

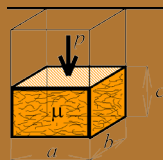
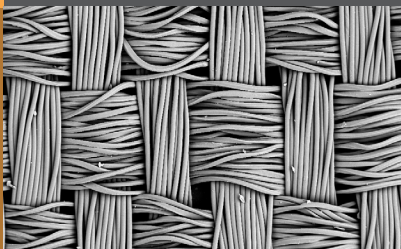
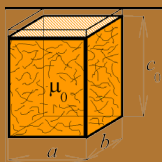


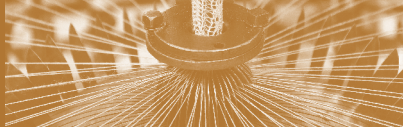
Pocket Programme

21st International Conference STRUTEX

Structure and Structural
Mechanics of Textiles

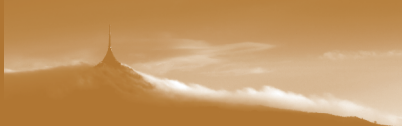
December 1 - 2, 2016
Building B, 2nd floor
Liberec, Czech Republic





Umění oblékat ...





Dear,

Welcome to the 21st International Conference STRUTEX at the Faculty of Textile Engineering, Technical University of Liberec. Faculty of Textile Engineering was established in 1960 as the second faculty of the Technical College.

Structure and Structural Mechanics of Textiles „STRUTEX“ conference is focused on presentation of textile structures and structural mechanics in modules: fiber layer, linear formations, 2D and 3D textile structures, description of special experimental methods for analysis of textile properties as well as textile structure, research and development of new 2D and 3D textile structures in the field of clothing and technical textiles.

We would like to wish you a pleasant stay at conference in Liberec.

Conference organizers.

Wednesday 30 November 2016

17:00 - 19:00 Registration & Welcome drink (Room B5)

Thursday 1 December 2016

08:00 - 15:00 Registration (Room B5)

Section I, II Chairman: prof. Oldřich Jirsák (Room B4)

09:00 - 09:30 **dr. Jana Drašarová (Dean of Faculty of Textile Engineering TUL)**
dr. Brigita Kolčavová Sirková (Head of KTT Department)
prof. Bohuslav Neckář (President of the Conference)

CONFERENCE OPENING

09:30 - 10:00 **Kyosev YK (Invited Lecture)**
*GEOMETRICAL AND MECHANICAL MODELLING OF TEXTILE STRUCTURES
AT FIBER AND YARN LEVEL - SOFTWARE AND DATA STRUCTURES*

10:00 - 10:20 **Neckář B**
THEORETICAL MODELS OF TENSILE BEHAVIOR OF STAPLE FIBER YARNS

10:20 - 10:40 **Ishtiaque SM, Yadav VK, Joshi SD and Chatterjee JK**
*NEW APPROACH FOR CARICATURISATION AND MONITORING OF
THE YARN FAULT*

10:40 - 11:00 **Pitucha T**
*GEOMETRICAL MODEL OF A KNITTED FABRIC MADE FROM
HYALURONAN BASED FIBERS*

11:00 - 11:20 Coffee Break (Room B5)

Section I, II **Chairman: prof. Bohuslav Neckář**
(Room B4)

- 11:20 - 11:40** **Vyšanská M**
IMAGE ANALYSIS AND DESCRIPTION OF SINGLE JERSEY LOOP GEOMETRY
- 11:40 - 12:00** **Kolčavová Sirková B and Mertová I**
WOVEN FABRIC STRUCTURAL PORE MODELS ANALYSIS
- 12:00 - 12:20** **Aslan S and Kaplan S**
*STRUCTURAL AND THERMAL-MECHANIC PROPERTIES OF FILAMENTS
PRODUCED FROM SHAPE MEMORY POLYMERS*
- 12:20 - 12:40** **Demir M and Kilic M**
INVESTIGATING POSSIBILITIES OF THREE-STRAND YARN PRODUCTION
- 12:40 - 13:00** **Güney S, Akgünoğlu B and Kaplan S**
*PARAMETERS AFFECTING SPORTS SOCKS PRESSURE AND PRESSURE
PREDICTION FROM TENSILE CHARACTERISTICS*

