<table>
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<tr>
<th>Time</th>
<th>Session</th>
<th>ID No.</th>
<th>Title</th>
<th>Speaker</th>
<th>Affiliation</th>
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<td>8h00</td>
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<td>10h15</td>
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<td>8</td>
<td><strong>Biodesign - Dyeing Natural Fibres With Living Organisms-Bacteria</strong></td>
<td>Sandra Heffernan, Massey University</td>
<td>New Zealand</td>
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<td>10h30</td>
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<td>22</td>
<td><strong>Yield Potential Of Hemp Cultivars (Cannabis Sativa L.) For Textile Applications In Belgium</strong></td>
<td>Veronique Troch, University College Ghent</td>
<td>Belgium</td>
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<td>10h45</td>
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<td>28</td>
<td><strong>Uv Protection From Polyamide And Wool Fabrics Dyed With Teak Leaves</strong></td>
<td>Nivea Tais Vila, Universidade Estadual de Maringa</td>
<td>Brazil</td>
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<tr>
<td>11h00</td>
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<td>253</td>
<td><strong>Rapid Microwave Assisted Flame Retardant Treatment for Cotton Fabric by an Industrial Byproduct – Phytic Acid</strong></td>
<td>Ramaswamy Nagarajan, University of Massachusetts</td>
<td>USA</td>
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<td>80</td>
<td><strong>Microscale natural fibers for large-scale nanotechnology</strong></td>
<td>Lars Berglund, KTH Royal Institute of Technology</td>
<td>Sweden</td>
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<td>11h00</td>
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</table>

**Room Infante**

**Chair:** Raul Fangueiro

**Room Miragaia**

**Chair:** Vincent Placet

**Room S. João**

**Chair:** Greg Holt

**Session:** Properties & characterization of natural fibers & structures

**Chair:** Maria José Araújo Marques Abreu

**Session:** Textile processing of natural fibers

**Chair:** Vincent Placet

**Session:** Functional natural fibers

**Chair:** Greg Holt

**Coffee-Break & Poster Session**
11h30

Invited Leacture
Preparation and Applications of Cellulose Nanomaterials
Alain Dufresne, Université Grenoble Alpes | France

11h45

ID 71
Effects Of Water Immersion Ageing On Composites Made Of Non-Pre-Dried Flax Fibres
Maria Morissa Lu, KU Leuven R&D | Belgium

12h00

ID 271
Electrospun Natural Nanofibres With Bioactive Plant Extracts For Therapeutic Applications
Diana P. Ferreira, University of Minho | Portugal

12h15

ID 218
Genetically Engineered Protein-Based Polymers For The Development Of Antimicrobial Materials
Margarida Pereira, CBMA - University of Minho | Portugal

12h30

ID 187
Effects Of Cellulose Nanofibrils On The Structure And Properties Of Poly(Vinyl Alcohol) Electrospun Nanofibers
Andrea Zille, 2C2T - University of Minho | Portugal

ID 182
Impact Of The Fibre Extraction Processing Steps Using A Labscale Scutching/Hackling Equipment On The Mechanical And Morphological Properties Of Hemp Fibres
Pierre Ouagne, Ecole Nationale d'Ingénieurs de Tarbes | France

ID 183
The Effect Of Silicone Coatings On The Durability Of Natural Fibre Composites When Subjected To Hydrothermal Aging
Gilles Koolen, KU Leuven R&D | Belgium

ID 151
Study Of Solutions To Optimize The
12h45
ID 216
Multifunctional Bio-Hybrid Nanocomposites Using Silk/Elastin Copolymers
Raul Machado, CBMA - University of Minho | Portugal

ID 70
Effect Of Zeolite On Properties Of Rice Husk Flour- Polypropylene Composites
Poonsub Threepopnatkul, Silpakorn University | Thailand

12h45
ID 282
The Effect Of Silane Modification On The Performance Of Nanocellulose-Reinforced Adhesives For Composite Wood Panels
Patrycja Hochmańska, Łukasiewicz Research Network-Wood Technology Institute | Poland

