Experimental Research with Timber

Czech Technical University in Prague

21-23 May 2014

Conference host: Petr Kuklík, Czech Technical University in Prague

Conference venue: Czech Technical University in Prague – CTU in Prague

Faculty of Civil Engineering (Fakulta stavební)

Thákurova 7

Prague 6

Building C, 2nd floor, lecture room C215

Wednesday, 21st	**09:00-10:00**	**Registration**

Wednesday, 21st	**10:00-11:00**	**Opening Session**
Richard Harris. Chair COST Action FP1004	Conference opening
Petr Kuklík. Conference Host	Research in CTU in Prague

Coffee

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IN SCIENCE AND TECHNOLOGY

COST FP1004 – Enhance mechanical properties of timber, engineered wood products and timber structures

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Wednesday, 21st	11:30-13:00	Connections
Paper	**Name**	**Title**
01	**Katarina Bratulic**, Georg Flatscher, Reinhard Brandner	Monotonic and cyclic behavior of joints with self-tapping screws in CLT structures
08	**Petr Sejkot**, Petr Kuklík	Design of three-dimensional nailing plates
34	**Daniel Brandon**, Pete Walker, Richard Harris, Martin Ansell, Julie Bregulla	Visco-elastic creep of dowel type timber connections
15	**Michael Drass**, Kay-Uwe Schober, Michael Kuechler	Glued-in rods in timber joints: Characterization of failure modes
40	**James Walker**, Robert Xiao	Strength of glued-in rods under combined axial and lateral loading
28	**Artur O. Feio**, José S. Machado	Traditional timber carpentry joints: monotonic tests and modeling

Lunch

Wednesday, 21st	14:00-15:30	Structural Performance 1
Paper	**Name**	**Title**
03	**Laurent Léoskool**, Thierry Descamps	Development of a structural insulated panel (SIP) with wood-based material
20	**Chiara Bedon**, Massimo Fragiacomo, Claudio Amadio, Annalisa Battisti	Buckling behavior of Blockhaus timber walls under in-plane vertical loads
13	**Michael Steilner**	Pre-stressing of wood with full thread screws
19	**Nicola Ruggieri**	In-plane Cyclic Tests on Historic Timber Frame Walls
22	Antanas Baltrušaitis, **Vytenis Kalėda**	Knot-related Stiffness Inhomogeneity within Wood Board

Coffee

Wednesday, 21st	16:00-17:30	Test Methods 1
Paper	**Name**	**Title**
02	Julia K. Denzler, **Peter Linsenmann**	Utilization of Microwave Measurement in Timber Strength Grading
06	**Robert Jára**, Jan Pošta, Petr Ptáček, Jakub Dolejš, Petr Kuklík	The comparison of methods for assessment of modulus elasticity and strength of spruce samples
12	**Marcus Flaig**, Nico Meyer	A new test configuration to determine the slip modulus of connections between crosswise bonded boards
36	**Ahmed Mohamed**, Rémi Caudoux, Hexin Zhang1	Performance Study of Displacement Transducers for Timber Material under Compression Tests Using Photogrammetric Approach
09	**Monika Terebesyová**, Pavla Ryparová, Petr Ptáček	Utilization of nanotechnologies for prevention of fungal growth

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Thursday, 22nd	09:15-10:45	Composites and Reinforcement
Paper	**Name**	**Title**
17	**Caoimhe O'Neill**, Danny McPolin , Su Taylor , Annette Harte	Behavior of Basalt Fiber Reinforced Polymer rods glued-in parallel to the grain in Low-Grade timber elements by Pullout-Bending tests
18	**Conan O'Ceallaigh**, Annette Harte, Karol Sikora, Daniel McPolin	Enhancing Low Grade Sitka Spruce Glulam Beams with Bonded-in BFRP Rods
24	**Izabela Burawska**, Marcin Zbiec, Piotr Beer	Enhancement of timber beams with D-shape local reinforcement
26	**Carlos Martins**, Alfredo M.P.G. Dias, R. Costa	Reinforcement of timber floors using lightweight concrete – Mechanical behavior of the connections
27	**Pedro Santos**, Alfredo M.P.G. Dias, L. Godinho	Experimental assessment of dynamic performance of timber-concrete composite floors
42	Timucin Bardak, Deniz Aydemir, Nurgul Tankut, Ali Naci Tankut, **Eser Sözen,** Serkan Peltek,	The effect of mixing method on bonding performance of PVA nanocomposites

Coffee

Thursday, 22nd	11:15-13:00	Structural Performance 2
Paper	**Name**	**Title**
35	**Thomas Reynolds**, Wen-Shao Chang, Richard Harris	Ambient Vibration Testing to Identify Lateral Stiffness and Damping in Modern Multi-Storey Timber Buildings
10	**Rostand Moutou Pitti**, Eric Fournely, Serge Ekomy Ango	Increase of semi-rigidity for timber truss beam structure
23	**Anna W. Ostrycharczyk**, Kjell A. Malo	Experimental evaluation of timber network arch bridge
39	**Jesus M. Menendez**, Kenneth Leitch, Robert Hairstans	Structural Behavior of Timber Frame Closed Panels for Specification in the United Kingdom
11	**Damien Lathuilliere**, Jean-François Bocquet, Laurent Bleron, Frédéric Dubois	Study of spreading under a compressive stress in glued laminated timber

Lunch

Thursday, 22nd	14:00-17:00	Structural Performance 2
Visit to: UCEEB University Centre for Energy Efficient Buildings		

UCEEB is supported by the European Union, OP RDI project No. CZ.1.05/2.1.00/03.0091

Thursday, 22nd	19:30	Dinner (Brewery restaurant, optional, on your own expenses)

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Friday, 23rd	9:30-11:00	Test Methods 2
Paper	**Name**	**Title**
07	**Jan Pošta**, Jakub Dolejš, Lubomír Vítek	Non-Destructive Examination by Radiometry
16	**Natalia Yaitskova**	Time-of-flight of transversal ultrasonic scan of wood: modeling versus measurement
38	**Aamir Khokhar**, Hexin Zhang	Determination of shear properties of timber joists by torsion test method
41	**John C. Hermanson**, John G. Michopoulos, Athanasios Iliopoulos	Industrialization of Physical System Identification

Coffee

Friday, 23rd	11:30-13:00	Structural Performance 3
Paper	**Name**	**Title**
21	**Ivan Giongo**, Roberto Tomasi, Dimitro Dizhur, Jason Ingham	In situ testing on of timber diaphragms in unreinforced masonry building
25	**Anna Rozanska**, Ewa Sudol, Anna Policinska-Serwa	Characteristics of Structural Floor Decking Performance in the Context of Reinforced Timber Beam Floors
29	**Tiago Ilharco**, João Miranda Guedes, Gabriele Romagnoli, Florian Kobryn	Experimental assessment of the bending performance of old timber beams before and after retrofitting
32	**Noëlie Magnière**, Steffen Franke, Bettina Franke	Numerical Investigation of the Residual Load-Carrying Capacity of Cracked Timber Elements
37	**David Gil-Moreno**, Dan Ridley-Ellis, J. Paul McLean	Strength class of “minor” conifer species, as estimated from log acoustic measurements, small-clear data and knowledge of wood property variation

Lunch and Conference Close