13:00 - 14:00 **Lunch (Room B5)**

Posters **Chairman: prof. Jakub Wiener (Room B5)**

- 14:00 - 14:05** **Zubair M, Neckář B and Maqsood HS**
*EXPERIMENTAL AND PREDICTED SPECIFIC STRESS STRAIN CURVES
OF WORSTED STAPLE YARNS*
- 14:05 - 14:10** **Havlová M and Špánková J**
*THE EFFECT OF MOISTURE CONTAINED IN WOVEN FABRIC ON ITS
AIR PERMEABILITY AND POROSITY*
- 14:10 - 14:15** **Moučková E and Jirásková P**
*INFLUENCE OF SELECTED PROCESS VARIABLES ON WORSTED COMPACT
YARN PROPERTIES*
- 14:15 - 14:20** **Ursíny P**
THEORY OF MASS IRREGULARITY CHANGES IN THE OE- ROTOR SPINNING SYSTEM

- 14:20 - 14:25** **Venkatesh KR, Mishra R and Venkataraman M**
A STUDY ON THE IMPROVMENT OF FABRIC COVER ON A SHUTTLELESS WEAVING MACHINE
- 14:25 - 14:30** **Bilisik K**
3D PREFORM ARCHITECTURES IN TECHNICAL TEXTILE APPLICATIONS: SHORT REVIEW BASED ON CASE STUDIES
- 14:30 - 14:35** **Razzaque A and Těšinová P**
ANALYSIS OF WATERPROOF AND THERMAL PROPERTIES FOR MULTI-LAYERED BREATHABLE FABRICS
- 14:35 - 14:40** **Karthik S, Baheti V, Militký J and Wasif Al**
DEVELOPMENT OF A MULTILAYERED BANDAGE
- 14:40 - 14:45** **Jabbar A and Militký J**
INVESTIGATION OF THE CREEP AND DYNAMIC MECHANICAL PROPERTIES OF JUTE/GREEN EPOXY COMPOSITES INCORPORATED WITH CHEMICALLY TREATED PULVERIZED NANO/MICRO JUTE FIBERS
- 14:45 - 14:50** **Stránská E and Neděla D**
USE OF REINFORCING FABRIC FOR PREPARATION OF MORE RESISTANCE ION EXCHANGE MEMBRANE
- 14:50 - 14:55** **Shaker K, Nawab Y, Ashraf M, Jabbar M and Umair M**
NATURAL FIBRE COMPOSITES FOR PROTECTION AGAINST ENVIRONMENTAL ELEMENTS
- 14:55 - 15:00** **Behera P, Karthik D, Naeem S, Baheti V and Militký J**
GEOPOLYMER/FLY ASH CONCRETE COMPOSITE MATERIALS
- 15:00 - 15:05** **Mazari FB, Havelka A, Chotěbor M, Wiener J and Mazari A**
A STUDY ON THE PERFORATED POLY-URETHANE FOAM FOR THE CAR SEAT
- 15:05 - 15:10** **Jariyapunya N, Geršak J, Musilová B and Boob S**
DESIGNING AND PATTERNMAKING WITH STRETCH FABRICS

15:10 - 15:15 **Pařilová H and Perun M**
ARTIFICIAL TURFS AND THEIR TESTING

15:15 - 15:20 **Eldeeb M**
THEORETICAL ANALYSES OF AIR JET YARN STRENGTH

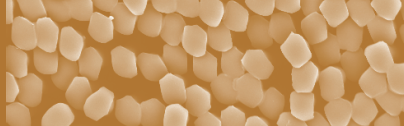
15:20 - 15:25 **Richtr M, Krupincová G and Boněk K**
*EVALUATION OF USED NOZZLE TYPE ON YARN QUALITY IN OPEN
END SPINNING*

15:25 - 16:00 **Discussion and Coffee Break (Room B5)**

Culture Program and Banquet

17:00 - 21:00 (City Hall, Liberec)