12h47
ID 129
Cellulose Nanofibril Films Treated With Tannin-Stabilized Silver Nanoparticles: Effect On Antimicrobial Properties
Lina Bufalino, Federal Rural University of Amazonia | Brazil

13h00
Lunch

13h00
ID 27
Preparation And Characterization Of Air Filtering Membranes Based On Pet, Castor Oil And Cellulose Nanocrystals: Electrospun Mats
Rachel Passos de Oliveira Santos, University of São Paulo | Brazil

14h00
ID 181
Surface Modification And Structural Investigation Of Spiders Silk Through Non-Thermal Plasma Sources
Nicola Stehling, University of Sheffield | United Kingdom

14h00
ID 276
Biodegradable Films Reinforced With Cellulose Nanocrystals And Natural Extracts For Food Packaging Applications
Sofia Costa, University of Minho | Portugal

14h15
ID 27
Preparation And Characterization Of Air Filtering Membranes Based On Pet, Castor Oil And Cellulose Nanocrystals: Electrospun Mats
Rachel Passos de Oliveira Santos, University of São Paulo | Brazil

14h15
ID 37
Simulation Of The Morphology Changes Of Lignocellulosic Fibers During Twin-Screw Extrusion Of Composites With Petro/Biosourced Matrices
Loubna Lemkhanter, INRA, France

14h30
ID 129
Cellulose Nanofibril Films Treated With Tannin-Stabilized Silver Nanoparticles: Effect On Antimicrobial Properties
Lina Bufalino, Federal Rural University of Amazonia | Brazil

14h30
ID 82
Effect Of Xylanase Treatment On Retama Monosperma Fibers Dyeing
Djamel Eddine Aizi, Laboratoire des Productions Valorisations Végétales et Microbiennes | Algeria

14h45
ID 186
Ultraviolet Light Treatment To Enhance Interfacial Adhesion In Bamboo Fibre Polymer Composites
Carlos Fuentes, KU Leuven R&D | Belgium

14h45
ID 276
Biodegradable Films Reinforced With Cellulose Nanocrystals And Natural Extracts For Food Packaging Applications
Sofia Costa, University of Minho | Portugal

Session:
Natural fiber based polymeric composites
Chair: Carlo Santulli

Session:
Functional natural fibers
Chair: Raechel Laing

Natural fiber modification techniques
Silgia Aparecida da Costa

Study Of Solutions To Optimize The Extraction Of Hemp Fibers For Composite Materials
Marie Gregoire, Ecole Nationale d'Ingénieurs de Tarbes | France

ID 101
Effect Of The Grid Spacing Of Fique Textiles On The Bending Behaviour Of Mortar/Fiber Laminates
Patricia Luna, Universidad Nacional de Colombia | Colombia

ID 302
Effects Of Polyelectrolytes On Dyeing Of Cotton Fabric With Acid Dyes
Miguel Granato, Universidade Federal de Santa Catarina | Brazil

ID 37
Simulation Of The Morphology Changes Of Lignocellulosic Fibers During Twin-Screw Extrusion Of Composites With Petro/Biosourced Matrices
Loubna Lemkhanter, INRA, France

ID 82
Effect Of Xylanase Treatment On Retama Monosperma Fibers Dyeing
Djamel Eddine Aizi, Laboratoire des Productions Valorisations Végétales et Microbiennes | Algeria

ID 77
Optimizing Enzymatic Dyeing Of Wool And Leather
Andrea Zille, 2C2T - University of Minho | Portugal

ID 95
Acoustic Evaluation Of A Mycological Bio-Composite As A Natural Fiber Alternative
Loubna Lemkhanter, INRA, France

ID 95
Acoustic Evaluation Of A Mycological Bio-Composite As A Natural Fiber Alternative
Loubna Lemkhanter, INRA, France
ID 226
Plasma Pretreatment And Digital Ink Jet Technology: A Tool For Long-Lasting Microbial Barrier On Cellulose Knitwear?
Sanja Ercegović Ražić, University of Zagreb | Croatia

