



**12th Annual Meeting of the Northern European  
Network for Wood Science and Engineering WSE, 12-  
13 September, 2016, Riga, Latvia**  
**Wood science and engineering –  
a key factor on the transition to Bioeconomy**

## Agenda

### Sunday, September 11

**19:00-21:30** *Welcome*

(party will be served on 27 floor of hotel **The Radisson Blu Hotel Latvija** (conference venue))

### Monday, September 12

8:00-9:00 Registration

**9:00-9:15** **Opening**

Inga Jekabsons, Ministry of Education and Science

Andrejs Krasnikovs, Latvian Academy of Sciences

**9:15-10:15** **Key note lectures**

9:15-9:45 FOREST SECTOR – THE CORNERSTONE OF LATVIA'S (BIO) ECONOMY

Klauss, Kristaps

9:45-10:15 ROLE OF WOOD-BASED BIOREFINING IN THE EUROPEAN BIOECONOMY

Niemela, Klaus

*Coffee*

**10:40-12:30** **Scientific session WOOD IN USE**

10:40-10:55 DRIVERS AND BARRIERS FOR AN INCREASED USE OF BIO-BASED BUILDING MATERIALS IN SWEDEN

Markström, E., Bystedt, A., Fredriksson, M., Sandberg, D.

10:55-11:10 CUSTOMER REQUIREMENTS ON SOLID WOOD MATERIAL; A BIRCH ROUNDWOOD CASE-STUDY

Nilsson, J., Johansson, J.

- 11:10-11:25 THE ROLE OF BIOBASED BUILDING MATERIALS IN THE CLIMATE IMPACT MITIGATION OF CONSTRUCTION  
**Peñaloza, D.**
- 11:25-11:40 PROPOSED CHANGES TO MACHINE STRENGTH GRADING OF STRUCTURAL TIMBER IN EUROPE  
**Ridley-Ellis, D.**
- 11:40-11:55 BARRIERS AND INCENTIVES FOR THE MARKET DIFFUSION OF LIGNIN BASED PRODUCTS  
**Lettner, M.**, Hesser, F., Zins, F., Smith, L., Stern, T.
- 11:55-12:10 DYNAMIC OF SUSTAINABLE TIMBER USE AND SUPPLY IN LATVIA FROM 2006 TILL 2014  
**Liše, S.**, Krūmiņš, J., Dubrovskis, D.
- 12:10-12:25 COW – PARAMETERS BEYOND PARAMETRICISM  
**Larsson, M.**
- 12:30:13:30 Lunch**
- 13:30-14:50 Scientific session POSTER SESSION**
- 13:30-13:35 INFLUENCE OF SURROUNDING ON THE WOOD MOISTURE CONTENT  
Bridziulaitytė, V., **Juodeikienė, I.**
- 13:35-13:40 CONDENSED TANNINS RICH GREY ALDER BARK EXTRACT POTENTIAL AS A RAW MATERIAL FOR WOOD ADHESIVE PRODUCTION  
Janceva, S., Andzs, M., Tupciauskas, R., Telysheva, G., Dizhbite, T., Dzenis, M., **Jablonskis, A.**
- 13:40-13:45 HEMP – ALTERNATIVE TO WOOD PRODUCTS  
**Jonaitienė, V.**, Norvydas, V., Stuoģė, I., Jankauskienė, S.
- 13:45-13:50 EFFECT OF THE WOOD SPECIES ON THE WOOD MILLING TOOL WEAR  
**Keturakis, G.**, Bendikienė, R.
- 13:50-13:55 CNC MACHINING OF HALFTONE AND LITHOPHANE IMAGES INTO WOOD-BASED PANELS  
**Kiiman, K.**, Luga, Ü., Kers, J.
- 13:55-14:00 AIR PERMEABILITY PROPERTIES OF CROSS LAMINATED TIMBER  
**Luciani, G.**, Horta, R., Kallakas, H., Kers, J.
- 14:00-14:05 FEASIBILITY STUDIES OF THE BIOOIL SUGARS AND ANHYDROSUGARS CONVERSION  
Meile, K., **Zhurinsh, A.**, Dobele, G., Jurkjaņe, V.
- 14:05-14:10 MEASURING THE ELECTRICAL CONDUCTIVITY OF WOOD AT LOW MOISTURE CONTENTS  
Otten, K.A., **Brischke, C.**, Meyer, C.
- 14:10-14:15 FORMULATION OF AN ALKYD EMULSION SUITABLE AS A WOOD PAINT  
**Sansonetti, E.**, Andersone, I., Andersons, B.
- 14:15-14:20 DEVELOPMENT OF A TEST SETUP FOR THE DYNAMIC MECHANICAL ANALYSIS OF WOOD SAMPLES IN TENSILE STRENGTH MODE  
Stenzel, M., **Sanne, M.**, Larnøy, E., Treu, A., Herold, N., Pfriem, A.
- 14:20-14:25 WOOD SURFACE PHOTOSTABILIZATION USING CERIUM DIOXIDE NANOPARTICLES IN TRANSPARENT WOOD COATINGS  
Uselė, U., Ukvalbergienė, K., **Lazėnė, J.**
- 14:25-14:30 MOISTURE BUFFERING WOODEN SURFACES  
**Vahtikari, K.**, Hughes, M.
- 14:30-14:35 WASTEWATER WOOD BIOMASS AND ITS PRACTICAL APPLICATION  
**Vitolina, S.**, Shulga, G., Reihmane, S.
- 14:35-14:40 THE INFLUENCE OF LIGNIN AND CARBOHYDRATES CONTENT ON THE AMOUNT OF BIOGAS PRODUCTION FROM VARIETIES: *MISCANTHUS* AND *SORGHUM*  
**Waliszewska, H.**, Zborowska, M., Waliszewska, B., Janczak, D., Lewicki, A.
- 14:40-14:45 CHANGES IN POLYSACCHARIDE PROFILE IN WOOD OF SCOTS PINE (*PINUS SYLVESTRIS* L.) STUMPS DURING TERM NATURAL DECOMPOSITION  
**Witczak, A.**, Skwarek, M., Lewandowska, A., Szadkowski, J., Sławska, M. & Radomski, A.

