various courses at undergraduate and postgraduate levels including Physics of Textiles, Textile Materials and Measurement, Nanocomposite Science and Technology.

Plenary Medal Lectures - Thursday, August 22, 2024

Topic of the Speech:
Automatic Identification of Textile Fibre Under Optical Microscope Using Neural Network Recognition Technology

Professor Lijing Wang
RMIT University
Australia

Prof. Lijing Wang works at RMIT School of Fashion and Textiles, Australia. He received his PhD degree from the University of New South Wales, Australia. He worked as a Postdoctoral Research Fellow at RMIT University in 1999 and 2000, followed by more than 8 years working at Deakin University as the Research Academic, then Senior Research Fellow. Since 2009, he returned to RMIT University. Prof Lijing Wang currently leads the Smart Textiles research cluster and Saving Lives research stream at the Centre for Materials Innovation and Future Fashion. He has been the chief investigator in more than 30 funded research projects, and his publications reached more than 240. His key research areas of interest are smart and high-performance textiles; wearable technology; protective garments; clothing comfort; fibres and polymers material science, engineering and modelling; material functional design; and clothing supply chain sustainability.

Topic of the Speech:
Calotropis Gigantea Fiber and Its Eco-functional Textiles

Professor Gang Li
College of Textile and Clothing Engineering,
Soochow University
China

Prof. Gang Li is a full professor at the National Engineering Laboratory for Modern Silk, Soochow University of China. He is the 15th high level talent of “Top six talent peaks” in Jiangsu province of China. He received MEng. from Donghua University of China, and obtained his Ph.D. in Biomedical textiles and Engineering from the Hong Kong Polytechnic University. He is also a visiting professor of Tufts University in USA. He published over 150 academic articles and issued 50 patents between 2006 and 2024. His research interests focus on biomedical materials, functional and smart textiles by combining silk-based materials, biomedical materials and textile engineering.

Plenary Medal Lectures - Thursday, August 22, 2024

Topic of the Speech:
Electrospun Nanofiber and Nanoyarn for Tissue Engineering

Professor Xiumei Mo
Donghua University
China

Prof. Xiumei Mo is a professor of Biomaterials in Donghua University. She had two years Postdoc experience in Kyoto University, three years research fellow experience in National University of Singapore, one year visiting professor experience in Aachen University of Applied Science and Technology. Her research work is electrospinning nanofiber and nanoyarn for different tissue regeneration, including skin, tendon, nerve, blood vessel, bone and cartilage tissue regeneration. She has published more than 450 papers, the papers were cited more than 16,057 times, her H-index is 67. She edited 11 books/chapters, she got the Science Technical Invention Awards from Shanghai Municipality(2008)，Science and Technology Progress Awards from State Department of People's Republic of China(2009), Nature Science Awards from Shanghai Government(2015), and Science Technical Invention Awards from China National Textile Industry Council (2022). She is the Committee Members of China Biomaterials Society and Vice Chairman of China Composite Materials Society Super-fine Fiber Branch.

Topic of the Speech:
Volumetric Bioprinting of Protein-based (Bio)inks for Tissue Engineering

Professor Maobin Xie
Guangzhou Medical University
China

Prof. Maobin Xie received his PhD degree of biomedical engineering from The Hong Kong Polytechnic University, Hong Kong, China in 2016, and then works as post-doc research fellow at Harvard University, Boston, USA from 2019-2021. He is now a professor at Guangzhou Medical University, Guangzhou, China. His research interests include 3D (bio)printing and biomaterials, especially focuses on the technology and (bio) inks development of volumetric additive manufacturing as well as the related biomedical applications. He has published over 30 peer-reviewed research work include Nature Communications, Science Translational Medicine, Proceedings of the National Academy of Sciences USA, Advanced Materials, Advanced Functional Materials, STAR Protocols, Biomaterials, etc. He has applied for 16 Chinese patents and 2 PCT patents. He serves as reviewers for over 10 international journals include Advanced Science, Advanced Healthcare Materials, ACS Nano, Applied Materials Today, Nanoscale, etc.

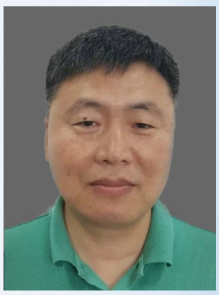
Plenary Medal Lectures - Thursday, August 22, 2024

Topic of the Speech:
Research on Human Thermal Regulatory Model based on Real Human Geometry and Arterial Vascular Tree

Dr. Fengzhi Li
Nanjing University of Aeronautics and Astronautics
China

Dr. Fengzhi Li serves as an associate Prof (Dec. 2006 to present) at the department of Man-Machine and Environment Engineering, College of Aerospace Engineering, Nanjing University of Aeronautics and Astronautics, Nanjing, China. Prior to working at NUAA, he worked as a Research Assistant, Associate in Hong Kong Polytechnic University, Hong Kong. He served as a Research Associate of Department of the Material, The University of Manchester, UK, 2020. In the past, he proposed the model of heat and moisture transfer in clothed human body system by the FEM to consider the 3-D real geometry of human body. Also he proposed a mask model of heat moisture and virus transfer, etc. And he published more than thirty papers in these fields, meanwhile, he chaired and participated in many of the National Natural Science Foundation.

Topic of the Speech:
Enhancing CO_2 Capture and Utilization: A Dual-Function Approach Using Silk Fibroin Hydrogels and Carbon Absorbents



Professor Xiaoqin Wang
Soochow University
China

Prof. Xiaoqin Wang obtained his Bachelor's degree on Microbiology in Shandong University in 1991, Master's degree on Molecular Biology in Peking Union Medical College in 1997, PhD's degree on biochemistry in the University of Groningen, the Netherlands, in 1998, and postdoc training in Prof. David Kaplan's lab on biomedical engineering at Tufts University, the US, during 2005-2009. Prof. Wang was appointed as a research assistant professor of Tufts University in 2011, a distinguished professor of Soochow University in 2012. Prof. Wang has published over 60 peer-reviewed articles and more than 30 US and Chinese patents, mainly on silk biomaterials for tissue engineering and drug delivery. Prof. Wang is also actively engaged in the commercialization of research results. He is the co-founder of biotech companies, Ekteino Laboratory and Cocoon Biotech Inc., in the US, and is also the founder and president of Simatech Inc., a Chinese startup company located in Suzhou.

Plenary Medal Lectures - Thursday, August 22, 2024

Topic of the Speech:
Color Construction of Textile Fiber Materials

Professor Liangjun Xia
Wuhan Textile University
China

Prof. Liangjun Xia received his master degree from Wuhan Textile University under the supervision of Prof. Weilin Xu, and obtained Ph.D. degree from Deakin University, Australia. His current research interests mainly include the color and functionalization construction of textile fiber materials for industrial applications. He was honored with the Hundred Talents Program of Hubei Province, China. Recently, Dr. Liangjun Xia has hosted and participated more than 10 research projects. He also has an extensive track records of 1 edited book and more than 30 publications in advanced textile materials and engineering journals including Nature Communications, Nano Energy, Chemical Engineering Journal, Green Chemistry, Journal of Cleaner Production, ACS Applied Materials & Interfaces, Carbohydrate Polymers, and Separation and Purification Technology.

Topic of the Speech:
Solutions for Microplastics

Dr. Lei Yao
Hong Kong Research Institute of Textiles and Apparel
Hong Kong, China

Dr. Lei Yao obtained her Bachelor of Science from Zhejiang Medical University and Master of Science in Zhejiang University, China. Dr Yao received her PhD in Textile Technology from The Hong Kong Polytechnic University, Hong Kong. Her current research interests centre around: textiles-human interactions, textile technologies and industry sustainability. She is now leading a research team and doing applied research on high-performance textiles, water-less textile technologies and post-consumer textile recycle. She has considerable research experience of textile and clothing and insight into applied research, R&D roadmap and innovation strategy.

Plenary Medal Lectures - Thursday, August 22, 2024

Topic of the Speech:
Quantifying the Parasitic Capacitance of Conductive Yarns Used in High-Frequency Applications

Professor Terry Ye
Department of Electrical and Electronic Engineering
Southern University of Science and Technology (SUSTech)
China

Prof. Terry Ye is the Professor at the Department of Electrical and Electronics Engineering (EEE) of Southern University of Science and Technology (SUSTech), and by courtesy, an Adjunct Professor at the Department of Electrical and Computer Engineering (ECE) of Carnegie Mellon University. Dr. Ye is active in academic research as well as industrial applications in many engineering areas that include IC Designs, Neuromorphic Computing ICs, Internet-of-Things (IOT) and Wireless Sensor Devices. Dr. Ye received his Ph.D. in Electrical Engineering from Stanford University and the Bachelor of Science in Electronic Engineering from Tsinghua University (Beijing). Prior to SUSTech, Dr. Ye had been the Professor of CMU-SYSU Joint Institute of Engineering since 2014, as well as the Director of Research and Technology Development of Hong Kong R&D Center for Logistics and Supply Chain Management (LSCM) since the center's inception in 2007. He also serves as the research fellow at the University of Hong Kong and the Chief Scientist of IOT Lab at Hong Kong University of Science and Technology. Beside his academic activities, Dr. Ye is keen on industry-academic collaborations. He had held various engineering and consulting roles in China Academy of Science, Impinj Inc., Synopsys Inc., Analog Device Inc., Magma Design Automation Inc., Silicon Architects Inc. and many other Silicon Valley companies.

Topic of the Speech:
Construction and Application of Breathing All-fiber Nanogenerator

Professor Wei Fan
Xi'an Polytechnic University
China

Prof. Wei Fan is affiliated with Xi'an Polytechnic University, Xi'an, China. He is associate dean of Textile Science and Engineering College, Dean of Flexible Electronics and Intelligent Textile Research Institute, Director of Key Laboratory of Functional Textile Materials and Products of the Ministry of Education. He is the winner of the Shaanxi Outstanding Youth Science Fund project, leader of Shaanxi University Youth Innovation Team. He is mainly engaged in the design and preparation of advanced fibers and its aggregates. In recent years, he has presided over more than 30 national, provincial, bureau and enterprise cooperation projects. He has published more than 100 papers as the first author or corresponding author in Nat. Commun., Adv. Mater., and ACS Nano and other journals. He has edited 1 monograph, 1 textbook, and 1 translation. He presided over 1 second prize of Science and Technology Progress Award of Shaanxi Province. He serves as an Editorial board of Adv. Compos. Hybrid. Mater. and Young Editorial Board of Adv. Fiber. Mater.

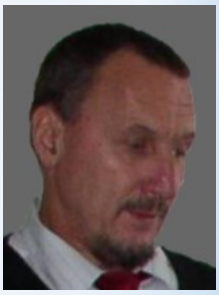
Plenary Medal Lectures - Thursday, August 22, 2024

Topic of the Speech:
Implementation of Clothing from Conception to Design Based on the AGI's Diffusion Transformer Framework

Dr. Aris Rui Huang
Founder of Chengdu SwiftChain Technology Co., Ltd.
Visiting Associate Professor of Xihua University
China

Dr. Aris Rui Huang, Founder of Chengdu Swiftchain Technology Co., Ltd., Senior system architect, Visiting associate professor of Xihua University, Columnist of "JINSE" and "8BTC" and "WHOSHIPM" and "WEIYANGX", Blockchain expert of AISINO Co., Ltd, Blockchain expert of Beijing Informationization and Industrialization International Information Technology Research Institute, The initiator and technical leader of the project "Application of Blockchain Technology to Improve China's Infectious Disease Surveillance System" of NSSFC, and the initiator and solution writer of "Blockchain-based Industrial Products Anti-counterfeit Traceability Platform" of 2020 Industrial Internet Innovation and Development Project-Blockchain Public Service Platform Project of MIIT, core team member of "Non-Bank Financial Business Credit Technology Path Research" (2019) of Baihang Credit, and former CRM system expert of AsiaInfo (China) Co., Ltd. He has participated in more than 20 large-scale domestic and foreign large-scale telecommunications, finance and blockchain industry application projects, and published many high-quality, industry-influential papers and Internet articles.

Topic of the Speech:
Upcycling of Basic Fibrous Waste Types



Professor Jiri Militky
Textile Faculty
Technical University of Liberec
Czech Republic

Prof. Jiri Militky, Prof. MSc. PhD., EURING, FEA. Born 16/06/1949, employment: Technical University of Liberec, Czech Republic. Work experience:2019 – head of PhD studies board at Textile Faculty,2012 head of Department of Material Engineering, 2009 - 2011 Vice dean for foreign affairs, 2003-2008 Dean of Textile Faculty, 2000 - 2002 Vice rector for science and foreign affairs at TU Liberec, 1994 - 1999 Dean of Textile Faculty, 1991- 1993 Vice rector for foreign affairs at TU Liberec, 1991 head of Department of textile materials, 1976 - 1989 Research Institute of Textile Finishing, head of scientific development dept., 1973- 1976 State Textile Research Institute Liberec – research worker. Scientific orientation: Modeling of fibrous structures, textile metrology, statistical data treatment, quality control, textile material engineering. Publication activities: 32 books, 563 articles, H index (SCOPUS) 36

Plenary Medal Lectures - Thursday, August 22, 2024

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

Professor Xianyi Zeng
Director of the GEMTEX Laboratory
The ENSAIT Textile Engineer School, University of Lille
France

Prof. 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. 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 has conducted three European projects such as FBD_BModel (H2020 Program) and a number of national and regional research projects as well as industrial projects in cooperation with international groups in France and Europe.

Topic of the Speech:
Computational and Analytical Studies on Sandwich Composites Reinforced with Hybrid Fibrous Materials and Bio-fillers

Professor Rajesh Mishra
Czech University of Life Sciences Prague
Czech Republic

Prof. Rajesh Mishra works at the Czech University of Life Sciences Prague, Czech Republic. His research areas are nanomaterials and nano-textiles, textile structural composites, green composites, nanocomposites, biomechanical engineering of fibrous structures, thermo-mechanical characterization of materials etc. He has about 200 publications in international journals and about 300 presentations in international conferences. His teaching and research activities include subjects based on nanotechnology, biomaterials, structural mechanics of fibrous structures in general and 3D woven structures in particular, textile quality characterization, engineering of textile structures, biomechanics of apparel textiles etc. He is responsible for internationals students' education and research at the faculty of engineering. Till date he has successfully guided 7 PhD candidates leading to award of title. The graduates are highly placed in academia and industry around the world. At present a few more are continuing research in leading areas of technology. He has also developed educational and research cooperation with many organizations around the globe.

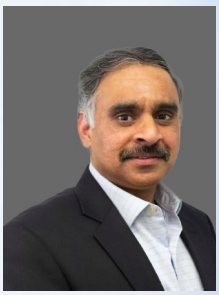
Plenary Medal Lectures - Thursday, August 22, 2024

Topic of the Speech:
Estimating Exercisality on Urban Greenways Using Physical Exercise Trajectory Data and Network-constrained Approach

Dr. Jianquan Cheng
Reader of Urban Studies
deputy director of MMU Crime and Well-being Big Data Centre
Manchester Metropolitan University
UK

Dr Jianquan Cheng is a Reader in Urban Studies at the Department of Natural Sciences, Manchester Metropolitan University (MMU) and Deputy Director of the Manchester Metropolitan Crime and Well-being Big Data Centre. Jianquan is also a visiting professor at the Key Laboratory of Environment Change and Resources Use in Beibu Gulf (Ministry of Education), Nanning Normal University, China. His research experience and expertise encompass urban growth, geographical mobility, spatial accessibility, and sustainable healthy cities, using GIS (geographic information science and system), big data, AI, and VR (virtual reality) approaches. His recent projects focus on analysing and modelling the impact of the physical and built environment on public health and well-being across various scales in Chinese and British cities, aiming to generate data-driven evidence and frameworks for spatial interventions and planning. He is also an Associate Editor for Frontiers in Sustainable Cities.

Topic of the Speech:
State of the Fashion Industry: Challenges, Opportunities and Barriers to Implement Circular Economy Principles



Dr. Prabhuraj Venkatraman
Manchester Fashion Institute
Manchester Metropolitan University
Manchester, UK

Dr. Prabhuraj Venkatraman (Prabhu), Senior Lecturer in Technical Textiles and Sustainable Fashion, Manchester Fashion Institute [MFI], Manchester Metropolitan University, U.K.Prabhu, a technical textile specialist and a Chartered Fellow of the Textile Institute, is a prolific researcher and a dedicated mentor. His research interests include using innovative sustainable materials, developing functional apparel, and technical textiles in improving health. He has made significant advancements in the development of bio-functional finishing of fabrics with antimicrobial properties using plant-based nano-emulsions. His other research areas include the development of socks for diabetic patients to monitor shear force or strain and prevent the formation of ulcers. His current projects include the development of smart face coverings with antimicrobial properties and the development of novel micro and nano-fibres using seaweed (alginate) for healthcare applications. His other research areas include the implementation of circular economy in textile supply chains and product life-cycle assessments. He regularly disseminates his research at international and national events and is a journal peer reviewer. As a Doctoral college Department lead [DCDL] for Manchester Fashion Institute, he plays a crucial role in postgraduate admissions and progression toward meeting the Institute's strategy of increasing the PGR community. He imparts his knowledge of sustainable fashion and product innovation to PG and UG students, inspiring the next generation of researchers. He has supervised five PhD students and four Master by Research (primary supervisor). He supervises three PhD students and two Masters projects and continues to nurture future scholars. He also serves as a personal tutor, offering pastoral guidance and supporting UG students.

Plenary Medal Lectures - Thursday, August 22, 2024

Topic of the Speech:
Innovative Anti-Bed Bug Technology for Textiles and Clothing

Dr. Kai-chiu Ho
Hansk New Materials Holdings Limited
Hong Kong, China

Dr. Kai-chiu Ho has more than 45 years' work experience in textiles and clothing industry, on innovation and technology, R & D strategy, project design, management and commercialization, technology management, project funding support, etc. He is the former Director, Research and Development of the Hong Kong Research Institute of Textiles and Clothing which is funded by Hong Kong SAR Government and a Distinguished Professor of Zhijiang College of Zhejiang University of Technology, China (2016 -2019). Dr. Ho is also a Fellow Member of the Textile Institute, UK; a Senior Member of China Textile Engineering Society;; an Adjunct Professor of Institute of Textiles and Clothing of The Hong Kong Polytechnic University (2013 - 2019); Honorary Associate Professor of the Faculty of Dentistry at the University of Hong Kong; Visiting Professor at both Donghua University, Zhejiang Sci-Tech University, Soochow University, etc., as well as Honorary Consultant of the Hong Kong General Chamber of Textiles; and the Hong Kong Federation of Invention and Innovation. Dr. Ho joined Hansk New Material Holdings Limited in 2016 as the R&D Director.

Topic of the Speech:
Unleashing the Creative Potential: Textiles as Catalysts for Interdisciplinary Innovation and Commercialization Success

Professor Li Li
The Hong Kong University of Science and Technology
Hong Kong, China

Prof. Li Li is the Professor in the Division of Integrative Systems and Design of The Hong Kong University of Science and Technology, Board of Director of The Hong Kong Research Institute of Textiles and Apparel Limited, and the Fellow of Royal Society of Arts. Her research interests include design thinking, functional textile design, and advanced manufacturing. She has strong collaboration with various local and international brands and textile companies. She has successfully secured over 70 projects. The developed technologies and products are used for various commercial purposes with a total knowledge transfer value of more than HK$ 350 million. She has also published over 120 research articles in world-leading and top-tier textile journals, and held 28 patents. With her achievement, she has won 38 prestigious international awards, including the Golden and Silver Award of the International Exhibition of Inventions of Geneva for three consecutive years.

