



### 3<sup>rd</sup> International Conference on Knowledge Based Textiles

March 05 – 06, 2024  
Conference Program (Tentative)



#### Day 1 March 05, 2024

| Inauguration Ceremony (MH: Main Hall) |   |   |  |
|---------------------------------------|---|---|--|
| 9:30 – 9:35                           | Recitation from Holy Quran/ National Anthem   |   |  |
| 9:35 – 9:40                           | Secretary ICTT  |   |  |
| 9:40 – 10:00                          | Welcome remarks by conference Co-organizers   |   | Donghua University, China<br>NED/ BUIITEMS Pakistan<br>Northumbria University, UK  |
| 10:00 – 10:20                         | Current Status and Achievements of GCF-63 Project "KnowTex"   |   | Prof. Yasir Nawab, PI KnowTex, NTU   |
| 10:20 – 10:35                         | Address by Rector NTU   |   | Prof. Dr. Tanveer Hussain, Rector NTU  |
| 10:35 – 10:50                         | Address by the Guests of Honour   |   | Textile Associations<br>FCCI/ Chambers<br>GCF Industrial Partners  |
| 10:50 – 10:55                         | Address by the Chief Guest  |   | Chief Guest  |
| 10:55 – 11:05                         | Distribution of shields and Group Photo   |   |  |
| <b>Tea Break</b>                      |   |   |  |
| 11:05 – 11:25                         | Design for sustainability, circular economy and life cycle assessment focussing on biocomposites  |   | Prof. Sapuan Salit, UPM, Malaysia  |
| 11:25 – 11:45                         | Circular fashion : Redefining the Global Textile Value Chain  |   | Dr. Alana James, Northumbria University, UK  |
| 11:45 – 12:05                         | Simple Sustainable Circular Supply Chain Complexity   |   | Dr. John Arthur, Consultant, UK  |
| 12:05 – 12:25                         | Industry, Communication, Opportunity & Academia-Why the Magic of Fabric does not develop to deliver value to all the  |   | Mr. Shabbir Halai, CEO Hallai Enterprises  |
| 12:25 – 12:40                         | Circularity: A manufacturer's perspective   |   | Mr. Mujeebullah Khan, CEO, iTextiles   |
| 12:40 – 12:55                         | Circularity: A manufacturer's perspective   |   | 1. Mr. Mujeebullah Khan, CEO, iTextiles<br>2. Ms. Nin castle, Reverse Resource<br>3. Mr. Ben Bouwhuis, CEO, AFFEXCO Global<br>4. Ms. Resham Shahzad, Director, Arshad Group<br>5.  |
| 12:55 – 13:35                         | <b>Panel Discussion (Circularity, a global context):</b><br>Navigating the Global Fashion Landscape: Challenges and Opportunities for Textile Manufacturers<br>(Dr. Shahid Rasul, Northumbria University, UK)               |   |  |
| <b>Lunch Break</b>                    |   |   |  |
| 13:35 – 14:25                         | Session A (Main Hall)<br><b>Circularity/Circular Fashion</b><br>Session Chair: Dr. Alana James (Northumbria University, UK)   | Session C (MP Hall 2)<br><b>Functional &amp; Smart Textile</b><br>Session Chair: Dr. Jibran Khaliq (Northumbria University, UK)   | Session B (MP Hall 1)<br><b>Composite Materials I</b><br>Session Chair: Prof. A. Fattah Seyam (NCSU, USA)  |
| 14:25 – 14:50                         | Why does a Circular Economy matter for a successful transition to sustainability<br><b>Dr. Sarim Dastgir (Qatar Env. &amp; Energy Research Institute)</b>   | Functional and Coated Textiles<br><b>Dr. Munir Ashraf (NTU)</b>   | Ballistic Impact damages mechanism of Textile Structural Composites<br><b>Prof. Bohong Gu (Donghua University, China)</b>  |
