

50th Textile Research Symposium (TRS 50)

7 - 8 September 2023

The Ravenala Attitude Hotel

Thursday 7 September 2023

Venue: B Leisure – Opening Ceremony	
08 30 – 09 00	Registration
09 00- 09 05	Welcome address by Assoc Prof S Rosunee, Chairperson, Organising Committee
09 05 – 09 15	Address by Dean, Faculty of Engineering, University of Mauritius
09 15 – 09 25	Address by an official of the Textile Machinery Society of Japan
09 25- 09 35	Address by Vice-Chancellor, University of Mauritius
09 35 - 09 50	Address by His Excellency the Ambassador of Japan
09 50 – 10 05	Address by the Hon. Mr Soomilduth Bholah Minister of Industrial Development, SMEs and Cooperatives (awaiting confirmation)
10 05 – 10 20	Address by the Hon. Mrs. Leela Devi Dookun-Luchoomun, GCSK Minister of Education, Tertiary Education, Science and Technology (awaiting confirmation)
10 20 - 10 50	Plenary Address: Mr. Nishaan DOOKHAN - Chief Operations Officer, <i>Tropic Knits Group, CIEL Textile, Mauritius</i>
10 50 – 11 10	Tea/Coffee Break
11 10 – 11 40	Plenary Address: Dr. Kaida XIAO - Associate Professor in Colour and Imaging Science and Research Group Leader for Colour Technology, <i>School of Design, University of Leeds, UK</i>
11 40 – 12 10	Plenary Address: Mr. Kendall TANG - Chief Executive Officer, <i>RT Knits, Mauritius</i>
12 10 – 12 40	Plenary Address: Dr. Bijoya Kumar BEHERA – Professor, Department of Textile and Fibre Engineering, <i>Indian Institute of Technology, Delhi, India</i>
12 40 – 13 10	Plenary Address: Dr. Arunangshu MUKHOPADHYAY – Professor, Department of Textile Technology, <i>National Institute of Technology, Jalandhar, Punjab, India</i>
13 10 – 14 00	LUNCH

Thursday 7 September 2023

Parallel Session 1 A	
Venue: Think Tank 1	
Fibres, Yarns, Textiles & Composites	
Session Chair : TBC (to be confirmed)	
14 00 – 14 20	Modeling of Stitches with Two Ply Yarn <i>Hidefumi Wakamatsu, Yoshiharu Iwata, and Yuya Yamada, Osaka University, Japan</i>
14 20 – 14 40	A Comparative Study on the Creep Behaviour of Ozone Treated Jute Fabric/Epoxy Composites filled with Ozonized and Pulverized Plant Fibres <i>Debarati Bhattacharyya, Vijay Baheti, Indian Institute of Technology Delhi, India</i>
14 40 – 15 00	Treatment Technique of Providing Cotton Fabrics with Function to Capture and Detect Metal Haptens for Preventing Metal Allergy and Evaluation of Treated Fabric Characteristics II. <i>Hidekazu Yasunaga, Hideyuki Shima, Kyoto Institute of Technology, Japan</i>
15 00 – 15 20	In-Plane and Out of Plane Compressive Loading on 3D Woven Fabric Composites at Different Strain Rate <i>Sameer Kumar Behera, Prabhjot Singh, S.P Singh, B.K. Behera , Indian Institute of Technology Delhi, India</i>
15 20 – 15 40	Environmental Friendliness of Polyester Fibers <i>Takeshi Kikutani, Tokyo Institute of Technology, Japan</i>
15 40 – 16 00	Tea/Coffee Break
Session Chair : TBC	
16 00 – 16 20	Relationship Between Cotton Fibre Properties in the Bale and those Post Ring-frame <i>Akbar Fassih, Lawrence Hunter, Durban University of Technology, Durban, South Africa</i>
16 20 – 16 40	Dynamic Stab Resistance of Shear Thickening Fluid (Stf) Treated Multi-Layered P-Aramid Fabric <i>Jyotirmoy Das, Abhijit Majumdar, Bhupendra Singh Butola, Indian Institute of Technology Delhi, India</i>
16 40 – 17 00	Design and Development of Fiber Reinforced Ductile Composites for Seismic Resistance Building Material <i>Sunny Pannu, Vikas Khatkar, Pavan Kalyan Boda, B K Behera, Department of Technical Education, Haryana, India</i>
17 00 – 17 20	Ceramic Fabric Reinforced Silica Aerogel Blankets with Low Thermal Conductivity and Improved Acoustic and Fire Performance <i>Jaya Sharma, Javed Sheikh, and B.K. Behera, Indian Institute of Technology Delhi, India</i>
17 20 – 17 40	Flexural Behaviour and Impact Energy Absorption of 3d Woven Honeycomb Composites <i>Lekhani Tripathi, Bijoya Kumar Behera, Indian Institute of Technology Delhi, New Delhi, India</i>