Plenary Medal Lectures - Thursday, August 22, 2024

Topic of the Speech:
Large-scale Manufacturing Optical Micro/Nano Functional Fibers for Thermal Energy Managment and Collection

Professor Keqin Zhang
Soochow University
China

Prof. Ke-Qin Zhang (Ph.D. in Physics), now is a professor of polymer science and textile engineering, in National Engineering Laboratory for Modern Silk and College of Textile and Clothing Engineering of Soochow University. He got his B Sc in Physics, M Sc and Ph. D. Degree in Condensed Matter Physics from Nanjing University at 1994, 1997 and 2000 respectively. After the graduation, he conducted his postdoctoral training in Max-Planck Institute for Metal Research sponsored by the Max-Planck Postdoctoral Fellowship and National University of Singapore from 2000-2004. He was awarded by the Lee Kuang Yew outstanding postdoctoral fellowship selected by the Lee Kuang Yew foundation from the global applicants at 2005. He became the research fellow and senior research fellow in National University of Singapore form 2004 to 2009. He returned to Soochow University as a professor at 2009. And he was the awardee of the one-thousand-talent recruiting programme issued by the central government of China at 2010. He has published more than 40 papers in the prestigious journals including the Nature, Physical Review Letters, and Small etc. He also filed more than 20 patents in China and other counties. He is the life member of American Physics Society and Biophysics Section, member of Materials Research Society of America and Singapore and member of a council of Chinese Functional Materials Association. He is the Editorial Board Member of the International Journal of Textile Science and Technology.

Medal Lectures - Wednesday, August 21, 2024

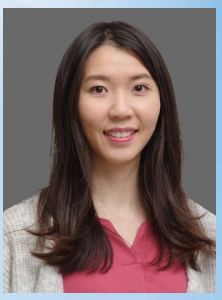
Topic of the Speech:
Enhancing Thermal Management by Using Thermo-Reflective Materials

Dr. Mohanapriya Venkataraman
Technical University of Liberec
Czech Republic

Dr. Mohanapriya Venkataraman is a passionate textile material scientist working as an Assistant Professor at the Department of Material Engineering, Faculty of Textile Engineering, Technical University of Liberec, Czech Republic. Her research areas include Textile Materials, Thermodynamic Analysis, Micro and Nanoporous Materials, Heat Transfer, Polymers, and Composites. She is a leader of multiple international projects funded by the EU, the Technology Agency of the Czech Republic (TA ČR), and the Czech Science Foundation (GA ČR). She has authored over 90 scientific papers; 100 conference publications; 20 keynote speeches; 35 book chapters, and 4 books and is a Guest Editor for two journals and an Associate Editor for JFBI. She is a nominee to be a panel member of the Czech Science Foundation (GA ČR). She was profiled in TA.DI magazine of Technology Agency of the Czech Republic (TA ČR) as a female researcher breaking the stereotype of a traditional scientist.

Medal Lectures - Wednesday, August 21, 2024

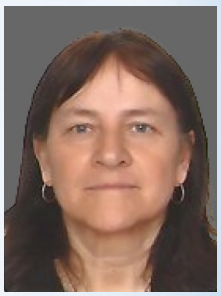
Topic of the Speech:
Effect of Structure and Material of Bilayer Knitted Fabric on Tactile Sensation and Warm Retention



Dr. Annie Yu
School of Fashion and Textiles
The Hong Kong Polytechnic University
Hong Kong, China

Dr. Annie Yu is an Assistant Professor in the School of Fashion and Textiles, the Hong Kong Polytechnic University. She obtained her Ph.D. from the same university in 2015. Her main research interests include the design of novel knitted fabrics and functional textiles. She also specialises in experimental design and evaluation of clothing fit and comfort, physiological and psychological responses of human participants to different types of textiles and clothing products, as well as formulation of simulation models to predict garment-skin pressures.

Topic of the Speech:
Air Permeability and Breathability Evaluation of Textile Layers



Dr. Dana Kremenakova
Dept. of Material Engineering
Faculty of Textile Engineering
Technical University of Liberec
Czech Republic

Dr. Dana Kremenakova is Associated professor at the Department of Material Engineering, Faculty of Textile Engineering, Technical University of Liberec, Czech Republic. She is working in the field of Textile Sciences, especially textile materials and technology. She is focusing mainly on thermal transport properties and barrier properties of fibrous structures, development of special metrology, prediction of geometrical and mechanical properties of fibrous assemblies, modelling of textile structures in line fibre – yarn – fabrics, prediction of thermal comfort, optical and mechanical properties of side emitting polymeric optical fibres and their application in textile structures. She has published 8 books (author and co-author), in Scopus are indexed 114 documents, 487 citations and h-index 10. She is a co-author of 2 international patent, 3 national patents and 5 utility issues. She was a member of the research team or coordinator of about 20 research projects. She is guarantor and lecturer of the subject "Nanotechnology in the Textile Branch" within the study program WE-TEAM Erasmus Mundus Joint Master Degree (AUTEX).

Medal Lectures - Wednesday, August 21, 2024

Topic of the Speech:
Research on Knowledge Modeling of Business Suit Pattern Design and Development of Automated Patternmaking Platform

Dr. Long Wu
School of Apparel and Art Design
Xi'an Polytechnic University
China

Dr. Long Wu obtained his Ph.D. degree from the Hong Kong Polytechnic University in 2013. He is currently serving as an associate professor in the School of Apparel and Art Design of Xi'an Polytechnic University. He teaches subjects about Apparel Production Technique, Apparel Machinery, Anthropometric Technology and Application, etc. As the main participant of the National Natural Science Foundation of China in 2013 (61303120), Dr. Wu carried out research work in Shaanxi Union Research Center of University and Enterprise for Apparel Intelligent Design and Manufacturing. Over the last several years, he received an outstanding student papers competition award in TBIS 2011 and an outstanding research papers competition award in TBIS 2014. Also, Dr. Wu was a member of the expert committees of the Garment Industry Association in Shaanxi Province between 2016 and 2019. Funded by China Scholarship Council in 2019, Dr. WU became a visiting scholar in the School of Fashion and Textiles at RMIT University in Melbourne, Australia from October 2019 to May 2020. In 2021, he was appointed the vice director of the Garment Customization Committee of China National Garment Association (CNGA).

Topic of the Speech:
Polypyrrole-based Conductive Fibers and Textiles for Biomedical Applications

Professor Jifu Mao
Donghua University
China

Prof. Jifu Mao has been a distinguished research fellow in College of Textiles at Donghua University since 2019. He received BS (2009) and MSc (2012) from Beijing University of Chemical Technology (BUCT), and obtained Ph.D. in Experimental Medicine from Université Laval (UL), Canada (2017). He worked in the Research Center CHU of Quebec-UL as a postdoctoral fellow (2017-2019). His current research involves electrically conducting bio-textiles, electro-mechanical bioreactors, and their biomedical applications. He has published more than 50 peer-reviewed papers in the journals such as ACS Nano, Adv Funct Mater, Bioact Mater, Adv Sci, Chem Eng J, applied for 20 patents and contributed two book chapters.

Medal Lectures - Wednesday, August 21, 2024

Topic of the Speech:
Cr_2Te_3-Encapsulated Liquid Metal for Wearable Sensors

Professor Xiuju Song
Zhejiang University
China

Prof. Xiuju Song is currently a Professor of School of Mechanical Engineering in Zhejiang University. She received her Doctor degree from Peking University on July, 2016. After that she has two years Postdoc experience in Prof. Manish Chhowalla's group from Rutgers University. Two year later she moved to University of Manchester as a Marie Curie Fellow and joined Prof. Cinzia Casiraghi's group. In May 2023, she joined in the Zhejiang University. She has over 30 peer-reviewed publications on high impact journals including Nature, Nature Materials, Nature Communications, ACS Nano, etc. Her H index is 24 and her works have collected 4000 citations. She is the Youth editor of the international journal of The Innovation and the Frontiers of Nanotechnology. She is also co-inventor in one patent filed in China. Her research mainly focuses on synthesis of 2D materials for wearable electronics.

Topic of the Speech:
Multifunctional Hydrogel Dresings for Accelerating Wound Healing

Professor Zheng Zhao
Wuhan University of Technology
China

Prof. Zheng Zhao received Ph.D. degree from The Hong Kong Polytechnic University in 2013, and is currently an Professor of Materials Science and Biomedical Engineering at State Key Laboratory of Advanced Technology for Materials Synthesis and Processing, Wuhan University of Technology. He was also selected as one of the top young talents in the "15551 Talent Project" of Wuhan University of Technology (2019), a member of the Biomedical Composite Materials Branch of the Chinese Society for Biomaterials, and a director of the Hubei Society of Biomedical Engineering. His research interests mainly focus on biomedical hydrogels, tissue engineering and nanoparticle drug delivery system. He had published over 30 papers in Adv Funct Mater, Biomaterials, Small, ACS Sensors, Anal Chem, etc. He is also principal investigator of the National Key Research and Development Program of China and the National Natural Science Foundation of China.

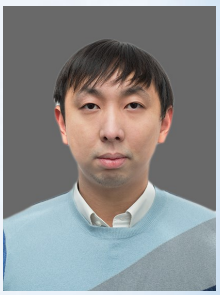
Medal Lectures - Wednesday, August 21, 2024

Topic of the Speech:
Piezoelectric Poly-L-Lactic Acid Film-based Wearable Sensors

Dr. Lu Jin
Yiwu Research Institute of Fudan University
China

Dr. Lu Jin is an Associate Professor at Yiwu Research Institute of Fudan University in China. He received his Ph.D. degree from the Department of Materials at The University of Manchester, which he pursued with the support of a CSC scholarship. Prior to this, he completed his M.S. degree at Dankook University in South Korea. After his master's graduation, he accumulated research experience at several institutions, including the Personal Protective Equipment Center in South Korea, The Hong Kong Polytechnic University in China, and Kyung Hee University in South Korea, actively participating in various international scientific research projects. His research interests lie in the piezoelectric thin-film materials and their novel applications, with a primary focus on the utilization of piezoelectric poly-L-lactic acid (PLLA) materials in wearable sensors for air flow detection, strain sensing, and motion recognition. The main research achievements include the design and development of the first generation of wearable piezoelectric airflow transducer, which has proven effective in measuring human respiratory flow and metabolism in complex environments. Based on the unique piezoelectric properties of uniaxially stretched PLLA films, he invented the world's first wearable unimodal strain sensors and integrated them with artificial intelligence to demonstrate finger-air-writing applications. His research findings have been published in international SCI journals, including npj Flexible Electronics, ACS Sensors, Advanced Functional Materials, ACS Applied Materials & Interface, etc.

Topic of the Speech:
Mechanism of Electrocatalyzed MXene Nanoenzymes Wet-spun Fibrous Dressing for Promoting Diabetic Ulcer Healing



Dr. Jun Song
Shanghai University
China

Dr. Jun Song received his bachelor's degree in Textile Engineering from Soochow University in 2017, and his doctorate degree from the School of Materials, University of Manchester in 2021. He has won the National Excellent Self-funded Scholarship for international students. In 2022, he joined the Mertdicine team in the School of Life Sciences, Shanghai University, engaged in postdoctoral research, and was selected into the Shanghai Pujiang Talent Plan and the Municipal Education Commission's postdoctoral Faculty project. He is mainly interested in the medical application and biological effects of multi-scale textile fibers. As the first author or corresponding author, he has published more than ten papers in international journals, such as Advanced Functional Materials, ACS Applied Materials & Interfaces, Journal of Materials Science & Technology, International Journal of Biological Macromolecules, Materials & Design, Journal of Materials Science & Technology, International Journal of Biological Macromolecules.

Medal Lectures - Wednesday, August 21, 2024

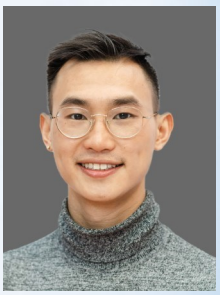
Topic of the Speech:
The Mechanical Mechanism of Knitted Strain Sensor for Pulse Wave Monitor from Skin Surface

Dr. Zhongda Chen
Nanjing Medical University
China

Dr. Zhongda Chen is a Postdoctoral at School of Biomedical Engineering and Informatics, Nanjing Medical University, P.R. China. He received his M.Sc. and Ph.D. degree from the Department of Materials, The University of Manchester. Under the supervision of renowned textile expert Prof. Henry Yi Li, he worked on the biomedical applications of textile materials such as fibers and knitted fabrics, focusing on the design and manufacture of wound healing devices and fabric-based flexible mechanical sensors. In 2022, he joined Professor Benhui Hu's research group at Nanjing Medical University for his postdoctoral work, focusing on the mechanical sensing of knitted fabrics for cardiovascular disease detection. During his tenure, he was selected for the "2023 Jiangsu Province Excellent Postdoctoral Program".His research interests lie in fibrous functionalized materials for the development of biomedical devices, implantable electronics and sensors. His research findings have been published in international high-quality journals, including Materials & Design, Materials Science and Engineering: C, ACS Omega, Advanced Functional Materials and ACS nano.

Topic of the Speech:
The FBD platform for ESG and ESPR legislation compliance

Ir. Tim Jun Li
Digital Clothing Limited
Manchester UK

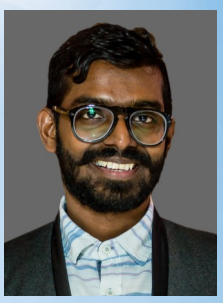


Ir. Tim Jun Li, Graduated with distinction (cum laude) from TU Delft in MsC Architecture, Urbanism and Building Sciences, Tim Jun Li has excellent design thinking and 3D modelling and simulation skillsets. Tim Jun Li was deeply involved in the Textile Industry Chain Big Data Platform EU Horizon 2020 project and was responsible for designing the e-shopping API plug-in user interface for hand feel, skin feel and thermal wear comfort. His expertise covers 3D virtual simulations of clothing thermal and moisture performance, and has contributed to publications of several excellent scientific research results, articles and patents. He has worked closely with Textile Bioengineering Informatics Society (TBIS) to organize world class international symposiums, and in the founding and establishment of the International Digital Health and Intelligent Material Innovation Alliance (IDHIMIA), as well as the Fashion Big Data foundation (FBDf).

Medal Lectures - Wednesday, August 21, 2024

Topic of the Speech:
The Future of Transparency and Circularity

Chathura Sudharshan
Seamless Source
UK



Chathura Sudharshan is the visionary founder of Seamless Source. With a deep-rooted understanding of the global fashion industry, he boasts a wealth of experience spanning both the global south and north. Having worked across diverse countries such as the UK, Italy, Belgium, Bangladesh, India, and Sri Lanka, Chathura has cultivated an unparalleled perspective on the industry's complexities. With a proven track record in innovation and business development, he has successfully led teams within numerous international fashion companies, garnering accolades for his contributions to business and innovative processes. Chathura founded Seamless Source after recognizing the significant shortcomings of traditional fashion supply chains, which lack both transparency and circularity. Seamless Source addresses this by providing pre-built value chains or the technology to construct your own. This empowers fashion businesses to create transparent and circular product lines. Seamless Source technology is called PRM - Product Relationship Management Platform. That connects brands, suppliers, consumers and recyclers all in one place to take products on a transparent and circular journey. In other words, a CRM digitally manages each product's lifecycle.

Topic of the Speech:
Innovation and Entrepreneurship Based on Digital Twin Textile Supply Chain Platform

Dr. Zhangchi Liu
Qingdao University
China

Dr. Zhangchi Liu, With a specialization in textile performance, digital textile industry chain, industry business 4.0 business model and big data technology platforms in his PHD at the University of Manchester, Zhangchi Liu played a vital role in the Textile Industry Chain Big Data Platform EU Horizon2020 project. He has extensive experience in communicating and coordinating large scale projects involving several international fashion apparel companies, lectured and received awards at international conferences and published high quality papers at international journals and patents.

Medal Lectures - Wednesday, August 21, 2024

Topic of the Speech:
Measuring Methods of Body Shape for Efficiently Manufacturing Individualized Garments

Dr. KyoungOk Kim
Faculty of Textile Science and Technology
Shinshu University
Japan

Dr. KyoungOk Kim is an Associate Professor in Department of Advanced Textile and Kansei Engineering, Faculty of Textile Science and Technology, Shinshu University and Division of Fabrics & Production, Institute for Fiber Engineering (IFES), Interdisciplinary Cluster for Cutting Edge Research (ICCER), Shinshu University, Japan. She received her Ph.D. from Shinshu University in Textile Engineering. Her research interests are clothing engineering, textile engineering, and kansei engineering for both apparel and textile fields.

Topic of the Speech:
Development And Performances Testing of Sitting Cushion with Comfort Zone Partition Based on Setting Poster Analysis

Dr. Liya Zhou
College of Fashion and Design
Donghua University
China

Dr. Liya Zhou has obtained her doctoral degree in Textile Engineering from Donghua University in 2007. She studied and worked as a research assistant at the Hong Kong Polytechnic University from 2003 to 2006. From 2007 to 2009, she worked as a senior technical consultant and technician and later served as a project manager in textile department of SGS, Shanghai. From 2009 to now, she has been served as a lecturer and associate professor Donghua University. Her research interest includes design and development of functional knitwear such as thermal and wet comfort; Subjective and objective evaluations and intelligent testing related to physiological comfort; textile quality control and testing; design and matching of knitted products; textile color matching and intelligent recommendation based on emotional intention.

Medal Lectures - Thursday, August 22, 2024

Topic of the Speech:
Study on the Recycling of Various Textile Materials and Their Impact to the Textile Industry Decarbonization

Dr. Eric Wang
R&D and Innovation Director,
SGS Connectivity & Products, Global Softlines
China

Dr. Eric Wang completed a BSc at Peking University and holds a PhD from the University of Guelph in Canada with major in organic chemistry. He has more than 15 years of experience in the development and implementation of innovative sustainability and chemical management solutions, digital platform and technical projects in the global textile and footwear supply chain. Eric is familiar with major international regulations and standards including REACH, CPSIA, bluesign, Higg Index, GRS, carbon footprint, and ESG etc. Knowledgeable in testing standards such as GB, ISO and AATCC, Eric has provided consultancy services and conducted hundreds of seminars, workshops, and training sessions in more than ten countries globally. He holds an ISO 14001 certificate from the Institute of Environmental Management and Assessment (IEMA) and is a Certified Energy Manager (CEM) by the Association of Energy Engineers (AEE). He also serves as an off-campus graduate student supervisor at Donghua University in Shanghai.

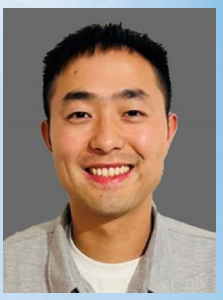
Topic of the Speech:
Preparation and Characterization of Three Dimensional Nanofibrous Scaffold

Dr. Jiashen Li
The University of Manchester
UK

Dr. Jiashen Li is a Lecturer in Textile Science & Engineering in the Department of Materials. His research interests involve the science and technology underpinning processing-structure-property relationships in functional fibers and textiles; including nano fibres, bio-functional fibres, smart fibres and textiles, e-textile, and structural fibre-composites. With more than ten years' experience on fibre spinning, he has significantly expanded his studies of advanced functional polymer fibres and textiles. Dr. Jiashen Li obtained his PhD in Polymer Materials (Physics) from Tianjin University (China) in 2001. He then spent thirteen years conducting biomaterials and fibre spinning in The Hong Kong Polytechnic University (Hong Kong), before joining the University of Manchester in 2015.

