MONDAY April 21

Chair for the day: J. W. S. HEARLE

8:00 AM REGISTRATION

8:30 AM WELCOME

9:00 AM SESSION I: NEW FIBER DEVELOPMENTS

Session Chair: R. HAGEGE

Innovation and Co-Marketing as Key as Success Factors for Development: the Example of Meryl
A. Gorius, J. M. Sitar - NYLSTAR (Italy)

Design, Synthesis and Characterization of a Novel Rigid-Rod "M5" Fiber with High Tensile and Compressive Properties
Sikkema et al. - AKZO (The Netherlands)

An XRD Study of the New Rigid Polymer Fiber "M5"
E. A. Klop and M. Lammers - AKZO (The Netherlands)

10:15 - 10:35 AM BREAK

10:35 AM SESSION I continued.

Structure and Property Development in the Manufacture of "M5" Fiber
M. Lammers, M. G. Northolt, D. J. Sikkema - AKZO (The Netherlands)
The Tensile Deformation of Polymer Fibers
J. M. Baltussen and M. G. Northolt - AKZO (The Netherlands)

Influence of Microstructure on the Ultraviolet Degradation of Poly(ethylene terephthalate) Fibers
D. G. Salem and S. B. Ruetsch - TRI, Princeton (USA)

Application of Ultrasonic and Dynamic Methods for the Analysis of Creep Process in Highly Oriented Fibers
V. Tiranov and A. Koulitchenko - State University and Tech. & Design, St. Petersburg (Russia)

12:20 - 1:25 PM LUNCH BREAK

1:35 PM SESSION II: COMPOSITES

Session Chair: A. R. BUNSELL

The Potential of a New Rigid-Rod Polymer Fibre in Advanced Composites
Van Der Jagt - Delft Univ.of Techn., Aerospace, Structures and Materials (The Netherlands).

New Technique for Knitting Solid 3D Structures
E. Sheffer and T Dias - UMIST (GB).

Elastic Properties of Three-Dimensionally Woven Composites
A. Saeys - Univ. of Ghent (Belgium); M. W. Dunn and C. M. Pastore, PCT and S. (USA).

Long term behavior characterization of coated fabrics for architecture membrane under biaxial loading
P Mauler, G. Nemoz, P. Hamelin - ITF Lyon (France).

Thermal Behaviour of C/PMR15 Composites: Experiments and Modelling
Assedat, J. Renard - Ecole des Mines, Centre des Materiaux, Paris (France).

3:35 - 3:55 PM BREAK

3:55 PM SESSION III: NATURAL FIBERS

Session Chair: M. E. CABEÇO SILVA

The Newest Achievements in Bast Fibre Processing and Applications
R. Kozłowski - Inst. Natural Fibers (Poland).

Feasability Studies for an International Agreement About Cotton Fibre Strength Measurement : Universal Strength Tester
C. K. Bragg - USDA (USA); J. P Gourlot - CIRAD-CA, Montpellier (France).

Characterization of Single Fibres by Means of a Profile Meter
C. Bernardin, P. Lemaire, M. Longree, B. Paquet - CENTEXBEL (Belgium)

5:25 PM END OF DAY SESSION
6:00 PM TOWN HALL RECEPTION

8:30 PM EVENING SESSION:

K. SLATER: "Future Prospects for Fiber Science"

TUESDAY April 22

Chair for the day: B. C. GOSWAMI

8:30 AM SESSION IV: STRUCTURE DEVELOPMENT DURING CONVENTIONAL ORGANIC FIBER PROCESSING.

Session Chair: M. G. NORTHOLT

On-line Measurement of Amorphous Orientation in PET fibers
B. Clauss and W. Oppermann - Deutsche Institut fur Textile-und Faserforschung Stuttgart DITF, and Institut fur Chemiefasern Denkendorf, (Germany)

The Prediction of Breaks in the PET Melt Spinning Process
C. King - Wellman, INC (USA).

