

**18<sup>TH</sup> INTERNATIONAL CONFERENCE**  
**STRUTEX**



**STRUCTURE AND STRUCTURAL**  
**MECHANICS OF TEXTILES**

**December 7th – 8th, 2011,**  
**Liberec, Czech Republic**

**HOTEL V KLÁŠTERNÍ 131/14, LIBEREC**

**PRELIMINARY PROGRAM**

**Section I: Structure and Structural Mechanics of Textiles**

**Section II: Novelties and Innovations in Textile Research Area**

**Section III: Research Centre Textile II**

## Final Program STRUTEX 2011

**7<sup>th</sup> December**

<b>8:15 – 9:00</b>	<i>Registration</i>
<b>8:45 – 9:00</b>	<b>Opening ceremony</b>
<b>9:00 – 10:00</b>	<b>Oral presentation – Session I chairperson Jiří Militký</b>
	<b>CHARACTERISING FREE FORM AND FORM FITTING FABRIC DEFORMATIONS</b> Ron Postle
	<b>GEOMETRICAL MODELING OF 3D WOVEN FABRICS</b> B. K. Behera & B. P. Dash, Mishra Rajesh
<b>10:00 – 10:20</b>	<i>Coffee break</i>
<b>10:20 – 12:00</b>	<b>Oral presentation – Session I chairperson Sayed Ibrahim</b>
	<b>FIBER ORIENTATION IN SLIVER</b> Bohuslav Neckář, Dipayan Das & S. M. Ishtiaque
	<b>MULTIPLE REGRESSION ANALYSIS OF THERMAL-INSULATION PROPERTIES OF WOVEN FABRICS</b> Małgorzata Matusiak
	<b>CONVERSION OF ELECTROSTATIC PRECIPITATORS INTO FABRIC FILTERS - A NEW APPROACH FOR DUST EMISSION CONTROL IN EGYPTIAN CEMENT PLANTS</b> M.A.Saad & Mossad Hamed Beibars
	<b>PROPERTIES OF KNITTED FABRICS PRODUCED BY KAPOK BLENDED YARNS</b> M. Bünyamin Üzümcü, Tuba Bedez Üte, Pınar Çelik, Nida Oğlakcioğlu & Hüseyin Kadoğlu
	<b>COMPLEX CRITERION FOR COMPUTER AIDED TEXTILES DESIGN</b> Jiří Militký & Dana Křemenáková
<b>12:00 – 13:00</b>	<i>Lunch</i>
<b>13:00 – 14:00</b>	<b>Oral presentation – Session I and III chairperson David Hui</b>
	<b>COMPARISON OF TECHNIQUES TO PREPARE NANO CRYSTALLINE CELLULOSE FROM JUTE FIBRES</b> Vijay Baheti, Rehan Abbasi, Miroslava Marsalkova & Jiri Militky
	<b>CONTELON - OUTLOOK OF CONTINUAL MEASUREMENT OF STRUCTURAL PROPERTIES OF YARNS</b> Václav Čejka, Norbert Pomp & Alexander Prošek
	<b>CONSTRUCTION AND OPTIMIZATION OF TRAVERSING MECHANISM FOR WINDING OF YARN</b> Anil Kumar & Jaroslav Beran
	<b>EFFECT OF KNIT STRUCTURES ON ELECTROMAGNETIC SHIELDING PROPERTIES OF KNITTED FABRICS</b> Ozlem Kayacan, Fatma Ceken, Sebnem Seckin Ugurlu & Ahmet Ozkurt
<b>14:20-15:30</b>	<b>Presentations of SGS projects</b>
<b>15:30 – 16:00</b>	<i>Coffee break</i>
<b>16:00 – 17:00</b>	<b>Poster session</b>
<b>17:00 – ...</b>	<i>Culture program and ceremonial refreshment</i>