Parallel Session 1 B
Venue: Think Tank 2

Science & Technology of Textiles Machinery

Session Chair : TBC

14 00 – 14 20	FEA Modeling of Needle Heating in High-Speed Industrial Sewing <i>Vinay Kumar Midha, Ankush Sharma, Dr. B.R. Ambedkar National Institute of Technology Jalandhar, India</i>
14 20 – 14 40	Applying Generative Design to the Development of Advanced Protective Wearables via Additive Manufacturing Technology <i>Raviduth Ramful, Mohammad Shoab Casseem, University of Mauritius, Mauritius</i>
14 40 – 15 00	Consideration on Braiding Angle and Yarn Length Compensatory Mechanism for 3D Rotary Brading <i>Kinari Toshiyasu, Kondo Yuya, Wakako Lina, Taniguchi Michio, Kanazawa University, Japan</i>
15 00 – 15 20	Numerical Simulation of the Air Flow Generated by Accompanying the High Speed Running Yarn with High Speed in a Yarn Guide <i>Shuichi Tanoue, Hiro Takeda, Yuki Osakabe, Hideyuki Uematsu, Ryo Jinnou, University of Fukui, Japan</i>
15 20 – 15 40	Development of Hand Evaluation System for Denim Fabrics <i>Kavita Rani, Meenakshi Ahirwar, B.K. Behera, Government Polytechnic College Haryana, India</i>
15 40 – 16 00	Tea/Coffee Break

Session Chair : TBC

16 00 – 16 20	Novel Twisting Device for Ring Spinning Machine <i>Rajesh T. Dhore, V. R. Sampath, Shri Vaishnav Vidyepeeth Vishwavidyalaya, India</i>
16 20 – 16 40	Transformation of Creativity in the Fashion Industry: Exploring the Impact of Technology <i>Nikita Singh, Lovely Professional University, Punjab, India</i>

Textiles for Sustainable Development

16 40 – 17 00	Tannin Rich Bark Extract Treated Value-Added Khadi Textiles - A Green Chemistry Approach of 'Waste To Wealth' Generation <i>Sourav Banerjee, S. Wazed Ali, Satya Narayan Naik, Indian Institute of Technology, Delhi, India</i>
17 00 – 17 20	Characteristics of Woven Fabrics Consisting of Recycled Yarn Derived from Wasted Textiles <i>Mari Inoue, Motoko Uchamaru, Yukio Higashiyama, Aoi Morishita, Teruo Kimura, Kobe University, Japan</i>
17 20 – 17 40	Sound Absorption of Adhesive Bonded Nonwovens from Mattress Foam and Cotton Fabric Waste <i>V.R. Sampath, Eradu Seid, Shri Vaishnav Vidyepeeth Vishwavidyalaya, India</i>

Friday 8 September 2023

Parallel Session 2 A	
Venue: Think Tank 1	
Session Chair: TBC	
08 30 – 09 00	Plenary Address: Dr Rajkishore Nayak - RMIT University, Vietnam
Nanofibres, Nonwovens, and Industrial Textiles	
09 00 – 09 20	Fabrication of Double-Layered Nanofiber Coalescer with Superior Separation Efficiency and Permeation Flux for Oil-In-Water Emulsion <i>Yunpeng YUE, Yasuhito MUKAI, Nagoya University, Japan</i>
09 20 – 09 40	Affecting Parameters for Fiber Production using Microfluidics <i>Tsutomu Ono, Yukari Saijo, Sora Nakajima, Takaichi Watanabe, Okayama University, Japan</i>
Apparel, Comfort & Smart Textiles	
09 40 – 10 00	Deformation Simulation of Knitted Fabric at the Stitch Level Using Machine Learning <i>Hikaru Nara, Hidefumi Wakamatsu, Yoshiharu Iwata, Osaka University, Japan</i>
10 00 – 10 20	Screen Printing Method for Conductive Textiles <i>Visileanu Emilia, Gabriela Alexandra Ene, Marian Catalin Grosu, Bogdan Mihailescu, Alina Florentina Vladu, The National Research and Development Institute for Textiles and Leather, Romania</i>
10 20 – 10 40	Computer Modelling of the Two-Dimensional Pore Size Distribution of Plain Woven Cotton Fabrics for the Prediction of Air Permeability <i>Patricia Julie Abel, Roshan Unmar, Satyadev Rosunee, Academy of Design and Innovation, Mauritius</i>
10 40 – 11 00	Tea/Coffee Break
Session Chair: TBC	
11 00 – 11 20	Basic Research on Tactile Slide-Feeling in Slide Fastener <i>Lina Wakako, Haruto Inoue, Toshiyasu Kinari, Kanazawa University, Japan</i>
11 20 – 11 40	Flexural Behaviour of UD, 2D and 3D Fabric Reinforced Metal-Faced Sandwich Composite Panels <i>Prabhjot Singh, Javed Sheikh, B K Behera, Indian Institute of Technology Delhi, India</i>
11 40 – 12 00	Reduction in Clothing Ventilation by Wearing the Infection-Isolated Gown and its Countermeasure Effectiveness of Local Body Cooling <i>Hiroyuki Ueda, Kaori Motomura, Kiho Tanaka, Osaka Shin-Ai Gakuin University, Japan</i>
12 00 – 12 20	Study on Non-linear CAE Simulation of Textile Bending <i>Yamashita Yoshihiro, Uematsu Hideyuki, Tanoue Shuichi, University of Fukui, Japan</i>
12 20 - 12 40	Modelling The UV Transmission Of Weft Knitted Fabrics <i>Manoj Imrith, Satyadev Rosunee, University of Mauritius, Mauritius</i>
12 40 – 13 40	LUNCH
Session Chair: TBC	
13 40 – 14 00	Evaluation of Towel Fabric Hand in Active and Passive Touch and EEG Analysis <i>Takafumi Hata, Takayuki Kodama, Mari Inoue, Kobe University, Japan</i>