ID 210
Facile Functionalization Of Cotton With Nanostructured Silver/Titania For Visible-Light Plasmonic Photocatalysis
Marwa Abid, Faculty of Sciences of Sfax | Tunisia

ID 117
Development Of Shoe Insole With Natural Fibers
Hafsa Jamshaid, National Textile University | Pakistan

ID 298
Influence Of Plasma Treatment On The Resulting Useful Properties Of Tapes Made Of Glass Fibers
Karolína Voleská, Technical University of Liberec | Czech Republic

ID 210
Facile Functionalization Of Cotton With Nanostructured Silver/Titania For Visible-Light Plasmonic Photocatalysis
Marwa Abid, Faculty of Sciences of Sfax | Tunisia

ID 130
Influence Of Physical Sputtering Plasma Treatment On The Tensile Strength Of Bamboo Fibers And Bamboo/Polyester Composites
Patricia Luna, Universidad Nacional de Colombia | Colombia

ID 94
Halogen Free Flame Retardant Finishing Of Wool And Wool Rich Fabrics For Aircraft Seats
Elif Kaynak Uraz, Eskisehir Technical University | Turkey

ID 143
Bast Fiber Circular Economy
Malgorzata Zimniewska, Institute of Natural Fibres & Medicinal Plants | Poland

ID 154
Sustainable Solutions Need To Be Smarter
Magdalena White, International Wool Textile Organisation | Belgium

ID 175
Fibre Area Correction Factors (Facf) For The Extended Rules-Of-Mixtures For Natural Fibre Reinforced Composites
John Summerscales, University of Plymouth | United Kingdom

ID 81
Aging Behaviour Of Poly(Lactic Acid) Bleached Softwood Kraft Cellulose (BsKP) Composite Containing Epoxy Modified Linseed Oil As A Coupling Agent
Lisa Wikström, VTT Technical Research Centre of Finland | Finland

ID 192
The Influence Of Textile Materials On Flame Speed Tests Of Professional Uniforms
Marcia Cristina Silva-Santos, University of Sao Paulo | Brazil

ID 194
Optimum Conditions For Measuring Thermal Resistance On Thermal Foot Model
Abdelhamid R. R. Aboalasaad, Technical University of Liberec | Czech Republic

ID 94
Halogen Free Flame Retardant Finishing Of Wool And Wool Rich Fabrics For Aircraft Seats
Elif Kaynak Uraz, Eskisehir Technical University | Turkey
Session: Natural fiber based polymeric composites
Chair: Aart Van Vuure
ID 213
Transverse Compressive Properties Of Natural Fibres Determined Using Micro Mechatronics Systems And 2D Full-Field Measurements
Vincent Placet, FEMTO-ST | France

16h45

ID 87
Water Absorption And Effect Of Temperature On The Characteristics Of Flax/Hemp Reinforced Composites
Opukuro David-West, University of Hertfordshire | United Kingdom

17h00

ID 96
Stabilization Of Hybrid Prepreg Composite Tapes For Industrial Applications
Mohanapriya Venkataraman, Technical University of Liberec | Czech Republic

Session: Textile processing of natural fibers
Chair: Pirjo Heikkilä
ID 119
Study Of The Wrinkling Behavior Of A Cotton Shirting Fabric Using A Novel Measurement Method
Charles Lanceron, ENSAIT/GEMTEX | France

17h30

ID 127
The Effect Of Thermal Treatment And Microwave Curing To The Mechanical Properties Of Flax Epoxy Composites
Chrysoula Saridaki, University of Patras | Greece

17h45

ID 145
Influence Of Composite Architecture And Interfacial Bonding Strength On Their Impact Properties
Mahadev Bar, École Nationale D’ingénieurs de Tarbes | France

Session: New processes for natural fiber agriculture extraction and processing
Chair: Miguel Gama
ID 11
Improvement Of The Wrinkling Behavior Of A Cotton Shirting Fabric Using A Novel Measurement Method
Charles Lanceron, ENSAIT/GEMTEX | France

