

The Fiber Society 2003 Spring Symposium Programme
ADVANCED FLEXIBLE MATERIALS AND STRUCTURES:
ENGINEERING WITH FIBERS
 June 30 - July 2, 2003, Loughborough University, UK

Monday, 30 June 2003:

19:00	Registration and Buffet Dinner– FARADAY DINING HALL
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Monday, 30 June 2003: Day Chair: Marc Renner

8:00	Registration – James France Building Exhibition Area	
8.45	Introduction: Dr Memis Acar, Symposium Chair – Room: CC.0.13 Welcoming Remarks from: Professor Marc Renner, President of the Fiber Society & Professor Phil Roberts, Deputy Vice Chancellor of Loughborough University	
9:00:	Keynote Address - Session Chair: Memis Acar Engineering with Fibers: The Evolution of A New Industry, Subhash K. Batra, Fred Abernathy, John Dunlop, Jan Hammond, David Weil (HCTAR)	
9.45	Discussion Session: Peter Foster, John Hearle, Dick Horrocks, Carl Lawrence, Victor Li, Alberto Mazzoldi, Marc Renner, Moon Suh	
10:30	BREAK: James France Exhibition Area	
	Parallel Session A1 – Room CC.0.12 Session Chair: Rene Rossi	Parallel Session B1 – Room CC 13 Session Chair: Carl Lawrence
10:45	Use of Hydrophilic Fibers and Fabrics for Improved Physiological Properties of Cold Protective Clothing <u>Rene Rossi</u>	A Contribution to Van Wyk's Theory of Contacts Between Fibers <u>Bohuslav Neckar, Sayed Ibrahim</u>
11:15	Effect of UVC Radiation and Ozone on Properties of Fabrics Used for Welders' Protective Clothing <u>Helena Makinen, Kirsi Jaakkola, Sanna Karkkula, Patrick von Nandelstadh</u>	Modelling of the Tensile Behaviour of Non-Plain Weave Fabrics <u>T V Sagar, P Potluri, J W S Hearle</u>
11:45	Protective Clothing - Innovative Technical Textiles with Multifunctional Properties <u>Hendrik Beier</u>	Some Statistical Theorems Governing Fiber Geometry of 2-D Nonwovens <u>Moon W. Suh</u>
12:15	LUNCH: James France Exhibition Area	
13:15	POSTER PRESENTATIONS: James France Building Exhibition Area	
14:15	Plenary Session – Room: CC.0.13 Fibre Assemblies as Tension members - John WS Hearle	
	Parallel Session A2 – Room CC.0.12 Session Chair: John WS Hearle	Parallel Session B2 – Room CC.0.13 Session Chair: Dominique Adolphe
14:45	Fatigue Mechanisms and Residual Properties of Polyester Ropes <u>Stephen J Banfield</u>	Desizing of Cotton Fabrics by Helium Atmospheric Pressure Plasma <u>Zaisheng Cai, Yoon J Hwang, Marian G McCord, Y Qiu</u>
15:15	Modern climbing ropes – Heat induced changes in load extension behaviour. <u>Jens McCartney, David B Brook, Mark Taylor</u>	Lewis Acid-Base Complexation of Polyamide 66 and its Drawing Behaviour <u>Nadarajah Vasanthan, Richard Kotek, Dong-Wook Jung, Daniel Shin, Alan E Tonelli</u>
15.45	Fibre Slippage in Loaded Assemblies <u>Andy Wilkins</u>	Carbon Fibers from the Pyrolysis of Electrospun Phenolic Resins <u>Diane Gee, G Wnek, J Layman, M Zhuang</u>
16:15	BREAK: James France Exhibition Area	
	Parallel Session A3 – Room CC.0.12 Session Chair: Martin King	Parallel Session B3 – Room CC.0.13 Session Chair: Dick Horrocks
16:30	Studies of Polyester Fibres Degradation in Textile Vascular Prosthesis - Ikram Zbali, Florence Dieval, Daniel Mathieu, Bernard Durand	The Effect of Direct Heat and Annealing Temperature on Lyocell Fibres <u>Fatemeh Dadashian, M A Wilding</u>
17:00	Biodegradability of Cellulose Fibers <u>Chung Hee Park, Y K Kang, T J Kang, S S Im</u>	Thermal Characteristics of Pet/Pen Fibers <u>Jiri Militky, Miroslava Marsalkova, Arun Pal Aneja</u>
19:00	DINNER: FARADAY DINING HALL After Dinner Presentation: TechniTex Faraday Partnership Brian McCarthy, BTG	