| 14:50 – 15:05                         | A case study conducted by the World Wide Fund for Nature (WWF) on competitive practices in the textile industry, focusing on compliance strategies to enhance sustainability.<br><b>Mr. Sohail Ali Naqvi (WWF Pakistan)</b> | Wearable textile-based piezoelectric and triboelectric nanogenerators: State-of-the-art, challenges and future outlines<br><b>Dr. Roohullah Bagerzadeh (Amirkabir university, Iran)</b> | The Effect of Fumed Silica Colloidal Suspension on the Shear Thickening Fluid Fabric Composite<br><b>Prof. Mohd Yazid Yahya (UTM, Malaysia)</b>  |
| 15:05 – 15:20                         | Transformation of the Textile Industry towards Sustainable Development<br><b>Dr. Awais Khatri (Mehran UET)</b>  | Nanofibers: A Sustainable Frontier for Cutting-Edge Materials<br><b>Prof. Dr. Zeeshan Khatri (Mehran UET)</b>   | Ballistic Impact damages mechanism of Textile Structural Composites<br><b>Prof. Mohd Yazid Yahya (UTM, Malaysia)</b>   |
| 15:20 – 15:35                         | Revealing the SMEP Project - Transforming Pakistan's Textile Landscape with Digital Traceability"<br><b>Ms. Nin Castle (Reverse Resources)</b>  | Potential new products in the export range of Pakistan's textile Industry<br><b>Dr. Usman Zubair (NTU)</b>  | 3D woven Composites for Ballistic Applications<br><b>Dr. Muhammad Umair (NTU)</b>  |
| 15:35 – 15:50                         | Traceability in Textiles & Apparel<br><b>Mr. Imran Asghar (Fibertrace)</b>  | An approach to develop the flexible textile-based antennas for smart textile applications<br><b>Dr. Shahood uz Zaman (NTU)</b>  | Impact Analysis of Hybrid Safety Helmets: A Numerical Approach<br><b>Dr. Muhammad Ali Nasir (UET Taxila)</b>   |
| <b>Tea Break</b>                      |   |   |  |
| 15:50 – 16:05                         | Session A1 (Main Hall)<br><b>Fibers I</b><br>Session Chair: Prof. Josphat Igadwa, Kenya   | Session C1 (MP Hall 2)<br><b>Productivity &amp; Quality</b><br>Session Chair: Dr. Aminuddin Haji, Yazd University   | Session B1 (MP Hall 1)<br><b>Textile Production Processes/ Composite Materials II</b><br>Session Chair: Prof. Hairul Abrial, Indonesia   |
| 16:05 – 16:30                         | Alternative Fibers for Textiles Fibers: Innovation & Significance<br><b>Dr. Sheraz Ahmad (NTU)</b>  | Enhancing productivity of Supervisors and Machine Operators using SMOT<br><b>Dr. Abher Rasheed (NTU, Faisalabad)</b>  | Innovation in Weaving at ITMA 2023 Lights the Road to Industry 4.0<br><b>Prof. A. Fattah Seyam (NCSU, USA)</b>   |
| 16:30 – 16:45                         | Improving Access To Sustainable Energy In Rural Pakistan Using Food And Fiber Agro-waste As A Renewable Fuel<br><b>Dr. Jibran Khaliq (Northumbria University, UK)</b>   | Productivity and Profitability enhancement in apparel industry through knowledge based innovation<br><b>Dr. Abdulwahab, Crescent Bahuman Ltd</b>  | Elevating Pakistani Textiles through Manmade Transformation for Global Export<br><b>Dr. Salma Farooq (NED University)</b>  |
