

Experimental Research with Timber

Czech Technical University in Prague

21-23 May 2014



Conference host: Petr Kuklik. Research in CTU, Faculty of Civil Engineering and UCEEB

Conference venue: Czech Technical University in Prague – CTU in Prague
Fakulta stavební (Faculty of Civil Engineering)

Thákurova 7

Prague 6

Building C, 2nd floor, lecture room C215

Wednesday, 21st	09:00-10:00	Registration
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Wednesday, 21st	10:00-11:00	Opening Session
Richard Harris. Chair COST Action FP1004		Conference opening
Petr Kuklik. Conference Host		Research in CTU in CTU Faculty of Civil and – UCEEB

Coffee

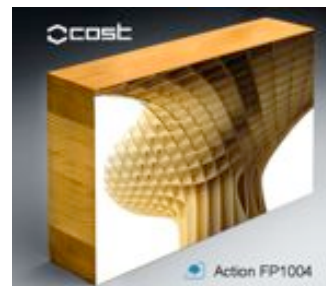


COST FP1004 – Enhance mechanical properties of timber, engineered wood products and timber structures

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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 Fragiacomio, 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 Zhang ¹	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, 22 nd		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, 22 nd		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	

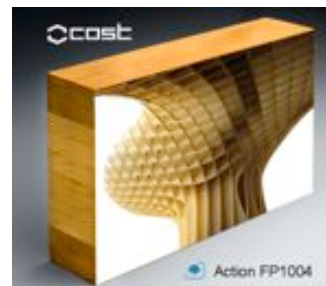
Lunch

Thursday, 22 nd		14:00-17:00	Structural Performance 2
<p>Visit to University Centre for Energy Efficient Buildings (UCEEB), which is a multidisciplinary research institute of CTU, combining knowledge from the Faculties of Civil, Mechanical, Electrical and Biomedical Engineering. Advanced research facilities include a solar simulator, a full-scale testing laboratory of building physics, testing equipment for heat pumps and energy accumulation systems, a material science laboratory and laboratories of indoor environment and user interaction with the building.</p>			
Thursday, 22 nd		19:30	Conference Dinner (optional). Brewery Restaurant

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Friday, 23 rd		9:30-11:30	Test Methods 2
Paper	Name	Title	
07	Jan Pošta, Jakub Dolejš, Lubomír Víttek	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, 23 rd		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