Medal Lectures - Thursday, August 22, 2024

Topic of the Speech:
Fiber Materials and Devices for Digital Healthcare



Dr. Zekun Liu
University of Oxford
UK

Dr. Zeku Liu receives his Ph.D. degree at Department of Materials, The University of Manchester in 2022. He is now working as a Research Associate at Nuffield Department of Orthopaedics, Rheumatology and Musculoskeletal Sciences, University of Oxford. During the Ph.D. study, his research focused on functionalized fiber materials for developing wearable strain, pressure, and strain sensors, which are utilized for body area sensing networks with improved sensing reliability. His current research mainly refers to flexible and biocompatible soft robots for tissue engineering. He published several peer-reviewed journal papers in Advanced Functional Materials, Nano Energy, Nano-Micro Letters, Bioactive Materials, Chemical Engineering Journal and ACS Applied Materials & Interfaces, etc. His research interests include nanomaterials and functionalized materials for the development of advanced composites, functional clothes, biomedical devices, and flexible electronics such as sensors, batteries, solar cells, and generators.

Topic of the Speech:
Printed Flexible Electronics for Advanced MedTech

Dr. Hui Huang
Singapore Institute of Manufacturing Technology (SIMTech)
Agency for Science, Technology and Research (A*STAR)
Singapore Institute of Technology (SIT)
Singapore

Dr. Hui Huang is a Senior Scientist in Microfluidics and MedTech Devices Group at Singapore Institute of Manufacturing Technology (SIMTech), Agency for Science, Technology and Research (A*STAR), and a joint Assistant Professor in Electronics at Singapore Institute of Technology. Dr Huang obtained his PhD degree in Microelectronics from Xi'an Jiaotong University, China. Prior to joining SIMTech, Dr Huang was a Lee Kuan Yew Postdoctoral Fellow in the School of Electrical and Electronic Engineering at Nanyang Technological University, Singapore. He was the recipient of Singapore Millennium Foundation Scholar in 2008. He has extensive R&D experience in nanomaterials, functional coatings and flexible devices with particular emphasis with particular emphasis in printed electronics, energy efficient, energy conversion and storage.

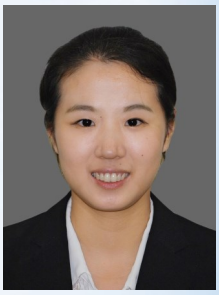
Medal Lectures - Thursday, August 22, 2024

Topic of the Speech:
Heat and Moisture Transfer of Multilayer Adult Incontinence Briefs in Computational Simulations and Objective Measurements

Dr. Yueping Guo
Novel Protective Textiles Limited
Hong Kong, China

Dr. Yueping Guo earned her Ph.D. degrees at Institute of Textiles and Clothing, The Hong Kong Polytechnic University. Then she consecutively joined The Hong Kong Polytechnic University and was a Fellow, Project Manager, Project Deputy Coordinator and Lecturer. She established Novel Protective Textiles Limited and is a Responsible Official of the company. She supervised M. Phil. and PhD students. She has authored and co-authored more than 100 journal publications, conference papers/presentations, technical reports, book chapters and patents. She has more than 10 awards on outstanding research papers, patent inventions and technology transfer. The inventions from the research projects have been successfully commercialized, including Nano-facemasks, High Performance Sportswear, Anti-Heat Stress Clothing for construction workers, and Summer Uniforms for cleansing workers, which won many international and regional invention/ innovation awards. She served as an editor for Journal of Fiber Bioengineering and Informatics, and is the reviewers for CMAJ and Textile Research Journal etc.

Topic of the Speech:
High Performance Wearable TENG Utilizing Nanofiber Membrane for Energy-harvesting



Dr. Chunhong Zhu
Faculty of Textile Science and Technology
Shinshu University
Japan

Dr. Chunhong Zhu is an Associate Professor in the Institute for Fiber Engineering (IFES), Interdisciplinary Cluster for Cutting Edge Research (ICCER), as well as the Department of Advanced Textile and Kansei Engineering, Faculty of Textile Science and Technology, Shinshu University, Japan. She obtained her Master's degree from Soochow University, China majored in Textile Materials and Design in 2010. After that, she received her Ph.D. from Shinshu University in 2014. From 2014 to 2015, she worked as a R&D in a Japanese company and returned to Shinshu University as a faculty member in 2015. Her research interests include three-dimensional fabrics, functional and smart textiles.

Medal Lectures - Thursday, August 22, 2024

Topic of the Speech:
Visualization of Polymer Fiber Microstructures by AIEgens

Professor Yanhua Cheng
Donghua University
China

Prof. Yanhua Cheng received her Ph.D. degree from the Department of Materials Science and Engineering at Donghua University in 2015, during which she was co-trained at Peking University (2009.02-2010.01) and University of California, Los Angeles (UCLA, 2011-2013). Her research interests mainly focused on AIE-based smart fibers and fibrous porous materials for thermal insulation. She has authored more than 50 publications. She received the second prize of National Technological Invention Award (2020), the Science and Technology Award of China Textile Industry Federation-the second prize of scientific and technological progress (2019), was shortlisted for the dual-use technological innovation achievements of the textile industry (2019), and Shanghai S&T 35U35 nomination award.

Topic of the Speech:
In-situ Crosslinking Reinforced Cellulose Aerogel Fibers for Thermal Insulation and Multifunctional Applications

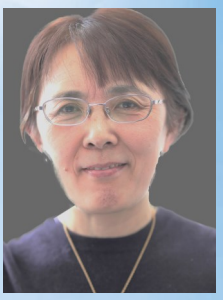
Professor Ronghui Guo
College of Biomass Science and Engineering
Sichuan University
China

Prof. Ronghui Guo is a professor of College of Biomass Science and Engineering at Sichuan University. She is candidate for academic and technical leaders of Sichuan Province, and overseas talents of Sichuan University. She obtained PhD from Hong Kong Polytechnic University. She is a member of the steering committee on textile and clothing of the Ministry of Education, member of the council for dyeing and finishing of the Chinese Society of textile engineering, director of the council of Sichuan textile engineering society and member of technical expert committee of energy conservation and environmental protection industry of Sichuan energy conservation association. She mostly focuses on researches of functional and smart fiber materials, flexible wearable sensor and textile recycling and utilization etc. In recent years, her researches have been supported by National Natural Science Foundation of China, Sichuan Science and Technology Program, Chengdu Science and Technology Bureau, Ningbo Science and Technology Bureau, etc. She has over 150 scientific publications including over 100 SCI papers and she owns more than 10 invention patents.

Medal Lectures - Thursday, August 22, 2024

Topic of the Speech:
Enhancing Thermal Management in Protective Textiles Using Hydrated Salt as Phase Change Materials

Dr. Danmei Sun
School of Textiles and Design
Heriot-Watt University
UK



Dr. Danmei Sun is an Associate Professor in Advanced Textile Materials & Engineering at the School of Textiles and Design, Heriot-Watt University. She comes from a textile industry background as a textile engineer for over 10 years before becoming an academic in 2018. Dr Sun's research interests lie in the areas of functional fibres/filaments for protective textile and clothing systems, eco-friendly printing and dyeing, understanding material properties through Finite Element Analysis, etc. Her research activities are supported by various research projects that are funded by government funding bodies such as UK Dstl/MoD, Oil & Gas Innovation Centre, Scottish Funding Council, EPSRC, and AHRC, and company partners such as Harris Tweed, Iron and Ocean Ltd., etc.

The 17th Textile Bioengineering and Informatics Symposium

Theme: Textile Sustainability, Ecology and Health

Onsite Venue:
10 Exco-ro,Buk-gu, Daegu 41515, Korea

For registration (We-chat)

TBIS 2024 Program at a glance
(August 20-23, 2024)

Venue	Time	Event/Session	Session Chair	
August 18, 2024 (Sunday)				
Virtual Room A (Online)	09:00-11:00 (KOREA, GMT+9) 17:00-18:00 (KOREA, GMT+9)	System Testing and Online Registration	TBIS Team	
TBIS 2024, August 20-23, 2024				
August 19, 2024 (Monday)				
Onsite	17:00-19:30 (KOREA, GMT+9)	Registration, Welcome Reception	TBIS Team	
August 20, 2024 (Tuesday)				
Onsite & Virtual Room A (Online)	09:00-17:00 (KOREA, GMT+9)	Registration	TBIS Team	
		TBIS IEC Board Meeting JFBI Board Meeting International collaboration forum on "Sustainability - Ecology – Health"	Prof. Yi Li (UK)	Tim Jun Li (UK)
August 21, 2024 (Wednesday)				
	09:00-09:10 (KOREA, GMT+9)	Opening Ceremony (Onsite and Online)	TBIS Chief Secretary	
Advanced Materials and Applications				
Plenary Session Onsite & Virtual Room A (Online)	09:10-09:25 (KOREA, GMT+9)	**Plenary Medal Lecture 1: Professor Kanji Kajiwara (Shinshu University, Japan) (Onsite)** Is Recycling Doing a Good Job for Our Sustainable Future?	**Prof. Yi Li (UK)**	
	09:25-09:40 (KOREA, GMT+9)	**Plenary Medal Lecture 2: Professor Xungai Wang (The Hong Kong Polytechnic University, HongKong, China) (Onsite)** Textile Sustainability – Past, Present and Future		
	09:40-09:55 (KOREA, GMT+9)	**Plenary Medal Lecture 3: Professor Wei Chen (Zhejiang Sci-Tech University, China) (Onsite)** Ionogel Electroactive Materials and Wearable Devices		
	09:55-10:10 (KOREA, GMT+9)	**Plenary Medal Lecture 4: Professor Guowen Song (Iowa State University, USA) (Onsite)** Fighting the Long-Term Health Impact: Cancer and Hazardous Substance Exposure in Fire-fighters and Understanding	**Prof. Kanji Kajiwara (Japan)**	
	10:10-10:25 (KOREA, GMT+9)	**Plenary Medal Lecture 5: Professor Aizheng Chen (Huaqiao University, China) (Onsite)** Supercritical Fluid Technology based Decellularized Extracellular Matrix for Biomedical Appli cation		
	10:25-10:40 (KOREA, GMT+9)	**Plenary Medal Lecture 6: Professor Apurba Das (Indian Institute of Technology Delhi, India) (Onsite)** Electrostatic Spray Coating Technology for Thermoplastic Composites		
	10:40-11:15 (KOREA, GMT+9)	Tea Break		
Textile Functionality and Sustainability				
Plenary Session Onsite & Virtual Room A (Online)	11:15-11:30 (KOREA, GMT+9)	**Plenary Medal Lecture 7: Professor Li Liu (Beijing Institute of Fashion Technology, China) (Onsite)** Key Technologies and Applications in the Research and Development of High-Performance Clothing for Winter Olympic Training Competitions	**Prof. Chiyomi Mizutani (Japan)**	
	11:30-11:45 (KOREA, GMT+9)	**Plenary Medal Lecture 8: Professor Chiyomi Mizutani (Otsuma Women's University, Japan) (Onsite)** Heat Retention of Fabrics composed of Moisture-absorbing Heat-generating Fibers and Wear Comfort		
	11:45-12:00 (KOREA, GMT+9)	**Plenary Medal Lecture 9: Professor Xuemei Ding (Donghua University, China) (Onsite)** Developing a Green Development Evaluation System for Ethiopian Textile and Garment Industrial Parks		
	12:00-12:15 (KOREA, GMT+9)	**Plenary Medal Lecture 10: Professor Tamaki Takada Mitsuno (Shinshu University, Japan) (Onsite)** Comparison of Subjective and Objective Assessments of Japanese People's Feeling of 'Out of Place' with Their Clothing	**Prof. Seung Kook An (Korea)**	
	12:15-12:30 (KOREA, GMT+9)	**Plenary Medal Lecture 11: Professor Jiyong Hu (Donghua University, China) (Onsite)** Wireless Temperature Sensing Yarn with UHF RFID Helix Dipole Hybrid Antenna for Respiratory Monitoring		
	12:30-12:45 (KOREA, GMT+9)	**Plenary Medal Lecture 12: Professor Seung Kook An (Pusan National University, Korea) (Onsite)** Methodology and Parameters Affecting the Clothing Comfort		
	12:45-14:00 (KOREA, GMT+9)	Lunch Time		
Virtual Room A (Onsite & Online)	14:00-17:10 (KOREA, GMT+9)	**Session A: TBIS Regular Topics - Textile Material, Products and Informatics**	Dr. Dana Kremenakova (Czech Republic)	Dr. Long Wu (China)
Virtual Room B (Onsite & Online)	14:00-15:30 (KOREA, GMT+9)	**Session B: TBIS Regular Topics - Biomedical Textiles**	Prof. Xiuju Song (China)	Prof. Zheng Zhao (China)
Virtual Room C (Onsite & Online)	15:30-17:15 (KOREA, GMT+9)	**Session C: TBIS Wofkshop - Fashion Textile Digitisation for Compliance with ESG and ESPR Legislations (FTD-ESG-ESPR)**	Dr. Zhangchi Liu (China)	Tim Jun Li (UK)
Virtual Room D (Onsite & Online)	14:00-15:30 (KOREA, GMT+9)	**Session D: TBIS Poster presentation**	Prof. Li Liu (China)	Dr. Mohanapriya Venkataraman (Czech Republic)

The 17th Textile Bioengineering and Informatics Symposium

Theme: Textile Sustainability, Ecology and Health

Onsite Venue:
10 Exco-ro,Buk-gu, Daegu 41515, Korea

Meeting ID: 972 4987 2562
Passcode: 169530

TBIS 2024 Program at a glance
(August 20-23, 2024)

Venue	Time	Event/Session	Session Chair
August 22, 2024 (Thursday)			
Biomedical and Functional Textiles			
Plenary Session Virtual Room A (Online Only)	07:00-07:15 (KOREA, GMT+9)	**Plenary Medal Lecture 13: Professor Bingqing Wei (University of Delaware USA) (Online)** Can Photoelectric Conversion Efficiency of Solar Cells Be Doubled?	**Prof. Uwe Reischl (USA)**
	07:15-07:30 (KOREA, GMT+9)	**Plenary Medal Lecture 14: Professor Uwe Reischl (Boise State University, USA) (Online)** Impact of Cosmetic Hairspray on Fabric Flammability	
	07:30-07:45 (KOREA, GMT+9)	**Plenary Medal Lecture 15: Professor Xudong Wang (University of Wisconsin-Madison, USA) (Onsite)** Synthesis and Large-Scale Assembly of Piezoelectric Biomaterials and Devices	
	07:45-08:00 (KOREA, GMT+9)	**Plenary Medal Lecture 16: Professor Zhaoqun Du (Donghua University, China) (Online)** Structure Formation, Theoretical Analysis and Application of a Series of Auxetic Textiles	
	08:00-08:15 (KOREA, GMT+9)	**Plenary Medal Lecture 17: Professor Lijing Wang (RMIT University, Australia) (Online)** Automatic Identification of Textile Fibre Under Optical Microscope Using Neural Network Recognition Technology	
	08:15-08:30 (KOREA, GMT+9)	**Plenary Medal Lecture 18: Professor Gang Li (Soochow University, China) (Online)** Calotropis Gigantea Fiber and Its Eco-functional Textiles	
	08:30-08:45 (KOREA, GMT+9)	**Plenary Medal Lecture 19: Professor Xiumei Mo (Donghua University China) (Online)** Electrospun Nanofiber and Nanoyarn for Tissue Engineering	**Prof. Xiumei Mo (China)**
	08:45-09:00 (KOREA, GMT+9)	**Plenary Medal Lecture 20: Professor Maobin Xie (Guangzhou Medical University, China) (Online)** Volumetric Bioprinting of Protein-based (Bio)inks for Tissue Engineering	
	09:00-09:15 (KOREA, GMT+9)	**Plenary Medal Lecture 21: Dr. Fengzhi Li (Nanjing University of Aeronautics and Astronautics, China)(Online)** Research on Human Thermal Regulatory Model based on Real Human Geometry and Arterial Vascular Tree	
	09:15-09:30 (KOREA, GMT+9)	**Plenary Medal Lecture 22: Professor Xiaoqin Wang (Soochow University, China) (Online)** Enhancing CO2 Capture and Utilization: A Dual-Function Approach Using Silk Fibroin Hydrogels and Carbon Absorbents	
	09:30-09:45 (KOREA, GMT+9)	**Plenary Medal Lecture 23: Professor Liangjun Xia (Wuhan Textile University, China) (Online)** Color Construction of Textile Fiber Materials	
	09:45-10:00 (KOREA, GMT+9)	**Plenary Medal Lecture 24: Dr. Lei Yao (Hong Kong Research Institute of Textiles and Apparel, Hong Kong, China) (Online)** Solutions for Microplastics	
	10:00-10:15 (KOREA, GMT+9)	Tea Break	

Venue	Time	Event/Session	Session Chair	
Virtual Room B (Online Only)	10:15-12:10 (KOREA, GMT+9)	**Session B: TBIS Regular Topics -Clothing Bioengineering**	**Dr. KyoungOk Kim (Japan)**	**Dr. Liya Zhou (China)**
Virtual Room C (Online Only)	10:15-12:25 (KOREA, GMT+9)	**Session C: Textile Bioengineering Design and Informatics**	**Dr. Jiashen Li (UK)**	**Dr. Hui Huang (Singapore)**
Virtual Room D (Online Only)	10:15-12:25 (KOREA, GMT+9)	**Session D: Textile Engineering Technologies**	**Prof. Ronghui Guo (China)**	**Prof. Yanhua Cheng (China)**
	13:20-14:00 (KOREA, GMT+9)	Lunch Time		
Wearables, Digital and Sustainable Technologies				
Plenary Session Virtual Room A (Online Only)	14:00-14:15 (KOREA, GMT+9)	**Plenary Medal Lecture 25:Professor Terry Ye (Southern University of Science and Technology, China) (Online)** Quantifying the Parasitic Capacitance of Conductive Yarns Used in High-Frequency Applications	**Prof. Xianyi Zeng (France)**	
	14:15-14:30 (KOREA, GMT+9)	**Plenary Medal Lecture 26: Professor Wei Fan (Xi'an Polytechnic University, China) (Online)** Construction and Application of Breathing All-fiber Nanogenerator		
	14:30-14:45 (KOREA, GMT+9)	**Plenary Medal Lecture 27: Dr. Aris Rui Huang (Chengdu SwiftChain Technology Co., Ltd., China) (Online)** Implementation of Clothing from Conception to Design Based on the AGI's Diffusion Transformer Framework		
	14:45-15:00 (KOREA, GMT+9)	**Plenary Medal Lecture 28: Professor Jiri Militky (Technical University of Liberec, Czech Republic) (Online)** Upcycling of Basic Fibrous Waste Types		
	15:00-15:15 (KOREA, GMT+9)	**Plenary Medal Lecture 29: Professor Xianyi Zeng (ENSAIT, France) (Online)** DigitalFashion: A Technology Platform for Digital Fashion Training Through Digitalization of Fabrics, Garments and Human Bodies and Fashion Design Elements		
	15:15-15:30 (KOREA, GMT+9)	**Plenary Medal Lecture 30: Professor Rajesh Mishra (Czech University of Life Sciences Prague, Czech Republic) (Online)** Computational and Analytical Studies on Sandwich Composites Reinforced with Hybrid Fibrous Materials and Bio-fillers	**Prof. Rajesh Mishra (USA)**	
	15:30-15:45 (KOREA, GMT+9)	**Plenary Medal Lecture 31: Dr. Jianquan Cheng (Manchester Metropolitan University, UK) (Online)** Estimating Exercisality on Urban Greenways Using Physical Exercise Trajectory Data and Network-constrained Approach		
	15:45-16:00 (KOREA, GMT+9)	**Plenary Medal Lecture 32: Dr. Prabhuraj Venkatraman (Manchester Metropolitan University Manchester, UK) (Online)** State of the Fashion Industry: Challenges, Opportunities and Barriers to Implement Circular Economy Principles		
	16:00-16:15 (KOREA, GMT+9)	**Plenary Medal Lecture 33: Dr. Kai-chiu Ho (Hansk New Materials Holdings Limited, Hong Kong, China) (Online)** Innovative Mosquito Repellent Technology for Textiles and Clothing		
	16:15-16:30 (KOREA, GMT+9)	**Plenary Medal Lecture 34: Professor Li Li (The Hong Kong University of Science and Technology, Hong Kong, China) (Online)** Unleashing the Creative Potential: Textiles as Catalysts for Interdisciplinary Innovation and Commercialization Success		
	16:30-16:45 (KOREA, GMT+9)	**Plenary Medal Lecture 35: Professor Keqin Zhang (Soochow university,China) (Online)** Large-scale Manufacturing Optical Micro/Nano Functional Fibers for Thermal Energy Managment and Collection		
August 23, 2024 (Friday)				
Venue	**Time**	**Event/Session**	**Session Chair**	
Onsite	09:00-16:00 (KOREA, GMT+9)	**International-Academic-Industrial Collaboration forum on "International Supply Chain Digitization and Sustainability"**	**Prof. Seung Kook An (Korea)**	**Mai Li (UK)**