<b>8<sup>th</sup> December</b>	
<b>08:30 – 10:00</b>	<b>Oral presentation – Session II chairperson Jiří Militký</b>
	<b>CREATING NEW GREEN SPACE IN TEXTILES: HOW FIBERS ARE ENGINEERED FOR YOU</b> Arun Pal Aneja, Jiri Militky & Dana Kremenakova
	<b>DEVELOPMENT OF ECO-SAFE AND SUSTAINABLE COTTON-BASED NONWOVEN FABRICS</b> Paul S. Sawhney, Chuck Allen, Michael Reynolds, Ryan Slopek and Brian Condon & David Hui
	<b>ONSET OF ELECTROSPINNING</b> <i>D. Lukáš, L. Vysloužilová, P. Pokorný, P. Mikeš, M. Bílek, R. Deliu</i>
<b>10:00 – 10:20</b>	<i>Coffee break</i>
<b>10:20 – 12:00</b>	<b>Oral presentation – Session II chairperson Arun Aneja</b>
	<b>TESTING OF SIDE EMITTING CHARACTERIZATION OF POLYMER OPTICAL FIBERS</b> Dana Křemenáková, Jiří Militký, Barbora Meryová & Vít Lédl
	<b>BASIC GARMENT PATTERN DESIGN AND THE DEVELOPMENT FOR THE STANDARD FIGURE</b> Nashwa Mahamd Nabeil & Ahmad El Sayed El Tahan
	<b>BIOSENSOR BASED DETECTION OF RESIDUAL PESTICIDES ON COTTON FIBERS</b> Syed Zameer Ul Hassan & Jiri. Militky
	<b>DYNAMIC BEHAVIOUR OF SLUB ELASTOMERIC YARNS</b> Sayed Ibrahim, Jiri Militky, Dana Kremenakova & Rajesh Mishra
	<b>FUNDAMENTAL GEOMETRIC MODELLING OF 3D KNITTED SPACER FABRIC</b> Levent Onal & Mustafa Yildirim
<b>12:00 – 13:00</b>	<i>Lunch</i>
<b>13:00 – 14:00</b>	<b>Oral presentation – Session II chairperson Mishra Rajesh</b>
	<b>THE INITIAL RESEARCH OF TEXTILE HEATING ELEMENTS</b> Michał Frydrysiak, Stefan Ziegler & Janusz Zięba
	<b>TRANSMISSION OF MEASUREMENT DATA INSIDE TEXTRONIC CLOTHING USING INFRARED LINK</b> Łukasz Teşiorowski, Michał Frydrysiak & Janusz Zięba
	<b>OPTIMIZATION OF MILLING CONDITIONS FOR THE PRODUCTION OF POLYPYRROLE NANOPARTICLES</b> M. Rehan Abbasi, M. Marsalkova, V. K. Baheti & J. Militky
<b>14:00 - 15:00</b>	<b>Presentations of SGS projects</b>
<b>15:00 – 15:30</b>	<i>Coffee break</i>
<b>15:30 – 16:00</b>	<b>Poster session</b>
<b>16:00 – ...</b>	<i>Conference closing</i>

7.12. 2011 10:00 - 11:00 Meeting of Textile Center II. (only for invited members, more information in official invitation.)