Tuesday, 1 July 2003: Day Chair: Moon Suh

8:00	Registration – James France Building Exhibition Area	
8:30	Plenary Session – Room: CC.0.13 <i>Electro-Active Polymer Fiber Actuators - Alberto Mazzoldi, Danilo De Rossi</i>	
	Parallel Session A4 – Room CC.0.12 Session Chair: Alberto Mazzoldi	Parallel Session B4 – Room CC.0.13 Session Chair: Stephen Russell
9:00	<i>Piezoelectricity in Natural and Synthetic Silks</i> Michael S Ellison	<i>A Mathematical Modelling for Carding</i> Hilary Ockendon, M E Lee
9:30	<i>Processable Stimuli Sensitive Polymers for Smart Fibers and Films</i> Ashwini K Agrawal, Manjeet Jassal, Ninad S Save	<i>A New Method for the Characterization of Surface State of Nonwovens - Stephane Fontaine, Marie-Ange Bueno, Marc Renner</i>
10:00	<i>Engineering the Design Attributes of Woven Interior Textiles Using Shape Memory Polymer</i> Yvonne Y F Chan, George K Stylios	<i>Influence of Fibre Rigidity on the Formation of Hydroentangled Structures</i> Ningtao Mao, Stephen J Russell
10:30	BREAK: James France Exhibition Area	
	Parallel Session A5 – Room CC.0.12 Session Chair: George K Stylios	Parallel Session B5 – Room CC.0.13 Session Chair: Perry Grady
10:45	<i>Flexible Materials for Water Transport Bags</i> Dana Eagles, Greg Toney, Srinath Tupil	<i>Understanding Structures of Nonwoven Surgical Gowns After Irradiation Through Microscopical Examination - M J Abreu, M E Cabeco-Silva, Dominique C Adolphe, Laurence Schacher</i>
11:15	<i>Development of Sensor Imbedded Flexible Textile Structure for Apparel or Large Area Applications</i> Subhash Ghosh, Keith Furrow	<i>The Application of Advanced Microscopy Techniques to Characterise Polypropylene Filaments</i> O K Risnes, R (Bert)R Mather, A Neville, J Buckman
11:45	<i>The Concept of Designing and Engineering Knitted Textiles using Shape Memory Alloy</i> Rachael C C Winchester, George K Stylios	<i>Through-Plane Diffusion of Moisture in Hygroscopic Fibrous Substrates Detected by Magnetic Resonance Imaging</i> Haskell W. Beckham and Johannes Leisen
12:15	LUNCH: James France Exhibition Area	
13:15	POSTER PRESENTATIONS: James France Building Exhibition Area	
14.15	Plenary Session - Room: CC.0.13 <i>Tailoring of PVA Fiber/Matrix Interface for Engineered Cementitious Composites (ECC)</i> Shuxin Wang, Victor C Li	
	Parallel Session A6 – Room CC.0.12 Session Chair: Victor C Li	Parallel Session B6 – Room CC.0.13 Session Chair: Jean Yves Drean
14:45	<i>Durability of Synthetic Fibers in Fiber-Cement Building Materials - Benoit de Lhoneux, Stephen Akers, Lieven Alderweireldt, Jan Carmeliet, Jyunichi Hikasa, Reinhard Kalbskopf, Victor Li, Dirk Vidts</i>	<i>Hybrid Models to Predict Clothing Sensory Comfort from Fabric Physical Properties,</i> Anthony Siu Wo Wong, Yi Li
15.15	<i>Non-Woven Textile Reinforced Composite Concrete</i> Stephen A S Akers, Bob Tait, Don Hourahane	<i>Objective Evaluation of Fabric Pilling Using No-Contact 3-D Measurement Method</i> Tae Jin Kang, Sung Min Kim, Dae Hwan Cho
15.45	<i>Uses of Geosynthetic Products Railway Foundation Structures</i> Russ N Tebay, Carl A Lawrence	<i>Improved Thermal Contact Comfort of Garments Caused by Functional Underwear</i> Lubos Hes, Zdenek Kus
16:15	BREAK: James France Exhibition Area	
	STUDENT PAPER COMPETITION FINAL PRESENTATIONS - Room: CC.0.13 Session Chair: Michael Ellison	
16:30	<i>The Model of Characteristics of the Artificial Store of Insulin in Vitro and In Vivo Conditions</i> Adela Medovic University of Belgrade, Serbia and Montenegro	
17:00	<i>Engineering Design of Fibers for Thermal Comfort and Function with Adaptive Thermal Comfort Model</i> Mr. Zhong Wang, The Hong Kong Polytechnic University, Honh Kong	
17:30	<i>Relationship Between Fibrous Structure and Spunbond Process</i> Rita Salvado, Universidade Beira Interior, Portugal	
19:00	SYMPOSIUM BANQUET: FARADAY DINING HALL Live Music: "KIND OF JAZZ" Trio	

