



NOVEL  
STRUCTURAL  
SKINS

COSTACTION TU1303

**PROGRAM**  
COST-Action meeting TU1303

Denkendorf  
March 24th & 25th 2015

## TUESDAY March 24th 2015

- 10:00-10:30**      **Welcome, Introduction & Update COST-Action  
Preview Working Group Sessions**  
Plenary session
- 10:30-13:00**      **Working Group meeting**  
  
Working Group 1b  
Working Group 2  
Working Group 4
- 13:00-14:00**      **lunch break**
- 14:00-17:00**      **Working Group meeting**  
  
Working Group 1a  
Working Group 1b  
Working Group 5
- 17:30-18:30**      **Management Committee meeting**
- 18:45**              **Bus from ITV to conference dinner**
- 19:00**              **dinner at restaurant Weinkeller Einhorn**  
Heugasse 17 - 73728 Esslingen a.N.

## Wednesday March 25th 2015

- 09:00-11:00**      **Keynote lectures 'Fabric Formwork'**  
Plenary session - Chair John Orr
- 09.00-09.30      **Remo Pedreschi** Edinburgh College of Art- UK  
Work on fabric formed concrete at the University of Edinburgh
- 09.30-10.00      **Christian Raun** Adapa – adaptive moulds - DK
- 10.00-10.30      **Benjamin Kromoser** TU Wien - AT  
Building free formed concrete surfaces by using “pneumatic forming of hardened concrete”
- 10.30-11.00      **Diederik Veenedaal** Block research group- CH  
Hybrid cable-net and fabric formed, anticlastic shells
- 11:00-12:00**      **Working Group meeting**  
  
Working Group 1c  
Working Group - other WG's if desired
- 12:00-13:00**      **lunch break**
- 13:00-14:00**      **Closing session - Summary of Working Groups**  
Plenary session

## Detailed Agenda

### Working Group 1

#### Working Group 1a - Adaptable structures & skins

Tue 24/03/2015 - 14.00-17.00

- 14.00 Introduction by Arjan Habraken  
Discussion of minutes of previous meetings  
Discussion of future actions  
Plan of action for review documents
- what to investigate / document ?
  - what can we investigate (knowledge, skills, contacts, time)
  - when to finish what ?

#### Working Group 1b - Bending-active

Tue 24/03/2015 - 10.30-13.00 & 14.00-17.00

- 10.30 Introduction by Lars De Laet  
10.30 Design of actively bent timber structures - Information based on Eurocode 5  
Dragos Naicu  
10.50 Elastic kinetics: conceptual design and structural analysis of two case studies  
Julian Lienhard & Andreas Schönbrunner  
11.10 Design and fabrication of bending-active furniture  
Pep Tornabell & Enrique Soriano  
11.30 Discussion  
State of the art report - Review paper  
Funding opportunities  
New activities  
Conclusion
- 14.00 Bending-active pavilion - discussion

#### Working Group 1c - Fabric Formwork

Wed 25/03/2015 - 09.00-12.00

- 09.00 Plenary lectures on 'Fabric Formwork' chaired by John Orr  
11.00 Discussion on presentations  
11.30 Review paper  
12.00 Funding opportunities

## Working Group 2

Monday 29/09/2014 - 13h-17h

- 10.30 Carol Monticelli, Politecnico di Milano, Italy: introduction *the WG2 on going activities; open questions to be discussed*
- 10.50 Eija Nieminen, Department of Materials Science Fibre Materials, Tampere University of Technology, Finland *approches, experiences and on going researches at TUT*
- 11.10 Carl Maywald, Vector Foiltec, Bremen Germany: *needs/requirements of the industry in terms of LCA of products*
- 11.30 Contributions from:
- Thomas Stegmaier, ITV or other ITV participant
  - Annamaria Ferrari, Dept. of Sciences and Methods of Engineering, University of Studies Reggio Emilia, Italy: *case-studies of Life Cycle Assessment for advanced materials* (by Skype or by slides sent to Carol Monticelli)
- 12.00 Carol Monticelli (with Alessandra Zanelli): *a proposal of a WGs cross linked publication on sustainability of membranes = statement of researches/projects/ engineering processes dealing with 4 main subtopics:*
- *the intentional finding of a structural form which conveys into a minimal mass/material enrolment (linked to WG1)*
  - *Meanings and strength of LCA tool at different levels: experiences of producers, manufacturers, designers firms, engineering firms....(focused on WG2)*
  - *LC thinking approach applied in finding the right balance between daylighting and thermal efficiency of membranes (linked to the WG3)*
  - *LC thinking in construction processes and the structural membranes end of life; temporary details for actual temporary structures? Case studies from EXPO 2015 and 2016*