Wednesday, August 21, Morning (Onsite & Virtual Room A)

Agenda/Venue	Time	Event/Session	Session Chair
August 21, 2024 (Wednesday)			
	09:00-09:10 (KOREA, GMT+9)	Openning Ceremony (Onsite and Online)	TBIS Team
Advanced Materials and Application			
Plenary Session Onsite & Virtual Room A (Online)	09:10-09:25 (KOREA, GMT+9)	**Plenary Medal Lecture 1: Professor Kanji Kajiwara (Shinshu University, Japan) (Onsite)** Is Recycling Doing a Good Job for Our Sustainable Future?	**Prof. Yi Li (UK)**
	09:25-09:40 (KOREA, GMT+9)	**Plenary Medal Lecture 2: Professor Xungai Wang (The Hong Kong Polytechnic University, HongKong, China) (Onsite)** Textile Sustainability – Past, Present and Future	
	09:40-09:55 (KOREA, GMT+9)	**Plenary Medal Lecture 3: Professor Wei Chen (Zhejiang Sci-Tech University, China) (Onsite)** Ionogel Electroactive Materials and Wearable Devices	
	09:55-10:10 (KOREA, GMT+9)	**Plenary Medal Lecture 4: Professor Guowen Song (Iowa State University, USA) (Onsite)** Fighting the Long-Term Health Impact: Cancer and Hazardous Substance Exposure in Firefighters and Understanding	**Prof. Kanji Kajiwara (Japan)**
	10:10-10:25 (KOREA, GMT+9)	**Plenary Medal Lecture 5: Professor Aizheng Chen (Huaqiao University, China) (Onsite)** Supercritical Fluid Technology based Decellularized Extracellular Matrix for Biomedical Application	
	10:25-10:40 (KOREA, GMT+9)	**Plenary Medal Lecture 6: Professor Apurba Das (Indian Institute of Technology Delhi, India) (Onsite)** Electrostatic Spray Coating Technology for Thermoplastic Composites	
	10:40-11:15 (KOREA, GMT+9)	Tea Break	
Textile Functionality and Sustainability			
Plenary Session Onsite & Virtual Room A (Online)	11:15-11:30 (KOREA, GMT+9)	**Plenary Medal Lecture 7: Professor Li Liu (Beijing Institute of Fashion Technology, China) (Onsite)** Key Technologies and Applications in the Research and Development of High-Performance Clothing for Winter Olympic Training Competitions	**Prof. Chiyomi Mizutani (Japan)**
	11:30-11:45 (KOREA, GMT+9)	**Plenary Medal Lecture 8: Professor Chiyomi Mizutani (Otsuma Women's University, Japan) (Onsite)** Heat Retention of Fabrics composed of Moisture-absorbing Heat-generating Fibers and Wear Comfort	
	11:45-12:00 (KOREA, GMT+9)	**Plenary Medal Lecture 9: Professor Xuemei Ding (Donghua University, China) (Onsite)** Developing a Green Development Evaluation System for Ethiopian Textile and Garment Industrial Parks	
	12:00-12:15 (KOREA, GMT+9)	**Plenary Medal Lecture 10: Professor Tamaki Takada Mitsuno (Shinshu University, Japan) (Onsite)** Comparison of Subjective and Objective Assessments of Japanese People's Feeling of 'Out of Place' with Their Clothing	Prof. **Seung Kook An (Korea)**
	12:15-12:30 (KOREA, GMT+9)	**Plenary Medal Lecture 11: Professor Jiyong Hu (Donghua University, China) (Onsite)** Wireless Temperature Sensing Yarn with UHF RFID Helix Dipole Hybrid Antenna for Respiratory Monitoring	
	12:30-12:45 (KOREA, GMT+9)	**Plenary Medal Lecture 12: Professor Seung Kook An (Pusan National University, Korea) (Onsite)** Methodology and Parameters Affecting the Clothing Comfort	
	12:45-14:00 (KOREA, GMT+9)	Lunch Time	

Wednesday, August 21, Afternoon (Onsite & Virtual Room A)

August 21, 2024 (Wednesday)		
Breakout Room A (Onsite & Online)		
Session A: TBIS Regular Topics - Textile Material, Products and Informatics		
Session Chairs	Dr. Dana Kremenakova (Czech Republic)	Dr. Long Wu (China)
Time Slot	**Author Name**	**Paper Title**
14:00-14:15 (KOREA, GMT+9)	**TBIS Medal Lecture: Dr. Mohanapriya Venkataraman (Technical University of Liberec, Czech Republic)**	**Enhancing Thermal Management by Using Thermo-Reflective Materials**
14:15-14:30 (KOREA, GMT+9)	**TBIS Medal Lecture: Dr. Annie Yu (The Hong Kong Polytechnic University, Hong Kong, China)**	**Effect of Structure and Material of Bilayer Knitted Fabric on Tactile Sensation and Warm Retention**
14:30-14:45 (KOREA, GMT+9)	**TBIS Medal Lecture: Dr. Dana Kremenakova (Technical University of Liberec, Czech Republic)**	**Air Permeability and Breathability Evaluation of Textile Layers**
14:45-15:00 (KOREA, GMT+9)	**TBIS Medal Lecture: Dr. Long Wu (Xi'an Polytechnic University, China)**	**Research on Knowledge Modeling of Business Suit Pattern Design and Development of Automated Patternmaking Platform**
15:00-15:15 (KOREA, GMT+9)	**TBIS Medal Lecture: Professor Jifu Mao (Donghua University, China)**	**Polypyrrole-based Conductive Fibers and Textiles for Biomedical Applications**
15:15-15:30 (KOREA, GMT+9)	Tea Break	
15:30-15:40 (KOREA, GMT+9)	Jia-Xin Zhang, Rohana Zur, Habibah Bt Abdul Jabbar	Research on Innovative Design Method of Trench Coat Style Based on Kansei Engineering
15:40-15:50 (KOREA, GMT+9)	Yan Wu , Qing-Yi Wang, Xue Qin, Zhi-Yuan Hu, Li Liu	Dynamic Skin Deformation of Knee Based on Speed Skating
15:50-16:00 (KOREA, GMT+9)	Mei-Ying Kwan, Kit-Lun Yick, Joanne Yip, Nga-Wun Li, Annie Yu, Ka-Wai Lo	Breast Anthropometry Measurements of Chinese Adolescent Girls for Sports Bra Design
16:00-16:10 (KOREA, GMT+9)	Qing-Yi Wang, Xue Qin , Yan Wu , Zhi-Yuan Hu , Li Liu	Study on Skin Strain Patterns of the Torso in Speed Skaters During Straight-Line Posture
16:10-16:20 (KOREA, GMT+9)	Kai Sun, Long Wu, Jing Qi, Jun-Tao Ding, Yue Wang, Jun Zhang	Clothing Style Recommendation System Based on Interactive Genetic Algorithm
16:20-16:30 (KOREA, GMT+9)	Hai-Yang Wang, Long Wu, Jing Qi, Jun-Tao Ding, Yue Wang	Optimization of 3D Printing Bra Cup Structure Design using Lattice Structure
16:30-16:40 (KOREA, GMT+9)	Xiao-Lei Luo, Lin Liu, Ju-Ming Yao	Application of Biomass Flame Retardant Technology in Cellulosic Textiles
16:40-16:50 (KOREA, GMT+9)	Lei-Lei Du, Ren-Hong Li, Wen-Xing Chen	Highly Efficient Subambient All-day Radiative Cooling Textiles with Optically Responsive MgO Embedded in Porous Cellulose Acetate
16:50-17:00 (KOREA, GMT+9)	Wei Zhang, Bao-Zhong Sun	Electrical-driven Deformation Behaviors of Textile Structural Shape Memory Polymer Composites
17:00-17:10 (KOREA, GMT+9)	Mei-Qi Hu, Bao-Zhong Sun, Bo-Hong Gu	Structural Effect and Temperature Effect on Multiple Transverse Impact Damage Distributions of 3-D Braided Composite based on Thermo-mechanical Coupling Approach

Wednesday, August 21, Afternoon (Onsite & Virtual Room B)

August 21, 2024 (Wednesday)		
Breakout Room B (Onsite & Online)		
Session B: TBIS Regular Topics - E-Textiles, Wearables and Biomedical Textiles		
Session Chairs	Professor Xiuju Song (China)	Professor Zheng Zhao (China)
Time Slot	**Author Name**	**Paper Title**
14:00-14:15 (KOREA, GMT+9)	**TBIS Medal Lecture: Professor Xiuju Song (Zhejiang University, China)**	**Cr_2Te_3-Encapsulated Liquid Metal for Wearable Sensors**
14:15-14:30 (KOREA, GMT+9)	**TBIS Medal Lecture: Professor Zheng Zhao (Wuhan University of Technology, China)**	**Multifunctional Hydrogel Dresings for Accelerating Wound Healing**
14:30-14:45 (KOREA, GMT+9)	**TBIS Medal Lecture: Dr. Lu Jin (Yiwu Research Institute of Fudan University, China)**	**Piezoelectric Poly-L-Lactic Acid Film-based Wearable Sensors**
14:45-15:00 (KOREA, GMT+9)	**TBIS Medal Lecture: Dr. Jun Song (Shanghai University, China)**	**Mechanism of Electrocatalyzed MXene Nanoenzymes Wetspun Fibrous Dressing for Promoting Diabetic Ulcer Healing**
15:00-15:15 (KOREA, GMT+9)	**TBIS Medal Lecture: Dr. Zhongda Chen (Nanjing Medical University, China)**	**The Mechanical Mechanism of Knitted Strain Sensor for Pulse Wave Monitor from Skin Surface**
15:15-15:30 (KOREA, GMT+9)	Tea Break	
Session C: TBIS Workshop - Fashion Textile Digitisation for Compliance with ESG and ESPR Legislations (FTD-ESG-ESPR)		
Session Chairs	Dr. Zhangchi Liu (China)	Tim Jun Li (UK)
15:30-15:45 (KOREA, GMT+9)	Professor Xianyi Zeng (ENSAIT，France)	**Introduction to FBD_BMODEL Project and FBD Foundation**
15:45-16:00 (KOREA, GMT+9)	Professor Yi Li (The University of Manchester, UK)	**On Sustainable and Circular Textiles**
16:00-16:15 (KOREA, GMT+9)	Tim Jun Li (Digital Clothing Limited, UK)	**The FBD platform for ESG and ESPR Legislation Compliance**
16:15-16:30 (KOREA, GMT+9)	Chathura Sudharshan (Seamless Source, UK)	**The Future of Transparency and Circularity**
16:30-16:45 (KOREA, GMT+9)	Zhangchi Liu (Qingdao University. China)	**Innovation and Entrepreneurship Based on Digital Twin Textile Supply Chain Platform**
16:45-16:55 (KOREA, GMT+9)	Xiao-Nan Xu (The University of Manchester, UK)	Advances in Textile Skin Comfort and Hand Feel Digitization for Sustainability
16:55-17:05 (KOREA, GMT+9)	Xu Wang (The University of Manchester, UK)	Fabric Hand Digitalization and Traceability in Wool Textile Manufacturing Processes
17:05-17:15 (KOREA, GMT+9)	Hao-Ke Liu (The University of Manchester, UK)	Advances in Digitization and Implementation of Textile Circularity

Thursday, August 22, Morning (Virtual Room A, online only)

Agenda/Venue	Time	Event/Session	Session Chair
August 22, 2024 (Thursday)			
Biomedical and Functional Textiles			
Plenary Session Virtual Room A (Online Only)	07:00-07:15 (KOREA, GMT+9)	**Plenary Medal Lecture 13: Professor Bingqing Wei (University of Delaware USA) (Online)** Can Photoelectric Conversion Efficiency of Solar Cells Be Doubled?	**Prof. Uwe Reischl (USA)**
	07:15-07:30 (KOREA, GMT+9)	**Plenary Medal Lecture 14: Professor Uwe Reischl (Boise State University, USA) (Online)** Impact of Cosmetic Hairspray on Fabric Flammability	
	07:30-07:45 (KOREA, GMT+9)	**Plenary Medal Lecture 15: Professor Xudong Wang (University of Wisconsin-Madison, USA) (Onsite)** Synthesis and Large-Scale Assembly of Piezoelectric Biomaterials and Devices	
	07:45-08:00 (KOREA, GMT+9)	**Plenary Medal Lecture 16 Professor Zhaoqun Du (Donghua University, China) (Online)** Structure Formation, Theoretical Analysis and Application of a Series of Auxetic Textiles	
	08:00-08:15 (KOREA, GMT+9)	**Plenary Medal Lecture 17: Professor Lijing Wang (RMIT University, Australia) (Online)** Automatic Identification of Textile Fibre Under Optical Microscope Using Neural Network Recognition Technology	
	08:15-08:30 (KOREA, GMT+9)	**Plenary Medal Lecture 18: Professor Gang Li (Soochow University, China) (Online)** Calotropis Gigantea Fiber and Its Eco-functional Textiles	
	08:30-08:45 (KOREA, GMT+9)	**Plenary Medal Lecture 19: Professor Xiumei Mo (Donghua University China) (Online)** Electrospun Nanofiber and Nanoyarn for Tissue Engineering	**Prof. Xiumei Mo (China)**
	08:45-09:00 (KOREA, GMT+9)	**Plenary Medal Lecture 20: Professor Maobin Xie (Guangzhou Medical University, China) (Online)** Volumetric Bioprinting of Protein-based (Bio)inks for Tissue Engineering	
	09:00-09:15 (KOREA, GMT+9)	**Plenary Medal Lecture 21: Dr. Fengzhi Li (Nanjing University of Aeronautics and Astronautics, China)(Online)** Research on Human Thermal Regulatory Model based on Real Human Geometry and Arterial Vascular Tree	
	09:15-09:30 (KOREA, GMT+9)	**Plenary Medal Lecture 22: Professor Xiaoqin Wang (Soochow University, China) (Online)** Enhancing CO2 Capture and Utilization: A Dual-Function Approach Using Silk Fibroin Hydrogels and Carbon Absorbents	
	09:30-09:45 (KOREA, GMT+9)	**Plenary Medal Lecture 23 Professor Liangjun Xia (Wuhan Textile University, China) (Online)** Color Construction of Textile Fiber Materials	
	09:45-10:00 (KOREA, GMT+9)	**Plenary Medal Lecture 24: Dr. Lei Yao (Hong Kong Research Institute of Textiles and Apparel, Hong Kong, China) (Online)** Solutions for Microplastics	
	10:00-10:15 (KOREA, GMT+9)	Tea Break	

Thursday, August 22, Morning (Virtual Room B, online only)

August 22, 2024(Thursday)		
Breakout Room B, online only		
Session B: TBIS Regular Topics -Clothing Biongineering		
Session Chairs	Dr. KyoungOk Kim (Japan)	Dr. Liya Zhou (China)
Time Slot	**Author Name**	**Paper Title**
10:15-10:30 (KOREA, GMT+9)	**TBIS Medal Lecture: Dr. KyoungOk Kim (Shinshu University, Japan)**	**Measuring Methods of Body Shape for Efficiently Manufacturing Individualized Garments**
10:30-10:45 (KOREA, GMT+9)	**TBIS Medal Lecture: Dr. Liya Zhou (Donghua University, China)**	**Development And Performances Testing of Sitting Cushion with Comfort Zone Partition Based on Setting Poster Analysis**
10:45-11:00 (KOREA, GMT+9)	**TBIS Medal Lecture: Dr. Eric Wang (SGS Global Softlines, China)**	**Study on the Recycling of Various Textile Materials and Their Impact to the Textile Industry Decarbonization**
11:00-11:10 (KOREA, GMT+9)	Xiao-Xuan Cui	Application, Aesthetics, Ethics: Research on the Development of Digital and intelligent in Fashion Design Based on AIGC
11:10-11:20 (KOREA, GMT+9)	Qi Sun, Ying Zhang, Yue Sun, Yi-Jun Chen, Lai-Li Wang	A Comparative Bibliometric Analysis of Research Articles on Garment Production
11:20-11:30 (KOREA, GMT+9)	Si-Qi Yang, Yan-Wen Ruan	The Connotation and Structure of Minimalist Consumption from the Perspective of Dual Integration of Art and Society
11:30-11:40 (KOREA, GMT+9)	Chia-Cheng Chou, Guo-Xiang Yuan	Application of Self-directed Learning in Fashion Design Education: Strategies, Impacts, and Case Studies
11:40-11:50 (KOREA, GMT+9)	Ya-Ting Yang, Yu-Wei Zhang, Zhen-Zhen Guo, Jian Li	Classification of Breast Morphology for Young Women
11:50-12:00 (KOREA, GMT+9)	Rui Sheng, Zhong-Hua Cao, Guo-Xiang Yuan	Typical Models and Characteristics of Footwear Product Design and Development in China
12:00-12:10 (KOREA, GMT+9)	We Zeng, Zhe Liu, Jin Duan	A Review on Medical Protective Fabric in Thermal and Moisture Management by Membrane-based Clothing systems towards Personal Comfort
12:10-14:00 (KOREA, GMT+9)	Lunch	

Thursday, August 22, Morning (Virtual Room C, online only)