Section I, II Chairman: **prof. Luboš Hes (Room B4)**

09:00 - 09:30 **Raudenský M (Invited Lecture)**

APPLICATION OF POLYMER HOLLOW-FIBERS TO THE HEAT EXCHANGER

09:30 - 10:00 **Placet V (Invited Lecture)**

MECHANICS OF BIOBASED FIBROUS ASSEMBLIES: FROM SINGLE FIBER TO COMPOSITE MATERIAL

10:00 - 10:20 **Čermáková K, Ackerman M, Čapek L and Horáková J**

TENSILE PROPERTIES OF SYNTHETIC BLOOD VESSEL REPLACEMENT

10:20 - 10:40 **Sivan M, Mikeš P, Chaloupek J, Strnadová K, Horáková J,
Tunák M, Chvojka J and Lukáš D**

HOW FIBERS ARE BOREN

10:40 - 11:00 **Coffee Break (Room B5)**

Section I, II Chairman: **prof. David Lukáš (Room B4)**

11:00 - 11:20 **Šaman A, Vejsadová L, Horáková J, Jenčová V and Mikeš P**

ELECTROSPUN POLYESTERS: COMPARISON OF POLYMERIC FIBROUS STRUCTURE AND ITS INFLUENCE ON FIBROBLAST PROLIFERATION

11:20 - 11:40 **Blažková L, Hlavatá J, Horáková J, Kalous T, Novák P, Pelcl M,
Strnadová K, Šaman A and Chvojka J**

COMPARISON OF THE WELL KNOWN SPINNING AND ELECTROSPINNING METHODS FOR POLYVINYL ALCOHOL

11:40 - 12:00 **Arumugam V, Mishra R, Salačová J, Venkataraman M,
Křemenáková D, Jamshaid H, Yang T, Xiong X, Venkatesh K
and Militký J**

FUNCTIONAL CHARACTERISTIC EVALUATION OF 3-DIMENSIONAL KNITTED SPACER FABRICS

12:00 - 12:20 **Jamshaid H, Mishra R, Militký J, Noman MT, Venkataraman M, Arumugam V, Yang T, Xiong X**
PERFORMANCE CHARACTERIZATION OF BASALT HYBRID WOVEN FABRIC REINFORCED CONCRETE

12:20 - 13:20 **Lunch (Room B5)**

Section I, II **Chairman: assoc. prof. Anna Ujhelyiová (Room B4)**

13:20 - 13:40 **Hassmann M, Stöger S, Mentel N and Krach W**
EXPERIMENTAL AND FINITE ELEMENT SIMULATION OF ASTM D1388 CANTILEVER TEST

13:40 - 14:00 **Frydrysiak E, Frydrysiak M and Tęšiorowski Ł**
A HYDROGEL PHANTOM FOR TESTING BIOSIGNALS FROM A TEXTRONICS T-SHIRT

14:00 - 14:20 **Hes L and Boguslawska-Baczek M**
ANALYSIS OF WATER VAPOUR TRANSFER IN SKIN MODEL TEXTILE TESTERS

14:20 - 14:40 **Coffee Break (Room B5)**

Posters **Chairman: dr. Blanka Tomková (Room B4)**

14:40 - 14:45 **Ryba J, Petková M, Polák Š, Ujhelyiová A, Hricová M and Mackulák T**
MECHANICAL PROPERTIES OF POLYPROPYLENE/HALLOYSITE COMPOSITE FIBRES

14:45 - 14:50 **Hrabovská V, Hricová M, Ryba J and Ujhelyiová A**
MECHANICAL AND THERMAL PROPERTIES OF BIODEGRADABLE FIBRES

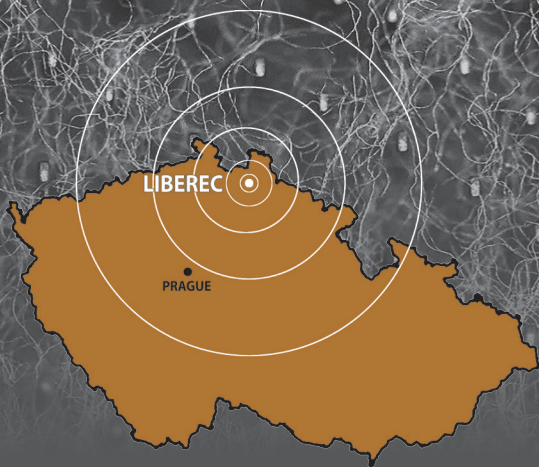
14:50 - 14:55 **Ujhelyiová A, Petková M, Johanidesová J and Omaníková L**
EFFECT OF PROCESS CONDITIONS ON PROPERTIES OF MODIFIED POLYPROPYLENE FIBRES