| 16:45 – 17:00                         | Date Palm Fibers: The New Comer to the Textile Industry<br><b>Dr. Mohamad Midani, Intexive Consulting, Egypt</b>  | What role can professional coaching play in textile and industrial innovation?<br><b>Mr. Ben Bouwhuis (CEO, AFFEXCO Global)</b>   | Development and analysis of 3D computational model of multifilament polyester yarn and weft knitted fabrics to predict comfort properties of sportswear<br><b>Dr. M. Owais Raza Siddiqui (NED)</b>   |
| 17:00 – 17:15                         | Empowering Communities: Transforming Pakistani Wool into High-Value Textiles through Research<br><b>Dr. Syed Zameer ul Hassan (BUIITEMS)</b>  | Analysis of factors effecting cost of poor quality in apparel manufacturing<br><b>Dr. Aqsa Imran (NTU)</b>  | Development of a lightweight composite Slay-Alpha<br><b>Dr. Syed Talha Ali Hamdani (NTU)</b>   |
| 17:15 – 18:00                         | <b>Panel Discussion (Pakistan's Textile Industry):</b><br>Charting the Path: Advancing Pakistan's Textile Industry Through Circular Practices<br>(Dr. Munir Ashraf, NTU)  | 1. Mr. Saqib Sohail, Artistic Millinir<br>2. Industry Rep<br>3. Mr. Jeff Wheeler, Elevate, USA<br>4. Mr. Rashid Iqbal, Naveena Group<br>5. Mr. Imran Zaidi, Primark                     | Study the Effects of Structural Arrangements on Mechanical Properties of 2D Auxetic Woven Fabrics<br><b>Dr. Arif A Shah (NESCOM)</b><br>Development of light weight protective armour<br><b>Dr. Muhammad Imran Khan (NTU)</b><br>Rubber Sandwiched Composites for Low Velocity Impact Applications<br><b>Mr. Hassan Iftekhar (NTU)</b> |



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## Day 2 March 06, 2024

| Session A2 (Main Hall )<br><b>Textile Business</b><br>Session Chair: Dr. Muhammad Abrar (GCUF)             |  | Session B2 (MP Hall 1)<br><b>Composite Materials III</b><br>Session Chair: Prof. Bohong Gu (Donghua University)  |   | Session C2 (MP Hall 2)<br><b>Circularity/Recycling</b><br>Session Chair: Dr. Raza Shah (Karachi University)   |  |
|--|--|--|---|---|--|
| 9:30 – 9:55  | Transforming Textile Business into a Circular and a Digital Enterprise<br><b>Dr. Shahid Rasul (Northumbria University, UK)</b>   | Development and characterization of graphene nanoplatelet (GNP) reinforced polylactic acid (PLA) composites for electric vehicle battery packs<br><b>Prof. Mohd Sapuan Salit (Universiti Putra Malaysia)</b> | Opportunities and challenges for circularity and eco-innovation in the Textile and Apparel sector in Kenya<br><b>Dr. Josphat Igadwa (Moi University, Kenya)</b> |   |  |
| 9:55 – 10:10   | Enhancing Exports by Product & Market Diversification<br><b>Dr. Sajjad Ahmad Baig (NTU)</b>  | Strategies and methodologies for ginger waste utilization<br><b>Prof. Hairul Abral (Andalas University, Indonesia)</b>   | Development of Hybrid Weft Knitted Auxetic Structures for Kids and Maternity Wear<br><b>Dr. Habib Awais (NTU)</b>   |   |  |
| 10:10 – 10:25  | Pakistan Textile Portal: Creating Business by Connection the textile value chain<br><b>Dr. Muhammad Asif (NTU)</b>   | Geo-tech application of nonwoven wool sheet for underground watercontent enhancement<br><b>Ms. Laiba Munir (BUITEMS)</b>   | Upscale recycling of nonwoven waste<br><b>Dr. Yasir Qayyum Gill, UET Lahore</b>   |   |  |
| 10:25 – 10:40  | Opportunities of Collaboration with China<br><b>Prof. Zamir Ahmed Awan (Global Silk Route Research Alliance)</b>   | Electrically conductive epoxy/polyaniline composite fabrication and characterization for electronic applications<br><b>Ms. Iqra Abdul Rashid (NTU)</b>   | The Future of Textile Recycling Technologies<br><b>Mr. Meer Mehmood Khan Jalbani (University of the Punjab)</b>   |   |  |