Extremal Properties of Fibers: Fibers with Extremal Properties - Theory, Practice and Perspective
K.E. Perepelkin - St Petersburg State University (Russia)

10:10 - 10:30 AM BREAK

10:30 AM SESSION IV continued.

Tailoring Fiber Friction via Grafted Permanent Lubricants
Stephen Michielsen - School of Textile and Fiber Engineering, Georgia Institute of Technology, Atlanta, (USA).

A New Contribution to the Viscoelastic Behavior of Polypropylene Fibers
A.M. Manich - Spanish Council for Scientific Res. (Spain)
M. H. Ussmane - Universidade da Beira Interior (Portugal) and A. Barella - Real Academia De Ciencias y Artes, Barcelona (Spain).

X-Ray Diffraction Determination of the Effective Temperature Applied to Fibers During Processing
Luis G. Roldan, Centro de Optica, Universidade da Beira Interior (Portugal).

12:00 - 1:00 PM LUNCH BREAK
1:30 PM SESSION V: STUDENT PAPERS

Session Chair: L. SCHACHER

Student paper 1 - Student paper 2 - Student paper 3 - Student paper 4

2:30 - 2:50 PM BREAK

2:50 PM SESSION VI: TEXTILE FINISHING I

Session Chair: J. J. PORTER

Correlations Between the Structure and Dyeing Properties of PET Microfibres
K. Vu Thi Hong, A. Lallam - ENSITM, Mulhouse (France).

Study of the Grafting of Fluoro Monomers on Poly (ethylene-terephthalate) Filaments
M. Louati, A. Elachari, A. Ghenaim, C. Caze - GEMTEX - ENSAIT - Roubaix (France).

Color Clustering and Shade Tapering: Newer Methods of Objective Textile Shade Sorting and Colored Inventory Control
J. R. Aspland - School of Textiles, Fiber and Polymer Sciences, Clemson University (USA).

Redefining Union Shade Index and New Applications of Digital Image Analysis for the Measurement of Uniform Coloration
J. M. Cardamone, W. C. Damert, A. Francis, and W N. Marmer - USDA, ARS, Eastern Regional Research Center, Wyndmoor (USA).

4:50 PM END OF DAY SESSION

5:15 PM POSTER SESSION

8:30 PM EVENING SESSION:

A. ANEJA: Fiber Technologies in the US: Past, Present and Future

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WEDNESDAY April 23

Chair for the day: R. WULFHORST

8:00 AM SESSION VII: PROPERTIES OF FIBERS AND TEXTILE STRUCTURES
Session Chair: J. Y. DREAN

**Mechanical Properties of Polyester Yarns and Fabrics Treated with various Heat Temperatures in Dyeing and Finishing Processes**
Kyoensgan (Korea), Textile Research Center of Kolon LTD. INC, Kumi (Korea).

**Performance Requirements of Operation Textile - Single Use Materials**
M.J. Arauto, M. E. Cabeco Silva - Universidade do Minho (Portugal).

**New Filter Materials Modified via Plasma-Chemical Treatment**
M. Neznakomova -Technical Univ., Sofia (Bulgaria).

**Investigation Into the Fraunhofer Diffraction Generated by a Ne-He Laser Striking a Sewing Thread**
P G. Schllachenko, Y. N. Vetrova, ST Petersburg University (Russia) and M. S. Bradshaw de Montfort University (England).

9:40 - 9:55 AM BREAK

9:55 AM SESSION VIII: **TRANSFER AND MECHANICAL PROPERTIES OF TEXTILE STRUCTURES**

Session Chair: S. HANSON

**Filtration Flow Modelisation Around and Through Textile Fibres**
G. Berton, D. Sigli Laboratoire de Mecanique et Rheologie - Univ. F Rabelais Tours, (France).

**Recent Advances in Bundle Strength Theories and Their Applications**
M.V. Suh, NCSU (USA).

**Sensorial Metrology of Fabric Surface State after Textile Finishing Process**
M A. Bueno, B. Lamy, P. Viallier, M. Renner - ENSITM, Mulhouse (France).