17h15

ID 83
Weavability Of Flax Fibre For 3D Warp Interlock Preform: Effect Of The Weft Layers Number On The Physical And Mechanical Properties Of The Preform
Ahmad Rashed Labanieh, ENSAIT | France

18h00

Session: Social Program - Porto 6 Bridges Cruise

ID 150
Thermal And Physical Characterization Of Bleached Cellulose From Orange Bagasse Using Chlorine Free Method
Paulo Fernandes, UNESP | Brazil

18h30

Closing

Social Program - Porto 6 Bridges Cruise
### DAY 2 | 2nd July 2019

#### Conference Announcements

**Keynote Lecture**

**Processing and Applications of Biomimetic Spider Silk**

**Thomas Scheibel**, University of Bayreuth | Germany

#### Chair: Raul Fangueiro

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<td><strong>ID 280</strong></td>
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<tr>
<td><strong>Multipurpose Hemp For Industrial Bioproducts And Biomass – “Mid-Performace” Bio-Based Composites Applications</strong></td>
<td><strong>Environmental Impact Of Cotton Fibre Production In Brazil</strong></td>
<td><strong>Natural Fibres In Next-To-Skin Textiles: Current Perspectives On Human Body Odour</strong></td>
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<tr>
<td>Jörg Müssig, Bremen City University of Applied Sciences</td>
<td>Luis Almeida, University of Minho</td>
<td>Raechel Laing, University of Otago</td>
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<td><strong>ID 111</strong></td>
<td><strong>ID 48</strong></td>
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<td><strong>Laccase Enzyme Treatment For Improved Flax Fibre – Epoxy Adhesion In Composites</strong></td>
<td><strong>Amazonian Tucum (Astrocaryum Chambira Burret) Leaflet Fiber And Artisanal Yarn Characterization</strong></td>
<td><strong>BODY ODOUR MANAGEMENT PERFORMANCE OF DIFFERENT FIBRES AND BLENDS</strong></td>
</tr>
<tr>
<td>Anne Hennig, Leibniz-Institut für Polymerforschung Dresden e.V.</td>
<td>Lais Pennas, University of Sao Paulo</td>
<td>Xungai Wang, Deakin University</td>
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<td><strong>ID 172</strong></td>
<td><strong>ID 103</strong></td>
<td><strong>ID 118</strong></td>
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<td><strong>A Material Proposed For Re-Use Of Hemp Shives As A Waste From Fiber Production</strong></td>
<td><strong>The Properties Of The Mesocarp Fibers Of Patauá, A Multiple-Use Palm From The Amazonia Forest</strong></td>
<td><strong>Simultaneous Dyeing And Flame Retardant Finishing Of Silk Fabric: An Ecofriendly Approach</strong></td>
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<tr>
<td>Carlo Santulli, Università di Camerino</td>
<td>Lina Bufalino, Federal Rural University of Amazonia</td>
<td>Goutam Bar, National Institute of Fashion Technology</td>
</tr>
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#### Coffee-Break & Poster Session
11h30
A Biosorbent Films Based On Nanocellulose And Lysozyme Nanofibers For Efficient Removal Of Mercury (II) From Natural Waters
Carmen Freire, University of Aveiro | Portugal

11h45
Impregnation Of Cellulose Fibers With Charged Nanocellulose For Water Filters
Andreas Mautner, University of Vienna | Austria

12h00
Effect Of Alternative Electric Field And Elongational Flow On Control Of Cellulose Nano Fibril
Hidemasa Takana, Tohoku University | Japan

12h15
Preparation Of Hydrophobic Nanocrystals Of Vegetable Cellulose For The Retention Of Oils
Denise Abatti Kasper Silva, University of the Joinville Region | Brazil

11h30
Environmental And Socio-Economic Impact Assessment Of The Production Of Kenaf (Hibiscus Cannabinus L.) In Heavy Metal Contaminated Soils
Ana Luisa Fernando, Universidade Nova de Lisboa | Portugal