14:45-14:50 IMPREGNATED WOOD PERFORMANCE IN OUTDOOR ENVIRONMENT

Tubli, P., Kallakas, H., Kers, J., Brischke, C., Humar, M., Jones, D.

**Coffee**

**15:45-17:15 Scientific session WOOD SCIENCE**

15:45-16:00 MICROSTRUCTURE STUDY OF BIRCH FALSE HEARTWOOD

Bankole, O.S., Rohumaa, A., Kers, J.

16:00-16:15 IDENTIFICATION OF WOOD EXTRACTIVES FROM POPULUS MAXIMOWICZII

Lewandowska, A., Szadkowska, D., Szadkowski, J., Witczak, A., Zielenkiewicz, T., Radomski, A.

16:15-16:30 WITHIN SPECIES VARIATION OF STRUCTURAL INTEGRITY – A TEST ON 204 SCOTS PINE TREES FROM NORTHERN EUROPE

Zimmer, K., Brischke, C.

16:30-16:45 NORWAY SPRUCE DYNAMIC MODULUS OF ELASTICITY

Šilinskas, B., Škéma, M., Aleinikovas, M.

16:45-17:00 THE IMPACT OF HEARTWOOD AND SAPWOOD ON BIOLOGICAL DISCOLORATION OF A PAINTED SURFACE

Sjökvist, T., Blom, Å.

17:00-17:15 IMPACT OF CRACKS TO THE HYGROTHERMAL PERFORMANCE OF CROSS LAMINATED TIMBER

Kukk, V., Püssa, M., Kallakas, H., Kers, J.

**19:00 -23:00 Dinner - Restaurant “MoonShine”**

(Old Town, Kalku str. 12, 11 min. walking from The Radisson Blu Hotel Latvija)

**Tuesday, September 13**

**9:00-9:30 Key note lecture**

9:00-9:30 OVERVIEW OF RESEARCH TOWARDS MULTIFUNCTIONAL PLYWOOD SANDWICH PANELS

Kalnins, Kaspars

**9:30-11:00 Scientific session WOOD MODIFICATION**

9:30-9:45 INFLUENCE OF SIZE DURING THERMAL MODIFICATION ON PROCESS AND RESULTING WOOD PROPERTIES - COMPARISON OF INDUSTRIAL AND LABORATORY TREATMENT

Källander, B.

9:45-10:00 EXTRACTIVES INFLUENCE ON THE WETTABILITY AND SWELLING OF THERMALLY MODIFIED SCOTS PINE

Källbom, S., Sedighi Moghaddam, M., Segerholm, K., Jones, D., Wålinder, M.

10:00-10:15 DIMENSIONAL STABLE AND DURABLE LAMINATED VENEER LUMBER (LVL) FROM EUROPEAN BEECH (FAGUS SYLVATICA) BY IMPREGNATION WITH LOW MOLECULAR WEIGHT PHENOLIC RESIN

Bicke, S., Biziks, V., Militz, H.

10:15-10:30 CURING BEHAVIOR OF PHENOLIC RESINS IN BEECH VENEER (FAGUS SYLVATICA L.)

Kampe, A., Franke, T., Herold, N., Pfriem, A.