**Analysis of the Drawing Processes with the Help of the Doppler Effect Laser Anemometry**
C. Cherif, B. Wulfhorst, T T. Phoa - RTHW Aachen (Germany).

**Evaluation of Fibrous Architecture of Non Wovens with the Computer Assisted Microscopy**
I. Krucinska, S. Krucinski - Technical Univ. of Lodz (Poland).

12:00 - 1:00 PM LUNCH BREAK

1:30 PM SESSION IX: **DYNAMIC RESPONSE OF TEXTILE STRUCTURES**

Session Chair: B. POURDEYHIMI

**Computer Modeling of Woven Fabrics**

**A Test Method for Fabric Bagging**
X. Shang, M. Yao, M. H. Miao, K. Y. Yeung, R. Dingra, Y. Li, Institute of Textile and Clothing, Hong Kong Polytechnic University (Hong Kong).

**Dynamic Analysis on Ring Spinning - With and Without Control Ring**
Q. Zeng, O Corning, Science and Technology Center Granville, (USA) and T. K. Ghosh, S. K. Batra, College of Textile, NCSU (USA).

**Monte-Carlo Simulation of a New Control Strategy for the Weft Brake on Air-Jet Looms**
L. Vangheluwe, University of Ghent (Belgium).

**Simulation of Manufacturing Processes and Materials Flow in Future High Performance Weaving**
I. Ortner - ETH Zurich (Switzerland).

3:10 - 3:30 PM BREAK

3:30 PM SESSION X: **TEXTILE STRUCTURES**

Session Chair: MOON W. SUH

**The Statistical Structure of Paper and Nonwovens**
R. W. Dent - Albany International (USA)

**Simulation of the Drape Behavior of Fabrics**
H. Rodel, S. Krzywinski, V. Ulbricht, P Fischer, A. Schenk, Insitut fur Textil Dresden (Germany).

**Vibrating Properties of Textiles Surfaces**
R. Postle, E. Aubry, M. Renner - ENSITM, Mulhouse (France).

5:00 PM END OF DAY SESSION

8:30 PM BANQUET

Old Alsatian Village Open-air Museum

**THURSDAY April 24**

Chair for the day: M. RENNER

8:00 AM SESSION XI: **PHYSICAL AND MECHANICAL BEHAVIOR OF FIBERS AND TEXTILE STRUCTURES**

Session Chair: J. MILITKI

**Modelling the in-plane Permeability of Woven Geotextiles**
S. Ariadurai, P Potluri - UMIST (UK)
Ian Whyte, Civil and Structural Engineer, UMIST (UK).
Influence of Fabric Structure and Hairiness on Adhesive Force
Z. Kus, N. C. Trung - Technical University of Liberec (Czech Republic).
Humidity - Dependent Air Permeability of Textile Materials
Finish Uniformity Measurements Using the TRI Dynamic Fluorometer
S. Wesson, TRI, Princeton (USA).
A Study on the Deformation Behaviour of Wrap Knitted Textiles
H. Stumpf, K. Schulte - Technical University Hamburg (Germany)

10:05 - 10:20 AM BREAK

10:20 AM SESSION XII: TEXTILE FINISHING 2

Session Chair: B. CERCIAT

Effect of Different Finishes Surface Materials and the Testing Parameters on the Frictional Characteristics of Cotton Knitted Fabrics
Interactive Fibre-Intumescent Flame Retardant Textiles
A. R. Horrocks, B. Kandola - Bolton Institute (UK).
The Reduction in Human Exposure to Pesticide through Selection of Clothing Parameters: Fabric Weight, Chemical Finishing and Fabric Layering
S. K. Obendorf - Cornell University (USA) and E. Csiszar, J. Borsa, I. Racz (Bulgaria).
Assessment of Carpet Wear: An Automatic Objective System
P Bernard - University of Ghent (Belgium).

12:00 PM CLOSING SESSION: M. RENNER