11h45
Characterization Of Agave Americana L. Plant As Potential Source Of Fibres For Composites Obtaining
Zaida Ortega, Universidad de Las Palmas de Gran Canaria | Spain

12h00
Dyeing Performance Of Brazilian Pineapple Leaf Fibers For Textile Application
Rayana Santiago De Queiroz, Institute for Technological Research | Brazil

12h15
Natural Dyeing Of Cotton With Anadenanthera Macrocarpa (Benth) Nivea Tais Vila, Universidade Estadual de Maringá | Brazil

12h30
Dyeing Cotton With Dye Extracted From Fallopia Japonica Leaves
Marija Gorjanc, University of Ljubljana | Slovenia

12h30
The Effect Of The Flax Fibre Extraction Method On Mechanical Properties Of The Composites Containing The Fibres
Wanda Różańska, Institute of Natural Fibres & Medicinal Plants | Poland

12h45
Fungal Degradation Of Flax Fibre Reinforced Composites Made Using Vegetable Oil Based Epoxy Resin
Arunjani Raj Mahendran, Kompetenzzentrum Holz GmbH | Austria
12h45

ID 308  
Synthesis And Characterization Of Lithium Iron Phosphate Nanowires From Sago Pith Cellulose Nanofibril Aerogel  
Jau Choy Lai, Universiti Teknologi Malaysia | Malaysia

ID 266  
Needle Punching Machine At Laboratory Scale To Manufacturing Fique Fiber Nonwovens  
Adriana Restrepo-Osorio, Universidad Pontificia Bolivariana | Colombia

ID 240  
Experimental Analysis Of Clay Boards Made With Coir  
Daniela Cenci, University of Minho | Portugal

13h00  
Lunch

14h00

Invited Lecture

Bacterial Nanocellulose: Last But Not The Least  
Miguel Gama, University of Minho | Portugal

14h15

ID 223  
Bacterial Cellulose Membrane With Functional Properties  
Andreia Monteiro, Institute of Chemistry | Brazil

ID 57  
Modeling Draw Process Of Flax Fibers  
Moussa Gomina, CNRS | France

14h30

ID 233  
Native Natural Fibers & Structures  
Chair: You-Lo Hsieh

ID 144  
Measurement Of The Lenght Of Short Animal Fibers: A Comparison Of Almeter And Classifiber Instruments  
German Escobar, INTI | Argentina

ID 6  
The Use Of Natural Fibers In Repairing And Strengthening Of Cultural Heritage Buildings  
Ali Abbass, University of Minho | Portugal

14h45

ID 313  
Multilayer Bacterial Cellulose With Confined Nanoparticle Distribution  
Soledad Roig, ICMAB-CSIC | Spain

ID 208  
Evaluating The Thermal Comfort Properties Of Rize’s Traditional Hemp Fabric (Feretiko) Using A Thermal Manikin  
Maria José Araújo Marques Abreu, University of Minho | Portugal

ID 116  
Study Of The Common Reed Phragmites Australis For A Valorisation In Biocomposites And Building Materials  
Mathilde Honoré, Institut de Recherche Dupuy de Lôme | France
ID 122  Development Of Textile-Based Hydrogel Dressings Used In Burn Treatment
Gizem Ceylan Türkoğlu, Dokuz Eylul University | Turkey

ID 60  Fibers Of Cellulose Sugar Cane Bagasse With Bromelain Enzyme Immobilized To Application In Dressing
Silgia Aparecida da Costa, São Paulo University | Brazil

ID 26  New Method To Produce Poly(Vinyl Alcohol)/Cellulose Acetate Films With Improved Antimicrobial Action
Marta A. Teixeira, 2C2T - University of Minho | Portugal

ID 35  Improving Friction Yarn Qualities For Its Use In Foundation Garments – Part 3
Kanwar Varinder Singh, National Institute of Technology | India

ID 299  Influence Of The Addition Of Nettle And Hemp Fibers To Cotton Based Yarns On The Moisture Management Properties
Miguel Navarro, Universidade do Minho | Portugal