- 14:55 - 15:00** **Seki Y and Akşit A**
DEVELOPING SURFACE CHARACTERIZATION OF JUTE FIBERS VIA HYDROPHOBIC MODIFICATION FOR POLYMERIC DOPED MATERIALS
- 15:00 - 15:05** **Erdogan UH, Selli F and Duran H**
BANANA PLANT WASTE AS RAW MATERIAL FOR CELLULOSE EXTRACTION
- 15:05 - 15:10** **Hlavatá J and Kuželová Košťáková E**
CENTRIFUGAL FIBER FORMING FROM BLENDS OF POLYMER SOLUTIONS
- 15:10 - 15:15** **Rástočná Illová D, Špitálsky Z, Malovníková M, Drozdová K and Ligas J**
INFLUENCE OF LOW-TEMPERATURE PLASMA UNDER ATMOSPHERIC PRESSURE ON THE NANOCOATING OF THE TEXTILE MATERIALS
- 15:15 - 15:20** **Křížová H, Palánková L, Krumová A and Wiener J**
DEVELOPMENT AND TESTING OF COTTON COATING WITH ANTIFUNGAL PROPERTIES
- 15:20 - 15:25** **Heinisch T, Těšinová P and Pološčuková L**
MOISTURE MANAGEMENT FOR DIFFERENT AIR CONDITIONS
- 15:25 - 15:30** **Komárková P and Glombíková V**
STUDY ON MOISTURE TRANSPORT OF SOCKS
- 15:30 - 15:35** **Raccuglia M, Hodder S and Havenith G**
TEXTILE WATER ABSORPTION PARAMETERS AND HUMAN WETNESS PERCEPTION
- 15:35 - 15:40** **Barabáš J, Balogová Ľ, Gála M and Babušiak B**
INFLUENCE OF INTERCONNECTION OF CONDUCTIVE FIBRES ON TRANSMISSION CHARACTERISTICS OF ELECTRIC SIGNAL
- 15:40 - 15:45** **Frydrysiak E, Śmigielski K and Frydrysiak M**
TEXTRONICS UNDERWEAR WITH PANTILINERS FOR PROPHYLACTIC AND SUPPORT TREATMENT OF A LOWER URINARY TRACT INFLAMMATION

- 15:45 - 15:50** **Naeem S, Javed S, Baheti V, Militký J, Ahmad Z and Behera P**
EFFECT OF TEMPERATURE, HEATING RATE AND HOLDING TIME ON THE PROPERTIES OF CARBON WEB MADE FROM ACRYLIC WASTE
- 15:50 - 15:55** **Gilani SQZ, Wiener J, Baheti V, Abid HA and Militký J**
INVESTIGATION OF CONVENTIONAL THERMAL TREATMENT AND LASER IRRADIATION OF ACRYLIC COATED GLASS FIBER NONWOVENS TO MAKE ELECTRICALLY CONDUCTIVE NONWOVEN SURFACE
- 15:55 - 16:00** **Yang T, Xiong X, Venkataraman M, Venkatesh K, Mishra R, Novák J and Militký J**
STUDY ON ACOUSTIC AND THERMAL PERFORMANCE OF STRUTO NONWOVENS ELECTRICALLY CONDUCTIVE NONWOVEN SURFACE

Section I, II **Room B4**

- 16:00 - 17:00** **dr. Brigita Kolčavová Sirková (Head of KTT Department)**
prof. Bohuslav Neckář (President of the Conference)
THREE AWARDS „BEST POSTER OF CONFERENCE STRUTEX 2016“
CONFERENCE CLOSING



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