August 22, 2024 (Thursday)		
Breakout Room C, online only		
Session C: Textile Bioengineering Design and Informatics		
Session Chairs	Dr. Jiashen Li (UK)	**Dr. Hui Huang (Singapore)**
Time Slot	**Author Name**	**Paper Title**
10:15-10:30 (KOREA, GMT+9)	**TBIS Medal Lecture: Dr. Jiashen Li (The University of Manchester, UK)**	**Preparation and Characterization of Three Dimensional Nanofibrous Scaffold**
10:30-10:45 (KOREA, GMT+9)	**TBIS Medal Lecture: Dr. Zekun Liu(University of Oxford, UK)**	**Fiber Materials and Devices for Digital Healthcare**
10:45-11:00 (KOREA, GMT+9)	**TBIS Medal Lecture: Dr. Hui Huang (Singapore Institute of Manufacturing Technology, A*STAR,**	**Printed Flexible Electronics for Advanced MedTech**
11:00-11:15 (KOREA, GMT+9)	**TBIS Medal Lecture: Dr. Yueping Guo (Novel Protective Textiles Limited, Hong Kong, China)**	**Heat and Moisture Transfer of Multilayer Adult Incontinence Briefs in Computational Simulations and Objective Measurements**
11:15-11:25 (KOREA, GMT+9)	Ying-Lei Lin, Ting-Ting Zhang, Jia-Guang Meng Xing-Yu Liu, Zhong-Chang Jiang, Ran Ma, Jing He	Structural Design and Energy Efficiency Evaluation of the Hip Assistive Unpowered Soft Exosuit
11:25-11:35 (KOREA, GMT+9)	Xiao-Xin Yang, Yue Yin, Jing Guo	Evaluation of Pressure Comfort of Supportive Waist Protections with Different Supporting Bars
11:35-11:45 (KOREA, GMT+9)	Yan-Ting Li, Li-Min Shi	Optimization Design and Evaluation of Shirt Structure for Female Wheelchair Users
11:45-11:55 (KOREA, GMT+9)	Qin-Yi Zhou, Yan-Zhen Wang	Impact of Tight-fit Shorts on Core Training: Exploring Equilibrium Points and Electromyograph Expression
11:55-12:05 (KOREA, GMT+9)	Jin-Zhou Yang, Yan-Zhen Wang	Research on the Mechanisms of Knee Pain Associated with Yoga Kneeling Postures
12:05-12:15 (KOREA, GMT+9)	Shi-Yao Chu, Li-Min Shi, Ying Yang	Research and Development of Easy-to-wear Warm Boots based on New Thermal Wadding
12:15-12:25 (KOREA, GMT+9)	Si-Ling Lin , Wei Fan, Jin-Zhao Zhang, Chun-Ming Zhao, Long Li	Electrical Heating Properties of Ag/PANI/PAN Conductive Fabrics
12:25-14:00 (KOREA, GMT+9)	Lunch	

Thursday, August 22, Morning (Virtual Room D, online only)

August 22, 2024 (Thursday)		
Breakout Room D, online only		
Session D: Textile Engineering Technologies		
Session Chair	Professor Ronghui Guo (China)	Professor Yanhua Cheng (China)
Time Slot	**Author Name**	**Paper Title**
10:15-10:30 (KOREA, GMT+9)	**TBIS Medal Lecture: Dr. Chunhong Zhu (Shinshu University, Japan)**	**High Performance Wearable TENG Utilizing Nanofiber Membrane for Energy-harvesting**
10:30-10:45 (KOREA, GMT+9)	**TBIS Medal Lecture: Professor Yanhua Cheng (Donghua University, China)**	**Visualization of Polymer Fiber Microstructures by AIEgens**
10:45-11:00 (KOREA, GMT+9)	**TBIS Medal Lecture: Professor Ronghui Guo (Sichuan University, China)**	**In-situ Crosslinking Reinforced Cellulose Aerogel Fibers for Thermal Insulation and Multifunctional Applications**
11:00-11:15 (KOREA, GMT+9)	**TBIS Medal Lecture: Dr. Danmei Sun (Heriot-Watt University, UK)**	**Enhancing Thermal Management in Protective Textiles Using Hydrated Salt as Phase Change Materials**
11:15-11:25 (KOREA, GMT+9)	Jing-Jing Li, Li-Min Shi, Hui Zhang	A Review on Smart Wearable Devices for Visually Impaired People
11:25-11:35 (KOREA, GMT+9)	Ying-Chen Zhang, Hong-Yan Wu, Xia-Nan Zhang, Yi-Shuo Chen, Da-Xun Yin, Jian-Cheng Lou, Guan-Yu Zhao, Man Li, Bao-Hua Li, Zhuang-Zhuang Li, Run-Ahe Li	A Study on antioxidant activity and molecular mechanism of natural dye fucoidin
11:35-11:45 (KOREA, GMT+9)	Ying Wang, Yuting Sun, Huamei Lang, Yanjie Xiao, Lina Sun, Lei zhang, Junzheng Liu, Jian Li, Yang Zhang	Design and Implementation of Women's Belly Bag Based on Style3D Technology
11:45-11:55 (KOREA, GMT+9)	Xiao-Xin Yang, Shu-Qi Liu, Jing Guo	A Correlation Study on the Thermal Insulation Performance of Down Wadding in Different Placement Conditions
11:55-12:05 (KOREA, GMT+9)	Ruo-Dan Pang, Ming-Hai Cui, Yan-Xia Xu	A Body Shape Study based on 3D Body Data for Top Size Aanalysis of Women Aged 18-25 Years
12:05-12:15 (KOREA, GMT+9)	Xing-Yu Chen, Ming-Hai Cui	The Spatial Relationship Inside Coats Based on CLO3D Virtual Fabrics
12:15-12:25 (KOREA, GMT+9)	Xiao-Yu Zhang, Jing-Ge Liu, Hao-Chen Yan, Zi-Han Yu, Gang Li	Flexible Sweat Sensors based on MOFs: Preparation and Application
12:25-14:00 (KOREA, GMT+9)	Lunch	

Thursday, August 22, Afternoon (Virtual Room A, online only)

Agenda/Venue	Time	Event/Session	Session Chair
August 22, 2024 (Thursday)			
Wearables, Digital and Sustainable Technologies			
Plenary Session Virtual Room A (Online Only)	14:00-14:15 (KOREA, GMT+9)	**Plenary Medal Lecture 25:Professor Terry Ye (Southern University of Science and Technology, China) (Online)** Quantifying the Parasitic Capacitance of Conductive Yarns Used in High-Frequency Applications	**Prof. Xianyi Zeng (France)**
	14:15-14:30 (KOREA, GMT+9)	**Plenary Medal Lecture 26: Professor Wei Fan (Xi'an Polytechnic University, China) (Online)** Construction and Application of Breathing All-fiber Nanogenerator	
	14:30-14:45 (KOREA, GMT+9)	**Plenary Medal Lecture 27: Dr. Aris Rui Huang (Chengdu SwiftChain Technology Co., Ltd., China) (Online)** Implementation of Clothing from Conception to Design Based on the AGI's Diffusion Transformer Framework	
	14:45-15:00 (KOREA, GMT+9)	**Plenary Medal Lecture 28: Professor Jiri Militky (Technical University of Liberec, Czech Republic) (Online)** Upcycling of Basic Fibrous Waste Types	
	15:00-15:15 (KOREA, GMT+9)	**Plenary Medal Lecture 29: Professor Xianyi Zeng (ENSAIT, France) (Online)** DigitalFashion: A Technology Platform for Digital Fashion Training Through Digitalization of Fabrics, Garments and Human Bodies and Fashion Design Elements	
	15:15-15:30 (KOREA, GMT+9)	**Plenary Medal Lecture 30: Professor Rajesh Mishra (Czech University of Life Sciences Prague, Czech Republic) (Online)** Computational and Analytical Studies on Sandwich Composites Reinforced with Hybrid Fibrous Materials and Bio-fillers	**Prof. Rajesh Mishra (USA)**
	15:30-15:45 (KOREA, GMT+9)	**Plenary Medal Lecture 31: Dr. Jianquan Cheng (Manchester Metropolitan University, UK) (Online)** Estimating Exercisality on Urban Greenways Using Physical Exercise Trajectory Data and Network-constrained Approach	
	15:45-16:00 (KOREA, GMT+9)	**Plenary Medal Lecture 32: Dr. Prabhuraj Venkatrman (Manchester Metropolitan University Manchester, UK) (Online)** State of the Fashion Industry: Challenges, Opportunities and Barriers to Implement Circular Economy Principles	
	16:00-16:15 (KOREA, GMT+9)	**Plenary Medal Lecture 33: Dr. Kai-chiu Ho (Hansk New Materials Holdings Limited, Hong Kong, China) (Online)** Innovative Mosquito Repellent Technology for Textiles and Clothing	
	16:15-16:30 (KOREA, GMT+9)	**Plenary Medal Lecture 34: Professor Li Li (The Hong Kong University of Science and Technology, Hong Kong, China) (Online)** Unleashing the Creative Potential: Textiles as Catalysts for Interdisciplinary Innovation and Commercialization Success	
	16:30-16:45 (KOREA, GMT+9)	**Plenary Medal Lecture 35: Professor Keqin Zhang (Soochow university, China) (Online)** Large-scale Manufacturing Optical Micro/Nano Functional Fibers for Thermal Energy Managment and Collection	

Thursday, August 23 (onsite only)

Agenda/Venue	Time	Event/Session	Session Chair	
August 23, 2024 (Friday)				
Wearables, Digital and Sustainable Technologies				
Onsite	09:00-16:00 (KOREA, GMT+9)	International-Academic-Industrial Collaboration forum on "International Supply Chain Digitization and Sustainability"	Prof. Seung Kook An (Korea)	Mai Li (UK)

Acknowledgement:

TBIS 2024 organizing committee would like to take this opportunity to thank those who have volunteered and have made significant contribution to the conference:
Young Mee Baek, Ji Yeon Baeg, Junwei Cao, Xiaodan Cao, Hyun Jong Choi, Tianyu Kou, Ziwei Li, Zhangchi Liu, Haoke Liu, Jing Liu, Ji Soo Lee, Ah Young Jang, Hyun Je Jo, Yeon Hee Jeon, Kyung Tae Kim, Shihao Song, Min Jae Seo, Xu Wang, Dekai Xu, Xiaonan Xu, Sirui Yao, Yuchen Yang, Yongwei Yang, Eon Soo Yoon, Wei Zeng, Yunfei Zhu, Xiaoyu Zhang.

Workshop - Fashion Textile Digitisation for Compliance with ESG and ESPR Legislations (FTD-ESG-ESPR)

August 21, 2024 (Onsite & Online)

15:30-17:15 (KOREA, GMT+9)

The Environment Social Governance (ESG) legislation was passed on April 24, 2023, followed by the adoption of the Eco-Design for Sustainable Products (ESPR) Legislation on May 27, 2024. These regulations mandate that all textile products placed on the EU market must be accompanied by a collection of mandatory data relating to a product's lifecycle, accessible via a digital product passport. These requirements will partially be implemented in 2026, with full implementation by 2030.

Given these legislative changes, fashion and textile companies must embrace digitisation to produce traceable, sustainable, and functional goods. This workshop, hosted by the Fashion Big Data Foundation and Digital Clothing Limited, is a collaborative venture arising from the EU Horizon 2020 project FBD_BModel Project Consortium. In partnership with the Textile Bioengineering and Informatics Society (TBIS), we will present the latest developments in a novel fashion big data (FBD) technology platform. This platform links consumer needs for fashion textile products and global fashion market demands with garment design and textile manufacturing processes to meet the incoming ESG and ESPR regulations.

In this FBD workshop, invited speakers will discuss complying with ESG and ESPR legislation by achieving digital transformation through material digitisation, product performance digitisation, manufacturing process digitisation, digital certification, digital product pass digitisation, digital twin value chain generation, and data-driven business models. Participants will be able to learn about the latest technological innovations, begin their business's digital transformation process in compliance with ESG and ESPR regulations, establish new data-driven collaborations, and ultimately develop core competencies in the Big Data Era.

Poster-List of Papers

August 21, 2024 (Wednesday)

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ePosters displaying time: 14:00-15:30 (KOREA, GMT+9) 13:00-14:30 (BEIJING TIME)			
ePosters presentation time: 14:00-15:30 (KOREA, GMT+9) 13:00-14:30 (BEIJING TIME)			
	Paper ID	**Author Name**	**Paper Tittle**
1	TBIS-20240006	Xi-Zi Yu	AI-Enabled Digital Fashion Design: The Double Diamond Model and Sustainability Exploration in the Case of ZERO COSMOS Brand
2	TBIS-20240014	Shao-Pu Liu, Jing Bian, An-Hua Zhong	Analysis of the Rapid Pattern Generation and Garment Fit Simulation for Children's T-Shirts
3	TBIS-20240015	Jing Bian, Shao-Pu Liu, An-Hua Zhong	Automatic Generation of Women's Suit Patterns for Optimizing Body Shape
4	TBIS-20240016	Juan-Fen Jiang, Zhen-Ying Li, Jia Wang	A Subdivision Scheme Applied on 3D Clothes with Hybrid Regular Meshes
5	TBIS-20240019	Qian Lyu, Nan Meng, Yang-Yang Wang	Research on the Application of Rolling and Dyeing Process on Vegetable-Tanned Leather Materials
6	TBIS-20240031	Xu He, Xiao-Wei Song, You-Fang Chen	Generation Z Consumers ’s Attitudestoward Cultural Appropriation byHigh-end Clothing Brands
7	TBIS-20240039	Nan Meng, Qian Lyu	Digital Fabric Design Based on Blender Software
8	TBIS-20240050	Yan-Mei Chi, Xiao-Yu Han	Digital Gown Design Based on CLO3D
Onsite	Poster Presentations		
Posters displaying time: 14:00-15:30 (KOREA, GMT+9) 13:00-14:30 (BEIJING TIME)			
Posters presentation time: 14:00-15:30 (KOREA, GMT+9) 13:00-14:30 (BEIJING TIME)			
	Paper ID	**Author Name**	**Paper Tittle**
1	TBIS-20240023	Hao Ye, Ming-Bang Wu, Ju-Ming Yao	Cnidarians-Inspired Free-Standing COF Fibrous Membranes for Uranium Extraction from Seawater
2	TBIS-20240027	Haruka Ebisawa, Daisuke Sasaki, Hikaru Takabayashi, Shinya Sudo, Miyuki Miyake, Hiromasa Moriyama, Eiji Ogura	Study on New Household Laundry Softener that imparts a Smooth and Dry Texture
3	TBIS-20240030	Ming-Bang Wu, Ju-Ming Yao	Controllable Preparation of Hierarchical Nanofiber Membranes with Adsorption and Photocatalysis Properties for Cascade Uranium Extraction from Wastewater
4	TBIS-20240033	Long-Fei Sun, Lin Liu, Ju-Ming Yao	Lightweight, High-strength and Moldable Cellulose Foam Via Air-drying
5	TBIS-20240059	Wen-Li Gong, Lin Liu, Ju-Ming Yao	Structural Control of Cellulose-Based Porous Microspheres and Phosphorus Adsorption and Separation Performance
6	TBIS-20240073	Deng-Feng Wang, Lin Liu, Ju-Ming Yao	Polyphenol Lignin Enabled highly Robust and Thermoplastic Bio-polyurethane Elastomer with Covalent Adaptive Network
7	TBIS-20240095	Hyelim Kim, Wonyoung Jeong	Preparation and Characterization of Stretchable Conductive Covering Thread with Covering Process- Focusing on Changes in the Fineness of Covered Conductive Yarns
8	TBIS-20240109	Xue-Ying Song, Xiao-Feng Wang, Jing Qi	Research on Data Cleaning Methods Combining Dynamic and Static Methods Processing
9	TBIS-20240110	Jing Qi, Xing-Ling Li, Long Wu, Wen-Ni Huang, Cheng Chi	A Parameterized Pattern Study on Fitted Sleeves of Women's Shirts with Towering Chest Shapes

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2	Xiao-Xuan Cui	Application, Aesthetics, Ethics: Research on the Development of Digital and intelligent in Fashion Design Based on AIGC
3	Qi Sun, Ying Zhang, Yue Sun, Yi-Jun Chen, Lai-Li Wang	A Comparative Bibliometric Analysis of Research Articles on Garment Production
4	Si-Qi Yang, Yan-Wen Ruan	The Connotation and Structure of Minimalist Consumption from the Perspective of Dual Integration of Art and Society
5	Xiao-Xin Yang, Yue Yin, Jing Guo	Evaluation of Pressure Comfort of Supportive Waist Protections with Different Supporting Bars
6	Jing-Jing Li, Li-Min Shi, Hui Zhang	A Review on Smart Wearable Devices for Visually Impaired People
7	Yan-Ting Li, Li-Min Shi	Optimization Design and Evaluation of Shirt Structure for Female Wheelchair Users
8	Chia-Cheng Chou, Guo-Xiang Yuan	Application of Self-directed Learning in Fashion Design Education: Strategies, Impacts, and Case Studies
9	Ying-Chen Zhang, Hong-Yan Wu, Xia-Nan Zhang, Yi-Shuo Chen, Da-Xun Yin, Jian-Cheng Lou, Guan-Yu Zhao, Man Li, Bao-Hua Li, Zhuang-Zhuang Li, Run-Ahe Li	A Study on antioxidant activity and molecular mechanism of natural dye fucoidin
10	Ying Wang, Yuting Sun, Huamei Lang, Yanjie Xiao, Lina Sun, Lei zhang, Junzheng Liu, Jian Li, Yang Zhang	Design and Implementation of Women's Belly Bag Based on Style3D Technology
11	Rui Sheng, Zhong-Hua Cao, Guo-Xiang Yuan	Typical Models and Characteristics of Footwear Product Design and Development in China
12	Qin-Yi Zhou, Yan-Zhen Wang	Impact of Tight-fit Shorts on Core Training: Exploring Equilibrium Points and Electromyograph Expression
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20	Xiao-Lei Luo, Lin Liu, Ju-Ming Yao	Application of Biomass Flame Retardant Technology in Cellulosic Textiles
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25	Xu Wang, Su-Jian Zhang, Kristina Brubacher, Barbara Waters, Yi Li	Fabric Hand Digitalization and Traceability in Wool Textile Manufacturing Processes
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About TBIS

www.tbisociety.org

Textile Bioengineering and Informatics Society (TBIS) is a charitable organization created to foster, develop and promote all aspects of science and technology in bioengineering of materials, fibers and textiles, and to study how fibers, textiles and clothing influence human biology, medicine, behavior and health, as well as human living environments.

TBIS organizes events including: International Symposium, Industry workshops/forums, R&D in testing and evaluation, standards. Publication: Proceedings and an academic journal-Journal of Fiber Bioengineering and Informatics.

The peer-reviewed international symposium has been organized annually in the following places:

- TBIS 2008, the 1st TBIS symposium on "Sports, Health, Eco-Function, Sportswear Creative Design" was held at Hong Kong in August 2008 during the period of Beijing Olympic 2008.
- TBIS 2009, the 2nd TBIS symposium was held as a special symposium on "Textile Bioengineering" at Hong Kong in July 2009, along with the 4th WACBE World Congress on Bioengineering 2009.
- TBIS 2010, the 3rd TBIS symposium was held on "Greener Textiles, Healthier Life", in May 2010, Dong Hua University, Shanghai , during the period of Shanghai World Expo 2010 .
- TBIS 2011, the 4th TBIS symposium was held on "Advanced Textile, Fashionable Industry" in May 2011, Beijing Institute of Fashion Technology, Beijing China.
- TBIS 2012, the 5th TBIS symposium was held on "Kansei and Bioengineering: Creating New Fiber- Textile Science and Technology" in August 2012, Shinshu University, Ueda, Japan.
- TBIS 2013, the 6th TBIS symposium was held on "Green. Health, Ecology, Bioengineering", in September 2013, Xi'an Polytechnic University, Xian, China.
- TBIS 2014, the 7th TBIS symposium was held on "Innovations for Protection, Health and
- Sustainability", in August 2014, Hong Kong Polytechnic University, Hong Kong, China.
- TBIS 2015, the 8th TBIS symposium was held on "Globalized Innovations" in June 2015, Zadar Croatia.
- TBIS 2016, the 9th TBIS symposium was held in July 2016, RMIT University, Melbourne in Australia.
- TBIS 2017, the 10th TBIS symposium was held in May 2017, Wuhan Textile University, China.
- TBIS 2018, the 11th TBIS symposium was held in July 2018, The university of Manchester, UK.
- TBIS 2019, the 12th TBIS symposium was held in September 2019, Soochow University, China.
- TBIS 2020, the 13th TBIS symposium was held on "Combatting COVID-19 Pandemic with Science and Technology Innovations " in July 2020, Webinar.
- TBIS 2021, the 14th TBIS symposium, was held on "Advanced Materials ▪ Smart Wearables ▪ Industry 4.0 " in July 2021 , Webinar.
- TBIS 2022, the 15th TBIS symposium, was held on "Sustainability of Textile Industry in Post Pandemic Era" in September 2022, Webinar.
- TBIS 2023, the 16th TBIS symposium, Institute of Natural Fibres & Medicinal Plants, Poland.
- TBIS 2024, the 17th TBIS symposium, Daegu, Korea.