## Working Group 4

Tuesday 24/03/2015 - 10.30-13.00

1. Brief review of the minutes of the last meeting in Brussels 29th September 2014
2. Presentations (max 20 mins each)
  - a. Raul Fanguiero [Peter Gosling]: presentation of the Horizon2020-proposal "Multifunctional Textile Membranes for Eco-efficient Lightweight Buildings"
  - b. Giorgio Novati: presentation on hyperelasticity
  - c. Jean-Christophe Thomas: presentation on design and analysis of inflatable beams
  - d. Peter Gosling: presentation on round robin 2
  - e. Maarten Van Craenenbroeck: A comparative study for biaxial testing of technical textiles and computational modelling of biaxial stress states in fabrics
3. Discussion and agreement of next actions – [MAIN TOPIC] to achieve TU1303 deliverables

## Working Group 5

Tuesday 24/03/2015 - 14.00-17.00

1. Short lecture about the importance of standardization and integrated design, by Bernd Stimpfle (formTL)
2. The status of the State of the Art and Policy Report for the structural analysis of membrane structures, by Marijke Mollaert (VUB)
3. The status of the Round Robin exercise on Wind, by Jimmy Colliers (VUB)
4. Discussion about the Summer School 'FROM UNCERTAINTIES TO PARTIAL SAFETY FACTORS CALIBRATION: APPLICATION TO TENSILE MEMBRANE STRUCTURES'
5. Misc.

## Location

### Address

#### ITV Denkendorf

Building C, second floor, Conference rooms 1-4

Körschtalstraße 26

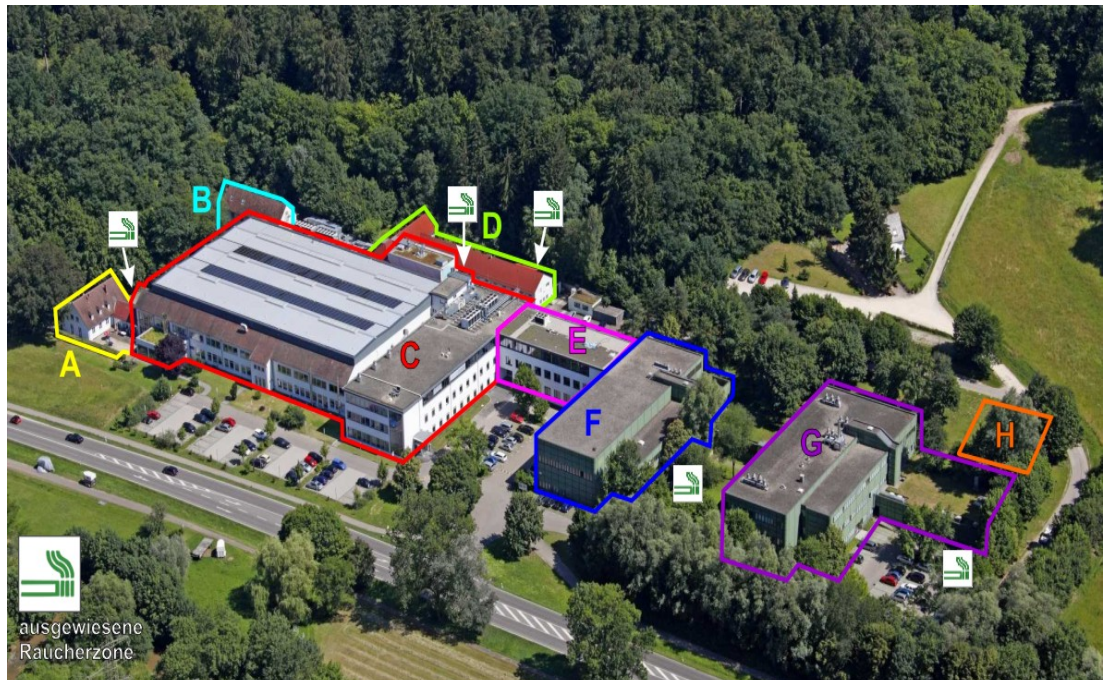
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#### Dinner

The dinner on Tuesday evening (19.00) will be in the following restaurant:

Weinkeller Einhorn

Heugasse 17

73728 Esslingen a.N.

[www.weinkeller-einhorn.de](http://www.weinkeller-einhorn.de)

A bus will drive all members from ITV to the restaurant. The bus leaves at 18.45.

#### Taxi service

Taxi Zentrale Esslingen: 0049 711 35 33 66 or 0049 711 35 66 66