

COST Action FP1004

## Innovative Timber Composites - Improving wood with other materials

**Thursday 17 and Friday 18 October 2013**  
TTR Centre /Frederick University,  
Nicosia, Cyprus



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# Innovative Timber Composites - Improving wood with other materials

## Motivation

Timber and wood-based engineered products are important as structural materials, especially in the drive towards sustainable technologies and construction. It is very important to improve the properties of these products, making them more competitive and reliable. This applies particularly to larger, more complicated structures where timber is becoming a realistic alternative to other construction materials.

The orthotropic properties of timber are well known – strong and stable along the grain, weak and susceptible to movement across the grain. Combining wood with other materials, to achieve composite action, enables the strength of wood to be realised and its shortcomings to be strengthened or eliminated.

COST Action FP1004, “Enhance mechanical properties of timber, engineered wood products and timber structures” provides a network for learning and development in a range of connected topics. This conference, with its proceedings, will present and record various methods for improving wood with other materials. It brings researchers and practitioners together to learn about various applications, and enables them to take part in discussions about future research and development.

The conference’s main subject, improving wood with other materials, is presented in three sessions, divided into two sessions on innovative methods of making composite structures, followed by a session showing how to improve structural response of timber structures designed to resist earthquakes.

Cyprus makes an excellent venue for the conference. The conference is hosted by

Michalis Socratous – Director of Cyprus Timber Training and Research Centre and Prof Panagiotis Toulitatos of Frederick University, Nicosia. The introduction to the day will include a presentation on short rotation forestry in Cyprus, a highly topical subject for a number of countries.

The recommended Conference hotel is in Larnaca and transport will be provided between the hotel and the conference venue in Nicosia. There will be an optional conference dinner (Cyprus night) in Larnaca in the evening of the conference. On Saturday 19 October there will be an optional scientific visit to the first experimental forest of Cyprus and also a visit to a historic church up to Troodos mountain in which had been used a unique / prototype wooden sheltering building system, consisting in a double roof.

The purpose of the COST programme is to strengthen Europe and other countries in scientific and technological research, for peaceful purposes, through the support of cooperation and interaction between European researchers.

This conference adheres to these principles. It will be an extraordinary opportunity to hear presentations from highly specialist, invited speakers and to participate in debate, in the island of Cyprus which is located at the crossroads of three continents Europe – Asia and Africa in the northern - east part of the Mediterranean Sea.

**Richard Harris**  
Michalis Socratous

Chair COST Action FP1004  
Director of TTR Centre

## Host and Local Organiser:

**Michalis Socratous** –

Director TTR Centre, Nicosia (Timber Training and Research Centre), which is the only educational and research centre in Cyprus dealing with wood and its products, new materials etc

**Accommodation:** Hotels in Larnaca –  
Bus provided from Golden Bay Beach Hotel to and from Nicosia for the seminar

## COST Action FP1004 Conference:

### Innovative Timber Composites-Improving wood with other materials

09:30 - 10.00	Welcome/Introduction Richard Harris / Michalis Socratous Introduction to the seminar	15:30 - 16:00	<b>Session 4 – Seismic</b> <b>Italy:</b> Prof Roberto Tomasi. Trento University, Italy – Introducing other materials to increase seismic resistance
10:00-10:30	<b>Session 1 – Wood in Cyprus</b> <b>Cyprus:</b> Michalis Socratous. TTR Centre, Nicosia, Cyprus – Short rotation forestry in Cyprus	16:00 -16.30	<b>Slovenia:</b> Dr. Bruno Dujic, CBD, Lopata, Slovenia – “Use of CLT in Slovenia in seismically active areas”
10.30-11.00	<i>Coffee</i>	16:30 – 17:00	<b>Cyprus:</b> Prof Panagiotis Toulitatos. Frederick University, Nicosia, Cyprus - “The design of modern timber anti-seismic structures in Eastern Mediterranean area”
11.00 - 11.30	<b>Session 2 – Wood improved with other materials – part 1</b> <b>Portugal:</b> Prof Alfredo Dias. Coimbra University, Portugal – “Summary of shear connector methods for timber:concrete composites”	17:00 – 17:30	Closing remarks <i>Conference Dinner in Larnaca</i>
11:30 – 12:00	<b>Germany:</b> Prof Kay-Uwe Schober. TU Mainz, Germany - “Concrete used in connections”		
12:00 – 13:30	<i>Lunch</i>		
13:30 – 14:00	<b>Session 3 – Wood improved with other materials – part 2</b> <b>Sweden:</b> Prof Robert Kliger. Chalmers University, Sweden – Wood - “Enhanced timber properties with FRP composites”		
14:00 – 14:30	<b>UK:</b> Dr Wen-Shao Chang. The University of Bath, UK – Wood – “Improved composite structures”		
14:30 -15:00	<b>Switzerland:</b> Robert Widmann. EMPA – “Comparison of different techniques for the strengthening of glulam members”		
15:00 – 15:30	<i>Coffee</i>		

Optional Dinner at the Golden Bay Hotel for COST Delegates on the evening of Thursday 17 October.  
Charge for dinner to delegates - €30€

This conference schedule may be adjusted