Proceedings of Textile Bioengineering and Informatics (TBIS proceedings) has been indexed by worldwide scientific and academic reputable databases such as EI, Scopus, CPCI/ISI Web of Knowledge, Library of Congress, CNKI, Google Scholar, Microsoft Academic Search, WorldCat and UlrichsWseb, becoming a leading academic conference organizer and publisher. In the CPCI/ISI Web of Knowledge database, TBIS has published 2193 research papers since 2008. TBIS has established an effective platform for academic institutions and individual scholars, researchers and students to present their research outputs, exchange ideas publish their research works and communicate with peers and experts in the field to get recognitions and enhance their career developments at different stages, as demonstrated in the past 17 years.

About JFBI

Journal of Fiber Bioengineering and Informatics (JFBI) (ISSN 1940-8676) is an academic peer-reviewed and fully refereed international journal to promote multidisciplinary research and collaborations across different fields. JFBI publishes reviews and original research outputs quarterly to promote cutting age cross-disciplinary collaboration and create higher impact for advancing textile science and engineering in terms of academic citations, industrial applications and contributions to global humanity. JFBI aims to support the career development of researchers and scholars at different stages from students, young researchers to senior academics. The types of works that JFBI publishes range from molecular to human-fiber-environment systems and textile value chains. JFBI publishes with an open access publication model, meaning that all interested readers will be able to freely access the journal online without any need for a subscription for the purpose to promote academic exchanges and impact of research.

You are welcome to submit original research manuscript to JFBI if your topic falls within the following areas:

- Textile devices, footwear, apparel and accessories
- Textile and apparel CAD technologies
- Textile informatics and supply chain management
- Novel materials: biomaterials, macromolecules, nano materials and smart materials, and novel fibers
- Novel technologies: biotechnology, nanotechnology, fiber technology, textile technology, dyeing and finishing technology and clothing technology
- Biomedical engineering, medical textiles and devices
- Manufacturing and processing equipment and devices: fiber spinning, yarn spinning, weaving, knitting, dyeing and finishing, non-woven, clothing manufacturing and finishing
- Design: fashion design, functional design, system design and integration, accessories design
- Evaluation and test methods, testing standards and instruments
- Theoretical modeling and computational simulation
- Thermal bioengineering, biomechanical engineering and sensory bioengineering
- Textile Tribology
- Clothing and textile devices for personal protection, sports performance and healthcare
- Clothing physiology, comfort, hygiene, health and ergonomics
- Textile Education and E-learning technologies
- Human body metrics and anthropology
- Textile ecology, carbon footprint, certification, sustainability and technology roadmap
- Textile value chains, digitization and AI applications.
- Wearable Technology, Wearable Devices, Fashion Electronics

JFBI has been indexed at Scopus and other databases. The citation scores have increased in the past three years from 0.3 in 2021 to 2.4 in 2023. More details on how to submit manuscript to JFBI, please visit the website: **www.jfbitbis.org.**

If you are interested in utilizing TBIS and JFBI platform for your career development, please feel free to contact via email to **editor@tbisociety.org.**

Supporting Organizations

Fashion Big Data foundation

www.fbdfoundation.org

The Fashion Big Data (FBD) foundation was established from the EU Horizon 2020 project “Fashion Big Data Business Model (FBD_BMODEL)”, which has been evaluated and approved by EU commission to continue to exploit the results of the project, to develop and utilize tools created during the project. The FBD foundation is a non-profit organization with a mission to develop a digitization and Intelligentization platform to speed up and support the sustainability of the Fashion and Textile Industry through the development and application of eco-sustainable materials, eco-sustainable fabrics, eco-sustainable design, and eco-sustainable products as well as eco-sustainable supply chain management. The scope and main activities of the organization is to promote the dissemination and exploitation of the FBD_BModel results, including:

- Cocreating the e-shopping tools with customers to enable novel C2B2B digital business models.
- Address the sustainability aspects and the pressure to move forward the circular fashion industry, through working with decision makers and interest groups to achieve the goal.
- Promote the technologies uptake of digitization and Intelligentization data services, promote international collaboration between academia, industrial enterprises, and associations.
- Cultivate new projects.
- Nurture the development of novel business services, business modelling, standardization, and certification.

IAFMS (IDHIMIA)

Originally known as International Digital Health and Intelligent Materials Innovation Association (IDHIMIA), the International Advanced Fiber Materials Society (IAFMS) is a multilateral, non-profit, and non-governmental organization that aims to promote international cooperation and scientific and technological innovation on next-generation fiber-related materials across borders, cultures, and disciplines. The organization was established in July 2020 by several notable institutions, including Donghua University from, University of Manchester, China Textile Engineering Society, Textile Bioengineering and Informatics Society (TBIS), École Nationale Supérieure des Arts et Industries Textiles (ENSAIT), Shanghai Public Health Clinical Center, Service Center for Societies of Shanghai Science and Technology Association, and Shanghai Consulting & Academic Activities Center for Academicians of Chinese Academy of Engineering. By converging the key innovation momentum in materials science, textiles, biomedicine, and information science, the society strives to build a platform for interdisciplinary and transnational technological cooperation, cultivate top-notch talents in fiber materials-related fields worldwide and promote cutting-edge scientific research and original major innovations.

Supporting Organizations

Empa

Empa
Materials Science and Technology

The Laboratory Biomimetic Membranes and Textiles is developing smart textiles. For this purpose, the research is focusing on three key research topics. The topic "bioactive textiles" consists of research on stimuli-responsive polymers for fluorescent and colourimetric sensors and controlled drug delivery solutions. Furthermore, we investigate antimicrobial surfaces for close to body applications as well as soft implants. Fibre-based sensor developments for biomonitoring applications and integration of sensors and polymers into textile systems for specific applications are allocated to our research activities within "wearables for health". Also, this research topic includes the investigation of feasibility, reliability and accuracy from the lab scale to studies with realistic settings. The third key topic "Androids and Avatars" focusses on the modelling of thermal and biological processes to predict physiological parameters and the integrity of biological tissues based on physics-based and data-driven models and simulations (digital twins). We aim at providing next-generation solutions for a healthy future.

The Czech University of Life Sciences Prague

CZU
CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

The Czech University of Life Sciences Prague celebrated its 110th anniversary in 2016. It is a public university (according to Act No. 111/1998 Coll. on universities). Currently there are 27 public universities and 2 state universities in the Czech Republic. Both public and state universities are financed by the Ministry of Education, Youth and Sports.

Currently the university has more than 18 000 students (10% are international students), 6 Faculties and 1 Institute. CZU offers over 170 accredited study programs at BSc, MSc and PhD levels (in 9 BSc, 20 MSc and 18 PhD programs the language of instruction is English).

The university has 1 700 employees, of which more than 700 are Professors or Associate Professors. Since 2007 the Czech University of Life Sciences is member of the Euroleague for Life Sciences www.euroleague-study.org.

Supporting Organizations

Association of British Chinese Professors

www.abcp.org.uk
Email: contact@abcp.org.uk

ABCP (Association of British Chinese Professors) is an independent and non-profitable association dedicated to increasing its members' impact and engaging academic collaborations, in particular collaborations between UK and China. ABCP members represent the highest calibre of Chinese academics in the UK across many fields.
The missions of ABCP are:
to promote academic excellence in education, engineering, social and physical sciences, medicine and emerging areas;
to stimulate academic collaborations between members and beyond;
to develop new talents and provide mentorship to young academics;
to promote Sino-UK communications and collaborations in a wide range of disciplines;

Best Pacific International Holdings Limited

www.bestpacific.com

Born in 1994, we stand today with over 30 years' experience as a global leader in the textile supply chain. From a modest elastic manufacturer, to a multi factory, innovation driven, fully vertical supplier partnering (and inspiring) brands & retailers worldwide. Spanning Asia, we offer a unique strategic opportunity for flexible global sourcing. Lead by Best Pacific China, our state of the art manufacturing operation is seamless across our production sites in China, Vietnam, and Sri Lanka – giving you the choice and flexibility to meet your sourcing requirements. Our fully vertical sites are constructed, managed and maintained to the highest in environmental, ethical & safety standards, always pushing the boundaries of sustainable manufacturing.

We are passionate about product. Producing fabric, elastic & lace our multi product offer makes us the premium single source destination for lingerie & sportswear. We deliver advanced textile technology to the market, always working with quality and speed. We are trusted by our partners, our in-house testing laboratory holds the highest independent accreditations.

Supporting Organizations

Golden Data Ltd

Golden Data Ltd is a high-tech enterprise focusing on providing industry 4.0 solutions. The team is leded by industrial experts with high education backgrounds such as doctors and professors, and the management board has international connections to Chinese giant manufacturers that strengthen its industry background and project experience. The company is committed to combining artificial intelligence and big data analysis with actual industrial application scenarios to provide technical solutions. Through data collection, data modelling and data analysis, the company can deeply explore the value of data and help traditional enterprises to increase production and reduce consumption, save energy, and increase efficiency, and realize digital transformation. At present, the company has led the research, development and practice of industry digitalization projects based on medical, water network, transportation and other fields abroad, accumulated successful project experience, and won the Innovate UK National Innovation Fund Award; in China, the company has won the core module digital transformation project of large-scale manufacturing enterprises in the fields of steel manufacturing, wind power generation and other fields, helping enterprises to promote the process of intelligence. In the future, the company will be based on the Smart Manufacturing, through advanced artificial intelligence research experience and knowledge and technology in the field of big data, to create a wide-area, full-cycle, multi-dimensional, and deep-level high-reuse solution; realize full digital innovation and serve The innovation of global traditional enterprises and the construction of smart cities have empowered the upgrading of enterprises and social development. Therefore, increasing demands of computing services are inevitable. Some computing service needs is fulfilled by cloud computing providers such as AWS, while some of them is suspended due to budget issue. Golden Data believes that by leveraging more services such as Sagemaker, DocumentDB, Kubernetes on AWS, more ec2 instances, s3 storage buckets, etc, it can optimize its working flow, facilitate the progress of digital transformation of its customers.

Ningbo Kechuang Technology Service Co., Ltd

Ningbo Kechuang Technology Service Co., Ltd., was established in February 2019 with a registered capital of 1 million RMB. It is the main operating unit of the Haishu Sub-market of the Ningbo Science and Technology Market. The company is a professional service organization that provides modern enterprises with services in various fields such as scientific and technological information consulting, scientific and technological achievements transfer services, intellectual property operation services, as well as finance and tax consulting. Its goal is to become a demonstration service enterprise in Ningbo. At present, the company's business scope has expanded to mid-to-high-end sectors such as financial services and training services. It has also expanded its services to integrate scientific and technological project consulting services, talent project services, financial services, legal services, and management consulting services. The company is also engaged in international technology transfer and cooperation. It received strong support from government and has established a stable international technology transfer and talent cooperation relationship with Finland. The company adheres to the business philosophy of "Facilitate the development of scientific and technological innovation of enterprises, becoming the bridge between government and enterprises" and "Customer satisfaction is the top priority". The continuous expansion of the company's business will serve more local companies, becoming a key link in promoting the integration of technology and economy, and an important engine for improving economic quality and efficiency.

Supporting Organizations

UK-China Association for Talent, Science and Technology Exchange (UCATSE)

www.ucatse.org

UK-China Association for Talent, Science and Technology Exchange (UCATSE) is a UK based non-profit organisation. UCATSE dedicate to high profile science & technology talent exchange, advanced technology transfer between UK and China. The association was founded in 2016 and is composed of outstanding oversea Chinese in British academics, science and technology, education and other innovative industries as well as some experts from other countries. The association also operates as oversea technology service office for Xi'an high-tech industries development zone.

Since founded, UCATSE has already successfully host 2018 UK-China Innovation and Entrepreneurship Forum in UCL, London; Co-organised 12th CSSAUK High-Level Talents Entrepreneurship Competition Final in Xi'an China. And also, UCATSE has organised various academic visiting, talent promotion conference, and educational/professional training program. The association plays very important role for enhancing UK-China cooperation in the talent and advanced technology exchange.

雨链科技
swiftchain

Swift Chain

The SwiftChain is an emerging technology company focused on blockchain industry solutions. Blockchain solutions are being explored and implemented in the financial, industrial Internet, telecommunications, supply chain and other industries. We have independent research and development of high-performance blockchain alliance chain underlying product SwiftChain, can quickly support the industry-level blockchain project landing, for the physical industry to build a low-cost trust environment, we work with universities, TBIS cooperation to achieve multi-industry, multidisciplinary integrated development of Industry-Academia-Research. Our "Optimization Research of The National Infectious Disease Monitoring and Early Warning Network Based On Blockchain Technology" has been awarded the National Social Science Fund. Our research results on anti-counterfeiting traceability of industrial products have been applied in the 2020 Industrial Internet Innovation and Development Project-Blockchain Public Service Platform Project of the MIIT of China, and will establish a national blockchain traceability platform, first of all in medicine, equipment manufacturing, e-commerce and other industries.

Supporting Organizations

Global Science Press

www.global-sci.org

Global Science Press (GSP) has been a fast-growing publishing company based in Hong Kong. GSP aims at publishing the state-of-the-art research results, providing the most professional platform for the researchers to prompt their latest discoveries, and connecting the scientists from all over the world in the areas of, but not limited to, mathematics, physics, chemistry, and computational sciences. The goal of GSP is to become a leading and innovative international publisher.

Supporting Organizations

Digital Clothing Limited

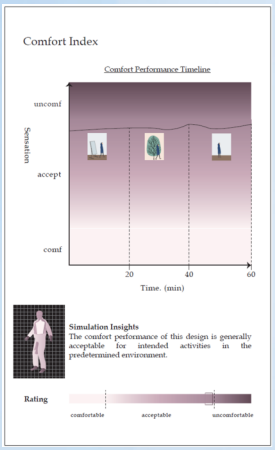
www.digital-clothing.co

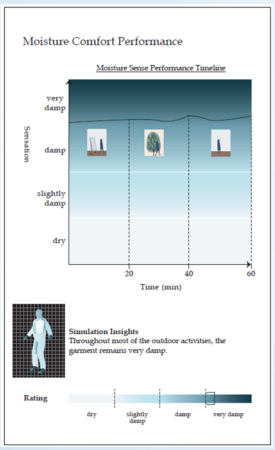
"Unlocking the potential of digital transformation: connecting you with sustainability and functionality."
Digital Clothing Limited is a high-tech international company with offices in the UK, Hong Kong, and Mainland China. We specialise in advanced professional services for B2B, B2B2C, and B2C models in the rapidly evolving digital fashion and e-textile markets.

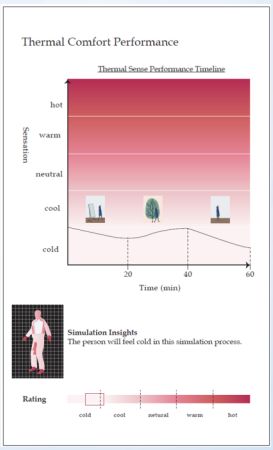
Leveraging patented innovations in advanced textile materials, clothing functional design, cloud computational simulation technologies, e-textile biosensors, and smart wearables, we are at the forefront of industry digital transformation.
With the recent Environment Social Governance (ESG) and Eco-Design for Sustainable Products legislation (ESPR) in mind, Digital Clothing Limited is unwavering in our commitment to helping the fashion and textile industry comply with these new regulations. Our Fashion Big Data platform is a globally recognised solution for Digital Product Passports, establishing a real-time, AI-driven, interconnected textile supply chain that ensures compliance and transparency, promoting sustainability in the industry.

At Digital Clothing Limited, we advance material and product innovations and supply chain business model innovations through novel material digitisation and advanced modelling services. We are also dedicated to upskilling industry workers with the digital competencies needed for sustainability and digital innovation. Our mission is to inspire and empower the next generation of industry leaders.

Our textile materials and product digitisation, certification, and consultation services result from over 30 years of research by leading teams from Hong Kong Polytechnic University and the University of Manchester. In the Horizon 2020 Fashion Big Data Business Model (FBD_B-Model) project, the FBD platform team has been a driving force in developing an interactive cloud computational design system with a garment and material functional FBD B2B platform and integrated sensory and thermal comfort FBD B2B2C interface. The digitisation data services developed in the Horizon 2020 Fashion Big Data Business Model (FBD_B-Model) project have been validated by the business partners in the project consortium and evaluated by the EU Commission as novel and innovative. The FBD team obtained IP assignments for their innovations on advanced e-fibres, e-textile biosensors, wearable technologies, and digital technologies from the relevant parties with authorisation approval for independent self-commercialization activities with Digital Clothing Limited.







ABOUT US.

Ningbo BEYOND Fashion Group Co., Ltd. was founded in 1995. With brand, R&D and marketing as its leading role, the company has established more than ten fashion brands, such as TONLION casual clothes, DME women's clothes, Gukoo household clothes and TONLION kids for different segments of the market, covering brand, manufacturing, sales, logistics and other clothing industry chains. BEYOND Fashion Group has more than 3000 stores nationwide, and there are online stores in e-commerce platforms such as Tmall and VIPSHOP. The annual sales volume reaches 6 billion yuan, of which online and offline sales account for 50% respectively. BEYOND Fashion Group is currently one of the leading apparel industry retail groups in China. Creating the best brand is the mission of BEYOND Fashion Group!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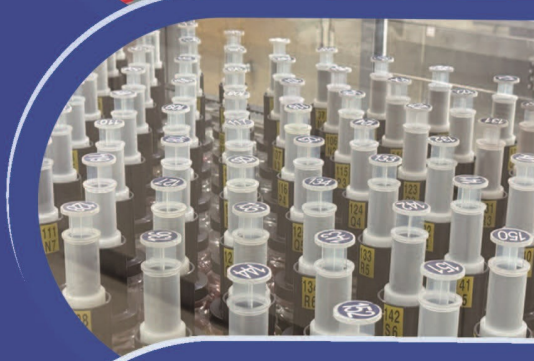
Different force strengths
Time of use can be set
Simple operation

REAL-TIME PRODUCTION DATA FOR PRECISE AND EFFICIENT MANUFACTURING.

领先工艺 多创奇迹

Y LEADING CRAFTSMANSHIP
D MULTI-CREATION MIRACLES

KEEP INNOVATION | HIGH QUALITY | MULTI VARIETY | FAST DELIVERY | GARDEN STYLE FACTORIES



Zhangjiagang Yiduo Dyeing and Finishing Co., Ltd. is located in Linjiang Industrial Park, Zhangjiagang City, Suzhou, Jiangsu Province, on the southern bank of the lower Yangtze River. This area is known for its abundant resources and pleasant climate, making it a hub for the wool textile industry.

Yiduo currently operates two wholly-owned subsidiaries, Zhangjiagang Yiduo Wool Textile Co., Ltd. and Zhangjiagang Yiduo Dyeing and Finishing Co., Ltd., covering an area of over 50,000 square meters with a building area of over 70,000 square meters. With a workforce of over 300 employees, the company has an independent development department and a dedicated design team for the wool textile industry.

The company boasts standardized factory buildings and a beautifully landscaped garden-style plant area. It not only employs modern enterprise management talents but also integrates spinning, weaving, dyeing, finishing and garment production into a streamlined process with advanced intelligent equipment and a digital management system.