10:30-10:45 A PRELIMINARY STUDY OF THE MECHANICAL PROPERTIES OF SCOTS PINE IMPREGNATED WITH A HIGH MELTING POINT WAX

Paajanen, O., Turunen, H., Peura, J.

10:45-11:00 WOOD DURABILITY ENHANCEMENT BY ACETYLATION AND IMPREGNATION WITH VEGETABLE OIL

Morozovs, A., Laiveniece, L.

**Coffee**

### **11:20-12:35 Scientific session INSTRUMENTAL METHODS**

- 11:20-11:35 X-RAY COMPUTED TOMOGRAPHY ON CHEMICALLY MODIFIED WOOD  
**Sedighi Moghaddam, M.**, Van den Bulcke, J., Wålinder, M.E.P., Claesson, P.M., Van Acker, J., Swerin, A.
- 11:35-11:50 VARIOUS INSTRUMENTAL METHODS FOR QUANTIFYING PHENOL-FORMALDEHYDE RESIN INTO BEECH WOOD  
**Biziks, V.**, Bicke, S., Koch, G., Van den Bulcke, J., Van Acker, J., Militz, H.
- 11:50-12:05 DEVELOPMENT OF FAST STILBENE CONCENTRATION MEASUREMENT METHOD BASED ON UV-FLUORESCENCE  
**Pulkka, S.**, Harju, A.M., Venäläinen, M., Antikainen, J.
- 12:05-12:20 APPLICATION OF INVERSED SIZE EXCLUSION CHROMATOGRAPHY FOR THE DETERMINATION PORE SIZE DISTRIBUTION IN POPLAR (POPULUS SP.) WOOD AND PULPS BEFORE AND AFTER STEAM EXPLOSION  
**Szadkowski, J.**, Radomski, A., Zielenkiewicz, T., Lewandowska, A., Witczak, A.
- 12:20-12:35 COMPARISON OF THREE METHODS OF PORE SIZE DISTRIBUTION ANALYSIS IN POPLAR BIOMASS SUBMITTED TO STEAM TREATMENT  
**Zielenkiewicz, T.**, Szadkowski, J., Radomski, A., Gołofit, T., Lewandowska, A., Marchwicka, M.

### **12:35-13:30 Lunch**

### **13:30-15:30 Scientific session ENGINEERED WOOD PRODUCTS AND COMPOSITES**

- 13:30-13:45 INFLUENCING FACTORS TO ENABLE AUTOMATION OF WOOD FURNITURE PRODUCTION  
**Johansson, J.**, Blomqvist, L., Nilson, H., Landscheidt, S.
- 13:45-14:00 PLYWOOD RIB STIFFENED SANDWICH PANELS FILLED WITH BIO-BASED RIGID POLYURETHANE FOAMS  
Labans, E., **Kalnins, K.**, Kirpluks, M., Japins, G., Cabulis, U.
- 14:00-14:15 IMPACT OF LAMINATE DIRECTIONS ON IN-PLANE SHEAR STIFFNESS OF CROSS-LAMINATED TIMBER  
**Turesson, J.**, Ekevad, M.
- 14:15-14:30 FIBRE DAMAGE IN WPC FOR TWO DIFFERENT COMPOUNDING PROCESSES  
**Frisk, O.**, Segerholm, B.K., Wålinder, M.E.P.
- 14:30-14:45 SURFACE CHANGES OF ARTIFICIALLY WEATHERED POLYPROPYLENE-THERMALLY MODIFIED WOOD FLOUR COMPOSITES  
**Kuka, E.**, Cirule, D., Kajaks, J., Andersone, I., Andersons, B.
- 14:45-15:00 REACTION-TO-FIRE PERFORMANCE OF FIRE RETARDANT TREATED WOOD AFTER LEACHING TEST  
**Kim, I.**, Larnøy, E., Militz, H.

### **Coffee**

### **15:30-16:15 Scientific session WOOD DURABILITY**

- 15:30-15:45 ROLE OF EXTRACTIVES AND LIGNIN FOR THE DURABILITY OF THREE HARDWOOD SPECIES FROM MOZAMBIQUE  
Siteo, E., Uetimane, E., Jebrane, M., **Terziev, N.**, Daniel, G.
- 15:45-16:00 INVOLVEMENT OF ANTIOXIDANT ENZYMES IN THE RESPONSE OF QUERCUS ROBUR LEAVES TO ERYSIPIHE ALPHITOIDES INFECTION  
**Skwarek, M.**, Witczak, A., Patykowski, J.
- 16:00-16:15 FUNGAL MOISTURE DEMANDS FOR COLONIZATION AND DECAY OF WOOD  
**Höpken, M.**, Schmidt, O., Huckfeldt, T.

### **16:15 Closing of the meeting**