Wednesday, 2 July 2003: Day Chair: Bill Oxenham

8:00	Registration – James France Building Exhibition Area	
8:30	Plenary Session – Room CC.0.13 <i>Filament-Winding Patterns and Stress Analysis of Thin-Walled Composite Cylinders</i> Evgeny V Morozov, M Hoarau, K E Morozov	
	Parallel Session A7 – Room CC.0.12 Session Chair: Evgeny Morozov	Parallel Session B7 – Room CC.0.13 Session Chair: Peter Foster
9:00	<i>Bleeding Fibres' - Damage Detection and Regeneration Using A Biomimetic Approach</i> Jody Pang, Ian Bond	<i>False-Twist Texturing A New Approach</i> Peter W Foster, G L D Wickramasinghe, U S W Gunasekera, Colin R Cork
9:30	<i>The Use of High Performance Fibers and Intumescent to Render Glass-Reinforced Composites Flame Retardant,</i> B K Kandola, A R Horrocks P Myler	<i>The Distribution of Twist in a Fluid-Jet False-Twist System</i> Colin R Cork, Peter W Foster
10:00	<i>A Novel 3D Structure, 3D Hybrid Woven/Knitted Fabric -</i> Levent Onal, Sabit Adanur	<i>Crimp Formation During Spinning</i> Ali Demir
10:30	BREAK: James France Exhibition Area	
	Parallel Session A8 – Room CC.0.12 Session Chair: Richard Wakeman	Parallel Session B8 – Room CC.0.13 Session Chair: Ali Demir
10:45	<i>Multi-Component Fiber Technology for Filtration and Other Applications</i> John F Hagewood	<i>Mapping of Spin Finish Oils on Nylon 66 Fibers</i> D N Hild, S Kay Obendorf, Wing Ying Fok
11:15	<i>New Design of Meltblown System Making Multi Layered Filter Media</i> Kyung-Ju Choi	<i>Characterisation of Different Finishing Treatments Using Tactile Sensory Analysis -</i> Flora Philippe, Laurence Schacher, Dominique C Adolphe
11:45	<i>Characterisation of Pore Structure of Mats Containing Hydrophobic and Hydrophilic Fibers</i> Jena Akshaya, Gupta Krishna	<i>Hair Density Distribution Profiles to Evaluate Hairiness</i> Yasar A Ozkaya, Memis Acar, Mike R Jackson
12:15	Closing Remarks – Room CC.0.13	
12:30	LUNCH: James France Exhibition Area	
14:00	Tour to Stratford-upon-Avon, the Shakespeare country Return late evening	