ID 202  Characterization Of Coconut Fibers For Use As Reinforcement In Cement Matrix Composites
Lina Bufalino, Federal Rural University of Amazonia, Brazil

ID 126  Investigation Of The Interfacial Bonding Between Natural Fibres And Various Cementitious Matrices In Mortar Composites
Seyed Ghaffar, Brunel University London | United Kingdom

ID 3  Evaluation Of Injection Moulded Natural Fibre-Polyolefin For Potential In Automotive Applications
James Thomason, University of Strathclyde | United Kingdom

ID 46  Material Sorting Using Hyperspectral Imaging For Biocomposite Recycling
Tuomas Sormunen, VTT Technical Research Centre of Finland Ltd | Finland

ID 32  Copy Paper As An Alternative Reinforcement For Biodegradable PLA And PBAT Composites
Nina Graupner, Bremen City University of Applied Sciences | Germany

ID 191  2D Native Fibrous Vegetable Material As Reinforcement Of Textile Composites Materials
Cristel Onesippe Potiron, Université des Antilles | Guadeloupe (FWI)

ID 67  Absorption Properties Of Fabricated Film From Cotton Gin Trash
Abu Naser Md Ahsanul Haque, Deakin University | Australia
16h45  ID 38  Main Criteria Of Sustainable Plant Fibre For Efficient Unidirectional Biocomposites
Alain Bourmaud, University of South Brittany | France

16h55  ID 62  Creating An All Natural Composite Using Random Chopped Banana Fibers And PLA
William Jordan, Baylor University | USA

17h00  ID 69  Transmission Loss Of Nap Cores Made With Cotton (Co) And Polylactic Acid (PLA)
For Application In Lightweight Construction
Franziska Stehle, Faserinstitut Bremen e.V. | Germany

17h15  ID 247  Assessment Of Extended Retted Hemp Fibres For Composite Reinforcement: Fibre Properties And Adhesion With Polyactide Matrix
Laetitia Marrot, InnoRenew Center of Excellence | Slovenia

17h30  ID 237  Hygrothermal Degradation Effects On A Rubber Toughened WPC
Francesco Mollica, Università degli Studi di Ferrara | Italy

17h45  ID 198  Potential Of Date Palm Flour As A Natural Filler For Virgin And Recycled Polypropylene Bio-Composites
Mahmoud Nassar, Sultan Qaboos University | Oman

18h00  Closing

Social Program - Conference Dinner
**9h00**

### Conference Announcements

#### Keynote Lecture

**Functionality and Sustainability of Natural Fibre Materials**

**Xungai Wang**, Deakin University | Australia

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**9h30**

### Chair: Adriana Restrepo-Osorio

**Influence of ethanol post-treatments on the properties of silk protein materials**

Adriana Restrepo-Osorio, Universidad Pontificia Bolivariana | Colombia

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**9h30**

### Chair: Joana Araújo

**In Situ Synthesis Of Cao And Sio2 Nanoparticles Onto Jute Fabrics: Exploring The Multifunctionalities**

Joana Araújo, Universidade do Minho | Portugal

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**10h15**

### Chair: Sara Lucia Mora Gordillo

**Plantain Fibers Used As Immobilization Support Of Laccase For Dye Degradation**

Sara Lucia Mora Gordillo, Universidad Nacional de Colombia | Colombia

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**10h15**

### Chair: Ana Luisa Fernando

**Development And Characterization Of Chitosan/Mmtca++ Bionanocomposites Incorporated With Two Different Essential Oils**