14 00 – 14 20	Evaluation of Motion Adaptability on Men’s Suit Pants based on Kinematic Soft Dummy System <i>Hiroyuki Kanai, Mana Sakurada, Hiroki Maru, Tetsu Sasagawa, Shinshu University, Japan</i>
14 20 – 14 40	Investigating the Effects of Tuck Stitches on the Thermophysiological Comfort Properties of Cotton Weft Knitted Fabrics <i>V. Nandlal, R. Unmar, S. Rosunee, University of Mauritius, Mauritius</i>
14 40 – 15 00	Measuring the Electromagnetic Shielding Efficiency (EMSE) by placing Two Identical Knitted Fabrics Together using Fair Isle Knitting Techniques <i>Bahadur G.K., S. Rosunee, University of Mauritius</i>
15 00 - 15 20	Factors Affecting Moisture Transmission through Denim Fabrics <i>Nooreeyah B. Mamodally, R. Unmar, S. Rosunee, University of Mauritius, Mauritius</i>
15 20 – 15 40	Tea/Coffee Break
15 40 – 16 15	Poster Session
Dyeing & Finishing	
Session Chair: TBC	
16 15 – 16 35	Synthesis of Mosquito Repellent, Antibacterial, and UV-Protective Dye for Functional Dyeing of Polyester <i>Javed Sheikh, Ankit Singh, Indian Institute of Technology, Delhi, India</i>
16 35 – 16 55	Eco-Friendly Flame-Retardant Treatment of Cotton Fabric Using Pomegranate Rind Extract <i>Rupayan Roy, National Institute of Fashion Technology Kannur, Kerala, India</i>
16 55 – 17 15	Traceability and Transparency in Textile Finishing Industry <i>Ms. Yogi Goel</i>
17 15 – 17 35	Electromagnetic Interference Shielding of Blended Activated Carbon Nonwoven Fabrics <i>Kuldip Singh, Vijay Baheti, Indian Institute of Technology Delhi, New Delhi, India</i>
17 35 – 18 00	Closing Ceremony

Parallel Session 2 B
Venue: Think Tank 2

Online Presentations

Session Chair: TBC

08 30 – 09 00	Plenary Address: Dr Rajkishore Nayak- RMIT University, Vietnam
09 00 – 09 20	Integrating Sustainable Local Wool, Low-Scale Transformation, and Nearshoring Approach in Canadian Clothing Manufacturing Bellemare Jocelyn, Leger Anne, Faust Marie-Eve, Fontaine Richard, University of Quebec in Montreal (UQAM), Canada
09 20 – 09 40	Real Time Measurement System for Stab Resistance Fabric Hireni Mankodi, The M S University of Baroda, India
09 40 – 10 00	Perceptions Made on Various Hypotheses Designed to Increase Bottom Thread Run-Out Time on Lock Stitch Sewing Machine Dr. Tasnim N. Shaikh, Savan P. Chokshi, The Maharaja Sayajirao University of Baroda, India
10 00 – 10 20	Shape Memory Nanocomposite-Based Thermal-Moisture Sensitive Cellulosic Textiles Nazife Korkmaz Memiş, Sibel Kaplan, Mehmet Kertmen, Süleyman Demirel University, Türkiye
10 20 – 10 40	Use of Neuromarketing to Explore Sustainable Fashion Consumption in Mauritius Adjnu Damar Ladkoo, Sandesh Mohabir, University of Mauritius, Mauritius
10 40 – 11 00	Tea/Coffee Break
Session Chair: TBC	
11 00 – 11 20	Piezoelectric Filler Incorporated Polymer Based Electrospun Mat For Energy Harvesting Applications Swagata Banerjee, Satyaranjan Bairagi, S.Wazed Ali, Indian Institute of Technology Delhi, India
11 20 – 11 40	Sustainable Encapsulation of Aakada Leaf Extracts (Calotropis Gigantean) with Harad for Topical Wound Dressing over Cotton Fabric Yogita Agrawal, V.R. Sampat, Shweta Agrawal, Shri Vaishnav Vidyapeeth Vishwavidyalaya, India
11 40 – 12 00	Influence of Tightness on Comfort and Protective Performance of Outer Shell Fabric of Multilayer Fire Protective Suit Rochak Rathour, Tathagata Das, Sudhanshu Maurya, Dr. Apurba Das, Dr. Ramasamy Alagirusamy, Indian Institute of Technology Delhi, India
12 00 – 12 20	Exploring the Potential of Simplifying Ikat Dyeing Technique for Bomkai Weavers in Odisha Tvisha Sharma, Vibhavari Kumar, National Institute of Fashion Technology, India
12 20 - 12 40	Characterization of Acrylic Colours: A Sustainable Alternative to Direct Dyes Krishi Sarin, Anjali Agrawal, National Institute of Fashion Technology, Kolkata, India
12 40 – 13 40	LUNCH