Posters Presentations

Acoustic Underlay Produced From Recycled Carpet Waste

Ian Rushforth, Mohsen Miraftab, Mark Swift, Kirill Horoshenkov

Capillary Flow in Fabrics

Faten Fayala, Mohamed Hamdaoui, Adel Ghith, Sassi Ben Nasrallah

Comparative Analysis of the Elasticity of Clothing Fabrics

Tatjana V Mihailovic, Ljiljana Simovic

Comparison of the Thermal Properties between Synthetics and Natural Nonwoven used as Isolated Layer in the Mongolian Garment Industry Economical and Sustainable Aspects

B Davaadordj, D C Adolphe, A Chuluun

Development of Leather Clad Ballistic Proof Fabric Composite: A New Approach

L Shastri, D C Shelly, R W Tock, S S Ramkumar

Enhancement of Adhesion of Aramid/Matrix by Atmospheric Pressure Plasma

Yoon J Hwang, Yiping Qiu, Marian G McCord

Experimental Verification of the Theory of Drafting by Bundles for the Combed Cotton Spinning Process

A Babay Dhouib, M Cheikhrouhou, B Vermeulen, J M Castelain

Fatigue Behaviour of Nylon Industrial Yarns

Rodney Averett, Mary Lynn Realf, Stephen Michielsen

Fibres Used in Sportswear and the Features of Clothing Comfort

Sevil Yesilpinar, Osman E Kececi

The Indexes and Test Methods to Characterize The Thermal Functional Performance of Textiles with Phase Change Materials

Bo-an Ying, Yi Lin Kwok, Yi Li, Qing-Yong Zhu, Chap-Yung Yeung

Influence of blending factors: blending method, type and proportion of silk waste on Thai silk/cotton yarn characteristics

Rungsima Chollakup, Jean-Yves Drean & Artan Sinoimeri

A New Test Method to Measure Liquid Moisture Management Properties of Textiles

Jun-Yan Hu & Yi Li

Nonlinear Dynamics of High-speed Transport for Staple Yarns

Eric M Austin & Bhuvanesh C Goswami

Plasma Modification of Polythene Terephthalate

Yoon J Hwang, Suzanne R Matthews, Mohamed Bourham, Marian G McCord

Predicting The Quality of Cotton Yarns On The Basis Of Metrological Characteristics Of Raw Material

Matgorzata Matusiak & Iwona Frydrych

Quality Assessment of the Mongolian Cashmere Fibre

Sarangoo Ukhnaa, Jean-Yves Drean

Recent Advances in the Spinning Processes used for High Performance Fibers

Nilufer Erdem, Umit Halis Erdogan

Simultaneous Heat and Moisture Transfer in Textiles

Nada Nefzi, Ahmed Mobarki, Sassi Ben Nasrallah, Faouzi Sakli

Study of Sorption Isotherms of Polyester Fibres Dyed with Disperse Dyes

Soufien Dhouib, Faouzi Sakli, Abdelaziz Lallam

Surface Energy Analysis of Grafted Nylon 66 Fibers

Ons Benaicha, Sami Abdelmoula, Sassi Ben Nasrallah, Faouzi Sakli, Claude Caze

Surface Modification of Cotton Fibres Using PEI to Enhance Dye Adsorption

Sorapong Janhom, Ruangsri Watanesk and Pete Griffiths

Theoretical Approach of Cotton Stickiness Measurement

Asma Amara, Jean-Yves Drean, Michel Nardin, A. Defoin

Water/Air-Jet Texturing

G.L.D. Wickramasinghe, P.W. Foster, C.R. Cork