Ana Luisa Fernando, Universidade Nova de Lisboa | Portugal

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**10h45**

### Chair: Luciano Pinheiro

**Biomordants And New Alternatives To The Sustainable Natural Fiber Dyeings**

Luciano Pinheiro, University of São Paulo | Brazil

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**10h45**

### Chair: Awadhesh Choudhary

**Study Of Fibre, Fabric Weight And Functional Finishes On Comfort Properties Of Woven Shirting Fabrics**

Awadhesh Choudhary, Nit Jalandhar | India

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**11h00**

### Coffee-Break & Poster Session
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<tr>
<td>11h30</td>
<td>Invited Lecture</td>
<td>ID 152</td>
<td>Vinyl Acetate Modified Microfibrillated Lignocellulose And Application In Polylactic Acid Biocomposites</td>
<td>Ferhat Yets, University of Manchester</td>
<td>United Kingdom</td>
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<td>11h45</td>
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<td>ID 162</td>
<td>Investigation Of Fermentation Residue Of Biogas Plants For The Production Of Sustainable Fibre Reinforced Composites</td>
<td>Marion Lütz, German Institutes of Textile and Fiber Research</td>
<td>Germany</td>
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<td>12h00</td>
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<td>ID 139</td>
<td>Properties of ring, rotor and Dref-II spun conductive cotton yarn</td>
<td>Atin Chaudhuri, University of Calcutta</td>
<td>India</td>
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<tr>
<td>12h15</td>
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<td>ID 170</td>
<td>Development And Characterization Of A Novel Starch - Chestnut Husk Biocomposite</td>
<td>Diana Pais, INEGI</td>
<td>Portugal</td>
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<td>12h30</td>
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<td>ID 173</td>
<td>Silk Fibroin Proton Conducting Membranes</td>
<td>Tomás Almeida, CICECO-Aveiro Institute of Materials</td>
<td>Portugal</td>
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<td>ID 296</td>
<td>Lightwood: Innovative Wood And Polyurethane Based Composites</td>
<td>Jorge Martins, Instituto Politécnico de Viseu</td>
<td>Portugal</td>
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<td>ID 108</td>
<td>Use Of Bamboo Mat As A Potential Soil Reinforcement Material- An Experimental Study</td>
<td>Chandrakaran Sreedharan, National Institute of Technology</td>
<td>India</td>
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<td>ID 241</td>
<td>Homo Sustentabilis: Circular Economy And New Business Models In Fashion Industry</td>
<td>António Marques, University of Minho</td>
<td>Portugal</td>
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<td>Homewear In Brazil: Evolution From 1976 To Present</td>
<td>Mariana Costa Laktim, University of Sao Paulo</td>
<td>Brazil</td>
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<td>ID 100</td>
<td>Natural Textile Fibers In Contemporary Brazilian Jewelry</td>
<td>Ivete Cattani, University of Sao Paulo</td>
<td>Brazil</td>
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<td>ID 109</td>
<td>Cognitive System Engineering: Cocreation For Auxetic Garment Design</td>
<td>Kanwar Varinder Singh, National Institute of Technology</td>
<td>India</td>
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**Sessions:**
- Textile processing of natural fibers
- Functional natural fibers
- Natural fiber based polymeric composites

**Chairs:**
- Julia Baruque
- Diana Ferreira
- Alain Bourmaud
12h45
ID 113
Development of moisture vapour permeable waterproof cotton fabric by coating with blend of natural Rubber and chloroprene Containing Ammonium Acetate
Debasish Das, University of Calcutta | India

114
Winding Filament Fabrication For Fibrous Structures In Architecture
Hannah Arkell, KADK | Denmark

13h00
Closing Ceremony

13h30
Lunch

14h30
Social Program - Walking Tour
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<td>Rita De Castro Engler, <a href="mailto:rita.engler@gmail.com">rita.engler@gmail.com</a></td>
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Aloysio Souza Filho, Universidade Tecnológica Federal do Paraná - UTFPR | Portugal

Influence Of The Addition Of Fibers In Different Phases Of The Spinning Process On The Behaviour Of Cotton Blended Yarns
Vânia Pais, Centre for textile Science and Technology (2C2T), University of Minho | Portugal

Mechanical And Colorimetric Properties Of 100% Fabric Cotton Dyed With Reactive Dye Using Seawater Bath
Miguel Granato, Universidade Federal de Santa Catarina | Brazil

Impact Behaviour of Hybrid Carbon/Flax Fiber Reinforced Composites
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