Specializing in woolen product manufacturing, Yiduo offers a wide range of high-end woolen fabrics including cashmere, double-faced wool fabric, boucle fancy wool, jacquard series, and knitted mercerized wool, with hundreds of varieties and thousands of color patterns. Upholding the business philosophy and service aim of "small batches, diverse varieties, high quality, and quick delivery," we strive to provide our customers with satisfactory and distinctive products. With an annual production capacity of over 3 million meters of refined woolen fabric, Yiduo is committed to leading the future market with its innovative approach under the corporate spirit of "quality, innovation, pragmatism, and integrity."

Beijing Key Laboratory of Clothing Ergonomics

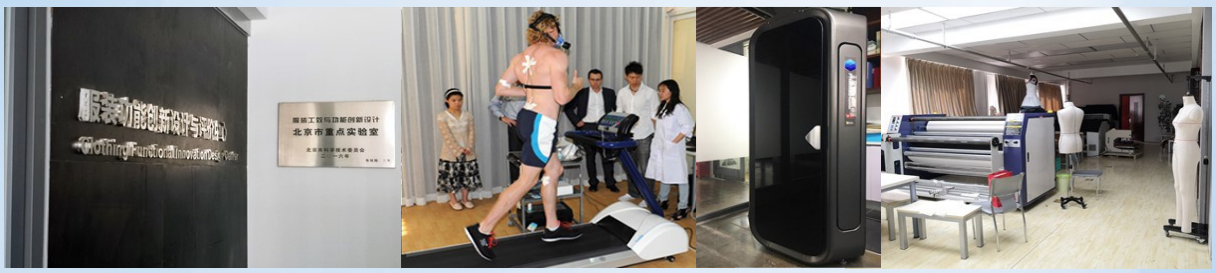
Beijing Key Laboratory of Clothing Ergonomics and Innovation Functional Design, headquartered at BIFT, was approved in the field of cultural creativity and design industry with its uniqueness, and ascertained as a key laboratory in 2016.

Positioning of Beijing Key Laboratory of Clothing Ergonomics and Innovation Functional Design: characterized by "Integration of Art and Engineering", centered on clothing ergonomics, fabric function innovative design, clothing function innovative design and evaluation, and other frontier domains, closely integrated with major demands of national economic construction and social development and special industries, it aims at becoming a scientific research base and design platform for internationally-advanced and domestic first-class clothing ergonomics and innovation functional design.

Beijing Key Laboratory of Clothing Ergonomics and Innovation Functional Design currently possessed with a total equipment assets of 21.35 million yuan and 234 sets of main special-purpose equipment, including 2 units (sets) of equipment for above 1 million yuan, such as 3D body scanner, human body and clothing surface motion deformation collection and analysis system, 6 units (sets) of equipment of 500,000 yuan and above, such as high speed photography collection and analysis system, motion analysis system, human body model system, clothing pressure measuring instrument, 41 units (sets) of equipment of 100,000 yuan and above such as cardiopulmonary function tester, wireless myoelectricity testing analysis system, human body composition analyzer, body composition analyzer for clothing design, wireless multi-channel physiologic instrument, thermal analyzer, human local three-dimensional measuring system, real-time motion monitoring system, human body and clothing surface viewpoint tracking system, 3D laser datamation instrument, flat-plate plantar pressure gauge, specialized treadmill, thermal infrared imager, etc.

In addition, Beijing Key Laboratory "Clothing Materials Research and Development and Evaluation Laboratory", "Clothing Technology Transfer Center", Zhongguancun Fashion Innovation Park, National Apparel and Accessories Museum and other institutions in the university as laboratory's supporting facilities provide support for the teaching and research work of clothing ergonomics and innovation functional design.

Key Laboratory of Clothing Ergonomics and Innovation Functional Design with its current use area, instruments, equipment and related supporting facilities can meet the basic requirements of carrying out experimental practice teaching and scientific research projects, and can also provide open services for students' undergraduate research training programs, excellent engineer training programs, experimental interest groups, functional costume designing competition teams, and university student innovation programs.



Xi'an Polytechnic University

Xi’an Polytechnic University, or XPU, is a comprehensive university with distinctive feature and strong foundation in running schools. It is the only university specializing in Textile and Apparel in West China. In 1912, XPU started as Weaving Department of Beijing Higher Industry School. In 1978, the university was founded under the direct leadership of the Ministry of Textile as Northwest University of Textile Science and Technology. In 2006, it took on its current name Xi’an Polytechnic University (XPU).

As one of the earliest institutions where China’s higher education in textile took shape, XPU at present goes beyond the textile by offering education at different levels including 56 undergraduate programs, 16 first-level-discipline MPHIL programs, 16 catalogs of professional master degree programs, 1PHD program. Located in the eastern part of Xi’an，XPU consists of two campuses-Jinhua Campus downtown and Lintong Campus near to the Terra-Cotta Warriors Museum.

At present, XPU consists of 14 schools and 1 teaching department covering engineering, arts, economics, management, education, literature and law, with textile and engineering as its pillar.

The university boasts a high-level staff of over 1500, each with both academic distinction in their respective fields and significant working experience, among whom Professor Yao Mu, an academician of Chinese Academy of Engineering, has been devoted to the teaching and researching on textile materials for more than 60 years. The university attaches great importance to developing students’ability to solve real-world problems, and it provides students with opportunities to conduct real-life projects. On campus, the university is well-equipped with the latest lab facilities. The applied research centers and comprehensive talents training bases are multidisciplinary and have connections and cooperation with many institutes and enterprises bothat home and abroad.

Over the years , XPU has been active in a full range of international cooperation and exchanges in education. Todate, it has ties with more than 60 universities and academic institutions in over 20 countries or regions. More than 500 students have been studying abroad through the dual degree programs between XPU and partner universities in the U.S, UK, Australia and Canada. More than 400 faculties and students have visited partner universities through various exchange programs and more than 400 foreign students have studied at XPU since 1995.

Qingdao University

纺织服装学院
College of Textiles & Clothing

The College of Textiles & Clothing in Qingdao University has an extensive 71 years of history, dating back to 1950. It has profound academic background and resources, strong scientific research strength and excellent educational achievements. The college currently has a post-doctoral research station for Textile Science and Engineering, offering a wide variety of postgraduate and undergraduate programs in the field of Textile Science and Engineering, Textile Materials, Textile Design, Textile Chemistry, Dyeing and Finishing Engineering, Fashion Design and Engineering, Design Art, Textile Engineering, Industrial Design Engineering, Material Engineering as well as Light Chemical Engineering.

Textile Engineering, Textile Chemistry as well as Dyeing and Finishing Engineering are the key disciplines in the "Twelfth Five-Year Plan" in Shandong Province in China. The undergraduate program on Textile Engineering has been recognized nationally as an "Excellent Engineering Education and Training Program"; it was selected as the peak discipline of Shandong Province in 2020. The college has a State Key Laboratory on Bio-polysaccharide Fiber and Eco-textile jointly established by the province and the Ministry, the Collaborative Innovation Center of Marine Biomass Fiber Materials and Textiles, the Collaborative Innovation Center of Eco-textile as well as the Engineering Research Center of Special Nonwoven Materials in Shandong Province. There are more than ten scientific research and teaching platforms including the Shandong Provincial Experimental Teaching Demonstration Center, with a total value of 87.43 million yuan in equipment. The discipline currently has 28 professors, 52 associate professors, 19 doctoral supervisors, double-appointed academicians, national specially appointed experts, national outstanding youths, experts specially subsidized by the State Council as well as new century outstanding talents of the Ministry of Education, Taishan Scholars, Chutian Scholars.

In the past five years, the university has established several national key research and development programs, the National Natural Science Foundation of China and other scientific research projects, published nearly a thousand high-level academic papers, wherein 300 were indexed by SCI/EI, and nearly 100 invention patents were authorized. It has received a second prize National Science and Technology Progress Award, 6 first prizes and 4 second prizes of Provincial and Ministerial Science and Technology Progress Awards. The total scientific research funds amount to 100 million yuan.

Zhongyuan University of Technology

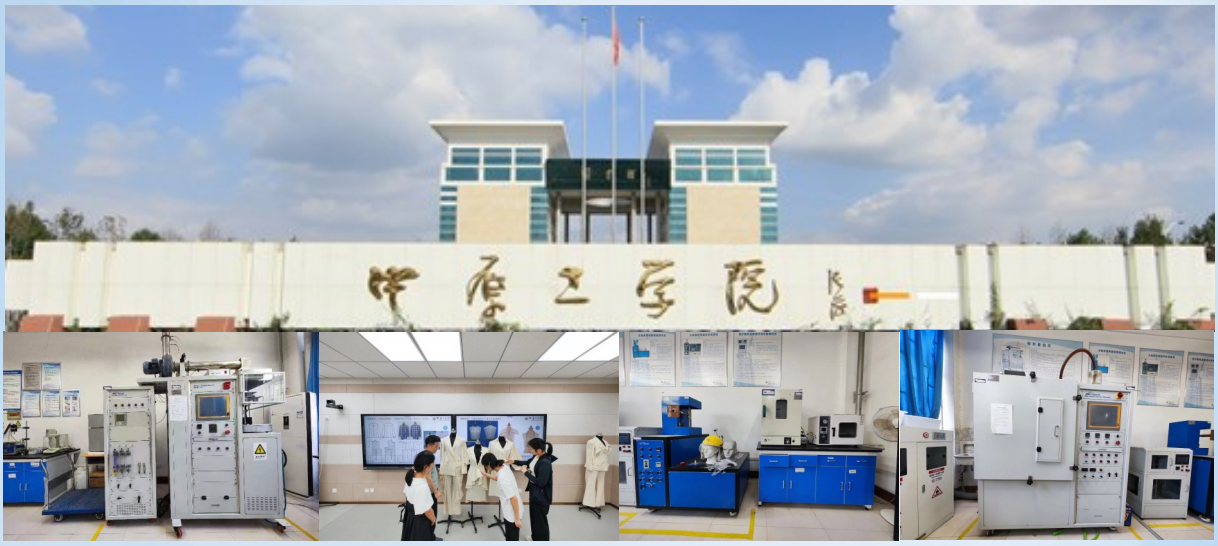
Zhongyuan University of Technology (ZUT) has a rich history, originally founded in 1955 as Zhengzhou Textile Institute and later renamed in 2000. With a strong focus on engineering, including electronic information, textiles, and garments, ZUT has grown into a significant educational institution. The university comprises 21 schools and departments, offering a wide range of disciplines such as fashion technology, energy engineering, and more.

ZUT boasts an impressive student body of over 23,000 and a faculty of 1,997 members, with 1,400 dedicated full-time educators. The faculty's expertise is evident through their significant achievements, including national awards and recognition.

The university's strengths are reflected in its two core disciplines: "Smart and Aviation Information Technology" and "New Materials and High-end Apparatus for Textile and Garment." These disciplines encompass seven first-tier fields and offer thirteen master's degree programs. ZUT also emphasizes undergraduate education, achieving recognition with seven national-level majors and various innovative teaching approaches.

Throughout the "Thirteenth Five-Year Plan," ZUT has been highly decorated, receiving 48 international honors, 649 national awards, and numerous provincial accolades. The university's dedication to research is evident in its 52 key laboratories and research centers, spanning diverse areas like diamond cutting techniques and functional textile materials. Over the past decade, ZUT has undertaken an impressive 2,313 scientific research projects, leading to 191 research awards, 1,053 published books, and 1,168 patents.

As ZUT continues to prioritize innovation, research, and quality education, it remains a driving force in Henan's academic landscape and beyond.



Manchester Metropolitan University

Manchester Metropolitan University is one of the largest universities in the UK with a proud heritage dating back to 1824. As a dual intensive institution equally focused on quality teaching and research activity, we have recently celebrated an excellent performance in the Research Excellence Framework (2021), with 90% of our research rated as internationally excellent or world-leading, and four subjects in the top ten nationally for research power – Art and Design, Education, English, and Sport.

Within the Faculty of Arts and Humanities, Manchester Fashion Institute is home to a community of fashion designers, buyers, merchandisers, researchers, product developers, and marketers, providing a platform for students to discover their niche in the international fashion industry. With our industry-standard facilities and expert staff who are internationally connected, we provide an environment that enables students to fulfil their potential and develop the knowledge, skills and experience that meet industry needs.

The Fashion Research Hub community of cultural historians, designers, technologists, and social scientists covers the breadth and depth of the fashion discipline. We have three central areas of research: Fashion Cultures, Fashion Business, and Fashion Technology, with three underpinning and cross-cutting themes of Sustainability, Equality and Diversity, and Digital. Our researchers are involved in collaborations across and outside the University both nationally and internationally, including third sector stakeholders, industry partners and policymakers. We work with various external partners on knowledge exchange to ensure our research creates positive change for society, culture, the environment and the economy. Our researchers' expertise is often called upon by the national and international press and media.

Our research degrees enable students to deepen their expertise, to enhance existing practice or to develop the skills, knowledge and expertise to address real-world problems and pursue new scientific, technological, creative and business pathways. Our research programmes also equip students with advanced research skills and a deep understanding of the philosophy of research and how society and culture work. The development of these skills, knowledge and expertise will enable students to make an original contribution in their field of study and provide them with a strong foundation to pursue advanced roles in academia, the cultural industries, the creative and business sectors.

Zhejiang Sci-Tech University
School of Materials Science & Engineeing

材料科学与工程学院
SCHOOL OF MATERIALS SCIENCE & ENGINEERING
浙江理工大學
ZHEJIANG SCI-TECH UNIVERSITY

The School of Materials Science and Engineering (MSE) originated from the discipline of Silk Fiber Materials and Textiles in June 2019. The School of Fiber Engineering was initially established in December 1994 and later renamed the School of Materials and Textiles in December 1999. At present, the MSE school has a highly competitive faculty and cutting-edge research facilities.

The MSE School comprises two departments focusing on polymer materials and materials engineering, offering comprehensive academic programs at the bachelor's, master's, doctoral, and post-doctoral levels. Moreover, the MSE discipline has consistently ranked within the top 1% of the global Essential Science Indicator (ESI) since 2012, achieving a remarkable milestone by reaching the top 3‰ worldwide in 2023.

The School of MSE currently has over 100 full-time faculty members including 30 doctoral supervisors. Our faculty includes an academician from Chinese Academy of Engineering and another from the Academy of Engineering in developed countries. Aligned with the frontiers of international science, the MSE School actively conducts fundamental and applied research spanning polymer material engineering, high-performance fibers, composite materials, biomedical materials, and new energy materials. This strategic focus aims to address domestic primary policy demands and foster regional economic development. The School of MSE has also established six national-level joint research platforms, including the Joint National Laboratory of Engineering, the Key Laboratory of Ministry of Education, and the Platform for International Technological Exchange and Cooperation. Additionally, it has set up eight provincial-level research platforms, such as the Key Engineering Laboratory of Zhejiang Province, the International Technological Cooperation Base, the "2011 Collaborative Innovation Center", and the International Joint Research Center. Moreover, the school has collaborated with local industrial enterprises to co-found eight Joint Innovation Service Centers. Furthermore, our faculty members have conducted numerous research projects supported by the Natural Science Foundation of China, the Ministry of Science and Technology of China, and other national research sponsors, and have won three national academic awards and over 50 provincial-level awards.

Otsuma Women's University,
Department of Clothing and Textile

OTSUMA WOMEN'S UNIVERSITY

Otsuma Women's University is located in central Tokyo in Japan. It was founded in 1908 as the college of Japanese dressmaking. Currently, there are 6 faculties: Home Economics, Literature, Social Information, Human Relations, Comparative Culture, and Junior College, with 7031 female students studying. Otsuma Women's University is one of the oldest comprehensive women's universities in Japan.

Otsuma Women's University celebrated its 110th anniversary in 2018 Our targets for action and educational goals are as follows: "To contribute to the realization of a healthy and sustainable society through striving for the enrichment of social capital by fostering truly independent women with minds rich in both refinement and compassion through the systematic promotion of the founding spirit of the university founder Kotaka Otsuma in education/research/regional activities in the context of the new era."

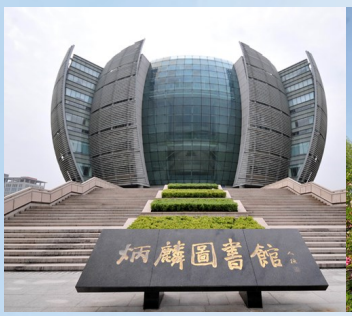
The Department of Clothing and Textiles is dedicate to explore clothing from a broad perspective and with a human-centric approach, in conjunction with the development of the area. The main of the department's basic research: (1) Textile materials, (2) Fashion and art, (3) Information/manufacturing, (4) Business, (5) Visual communication, and (6) Culture.




Soochow University

Soochow University is located in the ancient town of Suzhou, otherwise known as "Paradise on Earth". The university is part of the national "211 Project" and "2011 Plan". It is also one of the key Jiangsu provincial comprehensive universities. Found in 1900 Soochow University have grown significantly and currently has 29 post-doctoral programs, 24 main discipline doctoral programs, including 196 doctoral programs specializing in many areas. Today, Soochow University has developed into a comprehensive university with 12 major disciplines: philosophy, economics, law, education, literature, history, science, engineering, agriculture, medicine, management science, and art. It has a variety of programs and a strong foundation for students to pursue education in almost any area. Soochow University has achieved clear results and has received a very positive reputation both at home and abroad.

The College of Textile and Clothing Engineering (CTCE) of Soochow University is originated from “Private Women’s Sericulture School” which was established by the famous patriotic gentlemen Mr. Shi Liangcai in 1903, Shanghai of China. During the construction and development of over 100 years, it has established a unique complete teaching and research program in regards to the textile and silk industry chain in China, including planning mulberry, sericulture, silk reeling, weaving, dying, garment designing and engineering, as well as fashion shows. The development level of the disciplinary supporting platforms at CTCE is amongst the top in China. CTCE actively explores a new model of scientific talents with international visions. It develops an extensive academic exchange and cooperation with universities in United States, Britain, France and Japan, etc. CTCE has been closely cooperating with Shinshu University in Japan for more than 30 years, and co-organized China ISC for nine times.



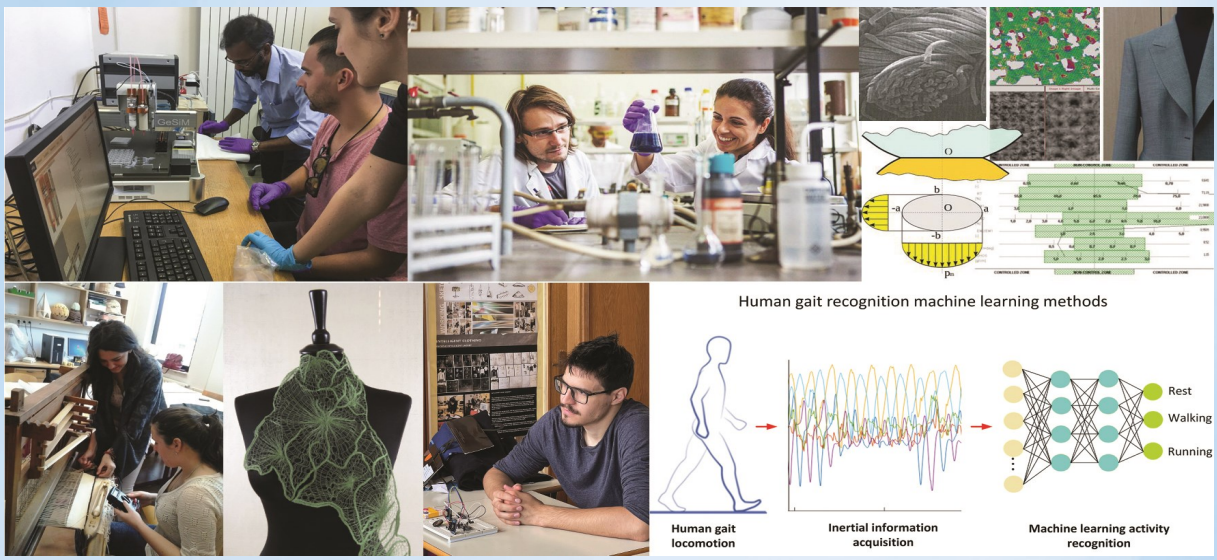

The Faculty of Mechanical Engineering at the University of Maribor is one of the leading faculties in Slovenia for education and research in mechanical engineering, textile materials, and clothing engineering. It was founded in 1959 and has since developed into a prestigious academic institution offering a wide range of undergraduate and postgraduate courses in mechanical engineering, mechatronics, energy systems, sustainable development, clothing science, design and textile materials.