## POSTER PRESENTATIONS

**Wednesday 7<sup>th</sup> December**

Section I: Structure and Structural Mechanics of Textiles

**PREPARATION OF ELECTROSPUN PVB/CNT COMPOSITE FIBRES**

Nurgül DUYAR, Baturalp YALÇINKAYA &, Fatma YENER

**THERMOPHYSICAL PROPERTIES OF WOVEN FABRICS REINFORCED GEOPOLYMER COMPOSITES**

Xiem Nguyen Thang, Petr Louda & Dora Kroisova

**PROPERTIES OF WOVEN REINFORCED COMPOSITES BY COMPUTATION**

Pavla Těšinová & Lukáš Těšina

**NEW POSSIBILITY OF OBJECTIVE EVALUATION OF YARN APPEARANCE IN AREA**

Eva Moučková; Petra Jirásková & Ludmila Koukolíková

**STUDY CONCERNING THE INFLUENCE OF THE RAW MATERIAL ON STRENGTH AND ELONGATION OF KNIT FOR MATTRESS**

Alina Coldea, Dorin Vlad & Costea Budulan

**RESEARCH REGARDING THE ACHIEVEMENT OF KNITS WITH SILVER NANOPARTICLES**

Crina Buhai, Crina Tiron, Costea Budulan & Gabriella Böhm

**MODELLING CURVE OF RECOVERY OF TEXTILES BY MEANS OF RHEOLOGICAL MODEL**

Katarína Zelová, Ludmila Fridrichová & Jana Přivratská

**DEFORMATION PROPERTIES OF TEXTILES MADE OF NANO FIBRES AT DYNAMIC STRESS**

Petr Tumajer, Jakub Wiener, Martin Bílek, Petr Ursíny & Eva Moučková

**KINETICS OF CRACK PROPAGATION IN TEXTILES USABLE FOR UPHOLSTERY FABRIC OF CAR SEATS**

Michal Petru & Ondřej Novák

Section III: Research Centre Textile II

**RELATION BETWEEN NEEDLE AND NEEDLE-LESS ELECTROSPINNING USING POLY (ETHYLENE OXIDE)**

Adnan Mazari & Oldrich Jirsak

**TEXTILE BARRIERS AGAINST MICROORGANISMS**

Šlamborová Irena & Wiener Jakub

**SCANNING ELECTRON MICROSCOPY IN ANALYSIS OF SOFT BODY ARMORS**

Radim Dejl, Jana Grabmüllerová & Gabriela Krupicová

**BALLISTIC TESTING OF EXPERIMENTAL COMPOSITES**

Radim Dejl & Gabriela Krupicová

**EFFECTS OF FINISHING ON FABRIC PERMEABILITY**

Marie Havlová

**RELATIONSHIP BETWEEN PERMEABILITY AND POROSITY OF MULTIFILAMENT FABRICS**

Marie Havlová

**DESCRIPTION OF FABRIC THICKNESS AND ROUGHNESS ON THE BASIS OF FABRIC STRUCTURE PARAMETERS**

Brigita Kolčavová Sirková

**MEASURED FIELD OF VELOCITIES (PIV) EXAMINATION OF ROUND AIR JET EXCITED INTO BIFURCATED MODE**

Pavel Kryštůfek

**CLEARANCE IMPACT ON THE DRIVE OF THE SMALL-DIAMETER KNITTING MACHINE**

Josef Skřivánek & Martin Bílek

**OPTIMISATION OF STEPPING MOTOR CONTROL IN DYNAMIC APPLICATION**

Petr Váša

**COMPUTATIONAL METHODS FOR VIBRATIONS AND NOISE REDUCTION OF TEXTILE MACHINES**

Vlastimil Votrubec, Martin Pustka & Pavel Šidlof

**SELECTION OF GAS SENSOR COVER TEXTILES FOR INTELLIGENT TEXTILES**

Petr Exnar, Veronika Zajícová, Pavla Těšinová & Ivan Doležal

**THE APPLICATION OF ELECTROCONDUCTIVE YARNS TO HEATING ELEMENTS IN FABRICS**

Jerzy Andrysiak, Krzysztof Sikorski & Iwona Frydrych