| 10:40 – 10:55  | Unlocking the Complex Interplay Between Economic Growth, Environmental Sustainability, and Degradation: An Advanced ARDL and NARDL Analysis<br><b>Dr. Muhammad Zia ur Rehman (NTU)</b> | Development and characterization of multifunctional carbon fabric-reinforced polymer composites incorporated with inorganic flame-retardants<br><b>Ms. Ayesha Afzal (NTU)</b>                                | Balochi Wool Renaissance: From waste to wearable innovation in Textiles<br><b>Ms. Aiman Waseem (BUITEMS)</b>  |   |  |
| 10:55 – 11:10  | Mapping Global Trade Potential of Pakistan Denim Industry: Empirical Evidence with Gravity Model<br><b>Ms. Ghazia Batool (NTU)</b>   | Development of composite interior panels; Repurposing textile dead waste<br><b>Mr. Ali Raza Shafqat (NTU)</b>  | Challenges and Opportunities in Textile Waste Management: A Review of Recycling Technologies<br><b>Mr. Raja Waseem Ullah Khan (NTU)</b>                         |   |  |
| 11:10 – 11:25  | Customer Perspectives on Sustainable Practices in Textile Manufacturing: A Comprehensive Review and Outlook<br><b>Mr. Syed Zeeshan Haider (NTU)</b>                                    | Innovative Reinforcement Strategies for Enhanced Performance of Natural Fiber-Reinforced Polymer<br><b>Dr. Tehseen ullah (NTU)</b>   | Recycling Threads: Barriers and Challenges in Textile sector of Pakistan<br><b>Dr. Muhammad Ahmad-ur-Rehman (NTU)</b>   |   |  |
| 11:25 – 11:40  | Unlocking Sustainable Success: Overcoming Barriers in Pakistan's Textile Circular Supply Chain<br><b>Mr. Muhammad Ibrahim Shahid (NTU)</b>   | Fabrication and impact analysis of sandwich composites by 3 D printed polymeric honeycomb core<br><b>Mr. Sohaib Arif (NTU)</b>   | Dynamics of Elegance: Unveiling Contemporary Fashion Trends in Pakistan<br><b>Ms. Ruba Babar (Lahore College for Women University)</b>                          |   |  |
| 11:40 – 11:55  | <b>Tea Break</b>   |  |   |   |  |
| Session A3 (Main Hall)<br><b>Traceability</b><br>Session Chair: Prof. Dr. Zeeshan Khatri (Mehran UET)      |  | Session B3 (MP Hall 1)<br><b>Waste Water Treatment</b><br>Session Chair: Prof. Yazid Yahya (UTM, Malaysia)   |   | Session C3 (MP Hall 2)<br><b>Nanotechnology/ Energy</b><br>Session Chair: Dr. Roohullah Bagerzadeh (Amirkabir University, Iran)                                 |  |
| 11:55 – 12:20  | Traceability for the competitive Edge<br><b>Mr. Jeff Wheeler (Elevate, USA)</b>  | Application of Polymer Nanocomposite Membranes for Textile Wastewater Treatment<br><b>Dr. Nasir Ahmad (NUST)</b>   | Nanotechnology: the science and applications<br><b>Prof. Abdel Salam (King Abdulaziz University, KSA)</b>   |   |  |
| 12:20 – 12:50  | Environmental Index Measures Promoting Assessment and Circular Transparency in Fashion<br><b>Dr. Alana James (Northumbria University, UK)</b>  | Potential of Modified fibers in Textile Wastewater Treatment<br><b>Aminoddin Haji (Yazd University, Iran)</b>  | Rational design and Synthesis of Energy Materials for Next-Generation Photovoltaic Solar Cells<br><b>Dr. Raja Shahid Ashraf (GCU Lahore)</b>                    | CoS2-Ni17S18:Al2S3 thin film as supercapacitor electrode for astounding energy storage and explicit photocatalyst for<br><b>Dr. Khuram Shahzad Ahmad (FJWU)</b> |  |