Session Chair: TBC	
13 40 – 14 00	Design and Development of Convertible Lunch Bag Made Up Of Banana Fibers <i>Srushiti Patil, Ritu Madhan, College of Home Science Nirmala Niketan, India</i>
14 00 – 14 20	Kota Doriya: Current Trials and Challenges <i>Ananya Mitra Pramanik, Anjali Agrawal, National Institute of Fashion Technology, Kolkata, India</i>
14 20 – 14 40	Design and Development of the Outer Shell of Extreme Cold Weather Clothing Considering the Mechanical and Physiological Performance <i>Ranjna Kumari, R.S Rengasamy and R. Chattopadhyay, Indian Institute of Technology, New Delhi, India</i>
14 40 – 15 00	Synergistic Influence of Reinforcement on Physical and Mechanical Properties of Woven Composites <i>Sweety A. Agrawal, The Maharaja Sayajirao University of Baroda, India</i>
15 00 - 15 20	Machine Learning Algorithms to Predict Fabric End Uses <i>Jonathan Y. Chen, David W. Lloyd, Simon C. Harlock, The University of Texas at Austin, USA</i>
15 20 – 15 40	Tea/Coffee Break
15 40 – 16 15	Poster Presentations
FACE-TO-FACE SESSION Fibres, Yarns, Textiles & Composites	
Session Chair: TBC	
16 15 – 16 35	Performance Evaluation of Load Bearing Capacity of Textile Waste Fibre Based Geosynthetics and their Combinations <i>Amit Kumar Pandey, B. K. Behera, R. Alagirusamy, Indian Institute of Technology Delhi, New Delhi, India</i>
16 35 – 16 55	Effect Of Thermal Ageing Of Coir And Banana Fibre On Mechanical Properties <i>Shashi Sony, Samrat Mukhopadhyay, Vijaykumar Narayandas Baheti, Indian Institute of Technology Delhi, New Delhi, India</i>
16 55 – 17 15	Exploring Solution Blowing Technique for High-Performance Nanogenerator Fibers: Submicrometric Diameter and Enhanced Piezoelectric Properties <i>Srishti Bajpai, B.S. Butola, Abhijit Majumdar, Indian Institute of Technology Delhi, New Delhi, India</i>
17 15 – 17 35	Impact Damage Analysis of 3D Woven Structural Composite-Based Aircrew Helmet using Fem and 3D X-Ray Tomography <i>Omender Singh, Bijoy Kumar Behera, Indian Institute of Technology Delhi, New Delhi, India</i>
17 35 – 18 00	Closing Ceremony

POSTER PRESENTATIONS:

Poster 1:

Fabrication of Double-Layered Nanofiber Coalescer with Superior Separation Efficiency and Permeation Flux for Oil-In-Water Emulsion

Yunpeng YUE, Nagoya University

Poster 2:

Designing Electrical Circuits on Textiles through the Sputtering Method

Alina Vladu, The National Research and Development Institute for Textiles and Leather, Romania

Poster 3:

Texture Measurement and KES (KAWABATA EVALUATION SYSTEM)

Haru Matsumoto, Kato Tech Co., Ltd, Japan

Poster 4:

The Characterization of the Recycled Yarn from Waste Textiles

Yan Wang, Kobe University, Japan

Poster 5:

Design And Development of Interactive Embellishments for Children's Clothing with Educational Benefits

Dr A.V. Soocheta, University of Mauritius

Poster 6:

Recycling and Upcycling of Industrial and Domestic Textile Waste

Danisha Teeroovengadam, University of Mauritius