**THE OPTIMIZATION APPLICATION OF AIR-JET NOZZLE IN RING SPINNING SYSTEM**

Guocheng Zhu, Sayed Ibrahim & Dana Kremenakova

**INDIVIDUAL BODY MEASUREMENTS SCANNED BY BODYFIT3D AND SIZING SYSTEM**

B. Musilova; R. Nemčoková; M. Reinke & V. Kovačič

**SKYSCAN 1174 COMPACT MICRO-CT AND ITS UTILIZATION IN THE TEXTILE INDUSTRY**

Marie Nejedlá & Jan Palata

**SGS**

**UTILIZATION OF YARN BREAKING STRESS AND ELONGATION IN WOVEN FABRIC**

Julie Zenina

**3D RECONSTRUCTION OF FIBRE ORIENTATION IN COMPOSITE MATERIALS**

Kateřina Ročková & Aleš Linka

**A FIBROUS OBJECT SEGMENTATION BY PREDOMINANT ORIENTATION**

Jiri Kula, Maros Tunak & Ales Linka

**KNITTED AUXETIC FABRIC**

Petra Vintrova & Jana Drasarova

**FUNCTIONAL WARP KNITTED FABRICS REINFORCED WITH SUPERELASTIC NITI FILAMENTS**

Kateřina Janouchová, Luděk Heller & Monika Vyšanská

**POISSON'S RATIO OF TEXTILES UNDER UNIAXIAL DEFORMATION**

Monika Malinská & Radko Kovář

**THE NEW METHOD FOR THE ANALYSIS OF THE DEFORMATION PROPERTIES OF THE YARN**

Martina Pokorná

**BIONICS AS AN INSPIRATION FOR TEXTILE PROGRESS**

Pavel Kejzlar, Lukáš Voleský, Dora Kroisová & Vladimír Kovačič

**DYNAMIC ANALYSIS OF THE NEEDLE MECHANISM**

Karel Pejchar

**METHODS FOR CREATING OF 3D NANO MATERIAL**

David Vejrych

**HYDROFOBIC POLYMER LAXERS NANOFIBERS**

Roman Knížek

**Thursday 8<sup>th</sup> December**

**Section II: Novelties and Innovations in Textile Research Area**

**SYNTHESIS OF CARBON NANOPARTICLES ON WIRES**

Eva Kostakova, Jan Gregr, Robert Jansta & Laszlo Meszaros

**TEXTILE THERMAL INSULATORS**

Petra Mackeová & Klára Kalinová

**SUB-MICRON NANOFIBER MEMBRANES**

Ganna Ungur & Jakub Hruza

**THE DETERMINATION OF ANIONIC AND NON-IONIC SURFACTANT EFFECT ON**

**ELECTROSPUN NANO FIBERS**

Fatma YENER, Oldrich JIRSAK &, Baturalp YALÇINKAYA

**EFFECT OF ADDITIVE ON NEEDLE ELECTROSPINNING SYSTEM**

Fatma YENER, Oldrich JIRSAK

**THE EFFECT OF PVA CONCENTRATION ON THE SPINNING PARAMETERS OF ROLLER ELECTROSPINNING**

Baturalp Yalçinkaya, Oldrich Jirsak, Funda Cengiz Çallıoğlu & Fatma Yener

**INFLUENCE OF NACL CONCENTRATION ON THE TAYLOR CONE NUMBER AND SPINNING PERFORMANCE**

Baturalp Yalçinkaya, Fatma Yener, Oldrich Jirsak & Funda Cengiz Çallıoğlu

**COMPARISON OF NEEDLE AND ROD ELECTROSPINNING SYSTEM**

Gökçin SEVGİSUNAR, Fatma YENER & Baturalp YALÇINKAYA

**INFLUENCE OF SOFTENERS ON THERMAL AND SENSORIAL CHARACTERISTICS OF DENIM**

Muhammad Mushtaq Mangat, Vladimír Bajžík & Luboš Hes

**EVALUATION OF CHANGE IN COLOR OF DENIM FABRIC AFTER VARIOUS INDUSTRIAL WASHING PROCESSES WITH DIFFERENT FIBER COMPOSITION**