| 12:50 – 13:05  | Nutrient Use Efficiency, Carbon Monitoring, and Life Cycle Assessment in the Textile Supply Chain<br><b>Dr. Khalid Mahmood (Rothamsted, UK)</b>  | Harnessing the power of Sun to bring circularity to textile Wastewater<br><b>Dr. Nimra Nadeem (NTU)</b>  | Fabrication of Cr2AlC MAX Phase for Flexible Supercapacitor Devices<br><b>MS. Arrisha Akram (University of Agriculture)</b>                                     | Engineering of MoS2 as Flexible sensors and Energy devices<br><b>Ms. Maryam Kousar (Uni of Agriculture)</b>   |  |
| 13:05 – 13:20  | Traceability as a business imperative<br><b>Mr. Irfan Islam Khan (Halexia)</b>   | Low pressure NF membranes for heavy metal removal from wastewater<br><b>Ms. Nida Abid</b>  | Polythiophene as an Emerging Conducting Polymer in Textile sector<br><b>Ms. Aiman Fatima (University of Agriculture)</b>  |   |  |
| 13:20 – 13:35  | Tracing Sustainability: Unveiling the Role of Traceability in Shaping Circular Textile Economies<br><b>Dr. Awais Ali Khan (SAWIE)</b>  | Greening the Blue: A sustainable Approach to Detoxify Synthetic Textile Sewage Containing Textile Dyes Using Bacterial Consortium<br><b>Mr. Khalid Hussain (KIBGE, University of Karachi)</b>                |   |   |  |
| 13:35 – 14:25  | <b>Lunch Break</b>   |  |   |   |  |
| Session A4 (Main Hall )<br><b>Fibers II</b><br>Session Chair: Dr. Mohamad Midani (Cairo University, Egypt) |  | Session B4 (MP Hall 1)<br><b>Functional &amp; Smart Textile</b><br>Session Chair: Prof. Abdel Salam (King Abdulaziz University, KSA)   |   | Session C4 (MP Hall 2)<br><b>Textile (Misc)</b><br>Session Chair: Prof. Sapuan Salit (Universiti Putra Malaysia)  |  |
| 14:25 – 14:55  | Spinnable Banana Fibers from Banana plant Stem: A success story<br><b>Dr. Faheem Ahmad (NTU)</b>   | Smart and Interactive Textiles: Pioneering the Future of Wearable Technology<br><b>Dr. Jibran Khaliq (Northumbria University, UK)</b>  | Towards Greener Textile Manufacturing: A Comparative Study on Core CVC and Staple CVC Yarns for Fibril Pollution Mitigation<br><b>Dr. Zulfiqar Ali (NTU)</b>    | Investigation of the heat setting and dyeing processes of cationic dyeable polyester knitted fabric<br><b>Dr. Saira Faisal (NED University)</b>                 |  |
| 14:55 – 15:10  | AM-Regen: Cultivating Resilience in Cotton through Regenerative Practices<br><b>Mr. Saqib Sohail (Artisictic Milliners)</b>  | Electroconductive and EMI Shielding Textiles: A New Era of Low Cost Technical Textiles<br><b>Dr. Asif Ali Qaisar, UET Lahore</b>   | An Investigation into the Integration and Impact of Sustainable Practices in the Denim<br><b>Mr. Mubbashir ali (Naveena Group)</b>                              |   |  |
| 15:10 – 15:25  | Devlopment of Cotton/Jute Blended yarn and Fabrics for Apparels<br><b>Ms. Bushra Mushtaq (NTU)</b>   | Functional Textile Fibers for Biomedical Applications<br><b>Dr. Muhammad Anwaar Nazeer (NTU)</b>   | Groundbreaking Innovations and Promising Role of ZNO NPs by Aloe Vera Gel Extract for enhancing UPF in Textiles<br><b>Ms. Uswa Batool (GCUF)</b>                |   |  |

|               |   |   |   |
|---------------|---|---|---|
| 15:25 – 15:40 | A Comparative Life Cycle Assessment Of Alternative Cellulosic Fibers<br><b>Mr. Muhammad Sohaib Atiq (NTU)</b>                                   | Smart Drug Delivery system<br><b>Dr. Raza shah (Karachi university)</b>   | Microencapsulation: Innovation in Textiles and Applications for Enhanced Fabric Functionality<br><b>Ms. Zarnab Gul (Kaunas Univ of Technology, Lithuania)</b>                           |