The faculty, which includes the Mechanical Engineering Research Institute and the Institute of Engineering Materials and Design, has a team of highly qualified and experienced professors, researchers, and teaching assistants who are dedicated to providing a challenging and dynamic learning environment for students.

The Institute of Engineering Materials and Design has state-of-the-art research facilities, including a Laboratory for Characterization and Processing of Polymers; Laboratory for Chemistry and Environmental Protection; Laboratory for Fabric Planning and Construction; Laboratory for Textile Technologies and Computer-based Textile Applications; Laboratory for Dyeing, Colorimetry and Finishing Ecology; Laboratory for Textile Printing and Textile Care; Laboratory for Clothing Engineering, Physiology and Garment Construction; Centre for Textile Care; Centre for Dyeing and Colour; and the Research and Innovation Centre for Design and Clothing Science.

The research focus of the Institute of Engineering Materials and Design is on the development of smart and (multi)functional textiles and composites for active packaging, medical and engineering applications. The research is based on the horizontal integration of nano- and biotechnologies and the incorporation of green, sustainable economic concepts (chemical recycling of polymers and composites) as well as the finishing of aged paper artefacts for the preservation of cultural heritage.

An important part of the research takes place within the Research and Innovation Centre for Design and Clothing Science, which is concerned with the study of phenomena related to the behaviour of textile structures under lower loads, the development of intelligent and/or functional high-performance clothing, and the ergonomics of the thermal environment, with a focus on the study of wearing comfort as a physiological response of the human body.



Wuhan Textile University

There are three parts to Wuhan Textile University (WTU: Sunshine Campus, Nanhu Campus and, Donghu Campus. We have devoted ourselves to establishing first-rate, world class and international conditions with a beautiful physical environment and campus including a major expansion of our Sunshine campus in Wuhan Jiangxia District, where professors and students have an access to a diverse range of facilities. With over 30,000 students including about 500 international students, WTU is known for providing a high quality, student-oriented education in a multi-disciplinary environment that integrates engineering, science, arts, economics and management. WTU has 20 schools, offering 65 undergraduate programs, 49 graduate programs and 5 joint PHD programs. In 2006, the university received an excellent rating from the Ministry of Education for Undergraduate Teaching.

According to the Wuhan City Government Development Plan, Nanhu Campus of WTU will continue to grow into an International Fashion Innovation Campus with functions such as Research & Education, Cultural Heritage, and Civilization Protection. Textile, apparel, art design and new media are the most featured disciplines of our university. These 4 schools are located in Nanhu Campus. All the teachers and Students at Nanhu fully feel the strong multi-cultural environment and international atmosphere.

The WTU staff is composed of a well-balanced and quality team. At present there are over 1500 instructional faculty numbers of which 1200 are full-time teaching staff and more than 300 professors who have attained doctoral degrees and 45 doctoral supervisors. A great many of our faculty have also received numerous awards, recognition and outstanding expert designations at both provincial and national levels. The university also employs various foreign and domestic scholars as adjunct professors in their respective fields of expertise.

WTU is a leader in scientific research. On the state level, it has a key laboratory for the development of Hubei New Textile Materials and Advanced Processing Technology", "The Ministry of Education funds the Key Laboratory for New Textile Materials Cleaning Processing and Functioning" and "the Research Center for Clean Production of Textile Printing & Dyeing". WTU also has also 25 provincial level key research centers, including the "Hubei Key Laboratory for Digital Textile Equipment", the "Hubei Fashion Art and Culture Research Center", the "Hubei PV Engineering Research Center", and the "Hubei Textile Systems and Policy Research Center". The multi-disciplinary centered on textile, apparel and artistic design are highlights that greatly support the textile and clothing disciplines.

We are entrusted with many additional national research projects awarded by the National 973 Program, National 863 Plan for major science and technology, the National Support Program, the National Natural Science Foundation, and National Social Science Foundation of China. Many of our achievements in research have won national or provincial awards. With benefits to the society as a whole, in addition to textiles and materials, our campus is widely applied in fields of aviation, aerospace, construction and environmental protection. Adhering to a philosophy of continuous scientific development, WTU works diligently and tirelessly to maintain its exceptional balance as an outstanding university for both teaching and research.

Centre for Materials Innovation and Future Fashion

RMIT UNIVERSITY

The Centre for Materials Innovation and Future Fashion (CMIFF) brings together senior material technology, design and enterprise researchers from within the School of Fashion & Textiles. This group research, develop and apply design and materials innovation to address real world problems in areas of health, wellbeing, protection, performance, sustainability and cultural experience.

Research Clusters

CMIFF has five connected clusters:

Advanced Materials and Technologies (Protection for Defence, Firefighting and Sports including Nano Technology)
Solutions for safer and healthier lives, and the environments we interact with through the design and development of advanced materials and performance textiles.

Textile Comfort and Performance (Clothing System Design, Engineering and Evaluation)
Research and development on the physical, physiological and psychological interface between humans, textile materials and apparel systems when worn against the human body; and external environments.

Smart Textiles (Sensors and Wearable Technologies)
Intelligent textiles that can detect changes in their surroundings, react to external stimulus, and produce practical applied outcomes. The induced stimulus and the consequent response could be chemical, electric and thermal.

Producing Fashion
Interrogates global fashion systems to propose distinctive and sustainable approaches to how fashion is designed, produced, consumed and communicated.

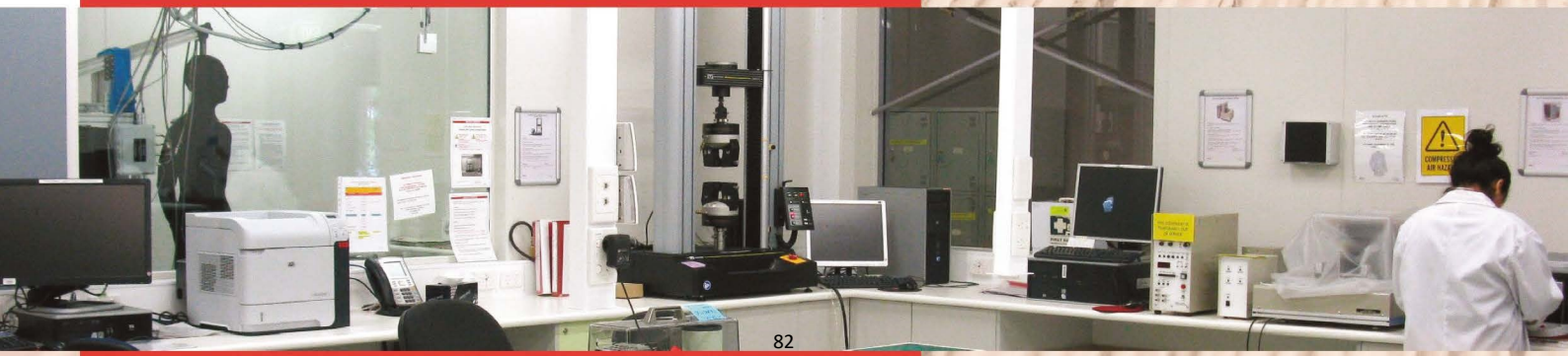
Materials Interplay (Materials as a Site for Cultural Engagement and Design Innovation)
The intersection of design, technology and craft: to explore materials as a site for cultural engagement, sustainable practice and innovation. Through practice-based research it seeks to imagine and activate future design practices to propose creative solutions across a spectrum of design contexts.

Industry Partners

2XU
Australian Wool Innovation (AWI)
Bruck Textiles/Australian Textile Mills
Bizwear
Bekaert Deslee
CSIRO
Chevron Australia
Defence Material Technology Centre (DMTC)
Defence Science Institute (DSI)
GRT Pty Ltd
Victoria Police
Wound Management Innovation CRC
Zenith Interior
Zhik Australia

Cover image:
High Risk Dressing/ Critical Fashion Exhibition 2017
Photo: Tobias Titz

Inside images:
CMIFF 2016



State Key Laboratory for Modification of Chemical Fibers and Polymer Materials (Donghua University)

State Key Laboratory for Modification of Chemical Fibers and Polymer Materials (SKLFPM) in Donghua University, with the first Chinese major in chemical fibers, was founded under the approval of State Development Planning Commission in 1992. It completed the national acceptance in 1996 and passed the national assessment 4 times since 2003. In 2018, SKLFPM was rated as "Excellent State Key Laboratory". As the first key state-level scientific research center of fibers and textiles in China, it has made great contribution to the development of chemical fiber industry of China.

SKLFPM currently focuses on three research themes, including high performance fibers and composite materials, functional fibers and low-dimensional materials, and environmentally-friendly and biomass fibers and materials. In 2007, Innovation and Talents Introduction Base of Advanced Fabrication Technology of Fiber Materials was enrolled in the Talents Introducing Program for Disciplinary innovation of universities. In 2017, it passed the evaluation and got rolling support of State Bureau of Foreign Affairs and Ministry of Education. In 2018, the Shanghai Belt and Road Joint Laboratory of Advanced Fiber and Low-Dimension Materials built by SKLFPM was supported by Shanghai Science and Technology Commission.

Prof. Xi Zhang (Academician, CAS) is the current director of SKLFPM Academic Committee. The director of SKLFPM is Prof. Meifang Zhu (Academician, CAS). SKLFPM has more than 100 faculty members, which constitutes a high-level research team. The facility center of SKLFPM is equipped with more than 300 instruments and 26 pilot plants.

SKLFPM promotes the principle of "openness, communication, cooperation and competition". In last five years, SKLFPM has conducted more than 900 scientific and engineering projects. The total amount of the funding is about 800 million Yuan. The laboratory has been awarded 14 National Awards, and more than 50 first-level prizes at the provincial and ministerial level. More than 3000 academic papers have been published, and more than 1000 patents were authorized.

As a state-level research center, SKLFPM aims at leading the development of fiber science and technology as well as chemical fiber industry, to meet the great demand of strategic fiber materials, and to be the international first-class academic exchange and research center.

ensait
ROUBAIX
ECOLE D'INGENIEURS TEXTILE

Research & engineer

Ensait, University of Lille is a French engineering school which trains about 70% of textile engineers in France. As one of the leading textile higher education and research institutions in Europe, it awards every year 120 students an Engineer Degree at Master level and 10-15 postgraduates a PhD of Engineering. The main topics taught in its two teaching departments (Fashion and Service Engineering; Technical Textiles and Advanced Materials) include: technical textiles, mechanical engineering, industrial engineering, textile manufacturing, smart materials, textile chemistry, biotechnology in textiles, clothing technologies, design, supply chain management. Like the other French engineering schools, ENSAIT trains its students through different industrial projects and industrial internships. Having graduated from ENSAIT, most of the ENSAIT students usually work as engineers or managers in different French industrial groups, such as Decathlon, Airbus, Chanel and Louis Vuitton.

The research activities of ENSAIT are carried out inside the **GEMTEX** National Laboratory (textile engineering and materials). In 2020, GEMTEX is participating in more than 20 collaborative research projects, funded by European Commission under the programs of H2020 and Erasmus Mundus, and by French government (FUI and ANR Programs). It is also involved in more than 10 industrial projects, funded by different companies. The Laboratory GEMTEX is composed of three research groups, namely MTC (Mechanics and Textile Composites), MTP (Multifunctional Textiles and Processes) and HCD (Human Centred Design).

- HCD Group (10 permanent teachers-researchers, 23 PhD students): mass customization, supply chain management, intelligent textiles, human perception and emotion
- MTP Group (16 permanent teachers-researchers, 24 PhD students): Bio sourced textiles, multifunctional material development, surface treatment, sustainable development
- MTC Group (5 permanent teachers-researchers, 15 PhD students): textile composite reinforcement, textile composites, ballistics, protection

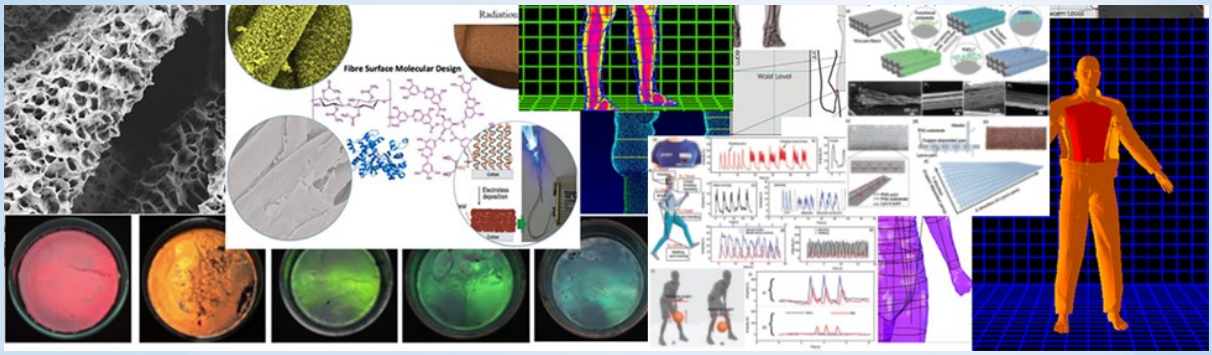
GEMTEX laboratory has dedicated its researches to industrial applications (transports, aeronautics, clothing, medicine, security …) while ensuring academic researches. Partnerships with industrials have been strengthened with the creation of SAIC, the internal research transfer department dedicated to the industrial and commercial activities. The laboratory is actively involved in the activities of the scientific networks at international scale such as AUTEX and Fiber Society.

The researchers in department of materials are developing advanced textile materials, technologies and products for a variety of applications, from biomedical devices, advanced composites for aeroplane-space technologies, personal protective devices, sportswear and smart e-textile wearables to digital technology platforms for novel fashion e-business models. The research starts from small to big scales: Graphene and 2D materials to form and/or functionalise fibres; fibre to form yarns, nonwovens and fabrics; yarns, nonwovens and fabrics to form composites, devices and apparels, buildings and airplanes with innovations in novel fibre spinning, fibre functionalisation, nonwoven fabrication, robotics, textiles and advanced composites, functional property measurements, smart textiles and wearables, body scanning and digital apparel. Theoretical investigations into the sciences have developed advanced models, computational algorisms, databases and computer simulation software to link materials innovations with human biological needs to establish the technology platform to enable next generation of AI fashion and textile supply chain business models in big data environment.

Strengths and areas

The particular strengths and areas of the textiles and apparel theme include a number of research clusters: advanced textile materials: the fundamental sciences of how molecules and 2D materials such as graphene form fibres and then engineered into textile structures to achieve various functions to meeting the needs of human beings in terms of survival, healthcare, protection, physiological and psychological comfort, esteem and self-actualisations; textile composts and robotics; biomedical textiles; protective textiles; digital apparel engineering; smart e-textile fashion AI technology.

Advanced engineering solutions and technologies have been invented and developed to create novel textile materials and apparel products for making our lives more comfortable and exciting in our daily and professional activities, such as protective clothing for defence and policy forces, sports and outdoor ventures, exploration of space, building up sky high buildings, engineering world record breaking bridges, designing smart cars and high speed trains, manufacturing smart e-textile wearables and soft robots for future soldiers, producing textile implants and scaffolds to fix our sick or damaged organs and tissues, body scanning, as well as developing digital technology platforms for enabling fashion big data e-business models.



MANCHESTER 1824
The University of Manchester

Postgraduate Research in Materials

As a leading international research hub, the Department of Materials has a wealth of academic talent and excellent facilities to invigorate your research. A range of study packages and funding options are available for high quality applicants.

Join our research community of more than 500 academic staff, Postdoctoral Research Assistants and Postgraduate Research Students to gain access to outstanding research facilities and benefit from our strong collaborations with industry.

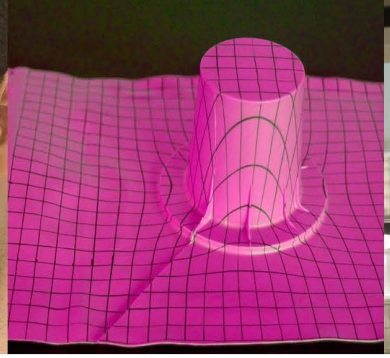
Our multidisciplinary research activity covers broad, socially relevant themes that allow us to meet the needs of industry and society. You can choose from:

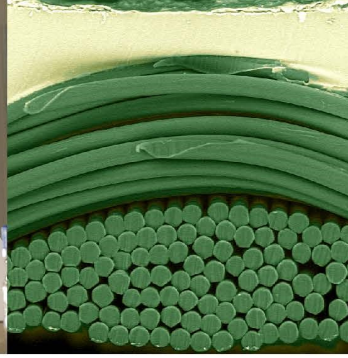
- Biomaterials
- Coatings and Ceramics
- Imaging and Characterisation
- Management and Marketing
- Metallurgy and Corrosion
- Nano and Functional Materials
- Polymers and Composites
- Textiles and Apparel

For an informal discussion about your study options, call +44 (0)161 306 3581 or email: pgr-materials@manchester.ac.uk

The Department of Materials at The University of Manchester is one of the largest single-site materials activities in Europe with interdisciplinary research spanning the breadth of materials.

materials.manchester.ac.uk



Research Degrees in Materials

Entry requirements

2.1 UK Honours degree or equivalent, or an approved combination of educational qualifications and industrial experience.

English Language

IELTS 6.5 with no subscore below 5.5 or equivalent. The University offers three, six and ten-week pre-sessional English language courses for students who need to improve their English to meet the minimum requirements.

Careers

The employment prospects following graduation from our research programmes are excellent; our graduates typically go on to research and development and management/consultant positions in industry and careers in academia.

Funding

The Department attracts a large amount of funding from Research Councils and Industry and is able to offer many fully-funded PhD studentships each year. See our website for a full list of funded projects.

How to apply

You can apply online now at www.manchester.ac.uk/postgraduate/howtoapply

Contact us

For further information, you can email or call us: pgr-materials@manchester.ac.uk or +44 (0)161 306 3581

Doctor of Philosophy (PhD): This is a 3, 3.5 or 4 year full-time research degree, typically supervised by a multidisciplinary team of experts in their fields. Students carry out individual research projects, the results of which will make an original contribution and substantial addition to knowledge. As well as developing excellent research skills, our PhD students also develop problem-solving, interpersonal and written and oral communication skills, and project management and organisational skills, all of which are highly valued in the job market.

Master of Philosophy (MPhil): If you wish to carry out a shorter piece of research, the MPhil degree may be suitable for you. This one-year programme enables students to develop a similar range of skills as the PhD through an individual research project that represents original work within a wider field of knowledge and investigation.

MSc by Research: This is a one-year full-time research degree and provides the opportunity to carry out a substantial research project as well as gain valuable skills and knowledge through a tailored taught package. This programme will normally consist of a 135-credit research project and additional 45 credits of taught content.

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TBIS Secretariat
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