M. Mushtaq Mangat, J. Wiener & A. M. Rehan Abbasi

**SIMULATION OF TEXTILE MAGNETIC CORE**

Janusz Zięba, Marian-Cătălin Grosu, Michał Frydrysiak & Łukasz Teşiorowski

**MASS TRANSFER IN TROPICAL CONDITIONS FOR MERINO WOOL FABRICS**

Antonin Havelka, Mohammad Motawe & Zdenek Kůs

**APPLICATION OF “MOISTURE MANAGEMENT” FIBERS IN WOVEN FABRICS**

Krzysztof Sikorski & Małgorzata Matusiak

**SIMULATION OF THE EFFECT OF AIR GAPS BETWEEN THE SKIN AND A WET FABRIC ON RESULTING COOLING FLOW**

Iveta Vyskočilová & Luboš Hes

**KNITTED FABRICS THERMAL RESISTANCE IN DIFFERENT TROPICAL CONDITIONS**

Mohammad Motawe, Antonin Havelka & Zdenek Kůs

**FUNCTIONAL PET FABRIC/POLYPYRROLE COMPOSITES**

Veronika Šafářová & Jan Grégr

**TESTING OF CARBOXYMETHYL CELLULOSE IN FIBER FORM**

Karolína Borůvková, Jakub Wiener, Jana Millerová

**OBSERVATION OF PHOTOCATALYSIS ON TEXTILES BY COD METHOD**

Andrea Chládová, Jakub Wiener & Radka Kuncová

**THE POSSIBILITY OF TEXTILE DYEING WITH ANTHOCYANINS**

Hana Křížová & Jakub Wiener

**COLOR DIFFERENCE FORMULAE EVALUATION BY METHOD OF ADJUSTMENT**

A.M. Rehan Abbasi, M. Vik &, M. Vikova

**DUSTING OF DAMAGED TEXTILES**

M. Jakubičková, J. Wiener & P. Kejzlar

**USING NON-CONTACT METHOD OF DETERMINING THE POROSITY AND PERMEABILITY OF TEXTILE STRUCTURES USING DIFFRACTION PATTERN**

Radka Vodickova, Michal Vik & Martina Vikova

**NOVEL METHOD OF SOUND BARRIER MEASUREMENT OF POROUS AND NONPOROUS MATERIALS**

Vijay Baheti & V.K.Kothari

**INFLUENCE OF WET MILLING OF FLY ASH ON COMPRESSION STRENGTH OF GEOPOLYMER MORTAR CURED AT ROOM TEMPERATURE**

Vijay Baheti, Nguyen Thang Xiem, Jiri Militky & Petr Louda

## **SGS**

### **THE INFLUENCE OF TEMPERATURE AND PRETENSION WEIGHT ON THE MECHANICAL AND THERMAL PROPERTIES OF PES MONOFILAMENTS**

Denisa Karhánková & Martina Košátková Hušková

### **PRODUCTION OF NANOFIBROUS LAYERS BY USING SPECIAL COLLECTOR AND THEIR TESTING**

Marcela Cudlínová, Jiří Chvojka, David Lukáš & Petr Mikeš

### **PRODUCTION OF COMPOSITES WITH CARBON FIBERS AND GEOPOLYMER MATRIX**

Pavčina Munzarova

### **CONDUCTIVE TEXTILES BASED ON SURFACE POLYMERIZATION**

Jitka Průchová & Michal Vik

### **PROPERTIES OF INORGANIC COMPOSITES WITH NANOPARTICLES**

Jitka Sitteová & Miroslava Maršálková

### **POWER IS THE PROBLEM - PIEZOELECTRIC USAGE AS AN ENERGY SOURCE FOR SMART CLOTHING**

Ladislav Nagy & Antonín Havelka

### **COMPARISON OF METHODS FOR EVALUATING THE SHIELDING EFFECTIVENESS OF TEXTILES**

Veronika Šafářová & Jiří Militký

### **EVALUATION OF SURFACE DEGRADATION OF OUTDOOR MATERIALS**

Lenka Techniková & Maroš Tunák

### **THE PRODUCTION OF YARNS FROM INDIVIDUAL PVA NANOFIBERS**

Jana Bajáková, Jiří Chaloupek, David Lukáš & Maxime Lacarin

### **RHEOLOGICAL AND ELECTRICAL PROPERTIES OF POLYPYRROLE NANOCOMPOSITES**

A. M. Rehan Abbasi, M. Marsalkova & J. Militky

### **EVALUATION OF TEXTILE PRODUCTS HEALTH RISKS**

Syed Zameer Ul Hassan & Jiri. Militky

### **ELECTROSPINNING OF BIOPOLYMER – only poster**

Vysloužilová Lucie, Mohrová Jana & Lukáš David