| 15:40 – 15:55 | Artistic Woolen Denim made from Baluchi Wool<br><b>Syed Bilal Ahmad, Artistic Millinirs</b>   | Characterization and Antibacterial Properties of ZnO Nanoparticles-Coated Cotton Fabrics<br><b>Ms. Zeinab A. Suliman (Moi University, Kenya)</b>                    | Bioactive waterborne polyurethane emulsions with biomedical potential as functional finishes: An approach in sustainable textiles<br><b>Dr. Noureen Arshad (Liberty Mills, Karachi)</b> |
| 15:55 – 16:10 | Organic Cotton Market and Role of Organic Cotton Accelerator<br><b>Mr. Asif Mehmood (OCA)</b>   | Electromagnetic interference shielding materials: recent progress, structure design, and future perspective<br><b>MS. Ayesha Naseer (University of Agriculture)</b> | Denim Sustainability and Automation By Using Laser Processing Technology<br><b>Mr. Muhammad Shahzad (PTUT)</b>  |
| 16:10 – 16:25 | Nurturing the Land: Strategies for Soil Health in Organic Cotton Production in Pakistan<br><b>Prof. Abdul Wakeel (Universty of Agriculture)</b> | Grapheene: Pioneering the Next Frontier in Smart Textile Applications<br><b>Dr. Muhammad Haroon Rashid (NTU)</b>  | Phosphorus and nitrogen-rich oligomeric structures as durable, antibacterial & formaldehyde-free flame-<br><b>Mr. Muhammad Shoaib (NTU)</b>   |
| 16:25 – 16:40 | Melt Spinning of Recycled functional polyester fibers<br><b>Dr. Muslim Rehman/ Mr. Safer Abbas (NTU)</b>  | Effect of Electronic beam irradiation on cotton fabric treated with chitosan<br><b>Dr. Ahmed Mosaad (Benha University, Egypt)</b>                                   | Development of Sustainable Hydrophilic Azadirachta indica loaded PVA Nanomembranes for Cosmetic Facemask Applications<br><b>Mr. Rizwan Tahir (NTU)</b>                                  |
| 16:40 – 17:40 | <b>Closing Ceremony</b>   |   |   |

| March 06, 2024                              |  |
|---|--|
| Textile (Circularity) Innovation Exhibition |  |
| 9:30 – 10:30                                | Inauguration Ceremony/ Visit of Chief Guest / VIP delegates            |
| 10:30 – 15:30                               | Visit of Jury for Evaluation   |
| 10:30 – 16:40                               | Open to public for Visit   |
| 16:40 – 17:40                               | <b>Closing Ceremony /Conferment of NTU-Interloop Innovation Awards</b> |

| March 06, 2024 |                                    |
|----------------|------------------------------------|
| 10:30 – 15:30  | <b>Poster Presentation Session</b> |

| Platinum Sponsors  | Gold Sponsors   | Silver Sponsors   | Co-Organizers  | Supporting Bodies   |
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|  <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: left;">  <p>National Textile University, Faisalabad,<br/>Pakistan</p> </div> <div style="text-align: center;">  <p><a href="http://www.conference.knowtex.pk" style="color: white;">www.conference.knowtex.pk</a></p> </div> <div style="text-align: right;">  <p><a href="mailto:sbatool@ntu.edu.pk" style="color: white;">sbatool@ntu.edu.pk</a><br/><a href="mailto:muzzamal.hussain@ntu.edu.pk" style="color: white;">muzzamal.hussain@ntu.edu.pk</a></p> </div> </div> |   |   |  |   |